

**AIIMS**

**51st ANNUAL REPORT**

**2006–2007**



**All India Institute of Medical Sciences  
New Delhi 110029**

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## All India Institute of Medical Sciences

The All India Institute of Medical Sciences (AIIMS) was established by an Act of Parliament in 1956 as an institution of national importance. Its main objectives were to develop patterns of teaching in undergraduate and postgraduate medical education in all its branches, so as to demonstrate a high standard of medical education to all medical colleges and other allied institutions in India; to bring together in one place educational facilities of the highest order for the training of personnel in all important branches of health activity; and to attain self-sufficiency in postgraduate medical education.

AIIMS has comprehensive facilities for teaching, research and patient care. Medical and paramedical courses are taught at AIIMS. The institution awards its own undergraduate, postgraduate and doctorate degrees.

Teaching and research are conducted in 50 disciplines. AIIMS plays a leading role in the field of medical research, having more than 1300 research publications by its faculty and researchers in a year. AIIMS also has a College of Nursing, which awards BSc (Hons) Nursing and BSc Nursing (Post-certificate) degrees.

Twenty-five clinical departments, including six superspecialty centres, manage practically all types of disease conditions with support from pre-clinical and para-clinical departments. AIIMS also runs a 60-bedded hospital at the Comprehensive Rural Health Centre at Ballabgarh in Haryana and provides health cover to about 7.7 lakh people through the Centre for Community Medicine.



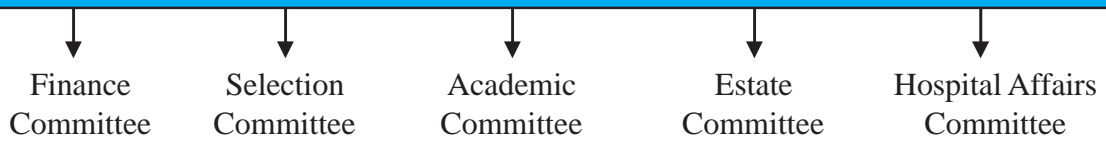
**AIIMS**

**ORGANISATION**

**Institute Body**



**Governing Body**



**All India Institute of Medical Sciences  
New Delhi**



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# 1. Director's Review

I am glad to present the Fifty-First Annual Report and audited statement of accounts for the year 2006-2007.

The All India Institute of Medical Sciences (AIIMS) was established in 1956 by an Act of Parliament as an institution of national importance. This was in pursuance to the recommendations made by the Bhore Committee in 1946.

AIIMS entrusted to develop patterns of teaching in undergraduate and postgraduate medical education in all its branches so as to demonstrate a high standard of medical education to all medical colleges and other allied institutions in India; to bring together at one place educational facilities of the highest order for the training of personnel in all important branches of health activity; and to attain self-sufficiency in postgraduate medical education.

AIIMS is an autonomous institution and awards its own degrees. The AIIMS continues to be a leader in the field of medical education, research and patient-care in keeping with the mandate from Parliament.

AIIMS is fully funded by the Government of India. However, for research activities, grants are also received from various sources including national and international agencies. While the major part of the hospital services are highly subsidized for patients coming to the AIIMS hospital, certain categories of patients are charged for treatment/services rendered to them.

During the 2006-2007 academic session (i.e. for courses commencing in July 2006 and January 2007), 393 students were admitted to various postgraduate, post-doctoral and super-speciality courses, i.e. MD, MS, MDS, MHA, PhD, MCh, DM, and MSc in various specialities. In the year under review, 945 postgraduate and post-doctoral students were on the rolls in various courses and 250 students qualified for their degrees. AIIMS provides full time postgraduate and post-doctoral courses in 47 disciplines. The guiding principle in postgraduate training is to train them as teachers, researchers and competent doctors, who can investigate, manage and treat patients independently.

This year AIIMS admitted 50 students to its MB,BS course (including 7 SC and 4 ST students), 36 students to the B.Sc. Nursing (post-certificate) course (including 3 each from SC and ST students), 51 students to the B.Sc. (Hons) in Nursing course (including 8 SC and 3 ST students), 37 students to the B.Sc. (Hons.) in Ophthalmic Techniques course (including 2 SC students and one ST student) and 21 students to the B.Sc. (Hons.) in Medical Technology in Radiography course (including one SC student). Twenty-three SC and 7 ST students were admitted to MD/MS courses, 3 SC and 7 ST students to MSc courses, 5 SC and 1 ST student to PhD courses and one each to DM/MCh courses.

AIIMS also provides short/long term training to doctors from various organizations and State Governments, WHO-in-Country Fellowship and elective training to Foreign Nationals students. Four hundred and fifty-three (453) candidates received short/long training in AIIMS during the year. In addition, elective training was provided to several candidates, including foreign nationals.



The Institute also continued to provide consultancy services to several neighbouring countries under bilateral agreements or under the aegis of international agencies. During 2006-2007, the Institute trained 58 WHO-sponsored/WHO-in-country fellowship candidates to fulfill its international obligations.

The details for the period 01.04.2006 to 31.03.2007 are as under:-

1.	Short term training	447
2.	Long term training	06
3.	WHO-in-country fellowship	32
4.	WHO-sponsored foreign nationals	26
5.	Elective training	75
6.	Foreign nationals	48

The MB,BS course is spread over 5½ years, divided into 1 year for pre-clinical, 1½ year for para-clinical and 2 years for clinical subjects followed by 1 year rotating internship. Para-medical courses like B.Sc (Hons.) in Nursing, Ophthalmic Techniques, Medical Technology in Radiography and Speech and Hearing continued to be popular and attracted students from other countries also. The curricula of these courses are under constant scrutiny by the faculty of the Institute for purposes of improvement.

The Institute organized a number of workshops, symposia, conferences and training programmes in collaboration with various national and international agencies during the year. Health care professionals from various institutions all over the country participated in these seminars and workshops. Guest and public lectures were organized by visiting experts and faculty of AIIMS.

The All India Institute of Medical Sciences is a leader in the field of medical research. Major research projects focus on national priorities. Over 430 research projects were ongoing during this period. Research grants totaling Rs 52 crores (approx.) were received from various international and national funding agencies during the year 2006-2007. During this period have been 1481 scientific publications by the faculty of AIIMS. In addition they have contributed to 279 Books/monographs/chapters in books.

During the year 2006-2007, the AIIMS hospital catered not only to patients from India but also from neighbouring countries, such as Nepal, Bangladesh, Sri Lanka, Bhutan and other Asian countries. In 2006-07, AIIMS had 15,25,410 OPD attendances and 79,171 in-patient admissions; and 82,503 surgical procedures were conducted in the hospital. In addition, at the Cardiothoracic and Neurosciences Centre (CN Centre), 2,10,611 patients were attended to in the OPDs (92,921 in Cardiology, 28,097 in Cardiothoracic and Vascular Surgery, 57,752 in Neurology and 31,841 in Neurosurgery), 24,966 patients were admitted and 6,465 surgeries were performed at the Centre. The Emergency Care Services (Casualty) attended to 1,76,959 patients in 2006-07.

The Jai Prakash Narain Trauma Centre is functional since 27 November 2006, with 28 faculty members, along with all other categories of staff. It has a state-of-the-art Emergency Room with 8 resuscitation bays, observation and triage areas and facilities for managing 20 critically ill patients.

The Centre has two functional operation rooms, two 30-bedded wards, a multislice CT scanner, mobile X-ray units and heavy duty automatic processors for radiography, a 1.5 Tesla MRI, a C-Arm X-ray unit with 3-D facility, colour Doppler and well-equipped laboratories. In the short period since it started functioning, the Trauma Centre has attended to 1,700 patients, with 625 admitted and 442 operated. A total of 5,764 radiological investigations have also been performed at the Centre.

The Dr. B.R. Ambedkar Institute Rotary Cancer Hospital now has 127 beds. The expanded Dr. BRAIRCH has modern, sophisticated machinery and equipment matching international standards. It is currently functioning through 8 disciplines namely Medical Oncology, Radiation Oncology, Surgical Oncology, Laboratory Oncology, Medical Physics, Anaesthesiology, Radiodiagnosis and Preventive and Community Oncology. Dr. BRAIRCH attended to 74,273 patients in the OPD (14,209 new cases and 60,064 old cases) and admitted 29,826 patients (18,235 short admissions and 2,501 regular admissions), while 3,889 patients were operated upon during the year.

Dr. Rajendra Prasad Centre for Ophthalmic Sciences (Dr. R.P. Centre) attended to 2,23,382 patients in the general OPD, 44,045 patients in the emergency and 1,67,616 patients in specialty clinics, totalling 4,35,043 patients during the financial year 2006-2007. The number of admitted patients was 25,986 and surgical procedures were conducted on 23,637 patients. The average percentage of bed occupancy was 81%. On an average, the Centre handles 1,465 cases and performs 65 operations per working day. Average indoor admissions per working day were 71 and the average length of stay was 4.8 days.

The Organ Retrieval Banking Organization (ORBO), a national facility and nodal centre for the country at All India Institute of Medical Sciences (AIIMS), New Delhi, with its objective of encouraging organ donations, fair and equitable distribution of human organs and optimum utilization of human organs, continues to work round-the-clock. A dedicated four-digit-help line 1,060 and the website ([www.orbo.org](http://www.orbo.org)) with a facility to download donor forms and email facility for correspondence, remains available to the public for enquiries regarding organ donation and transplantation.

The Cardiothoracic Centre, while standardizing various surgical procedures with very high success rate, has brought down the cost of operations. Laparoscopic and endoscopic surgeries are now actively performed in different disciplines. The Institute has kept abreast with state-of-the-art surgical procedures. The Department of Dental Surgery is all set to start a full-fledged Dental college. The department is the nodal centre for the National Oral Health Policy of the Government of India. A Centre for Dental Education and Research working, at present in the Department of Dental Surgery conducts an MDS (postgraduate course) in the speciality.

The Centre for Behavioural Sciences (National Drug Dependence Treatment Centre), AIIMS, at Ghaziabad is a 50 bedded centre with full OPD and other services.

Due to expansion of facilities like OPD, emergency service, private wards and use of innovative methods, AIIMS main hospital has been able to provide better and efficient patient care. Due to quick turnover of patients, number of indoor admissions and operations performed have all

increased. The average length of stay is around 4.8 days; the average bed occupancy, 77.4% and the net death rate, 2.5%, which is at par with any health standards in developed countries. With the use of mechanical cleaning devices and active interaction of Hospital Infection Control Committee (HIFCOM), the general hygiene and sanitation of the hospital is of a high level.

Medicines are supplied to all patients attending the Casualty free of cost. During the financial year 2006-07, an amount of Rs 3,00,23,718/- has been distributed to 1,784 poor and indigent patients.

Community-based programmes have been an integral part of the Institute's clinical and research activities. The Rural Health Centre at Ballabgarh, being run under the supervision of the Centre of Community Medicine (CCM), is a unique experiment. Besides, departments of Obstetrics and Gynecology, Rehabilitation and Physical Medicine, Paediatrics and Dr. Rajendra Prasad Centre for Ophthalmic Sciences organize regular camps in the rural community. The outpatient facilities for patients with ophthalmic and dental problems are drawing more and more patients.

The Centre for Community Medicine (CCM) has a widely acclaimed model of rural health services at Ballabgarh in the neighbouring state of Haryana. Apart from providing comprehensive health services at the doorsteps of people in the villages covered, it also has a secondary level care hospital at Ballabgarh with 50 beds, which attracts patients from far and wide. The number of patients attended to in the hospital included 1,57,851 in the OPD and 21,582 in the casualty, while 6,967 patients were admitted. The project has achieved significant success in terms of improving the health of mothers and children of the area. With zero Maternal Mortality Rate and Crude Death Rate of 6.6, it is well ahead of targets set by Government of India for 2010.

The Urban Health Programme and Family Health Exercise programmes also cater to urban slums of Delhi having a population of about 60,000. A Mobile Health Clinic of CCM visits these slums 5 times a week and provides preventive, promotive and primary level curative services. Domiciliary services in these slum areas are provided through para-medical workers. These services attended to 25,901 patients in 2006-07.

The CCM has now established a Disease Outbreak Response Cell (DORC) for ensuring a rapid response to infectious disease outbreaks that may occur from time to time in the region.

The AIIMS has an AIDS Education and Training Cell for prevention of HIV/AIDS. Amongst its various activities, this cell also operates an interactive telephone helpline called 'Shubhchintak' to answer queries of the general public on HIV/AIDS. This helpline is quite popular and also has an internet based helpline called "e-shubhchintak". CCM also runs a Sex and Marriage Counselling Clinic (SMCC) in AIIMS Hospital.

Despite increasing pressures, the Institute has constantly tried to demonstrate its commitment to professionalism and service to the common people at affordable cost. Thousands of patients from all over the country come to AIIMS everyday to get the best health care available in the country.

AIIMS faculty have been providing leadership to various illustrious national bodies and institutions. Faculty on lien/deputation include Prof. M.K. Bhan, Secretary, Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi, Prof. K.K.

Talwar, Director, Postgraduate Institute of Medical Education and Research, Chandigarh, Prof. A.K. Mahapatra, Director, Sanjay Gandhi Post-graduate Institute of Medical Sciences, Lucknow, Prof. R.K. Sarma, Director, NEGRIMS, Shillong and Prof. K.S. Reddy, President, Public Health Foundation of India, New Delhi.

The medical college of the Institute has been adjudged the best in the country for the 6<sup>th</sup> consecutive year by national surveys.

Prof. P. Venugopal  
Director, AIIMS



**AIIMS**

**ORGANISATION**

**Institute Body**



**Governing Body**



**All India Institute of Medical Sciences  
New Delhi**

## 2. The Institute and its Committees

### INSTITUTE BODY

from 1.4.2006 to 31.3.2007

1. **Hon'ble Dr Anbumani Ramadoss** President  
Union Minister for Health and Family Welfare  
Nirman Bhawan, New Delhi 110011
2. **Dr Akhilesh Das** Member  
Member of Parliament (Rajya Sabha) (up to 30.5.2006)  
11, Lodhi Estate  
New Delhi 110001  
**Shri R.K. Dhawan** Member  
Member of Parliament (Rajya Sabha) (w.e.f. 31.5.2006)  
141, Golf Links  
New Delhi 110003
3. **Professor Vijay Kumar Malhotra** Member  
Member of Parliament (Lok Sabha)  
6, Dr Bishamber Dass Marg  
New Delhi 110001
4. **Dr Karan Singh Yadav** Member  
Member of Parliament (Lok Sabha)  
C-6 MP Flats, Baba Khadak Singh Marg  
New Delhi 110001
5. **Dr Deepak Pental** Member  
Vice Chancellor (Ex-Officio)  
University of Delhi  
Delhi 110007
6. **Shri P.K. Hota** Member  
Secretary (Health) (up to 1.11.2006)  
**Shri Naresh Dayal** Member  
Secretary (Health) (w.e.f. 2.11.2006)  
Ministry of Health and Family Welfare  
Nirman Bhawan, New Delhi 110011

7. **Dr R.K. Srivastava** Member  
 Directorate General of Health Services (Ex-Officio)  
 Nirman Bhawan, New Delhi 110011
8. **Professor A. Rajasekaran** Member  
 President (up to 10.8.2006)  
 National Board of Examinations  
 New Delhi
- Dr Shyam Prasad** Member  
 Vice President (w.e.f. 11.8.2006)  
 National Board of Examinations  
 New Delhi
9. **Dr S.S. Agarwal** Member  
 Central Drug Research Institute  
 Chattar Manzil Palace  
 Post Box No. 173, Lucknow 226001
- Dr S.S. Agarwal**  
 Former Director, SGPGI  
 D-13, Vivekanandpuri, Lucknow 226007
10. **Professor B.P. Chatterjee** Member  
 Department of Biological Chemistry  
 Indian Association for the Cultivation of Science  
 Jadavpur, Kolkata 700032
11. **Shri Sudeep Banerjee** Member  
 Secretary  
 Department of Secondary Education and  
 Higher Education  
 Ministry of Human Resource Development (HRD)  
 Shastri Bhawan (Gate No. 6), New Delhi 110001
12. **Professor K.K. Talwar** Member  
 Director  
 Postgraduate Institute of Medical Education  
 and Research, Chandigarh

- |     |   |                                      |
|-----|---|--------------------------------------|
| 13. | <b>Professor Kartar Singh</b><br>Director<br>Sanjay Gandhi Postgraduate Institute of<br>Medical Sciences, Lucknow   | Member                               |
| 14. | <b>Professor R. Surendran</b><br>Professor and Head<br>Department of Surgical Gastroenterology<br>Government Stanley Hospital, Chennai                            | Member                               |
| 15. | <b>Dr (Mrs) Nilima Arun Kshirsagar</b><br>Dean, Professor and Head<br>Department of Clinical Pharmacology<br>Seth G.S. Medical College and KEM Hospital<br>Mumbai | Member                               |
| 16. | <b>Shri Sanjiv Misra</b><br>Additional Secretary and Financial Adviser  | Member<br>(up to 3.7.2006)           |
|     | <b>Shri Raghbir Singh</b><br>Addl. Secretary and Financial Advisor<br>Ministry of Health and Family Welfare<br>Nirman Bhawan, New Delhi 110011                    | Member<br>(w.e.f. 4.7.2006)          |
| 17. | <b>Professor P. Venugopal</b><br>Director, AIIMS  | Member-Secretary                     |
| 18. | <b>Smt Bhavani Thyagarajan</b><br>Joint Secretary<br>Ministry of Health and Family Welfare<br>Nirman Bhawan, New Delhi 110011                                     | Special Invitee                      |
| 19. | Dean (Academic), AIIMS  | Special Invitee                      |
| 20. | <b>Dr T.P. Singh</b><br>Professor and Head<br>Department of Biophysics<br>AIIMS, New Delhi  | Special Invitee<br>(up to 31.8.2006) |



## GOVERNING BODY

1.	Dr Anbumani Ramadoss	Chairman
2.	Dr Akhilesh Das	Member (up to 30.5.2006)
	Shri R.K. Dhawan	Member (w.e.f. 21.6.2006)
3.	Dr Karan Singh Yadav	Member
4.	Shri P.K. Hota	Member (up to 1.11.2006)
	Shri Naresh Dayal	Member (w.e.f. 21.12.2006)
5.	Dr R.K. Srivastava	Member (Ex-Officio)
6.	Shri Sanjiv Misra	Member (up to 3.7.2006)
	Shri Raghubir Singh	Member (w.e.f. 21.12.2006)
7.	Professor A. Rajasekaran	Member (up to 10.8.2006)
	Dr Shyam Prasad	Member (w.e.f. 21.12.2006)
8.	Professor K.K. Talwar	Member
9.	Professor Kartar Singh	Member
10.	Professor R. Surendran	Member
11.	Professor P. Venugopal	Member-Secretary
12.	Smt Bhavani Thyagarajan	Special Invitee
13.	Dean (Academic), AIIMS	Special Invitee
14.	Dr T.P. Singh	Special Invitee (up to 31.8.2006)
	Dr T.D. Dogra	Special Invitee (w.e.f.10.1.2007)

## STANDING FINANCE COMMITTEE

1.	Shri P.K. Hota	Chairman (up to 1.11.2006)
	Shri Naresh Dayal	Chairman (w.e.f. 21.12.2006)
2.	Professor Vijay Kumar Malhotra	Member
3.	Dr Akhilesh Das	Member (up to 30.5.2006)
	Shri R.K. Dhawan	Member (w.e.f. 21.6.2006)
4.	Dr R.K. Srivastava	Member (w.e.f. 21.6.2006)
5.	Shri Sanjiv Misra	Member (up to 3.7.2006)
	Shri Raghubir Singh	Member (w.e.f. 21.12.2006)
6.	Professor A. Rajasekaran	Member (up to 10.8.2006)
	Dr Shyam Prasad	Member (w.e.f. 21.12.2006)
7.	Shri Sudeep Banerjee	Member
8.	Dr S.S. Agarwal	Member
9.	Professor P. Venugopal	Member-Secretary
10.	Dean (Academic), AIIMS	Special Invitee
11.	Smt Bhavani Thyagarajan	Special Invitee

## HOSPITAL AFFAIRS COMMITTEE

- |                                     |                            |
|-------------------------------------|----------------------------|
| 1. Professor S.S. Agarwal           | Chairman                   |
| 2. Dr Akhilesh Das                  | Member (up to 30.5.2006)   |
| Shri R.K. Dhawan                    | Member (w.e.f. 21.6.2006)  |
| 3. Professor Karan Singh Yadav      | Member                     |
| 4. Dr R.K. Srivastava               | Member (w.e.f. 21.6.2006)  |
| 5. Shri P.K. Hota                   | Member (w.e.f. 1.11.2006)  |
| Shri Naresh Dayal                   | Member (w.e.f. 21.12.2006) |
| 6. Shri Sanjiv Misra                | Member (up to 3.7.2006)    |
| Shri Raghubir Singh                 | Member (w.e.f. 21.12.2006) |
| 7. Professor Nilima Arun Kshirsagar | Member                     |
| 8. Professor K.K. Talwar            | Member                     |
| 9. Dr Shyam Prasad                  | Member (w.e.f. 21.12.2006) |
| 10. Professor P. Venugopal          | Member-Secretary           |

## ESTATE COMMITTEE

- |                                   |                            |
|-----------------------------------|----------------------------|
| 1. Professor Vijay Kumar Malhotra | Chairman                   |
| 2. Professor Karan Singh Yadav    | Member                     |
| 3. Dr R.K. Srivastava             | Member (w.e.f. 21.6.2006)  |
| 4. Dr S.S. Agarwal                | Member                     |
| 5. Shri P.K. Hota                 | Member (up to 1.11.2006)   |
| Shri Naresh Dayal                 | Member (w.e.f. 21.12.2006) |
| 6. Professor Deepak Pental        | Member                     |
| 7. Shri Sanjiv Misra              | Member (up to 3.7.2006)    |
| Shri Raghubir Singh               | Member (w.e.f. 21.12.2006) |
| 8. Shri Sudeep Banerjee           | Member                     |
| 9. Professor P. Venugopal         | Member-Secretary           |

## ACADEMIC COMMITTEE

- |                                     |                               |
|-------------------------------------|-------------------------------|
| 1. Professor Nilima Arun Kshirsagar | Chairperson (w.e.f.21.6.2006) |
| 2. Professor R. Surendran           | Member                        |
| 3. Professor Kartar Singh           | Member                        |
| 4. Professor K.K. Talwar            | Member                        |
| 5. Professor Nilima Arun Kshirsagar | Member (up to 20.6.2006)      |
| Dr R.K. Srivastava                  | Member (w.e.f. 21.6.2006)     |

- |    |                           |                            |
|----|---------------------------|----------------------------|
| 6  | Professor A. Rajasekaran  | Member (up to 10.8.2006)   |
|    | Dr Shyam Prasad           | Member (w.e.f. 21.12.2006) |
| 7. | Professor B.P. Chatterjee | Member                     |
| 8. | Shri Sudeep Banerjee      | Member (w.e.f. 21.6.2006)  |
| 9  | Professor P. Venugopal    | Member-Secretary           |

### **SELECTION COMMITTEE**

- |     |                                  |                              |
|-----|----------------------------------|------------------------------|
| 1.  | Professor A. Rajasekaran         | Chairman (up to 10.8.2006)   |
|     | Professor R. Surendran           | Chairman (w.e.f. 21.12.2006) |
| 2.  | Dr Akhilesh Das                  | Member (up to 30.5.2006)     |
|     | Professor Karan Singh Yadav      | Member (w.e.f. 21.6.2006)    |
| 3.  | Dr R.K. Srivastava               | Member (w.e.f. 21.6.2006)    |
| 4.  | Professor K.K. Talwar            | Member                       |
| 5.  | Professor Kartar Singh           | Member                       |
| 6.  | Shri Sudeep Banerjee             | Member                       |
| 7.  | Professor Nilima Arun Kshirsagar | Member                       |
| 8.  | Professor R. Surendran           | Member (up to 20.12.2006)    |
| 9.  | Dr Shyam Prasad                  | Member (w.e.f. 21.12.2006)   |
| 10. | Professor P. Venugopal           | Member-Secretary             |

### 3. Academic Section

#### Acting Dean

Nikhil Tandon  
(up to 3.4.2006)

T.P. Singh  
(w.e.f. 10.4.2006 to 4.5.2006)

#### Dean

R.C. Deka  
(w.e.f. 4.5.2006)

#### Sub-Deans

Nikhil Tandon  
(up to 3.4.2006)

Neerja Bhatla  
(w.e.f. 3.4.2006 to 14.6.2006)

Sunil Chumber  
(w.e.f. 14.6.2006)

Sandeep Guleria  
(w.e.f. 2.11.2006)

#### Registrar

V.P. Gupta  
(up to 22.2.2007)

Sandeep Agarwala  
(w.e.f. 13.3.2007)

#### Administrative Officer

S.K. Vashist  
(w.e.f. 21.08.2006)

The Academic Section develops policies and plans and executes academic activities. It also administers intramural research projects. These activities encompass the undergraduate, postgraduate and doctoral programmes for medical, nursing and paramedical courses. These activities are conducted by the undergraduate, postgraduate and paramedical cells.

#### UNDERGRADUATE EDUCATION

The Section handles post-admission formalities for new students, develops and revises curricula and administers teaching programmes including internal assessment of undergraduate students. The include MB,BS, BSc (Hons) in paramedical courses such as Medical Technology in Radiography and Ophthalmic Techniques, and BSc Nursing (Post-certificate) and BSc (Hons) Nursing courses.

#### Bachelor of Medicine and Bachelor of Surgery (MB,BS)

The pattern of education at the undergraduate level was reviewed and implemented from July 2004 onwards. Duration of the MB,BS course continues to be 5½ years, including one year compulsory internship training. The training during this period is as follows:

One year: Pre-clinical training  
One-and-a-half years: Paraclinical training

Two years: Clinical training  
 One year: Rotating internship (compulsory)

Every year 50 students are admitted to the MB,BS course. Out of 50 seats, 5 seats are reserved for foreign nationals and the screening and admissions for these 5 seats is done on the recommendations of the Ministry of External Affairs, Government of India. For the remaining 45 seats (7 for Scheduled Caste, 4 for Scheduled Tribe and 34 general category candidates), students are selected on the basis of their performance in an All India Entrance Examination. Further, 3% seats are reserved for orthopaedic physically handicapped candidates on horizontal basis. During the year, there were 1,67,148 applicants, and 1,25,829 candidates appeared in the entrance examination for these 45 seats. The total number of undergraduate students as on 31 March 2007 was 256 including 49 interns.

*Merit scholarships* of Rs 750 per month and Rs 500 per month were awarded to 6 students who secured first and second in the 1st, 2nd and final MB,BS examination.

*Summer fellowships* were awarded to 6 students for research in selected areas. These students were given a stipend of Rs 500 per month. They worked under the supervision of a member of the faculty.

### **Paramedical and Nursing Education**

All activities pertaining to the admission and training of paramedical and nursing students are handled by this cell. A batch of 51 students was admitted for the BSc (Hons) Nursing in August 2006. The current student strength for the nursing and paramedical courses is as follows:

<b>Nursing courses</b>	<b>Number of students</b>
BSc Nursing (Post-certificate)	36
BSc (Hons) Nursing	202
<b>Paramedical courses</b>	
BSc (Hons) Ophthalmic Techniques	37
BSc (Hons) Medical Technology in Radiography	21

## **POSTGRADUATE EDUCATION**

The Academic Section looks after all the activities pertaining to admission, selection and training of postgraduate students including junior and senior residents. It also deals with all service matters relating to senior residents. It handles all activities of the PhD, DM, MCh, MD, MS, MDS, MHA, MSc and MBiotech courses in different disciplines.

The admission to all postgraduate courses is done by an All India Entrance Examination held twice a year. Foreign nationals are also admitted through an entrance examination. Postgraduate students from Nepal are admitted under a bilateral agreement between the Governments of India and Nepal.

A total of 393 students, including 23 state-sponsored and 10 foreign nationals, were

admitted to the above-mentioned courses during the year under review. The total number of postgraduate and doctoral students on 31 March 2007 was 945. The subject wise distribution of postgraduate students is given below.

A total of 250 postgraduate students MS/MS/MDS/DM/MCh/PhD/MSc/M. Biotech passed out during the year 2006–2007.

<b>PhD</b>	<b>General</b>	<b>Sponsored</b>
Anatomy	14	–
Biochemistry	38	–
Biophysics	17	–
Biostatistics	3	1
Biotechnology	15	–
Cardiology	3	–
Cardiac Biochemistry	2	–
Forensic Medicine	1	–
Gastroenterology	7	–
Haematology	9	–
CTVS	3	–
Laboratory Medicine	12	–
Medical Oncology	5	–
Medical Physics	2	–
Medicine	10	–
Microbiology	36	–
Neurology	8	–
Nuclear Magnetic Resonance	2	–
Nuclear Medicine	2	–
Otorhinolaryngology (ENT)	2	–
Ophthalmology		
Ocular Pharmacology	4	–
Ocular Microbiology	1	–
Community Ophthalmology	1	–
Ocular Pathology	1	–
Ocular Biochemistry	2	–
Paediatrics	7	–
Pathology	10	–
Centre for Community Medicine	1	–
Endocrinology	4	–
Paediatric Surgery	1	–
Neuro-Biochemistry	5	–
Pharmacology	11	–

Physiology	16	1
Psychiatry	4	–
Radiation Oncology	2	–
Reproductive Biology	4	–
Transplant Immunology and Immunogenetics	10	1
<b>TOTAL</b>	<b>278</b>	<b>3</b>

<b>DM</b>	<b>General</b>	<b>Sponsored</b>
Cardiac Anaesthesiology	6	3
Cardiology	16	3
Clinical Haematology	5	3
Endocrinology	8	3
Gastroenterology	10	2
Haemato-Pathology	3	2
Medical Oncology	8	3
Neonatology	4	3
Nephrology	7	4
Neuro-Anaesthesiology	5	2
Neurology	13	1
Neuroradiology	3	–
Paediatric Neurology	5	1
Clinical Pharmacology	1	–
<b>TOTAL</b>	<b>124</b>	<b>30</b>

<b>MCh</b>	<b>General</b>	<b>Sponsored</b>
Cardiothoracic and Vascular Surgery	16	–
Gastrointestinal Surgery	5	3
Neurosurgery	27	3
Paediatric Surgery	11	1
Urology	8	3
<b>TOTAL</b>	<b>77</b>	<b>10</b>

<b>MD</b>	<b>General</b>	<b>Sponsored</b>
Anaesthesiology	21	–
Anatomy	11	–
Biochemistry	7	–
Biophysics	7	–
Community Medicine	11	–
Dermatology and Venereology	9	2

Forensic Medicine	5	–
Hospital Administration	4	7
Laboratory Medicine	5	–
Medicine	34	3
Microbiology	6	–
Nuclear Medicine	6	1
Obstetrics and Gynaecology	24	–
Ophthalmology	65	–
Pediatrics	18	1
Pathology	14	1
Pharmacology	7	–
Physical Medicine and Rehabilitation	3	–
Physiology	8	–
Psychiatry	16	1
Radiodiagnosis	16	3
Radiotherapy	5	–
<b>MS</b>		
Orthopaedics	11	3
Otorhinolaryngology	9	–
Surgery	28	2
<b>MDS</b>		
Conservative Dentistry and Endodontics	6	–
Orthodontics	6	–
Prosthodontics	5	–
<b>TOTAL</b>	<b>391</b>	<b>24</b>
<b>MSc</b>		
	<b>General</b>	<b>Sponsored</b>
Anatomy	1	–
Biochemistry	3	1
Biophysics	1	–
Perfusion Technology	3	–
Biotechnology	18	2
Nuclear Medicine Technology	8	2
Pharmacology	5	–
Physiology	2	1
Urology Technology	–	–



**MSc Nursing**

Oncological Nursing	4	—
Cardiological/CTVS Nursing	4	—
Nephrological Nursing	4	—
Neurosciences Nursing	4	—
Paediatric Nursing	4	—
Psychiatric Nursing	4	—
Critical Care Nursing	3	2
<b>TOTAL</b>	<b>76</b>	<b>8</b>

*Salaries:* The present salary of residents, as recommended by the Fifth Pay Commission is:

Junior Residents	Rs 9400–9725–10050 plus allowances as per rules
Senior Residents	Rs 10940–11295–11050 plus allowances as per rules.

**SHORT AND LONG-TERM TRAINING PROGRAMMES**

The section handles activities regarding training programmes of short- and long-term duration for both medical and paramedical personnel. During the year, the Institute had 447 short- and 6 long-term trainees. In addition 26 WHO Fellows (Foreign Nationals) under the WHO fellowship programme and 48 foreign trainees and 32 WHO Fellows (Indian Nationals) for WHO-In-Country Fellowship training programme (2006–2007) were imparted training in various departments. The elective posting of foreign undergraduate medical students is also handled by the section. During the year, 75 foreign undergraduate medical students underwent elective training.

**COMMITTEE MEETINGS**

The Academic Section is responsible for arranging the meetings of the Academic committee, Staff Council, Faculty Meetings and Dean's Committee. The details of the meetings held during the year are as under:

Staff Council	1	09.01.2007
Dean's Committee	1	28.08.2006
Faculty Meetings	11	18.04.2006
		08.08.2006
		19.09.2006
		17.10.2006
		07.11.2006
		21.11.2006
		16.01.2007
		06.02.2007
		20.02.2007
		06.03.2007
		20.03.2007

**RESEARCH**

**Intramural research funds and its allocation are handled by the Section. The details of intramural research conducted during the year are given in Appendix I.**

1. The research grant allocated to faculty members ranges from Rs 25,000 to Rs 50,000 per annum depending on the research project.
2. Project review by specialty review groups—15 March.
3. Final recommendations of the Research Committee—31 March.
4. Allocation of funds—15 April.

## **ORATIONS**

The Academic Section organized the following Orations during 2006–2007.

<b>S. No.</b>	<b>Name of Oration</b>	<b>Name of Orator</b>	<b>Date of Oration, Time and Venue</b>
1.	Second Professor Kesho Ram Laumas Memorial Oration	Dr Chander P. Puri, Director, National Institute for Research in Reproductive Health, Indian Council of Medical Research, Jehangir Merwanji Street, Parel, Mumbai 400012	Monday, 6 November 2006 at 4.00 pm in LT-I, AIIMS
2.	Eighteenth AIIMS Silver Jubilee Oration	Dr Vinay Kumar, MB,BS, MD, FRCPATH, Alice Hogge and Arthur A. Baer Professor, Chairman, Department of Pathology, Vice-Dean of Biologic Sciences Division and Pritzker Medical School, University of Chicago	Thursday, 23 November 2006 at 4.00 pm in LT-I, AIIMS
3.	Seventeenth Sarveshwari Memorial Oration	Professor Arnold Menezes, Vice-Chairman, Department of Neurosurgery, University of IOWA, USA	Wednesday, 14 February 2007 at 4.00 pm in LT-I, AIIMS

**ACADEMIC SECTION-II**  
(Nursing and Paramedical Cell)

Statement of Institute Research Grant for the year 2006–2007

Sl. No.	Name, Designation	Department	Title	Amount	Duration
1.	Suman Bhasker, Assistant Professor	BRA IRCH	A study of acute radiation toxicity in patient of curable head and neck cancers undergoing radical versus postoperative radiotherapy	1,00,000	2 years
2.	Deepak Agrawal, Assistant Professor	Neurosurgery	Acute thalamic involvement in severe head injury : An autopsy study with histopathological correlation	60,000	3 years
3.	M. Vanathi, Assistant Professor	Ophthalmology, Dr. R.P. Centre	Topical application of new antifungal agent (micafungin) in the treatment of fungal corneal ulcers	60,000	2 years
4.	Ramesh Agarwal, Assistant Professor	Paediatrics	Correlation of cord serum retinol level in preterm very low birth weight infants with maternal serum retinol level at delivery	1,00,000	1 year
5.	Sushma, Assistant Professor	Surgery	Prospective study to evaluate the role of Helicobacter pylori in benign and malignant hepatobiliary disease	60,000	2 years
6.	Rachna Seth, Assistant Professor	Paediatrics	Assessment of psychosocial and neurocognitive outcomes in childhood leukemias	67,000	3 years
7.	Viveka P. Jyotsna, Assistant Professor	Endocrinology and Metabolism	Bone health in patients of hyperthyroid Graves disease in relation to : a) Duration of thyrotoxicosis b) Improvement after patient becomes euthyroid	45,000	2 years
8.	Ritu Gupta, Assistant Professor	Laboratory Oncology, BRA IRCH	Assessment of multi-drug resistance pattern in acute myeloid leukemia and response to therapy	90,000	2 years

9.	Minati Choudhury, Assistant Professor	Cardiac Anaesthesia C.T.C.	Imbalance between endothelin-I and plasma nitric oxide products influences the outcome in children suffering from severe pulmonary hypertension due to congenital heart disease	1,00,000	3 years
10.	Kalpana Luthra, Associate Professor	Biochemistry	HIV-1 resistance conferring polymorphisms in DC-SIGN in high-risk individuals: A pilot study	1,45,000	2 years
11.	Ramakrishnan, Assistant Professor	Cardiology	Evaluation of NT-pro-BNP levels in the differentiation of constrictive pericarditis from restrictive cardiomyopathy	55,000	2 years
12.	Binod K. Khaitan, Associate Professor	Dermatology and Venereology	A descriptive study to define the specific clinical features of segmental vitiligo as compared to non-segmental vitiligo and to study the relevance of co-existent organ specific (TPO) and non-organ specific (ANA) autoimmunity in these patients	95,000	1 year
13.	R. Goswami, Associate Professor	Endocrinology and Metabolism	Calcium sensing receptor gene sequence analysis in patients with sporadic idiopathic hypoparathyroidism in India	98,000	1 years
14.	Govind K. Makharia, Assistant Professor	Gastroenterology	Screening of patients with functional bowel disease, short stature, metabolic bone disease, amenorrhea and infertility for celiac disease	47,000	2 years
15.	Neeti Makhija, Associate Professor	Cardiac Anaesthesia	Role of coenzyme Q 10 and alpha lipoic acid in attenuating the oxidative stress & systemic inflammatory response in patients undergoing coronary artery bypass graft surgery	1,00,000	3 years
16.	Sanjay Kumar Sood, Assistant Professor	Physiology	Neural correlates of conflict : An event related functional magnetic resonance imaging study	80,000	2 years

17.	Vandana Jain, Assistant Professor	Paediatrics	Vitamin D status of exclusively breastfed term healthy infants at a mean age of 3 months and its correlation with maternal vitamin D status	1,00,00	1 year
18.	Rajeev Kumar, Assistant Professor	Urology	Homocysteine : A marker of male infertility	1,00,000	2 years
19.	Anant Mohan, Assistant Professor	Medicine	Effect of feeding pectin on blood glucose level and antioxidant enzyme status in type 2 diabetes (NIDDM)	1,00,000	2 years
20.	Virinder Kumar Bansal, Assistant Professor	Surgery	Prospective case-control study to evaluate the role of Glutathione S transferases (GSTT 1 and GSTM 1) gene deletion in breast carcinoma and its prognostic significance	20,000	1 year
21.	Raj Kumar Yadav, Assistant Professor	Physiology	Autonomic status and leptin levels in serum and peritoneal fluid of patients with pelvic endometriosis (EM)	1,00,000	1 year
22.	Sandeep Seth, Associate Professor	Cardiology	Screening for preclinical hypertrophic cardiomyopathy (HCM) by tissue Doppler imaging	30,000	3 years
23.	Anjana Talwar, Assistant Professor	Physiology	The effect of smoking on stress-induced changes in cognitive functions	1,00,000	2 years
24.	J.P.K. Katyal, Assistant Professor	Pharmacology	Pharmacokinetics interaction between thalidomide and dexamethasone in patients with multiple myeloma	41,200	1 year
25.	Ashutosh Halder, Assistant Professor	Reproductive Biology	An investigation on chromosome mosaicism and aneuploidy on preimplantation embryos	60,000	1 year
26.	Anushree Gupta, Assistant Professor	Biotechnology	Modulation of endothelin-1 in coronary artery bypass grafting patients imparted with pre-operative relaxation therapy	1,00,000	1 year

27.	Sarma Singh Additional Professor	Laboratory Medicine	To study the immunogenic effect of kinesin motor domain gene against visceral	1,00,000	2 years
28.	Surender Singh, Assistant Professor	Pharmacology	Evaluation of anti- inflammatory activity of plant lipids containing-linolenic acid	1,05,000	1 year
29.	Tanuj Dada, Associate Professor	Ophthalmology Dr. R.P. Centre	Mutation spectrum of the CYP11B1 gene in North Indian primary congenital glaucoma patients	1,00,000	3 years
30.	Rima Dada, Associate Professor	Anatomy	Mutation in the oxidative phosphorylation (oxphos) pathway and spermatogenic arrest in infertile males	1,25,000	2 years
31.	Madhuri Behari, Head	Neurology	Effect of dehydroepiandrosterone sulfate (DHEA-S) on EEG of the cortex and striatum after dopaminergic priming in the 6-OHDA rat model of Parkinson disease	55,000	2 years
32.	Venkateswaran K. Iyer, Associate Professor	Pathology	Evaluation of chromosome 1 p and 11p deletions in hepatoblastoma and hepatocellular carcinoma	1,25,000	3 years
33.	Kh Reeta, Assistant Professor	Pharmacology	Evaluation of the effect of curcumin on phenytoin induced cognitive impairment and oxidative stress in rats	1,06,000	1 year
34.	Taposh K. Das, Associate Professor	Anatomy	Ultrastructural localization of proteins modified by fluoride- induced lipid peroxidation. and to study the preventive role of dietary antioxidants	1,00,000	1 year
35.	Radhika Tandon, Professor	Ophthalmology Dr. R.P. Centre	Culture of human retinal pigment epithelial (hRPE) cells on human amniotic membrane (hAM)	40,000	2 years
36.	Suman Jain, Assistant Professor	Physiology	Histochemical investigations into the possible neural substrates responsible for sucrose-induced pain modulation	1,00,000	1 year

37.	Sandeep Mathur, Assistant Professor	Pathology	Utility of immunocyto-chemistry using antibodies t calretinin and Ber-EP4 in distinguishing reactive mesothelial cell proliferation form metastatic adenocarcinoma	65,000	1 year
38.	D.S. Arya Assistant Professor	Pharmacology	Pharmacological studies on thalidomide in ischaemia reperfusion model of myocardial infarction in rats	50,000	1 year
39.	Vijay L. Kumar, Professor	Pharmacology	Studies on the effect of latex of calotropis procera against renal complications in diabetes	30,000	1 year
40.	Arundhati Sharma, Associate Professor of Genetics	Anatomy	Mutation analysis of the 5q31-linked autosomal dominant corneal dystrophies in the North Indian patients	80,000	1 year
41.	Ratna Sharma, Associate Professor	Physiolog	The effect of stress-induced changes in theta and alpha bands during memory retrieval	1,00,000	2 years
42.	N.C. Chandra, Assistant Professor	Biochemistry	To study the role of insulin, oestradiol and epidermal growth factor on the transcriptional regulation of LDL-receptor (LDLR)	1,00,000	1 year
43.	T.C. Nag. Assistant Professor	Anatomy	Localization of markers of oxidative phosphorylation in the ageing human photoceptors: An immunohistochemical study	50,000	1 year
44.	Neena Malhotra, Associate Professor	Obstetrics and Gynaecology	Level of angiogenics cytotaines (Interleukin II-8 and leptin) in peritoneal fluid of Indian women with endometriosis	60,000	1 year
45.	Immaculata Xess, Associate Professor	Microbiology	Rapid detection technique in candidemia in critically ill patients and its therapeutic out come	80,000	1 year
46.	Sameer Bakhshi, Associate Professor	Pediatic Oncology IRCH	Study of her2-neu and p-53 expression in ostoeosarcoma by immunohistochemical methods	1,00,000	1 year

47.	S.B. Ray, Additional Professor	Anatomy	Role of cyclic AMP response element-binding (CREB) protein expression in the spinal cord of rat in nimodipine induced potentiation of morphine analgesia : An immunohistochemical study	99,600	2 years
48.	Seema Tyagi, Associate Professor	Haematology	Molecular cytogenetics in myelodysplastic syndromes and acute myeloid leukemia: Diagnosis and prognostic significance	53,000	1 year
49.	Rohit Saxena, Assistant Professor	Ophthalmology Dr. R.P. Centre	Evaluation of various parameters for early detection of ethambutol induced optic neuropathy and correlating them with serum levels of ethambutol	46,150	1 year
50.	K. Anand, Assistant Professor	Community Medicine	School-based healthy lifestyle programme in Ballabgarh town	1,00,000	10 months
51.	Y.S. Kusuma, Assistant Professor	Community Medicine	Social and cultural dimensions of hypertension in neo-and settled migrants in Delhi: A preliminary study	97,000	1 year
52.	Sanjeev Kumar Gupta Professor	Community Medicine	Rapid assessment of prevalence of hypertension and diabetes mellitus and their risk factors in rural Ballabgarh	1,00,000	1 year
53.	Vinay Goyal, Associate Professor	Neurology	To study the bone mineral status and prevalence of osteoporosis and osteomalacia in patients taking valproic acid monotherapy	50,000	1 year
54.	P.K. Chaturvedi, Assistant Professor	Reproductive Biology	Effect of cryo-freezing on human spermatozoa Sperm functions and ultrastructure study	50,0000	2 years
55.	Lakshmy Ramakrishnan, Associate Professor	Cardiac Biochemistry	Development of long-acting penicilins for rheumatic fever prophylaxis: Preliminary evaluation of the current 3 weekly schedule in	50,000	1 year



56.	T. Velpandian, Assistant Professor	Ocular Pharmacology Dr. R.P. Centre	terms of disease control  Evaluation of the role of retinal P-glycoprotein drug transporters in the ocular disposition of drugs	48,000	2 years
57.	Jasbir Kaur, Assistant Professor	Ocular. Biochemistry Dr. R. P. Centre	Expression of p53 and mdm2 in human malignant eyelid tumours	50,000	2 years
58.	Manju Aron, Assistant Professor	Pathology	Diagnostic utility of Hep Parl pCEA and CD34 in differentiating non-neoplastic and metastatic liver lesions from primary hepatocellular carcinoma in fine needle aspiration samples	50,000	3 years
59.	Jagriti Bhatia, Assistant Professor	Pharmacology	Evaluation of terminalia arjuna as a potential 'prophylactic antihypertensive'	70,000	1 year
60.	Pankaj Hari, Assistant Professor	Paediatrics	Serum, cystatin C assay for the detection of early renal insufficiency in malnourished children with chronic kidney disease	10,000	2 years
61.	Poonam Malhotra Kapoor, Assistant Professor	Cardiac Anaesthesia C.N.C.	Audit of early goal directed therapy in patients undergoing cardiac surgery	1,25,000	2 years

Total funds available : Rs 50,00,000  
Total allocated : Rs 47,22,950

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Balance : Rs 2,77,050

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## 4. Examination Section

### **Dean (Exams)**

T.P. Singh (01.04.2006 to 31.08.2006)  
T.D. Dogra (01.09.2006 to 31.03.2007)

### **Professor-in-charge (Exams)**

K.K. Deepak

### **Sub-Dean (Exams)**

K.K. Deepak (01.04.2006 to 11.09.2006)  
A.K. Dinda (12.09.2006 to 31.03.2007)

### ***Assistant Controller of Exams***

Rajesh Bharadwaj (01.04.2006 to 03.07.2006)  
K.M. Gupta (officiating) (04.07.2006 to 30.09.2006)  
R.K. Dabral (officiating) (01.10.2006 to 31.03.2007)

### ***Administrative Officer***

K.M. Gupta (01.04.2006 to 30.09.2006)  
R.K. Dabral (23.08.2006 to 31.03.2007)

### ***Accounts Officer***

N.K. Bajaj

During the period under review (2006–2007), the Examination Section conducted the following Professional and Entrance Examinations.

### **POSTGRADUATE AND UNDERGRADUATE EXAMINATIONS**

Details of various undergraduate and postgraduate professional examinations conducted by AIIMS from 1.4.2006 to 31.3.2007.

S. No.	Month and Year	Examination	Number of students			
			Appeared	Absent	Passed	Failed
1	<b>MAY 2006</b>	Final Postgraduate/Post-doctoral	110	1	105	5
2	-do-	MSc (Nursing) Phase I	15	–	14	1
3	-do-	MSc (Nursing) Phase II	13	–	13	–
4	-do-	Final MB,BS (Supplementary)	5	–	2	3
5	-do-	Second MB,BS (Supplementary)	8	1	5	2
6	-do-	BSc Nursing (Post-certificate), Phase I	16	–	12	4
7	-do-	BSc Nursing (Post-certificate), Phase II (new scheme)	17	–	16	1
8	-do-	BSc (Hons) Nursing, Phase I	51	–	50	1
9	-do-	BSc (Hons) Nursing, Phase II	50	–	50	–
10	-do-	BSc (Hons) Nursing, Phase III	50	–	49	1
11	-do-	BSc (Hons) Nursing, Phase IV	41	–	40	1

S. No.	Month and Year	Examination	Number of students			
			Appeared	Absent	Passed	Failed
		<b>C.F.</b>	<b>376</b>	<b>2</b>	<b>356</b>	<b>19</b>
		<b>B.F.</b>	<b>376</b>	<b>2</b>	<b>356</b>	<b>19</b>
12	<b>JULY 2006</b>	First Professional MB,BS	56	–	53	3
13	-do-	BSc (Hons) Ophthalmic Techniques, Phase I	12	2	6	4
14	-do-	BSc (Hons) Ophthalmic Techniques, Phase II	10	–	4	6
15	-do-	BSc (Hons) Ophthalmic Techniques, Phase III	8	–	7	1
16	-do-	BSc (Hons) Medical Technology in Radiography, Phase I	7	–	5	2
17	-do-	BSc (Hons) Medical Technology in Radiography, Phase II	5	–	5	–
18	-do-	BSc (Hons) Medical Technology in Radiography, Phase III	3	–	3	–
19	<b>AUG 2006</b>	First MB,BS Professional (Supplementary)	3	–	3	–
20	<b>NOV 2006</b>	BSc (Hons) Ophthalmic Techniques, Phase I (Supplementary)	4	–	3	1
21	-do-	BSc (Hons) Ophthalmic Techniques, Phase II (Supplementary)	6	–	6	–
22	-do-	BSc (Hons) Ophthalmic Techniques, Phase III (Supplementary)	1	–	1	–
23	-do-	BSc (Hons) Medical Techniques in Radiography Phase I (Supplementary)	1	–	1	–
24	<b>DEC 2006</b>	Final Postgraduate/Post-doctoral	114	–	107	7
25	-do-	MSc (Nursing), Phase I (Supplementary)	1	–	1	–
26	-do-	Final MB,BS	53	1	45	7
27	-do-	Second MB,BS	47	–	40	7
28	-do-	BSc Nursing (Post-certificate), Phase I (Supplementary)	4	–	4	–
29	-do-	BSc Nursing (Post-certificate), Phase II	1	–	–	1

S. No.	Month and Year	Examination	Number of students			
			Appeared	Absent	Passed	Failed
30	-do-	(Supplementary) BSc (Hons) Nursing, Phase I (Supplementary)	1	–	1	–
31	-do-	BSc (Hons) Nursing, Phase II (Supplementary)	1	–	–	1
32	-do-	BSc (Hons) Nursing, Phase III (Supplementary)	4	–	4	–
33	-do-	BSc (Hons) Nursing, Phase IV (Supplementary)	5	–	5	–
34	<b>JAN 2007</b>	First MB,BS (Re-examination for failed students)	6	1	1	5
35	<b>FEB 2007</b>	First MB,BS (Compartmental examination)	2	–	2	–
<b>Grand Total</b>			<b>731</b>	<b>6</b>	<b>663</b>	<b>64</b>

### Entrance Examinations for Undergraduate and Postgraduate courses

S. No.	Courses	Date of Examination	Number of students	
			Applied	Appeared
1.	MD/MS/MDS (AIIMS) July Session 2006	7 May 2006	15,596	8,234
2.	DM/MCh/MHA July Session 2006	21 May 2006	1,496	1,063
3.	MB,BS (AIIMS) August Session 2006	1 June 2006	75,702	51,231
4.	BSc (Hons) Nursing 2006	18 June 2006	1,926	1,283
5.	BSc Nursing (Post-certificate) 2006	14 June 2006	69	45
6.	BSc (Hons) Paramedical Courses 2006	7 June 2006	753	583
7.	MSc Courses 2006	8 July 2006	253	146
8.	MSc Nursing 2006	1 July 2006	304	229
9.	MBiotechnology Entrance Examination 2006	22 July 2006	847	423
10.	PhD July Session 2006	15 July 2006	469	270
11.	Senior Residents Entrance Examination July 2006 Session	17 June 2006	503	338
12.	MD/MS/MCh (6 years)/MDS (AIIMS) Jan. Session 2007	12 Nov 2006	18,057	15,800
13.	Senior Residents Entrance Examination Jan. 2007 Session	23 Dec. 2006	614	397
14.	DM/MCh/MHA January Session 2007	17 Dec. 2006	1,682	1,226
15.	All India PG Entrance Exam: MD/MS/Diploma/MDS	14 Jan. 2007	48,458	44,330
16.	PhD January Session 2007	20 Jan. 2007	419	231
<b>TOTAL</b>			<b>1,67,148</b>	<b>1,25,829</b>

### Examination for recruitment

1.	Sister Grade II	24 Sept. 2006	9,563	6,220
2.	JE (Civil/ Electrical/ A/c & Refrigeration)	26 Nov. 2006	1,025	460
3.	Jr Accounts Officer	29 April 2006	107	70
<b>TOTAL</b>			<b>10,695</b>	<b>6,750</b>

### Details of entrance examination

Number of entrance exams conducted: 16  
Number of applicants: 1,67,148 (One lakh sixty-seven thousand one hundred forty-eight)  
Number of candidates appeared: 1,25,829 (One lakh twenty-five thousand eight hundred twenty-nine)  
Candidates Passed in PhD Viva-Voce

## **SIGNIFICANT EVENTS**

The MBIotechnology entrance examination has now been separated from other MSc courses with effect from August 2006 session, in order to facilitate the candidate to apply for other MSc courses as well as for MBIotechnology. The Examination Section has also been conducting the BSc (Speech and Hearing) Entrance Examination of All India Institute of Speech and Hearing, Mysore since 2004. The examination for the year 2006 was held on 3 June 2006.

As a further step towards introduction of more checks and balances, so as to maintain complete confidentiality and integrity of the examination system, question papers for outstation centres are now kept in the safe custody of Sate Bank of India branches. In order to avoid any case of impersonation, all candidates are digitally photographed and thumb impressions obtained during the entrance examination. In addition to this, physical frisking has also been started from the year 2006.

Examination section is also providing technical expertise to various universities and institutions in India and abroad for conducting their entrance examinations.

In All-India PG entrance examination, each candidate was provided a pen to write. This was done to prevent use of any electronic feature inbuilt in the pen carried by them.

Frisking of every candidate on main entrance of the examination centre has been introduced to prevent the usage of electronic gadgets during the examination.

Photography (Snapshot) is being done in cases of doubtful identity of a candidate during the course of the examination.

Cash transaction has been minimized by sending 90%–95% amount through Demand Draft/Bankers cheque in advance to the designated exam centres.

### **Important entrance examinations conducted**

1. All-India PG entrance examination for admission to MD/MS/Diploma/MDS courses against 50% open merit seats quota was held in 103 centres (local 20, outstation 83) in 15 cities of India on 14 January 2007. The results were declared on 15 February 2007.
2. The AIIMS PG entrance examination for admission to the MD/MS/MDS courses for the session starting from July 2006 was conducted in Delhi at 36 centres on 7 May 2006 and 12 November 2006 for January 2007 session at 37 centres. The results were declared on 17 May 2006 and 18 November 2006, respectively.
3. Selections for various Post-doctoral (super-specialty) courses viz. DM/MCh and Masters in Hospital Administration for July 2006 and January 2007 sessions were made on the basis of a three-stage performance evaluation carried out from 21 May 2006 to 26 May 2006 and 17 December 2006 to 22 December 2006, respectively.
4. The Institute also conducted the entrance examination for the post of Senior Residents/ Demonstrators on 17 June 2006 and 23 December 2006. All the candidates who had scored 50% or above marks in the written examination were called merit wise for the departmental assessment, which was held on 21 and 22 June 2006 and 27 and 28

December 2006, respectively. Selection for the post of Senior Residents/Demonstrators is held twice in a year in the months of June and December.

5. Selections of candidates for registration to the PhD programme for July 2006 and January 2007 sessions were held from 15 to 20 July 2006 and 20 to 25 January 2007. The results were declared on 23 July 2006 and 21 January 2007, respectively.
6. The entrance examination for admission to the MB,BS course of AIIMS for August 2006 session was held in 155 centres (local 82, outstation 73) in 10 cities of India on 1 June 2006.
7. The entrance examination for admission to the BSc (Hons) Nursing course was held in Delhi and Thiruvananthapuram on 18 June 2006.
8. The entrance examination for admission to the MSc/MBiotechnology courses for the August 2006 session was held in Delhi on 8 July 2006 and 22 July 2006, respectively.
9. The entrance examination for admission to the MSc Nursing course was introduced from the year 2005. This examination was held on 1 July 2006 in Delhi only. Admission was made by allotment of seats on merit basis through counselling held on 19 July 2006 and 25 July 2006.
10. The entrance examination for admission to the BSc Nursing (Post-certificate) course was held in Delhi on 14 June 2006, followed by the personal assessment of candidates on 16 June 2006.
11. The entrance examination for admission to Paramedical courses—BSc (Hons) Ophthalmic Techniques and BSc (Hons) Medical Technology in Radiography for the August 2006 session was held in Delhi at two centres on 07 June 2006. Admissions to these two courses were made by allotment of seats on merit basis through counselling held on 17 July 2006 and 27 July 2006, respectively.
12. The examination section has also conducted the written/skill test for recruitment to the following posts at the institute:
  - i) Written test for the post of Statistical Assistant at AIIMS on 8 April 2006.
  - ii) On the direction of Hon'ble Supreme Court of India, MDS Merit Assessment Test of K.M. Shah Dental College and Hospital, Vadodara, Gujarat, was held on 13 September 2006.
  - iii) Written test for recruitment to the post of Sister Grade-II at AIIMS was held on 24 September 2006 at 15 centres in Delhi. The interviews were held on 11 November 2006 and 12 November 2006 (two days).
  - iv) Skill test for the post of Stenographer was conducted on 14 and 15 October 2006.
  - v) Interviews for the post of Lab Technician were conducted by the Examination Section on 18 November 2006 and 19 November 2006.
  - vi) The written test for the post of Junior Engineers was conducted on 26 November 2006. The interviews for the post of Junior Engineers were held on 17 January 2007.
  - vii) Skill test for departmental candidates for the post of LDC was conducted on 24 March 2007.

viii) Written test for the post of Medical Social Service Officer (MSSO) Grade-II at AIIMS was conducted on 25 March 2007.

***Participation in other events***

1. The Examination Section actively participates in the counselling for admission to the AIIMS Postgraduate, BSc (Hons) Paramedical, MSc (Nursing) courses and interviews for the BSc (Nursing) Post-certificate course.
2. Professor-in-charge (Exam) has been co-ordinating the evaluation of PG students thesis from B.P. Koirala Institute of Health Sciences, Dharan, Nepal.
3. The institute is also providing assistance in conducting the Entrance Examination for admission to BSc (Hons) Speech and Hearing course of All India Institute of Speech and Hearing, Mysore since the year 2004. This year the examination was conducted on 3 June 2006.

## 5. General Administration

### Deputy Director (Administration)

Debashish Panda, IAS

### Chief Administrative Officer

Attar Singh

### Senior Administrative Officers

Prem Ballabh	R.D. Pandey (up to 28.09.2006)	K.M. Gupta (up to 30.09.2006)
B.S. Sharma (w.e.f. 15.12.2006 A/N)		

### Administrative Officers

K.C. Choker	E.L. Lakra	S.K. Vashisht
Sanjay Kumar (up to 3.10.2006)	Sanjay Kumar	Kundan Kumar
K.K. Vaid	Ajay Kumar	R.K. Dabral (w.e.f. 1.06.2006)
S. Rangabashiam (w.e.f. 1.06.2006)	S.K. Mishra (w.e.f. 20.12.2006)	

### Administrative Officer (General) and Estate Manager

K.K. Vaid

### Deputy Chief Security Officer

Rajiv Lochan

### Store Officers

R.L. Prasad (under suspension)	S.S. Bhaduria
K.D. Sharma	Pradeep Kumar Gupta

## ENGINEERING SERVICES DEPARTMENT

### Superintending Engineer

Rajesh Kumar (up to 28.02.2007)

### Executive Engineers

S. Bhasker (Civil-I)	M. Rastogi (Civil-II)	Sanjay Ram (Electrical)
B.S. Anand (Airconditioning)		

The General Administration, including personnel and establishment, security, estate, matters related to Engineering Services Department, stores, vigilance and public relations activities of AIIMS are controlled and supervised by the Deputy Director (Administration). There are various branches looking after the above-mentioned areas. Each branch is headed by a senior



officer with supportive officers and staff members. A brief description of the activities of these branches is given below.

All matters relating to Establishment Section and General Administration including appointment of staff, arranging meetings of statutory committees, management of estate and property, purchase of equipments, materials and consumables, security arrangements, employees' welfare are looked after by the administration.

The total sanctioned staff of AIIMS is 8653, including the main hospital, all the centres and administration. These include the following:

S. No.	Category/group	Sanctioned strength	In position staff
1.	Faculty	585	469
2.	Group 'A'	300	188
3.	Group 'B'	696	567
4.	Group 'C'	5,200	4,323
5.	Group 'D'	1,872	1,538
	<b>Total</b>	<b>8,653</b>	<b>7,085</b>

**The following major works were undertaken during the year.**

**Construction of Jai Prakash Narayan Apex Trauma Centre at AIIMS**

An ultramodern trauma centre of 186 beds capacity has been completed. The facility has been made operational partially w.e.f. November 2006. Presently the casualty with 30 triage beds are functional. Two wards having 60 beds are operational. The diagnostic wing of the Centre housing CT Scan, MRI, Ultrasound, Digital X-Ray, etc. have been made operational. Two state of art operation theatres are also in use. The balance facilities and wards are being put to use in phased a manner.

**Developing additional Private wards (57)**

A total of 57 deluxe suites have been added in the last year. This have been made functional. Thus presently 117 additional private ward rooms are augmenting the existing 63 private ward rooms in the main hospital.

**Additional tower for the C.N. Centre**

The ambitious project of C.N. Tower housing 63 private wards has been completed **and put** to use thus making way for creation of additional bed capacity in the Centre. Also, the rooms earlier used for private wards in the existing C.N. Centre buildings have been vacated and the same are being put to use for alternate patient care facilities. Four new operation theatres have been completed and are in the process of being commissioned.

#### Construction of the Centre for Dental Education and Research

The 80 dental chaired centre is on the verge of completion and is expected to be commissioned by June 2007.

#### Covering of *nallah* on the east side of Ansari Nagar

The covering work of the 600 metre out of the total 1.218 km stretch of *nallah* is almost complete. The same is expected to be put to use by end of June 2007. This would provide an additional entry access to the Ansari Nagar Campus, thus leading to decongestion of the existing entry points.

#### Construction of the Surgical Block at AIIMS

The detailed project report of the said centre has been prepared by the consultant. The proposal for the approval of EFC has been sent to the Ministry for accord of sanction. The drawings and plans for the proposed centre have already been finalised. Work would be taken up further on receipt of the approval of the EFC.

#### Installation of 9 additional lifts in the OPD and wards

CPWD has already engaged a consultant for the said work and submission drawings have been prepared and submitted to NDMC for approval. Tender inviting procedure has already been initiated by the CPWD.

#### Developing IVF facility at AIIMS

The engineering works pertaining to the said facility have been completed.

#### Airconditioning of OPD

The main OPD wing of the hospital except for the ground floor and physiotherapy wing, has been provided with central airconditioning in the current year, thus providing relief to the visiting patients and their attendants from the excessive heat and humidity in the crowded consultation rooms and the waiting areas/corridors.

#### Renovation of Ward/OPD

The OPD of gynecology has been renovated with optimum utilization of space available for care. The same has now been decongested and made aesthetically and clinically more patient friendly. The AB-3, D-7, D-2 (half), AB-8 (recovery area) wards have been remodeled and renovated, in the current year. The work of renovation of C-7 ward is also on verge of completion.

#### Commissioning of New Mortuary/Forensic department

A new state of art Mortuary building has been commissioned and put to use in the current year. Also the Department of Forensic Sciences and Toxicology have been shifted in the new building with enhanced spaces, facilities for museum, conference room, lecture room, laboratories, etc.

## 5.1 Office of Liaison Officer

### Liaison Officer

Prof. J.S. Titiyal

### Principal Private Secretary

Mr. Tej Bir Singh

**SC/ST Cell, AIIMS**

### Office Superintendent

Mr. Prakash Singh

**UDC**

Mr. Harish Ahuja

**SC/ST Students Cell (Academic Section)**

### Office Superintendent

Mr. Somdutt

**UDC**

Mr. Narottam Anand

Mr. Suresh Kumar

**Dr. J.S. Titiyal, Professor** of Ophthalmology took over as Liaison Officer, AIIMS as per order of Director, AIIMS in October, 2005.

### Office of Liaison Officer

The AIIMS administration introduced a separate SC/ST cell working under the administrative control of Liaison Officer in administrative block of AIIMS for the welfare of SC/ST employees. First Liaison Officer Mr. S.R. Chakravorty, F&CAO was appointed by the Director, AIIMS in 1981 and till 2003, grievances of SC/ST employees was being looked after in the establishment section itself.

Main aim to appoint a Liaison Officer is to look after the grievances of SC/ST candidates in their service matters and to ascertain that vacant reserved posts for SC/ST candidates in various category group the A,B,C & D are filled and proper reservation is identified in newly created posts as per reservation roster decided by Govt. of India in promotion through DPC and in open competitive examinations.

Prof. Sukhadeo Thorat, Chairman, UGC and Chairman of a committee to look into the complaints from Member of Parliament, media reports and other representations on the

alleged harassment to SC/ST students in AIIMS visited on 8<sup>th</sup> December, 2006. It was apprised of the reasons of resentment amongst the reserved students.

### **SC/ST student cell in Academic Section**

As per suggestions of Mr. K.M. Shyam Prasad, one SC/ST cell has also been formed in March, 2007 in the academic section to look after the grievances of Undergraduate and Post-graduate students.

### **Departmental Promotion Committee**

All files of group A,B,C & D category (except faculty posts) pertains to DPC or posts for advertisement for direct recruitment are examined by the Liaison Officer prior to holding of DPC meeting. The Liaison Officer is also appointed as one of the members of the selection committee in DPCs as a representative of SC/ST category in the selection committee meetings are held.

### **Grievances**

During the year 2006-2007 ( 1<sup>st</sup> April, 2006 – 31<sup>st</sup> March 2007) various representations were received from the candidates of SC/ST category regarding their departmental promotion, anomaly in fixing their seniority at appropriate place in the cadre for the purpose of promotion and appointment on compassionate grounds of deceased employee dependants. Most of the cases were discussed with the Senior Administrative Officer(Rectt.), Chief Admn. Officer and Deputy Director (Admn.) to solve the problems of the employees.

## 6. Hospital

### Medical Superintendent

D.K. Sharma

### Additional Professor

Siddhartha Satpathy (Department of Hospital Administration)

### Associate Professors

I.B. Singh (Department of Hospital Administration)

Sanjay Arya (Department of Hospital Administration)

### GENERAL INFORMATION

<b>Total number of beds</b>	<b>1,428</b>
Main Hospital and private wards	1,043
Bassinets	25
CNC	360

### HOSPITAL PERFORMANCE INDICES

Item	Current year	Past year	Comments
Average length of stay (days)	4.8	5.4	Indicates effective utilization of beds
Average bed occupancy rate (%)	77.4	82.4	Indicates fair occupancy
Net death rate (%)	2.5	3.0	Indicates low mortality rate despite the fact that a large number of critically ill patients are admitted to the hospital
Combined crude infection rate	7.63	8.48	

Please *see* Appendix I and II for details

## 6.1 Medical Records Services (Hospital)

**Chief Medical Record Officer**  
and  
**Sub-Registrar, Births and Deaths**

N.K. Sharma

### **Education and Training**

Shri G.V. Vishnu Kumar, Statistical Assistant was deputed for one week for training in coding of Indoor Cases and Deaths on the basis of ICD-10 volume of WHO under guidance of Shri N.K. Sharma.

Shri Ashish Kumar, MRT, Ms Rekha Kaushal, DEO, Grade A and Ms Pooja Pandey, LDC had attended Training by NDMC for on-line Registration of Birth and Death Records.

During the year, a group of 15 doctors of Border Security Force and a group of students of the Medical Records Degree and Diploma from St. Stephens Hospital, New Delhi visited the Medical Records Section.

### **Meetings**

Three Casualty Death Review Committee meetings were held in the year 2006–07.

### **Court attendance**

A total of 1894 summons (average 6 summons per day) were attended to by the Medical Records Personnel in Delhi and outside Delhi.

### **Computerization of Medical Records**

Computerization of medical records is in full swing. During the first phase, Central Admission Office and Hospital Enquiry will be computerized and in the second phase, Medical Records Section (Hospital) will be computerized.

### **Inpatient Services**

The hospital has maintained its tradition of services and quality of patient care, in spite of ever increasing number of patients that come to this hospital from all over the country as well as from abroad. A total of 79,171 patients were admitted during the year in the various

clinical units of the Main Hospital and CNC. The department-wise, state-wise and gender-wise admissions are given in Appendix III and IV. Number of surgical procedures performed during the year in different surgical disciplines is given in Appendix V.

Records are systematically classified and categorized for easy retrieval. All in-patient records of the C.N. Centre are maintained by the Medical Records Section of the Main Hospital.

#### **Central Admission Office and Hospital Enquiry**

Medical records of patients admitted to the hospital are initiated from the Central Admission Office which also functions as an Enquiry counter. All types of enquiries regarding patients, departments, doctors and centres are provided from this office.

This office functions round the clock, i.e. 365 days  $\times$  24 hours. Therefore, the staff works in shifts. This office is manned by the Junior Reception Officer, Receptionist, Medical Records Technicians and other ministerial and hospital staff.

#### **Outpatient department and specialty clinics**

A total of 15,25,410 patients attended the general outpatient department and specialty clinics of the main hospital. The details of the outpatient load profile are given in Appendix VI.

## APPENDIX I

### Yearly Statistical Health Bulletin (2006–2007)

		<b>Main Hospital</b>	<b>CNC</b>	<b>Total</b>
1	Total patient admitted	61,318	17,853	79,171
	a. Adults and children	59,468	—	—
	b. Newborn infants	1,850	—	—
2	Total number of patients discharged	55,568	14,401	69,969
	a. Adult and children	54,072	—	—
	b. Newborn infants	1,496	—	—
3	Total days of care	265,165	86,113	351,278
	a. Adult and children	255,532	—	—
	b. Newborn infants	9,633	—	—
4	Average length of stay (ALS)	4.8	6.0	5.0
	a. Adults and children	4.7	—	—
	b. Newborn infants	6.4	—	—
5	Total number of patient care days in hospital (as per daily census)	289,124	109,092	398,216
	a. Adults and children	283,912	—	—
	b. Newborn infants	5,212	—	—
6	Daily average number of patients	792	299	1,091
	a. Adults and children	778	—	1,077
	b. Newborn infants	14	—	14
7	Average bed occupancy (%)	75.5	83.1	77.4
	a. Adults and children	76.0	—	—
	b. Newborn infants	56.0	—	—
8	Births in hospital	1,850	—	1,850
	a. Male babies	985	—	985
	b. Female babies	864	—	864
	c. Intersex	1	—	1
9	Total deaths (including newborns)	1,969	1,047	3,016
	a. Death under 48 hours	621	268	889
	b. Death over 48 hours	1,348	779	2,127
	c. Gross death rate (%)	3.5	7.3	4.3
	d. Net death rate (%)	2.5	5.5	3.1



## APPENDIX II

S. No.	Departments/Sections	Admissions	Discharges	Days of care	Average length of stay	Total deaths	Deaths under 48 hrs	Deaths over 48 hrs	Gross deaths (Rate in %)	Net deaths (Rate in %)
1	Medicine	4,136	3,515	28,202	8.0	694	244	450	19.7	13.8
2	Endocrinology	405	333	5,486	16.5	11	2	9	3.3	2.7
3	Gastroenterology	2,398	1,996	10,565	5.3	304	99	205	15.2	10.8
4	Urology	4,805	4,581	15,879	3.5	33	8	25	0.7	0.5
5	General Surgery	5,832	5,169	34,141	6.6	152	33	119	2.9	2.3
6	Orthopaedics	3,831	3,494	27,479	7.9	30	8	22	0.9	0.6
7	Paediatric	5,767	5,151	20,158	3.9	205	61	144	4.0	2.8
8	Dental Surgery	175	167	1,168	7.0	—	—	—	—	—
9	Paediatric Surgery	2,437	2,202	12,970	5.9	58	10	48	2.6	2.2
10	Psychiatry	400	294	6,680	22.7	1	1	—	0.3	—
11	Otorhinolaryngology	3,965	3,793	13,773	3.6	6	3	3	0.2	0.1
12	Dermatology	3,142	2,994	9,362	3.1	14	—	14	0.5	0.5
13	Obstetrics and Gynaecology	8,221	7,166	30,607	4.3	22	6	16	0.3	0.2
14	Neonatology	1,850	1,496	9,633	6.4	44	16	28	2.9	1.9
15	Radiotherapy	72	93	554	6.0	9	5	4	9.7	4.5
16	Nuclear Medicine	544	425	637	1.5	—	—	—	—	—
17	Gastrointestinal and Liver Transplantation Services	613	484	7,697	15.9	41	7	34	8.5	7.1
18	Nephrology	4,190	3,939	12,091	3.1	166	57	109	4.2	2.8
19	Haematology	7,526	7,388	12,661	1.7	112	32	80	1.5	1.1
20	Physical Medicine and Rehabilitation	29	25	848	33.9	—	—	—	—	—
21	Anaesthesiology	458	442	442	1.0	1	—	1	0.2	0.2
22	IRCH (Private ward)	522	421	4,132	9.8	66	29	37	15.7	9.
	<b>Sub-Total (MAIN)</b>	<b>61,318</b>	<b>55,568</b>	<b>265,165</b>	<b>4.8</b>	<b>1,969</b>	<b>621</b>	<b>1,348</b>	<b>3.5</b>	<b>2.5</b>
23	Cardiology	7,723	6,850	22,174	3.2	207	84	123	3.0	1.8
24	Neurology	2,865	2,146	18,433	8.6	184	40	144	8.6	6.8
25	Neurosurgery	4,248	2,927	23,249	7.9	442	117	325	15.1	11.6
26	Cardiothoracic Vascular Surgery	3,017	2,478	22,257	9.0	214	27	187	8.6	7.6
27	Neuro-anaesthesia	—	—	—	—	—	—	—	—	—
	<b>Sub-Total (CNC)</b>	<b>17,853</b>	<b>14,401</b>	<b>86,113</b>	<b>6.0</b>	<b>1,047</b>	<b>268</b>	<b>779</b>	<b>7.3</b>	<b>5.5</b>
	<b>GRAND TOTAL {Main+ CNC}</b>	<b>79,171</b>	<b>69,969</b>	<b>351,278</b>	<b>5.0</b>	<b>3,016</b>	<b>889</b>	<b>2,127</b>	<b>4.3</b>	<b>3.1</b>

### APPENDIX III

#### Department-wise distribution of inpatients (2006–2007)

S. No.	Departments/Sections	Numbers
1	Medicine	4,136
2	Endocrinology	405
3	Gastroenterology	2,398
4	Urology	4,805
5	General Surgery	5,832
6	Orthopaedics	3,831
7	Paediatric	5,767
8	Dental Surgery	175
9	Paediatric Surgery	2,437
10	Psychiatry	400
11	Otorhinolaryngology	3,965
12	Dermatology	3,142
13	Obstetrics and Gynaecology	8,221
14	Neonatology	1,850
15	Radiotherapy	72
16	Nuclear Medicine	544
17	Gastrointestinal Surgery	613
18	Nephrology	4,190
19	Haematology	7,526
20	Physical Medicine and Rehabilitation	29
21	Anaesthesiology	458
22	IRCH (Private ward)	522
<b>Sub-Total (MAIN)</b>		<b>61,318</b>
23	Cardiology	7,723
24	Neurology	2,865
25	Neurosurgery	4,248
26	Cardiothroacic Vascular Surgery	3,017
27	Neuro-anaesthesia	—
<b>Sub-Total (CNC)</b>		<b>17,853</b>
<b>GRAND TOTAL</b>		<b>79,171</b>

## APPENDIX IV

### State-wise distribution of inpatients (2006–2007)

State	Number of patients		
	Main	CNC	Total
Delhi	33,550	7,170	40,720
Uttar Pradesh	10,480	3,246	13,726
Haryana	7,066	2,050	9,116
Bihar	4,695	2,148	6,843
Rajasthan	923	566	1,489
Punjab	236	319	555
Other states	4,037	2,276	6,313
Other countries	331	78	409
<b>Total</b>	<b>61,318</b>	<b>17,853</b>	<b>79,171</b>

### Gender-wise distribution of inpatients (2006–2007) (Main Hospital and C.N. Centre)

	Males	Females	Male children	Female children	Total
<b>Main Hospital</b>	25,291	22,309	9,527	4,191	61,318
<b>CNC</b>	9,810	4,077	2,722	1,244	17,853
<b>Total</b>	<b>35,101</b>	<b>26,386</b>	<b>12,249</b>	<b>5,435</b>	<b>79,171</b>

## APPENDIX V

### Surgical procedures (2006–2007)

S. No.	Department	Major	Minor	Total
1.	Casualty	1	8,606	8,607
2.	Dental Surgery	2,637	3,552	6,189
3.	General Surgery	2,866	10,187	13,053
4.	Gynaecology	1,390	1,495	2,885
5.	Obstetrics	692	650	1,342
6.	Orthopeadics	2,186	1,350	3,536
7.	Otorhinolaryngology	2,126	23,374	25,500
8.	Paediatric Surgery	1,405	2,913	4,318
9.	Urology	1,315	8,838	10,153
10.	Gastrointestinal Sugery	456	6	462
<b>Sub-Total (MAIN)</b>		15,074	60,971	76,045
11.	Cardiothoracic and Vascular Surgery	3,141	3	3,144
12.	Neurosurgery	2,812	502	3,314
<b>Sub-Total (CNC)</b>		5,953	505	6,458
<b>GRAND TOTAL</b>		21,027	61,476	82,503

## APPENDIX VI

### Attendance in OPDs and Specialty Clinics (2006–2007)

(A) Medical Disciplines		New cases	Old cases	Total
<b>1.</b>	<b>General Medicine</b>			
	<i>General OPD</i>	65,456	61,000	126,456
	<i>Specialty Clinics</i>			
	Chest	1,755	4,040	5,795
	Renal	4,979	18,348	23,327
	Endocrinology	9,093	18,979	28,072
	Nuclear Medicine	1,270	2,047	3,317
	Renal Transplant Clinic	125	4,801	4,926
	Rheumatology Clinic	437	7,210	7,647
	Geriatric Clinic	141	530	671
<b>2.</b>	<b>Haematology Clinic</b>	3,965	17,531	21,496
<b>3.</b>	<b>Gastroenterology</b>	17,315	30,529	47,844
<b>4.</b>	<b>Paediatrics</b>			
	<i>General OPD</i>	28,219	34,837	63,056
	<i>Specialty Clinics</i>			
	Well Baby	439	145	584
	Follow-up TB	212	1,654	1,866
	Genetic and Birth Defect Clinic	1,292	1,067	2,359
	Renal	491	3,563	4,054
	Paediatric Neurology	1,849	3,845	5,694
	Paediatric Chest Clinic	518	3,435	3,953
	High-risk Neonatal	269	817	1,086
<b>5.</b>	<b>Dermatology</b>			
	<i>General OPD</i>	30,772	26,817	57,589
	<i>Specialty Clinics</i>			
	Sexually Transmitted Disease	872	1,396	2,268
	Allergy	509	933	1,442
	Leprosy	449	1,927	2,376
	Pigmentation	582	1,747	2,329
	Dermatology Surgery	379	617	996
<b>6.</b>	<b>Psychiatry</b>			
	<i>General OPD</i>	1,715	—	1,715
	<i>Specialty Clinics</i>			
	Child guidance	430	313	743
	Walk-in-clinic	12,328	21,377	33,705

<b>(B) Surgical Disciplines</b>		<b>New Cases</b>	<b>Old Cases</b>	<b>Total</b>
<b>1.</b>	<b>General Surgery</b>	36989	26699	63688
<b>2.</b>	<b>Urology</b>	11341	21340	32681
<b>3.</b>	<b>GI Surgery</b>	1724	4195	5919
<b>4. Anaesthesia Clinics</b>				
	Pain clinic	1087	2807	3894
	Pre-anaesthesia	7509	1500	9009
<b>5.</b>	<b>Paediatric Surgery</b>			
	<i>General OPD</i>	6,519	11,426	17,945
	<i>Specialty Clinics</i>			
	Hydrocephalus	22	198	220
	Intersex Clinic	20	130	150
	Paediatric Urology	315	2,695	3,010
<b>6.</b>	<b>Orthopaedics</b>			
	<i>General OPD</i>	76,363	133,438	209,801
	<i>Specialty Clinics</i>			
	Follow-up	–	6603	6603
	Tuberculosis	–	–	–
	Polio	41	23	64
	Scoliosis	533	925	1458
	Hand	712	1012	1724
	Club Foot (CTEV)	268	1269	1537
<b>7.</b>	<b>Otorhinolaryngology and RUAS</b>			
	<i>General OPD</i>	43,198	35,339	78,537
	<i>Specialty Clinics</i>			
	Audiology	125	137	262
	Speech	1,219	1,169	2,388
	Hearing	719	920	1,639
	Voice	601	766	1,367
	Vertigo	90	106	196
	Rhinology	79	92	171
<b>8.</b>	<b>Obsetetrics and Gynaecology</b>			
	<i>General OPD</i>	28,284	37,832	66,116
	<i>Specialty Clinics</i>			
	Postnatal	118	31	149
	Infertility	–	–	–
	Family welfare	4,219	2,596	6,815
	Antenatal	372	2,433	2,805
	Endocrino-gynaecology	109	160	269
	High-risk pregnancy	1,991	10,265	12,256

<b>9.</b>	<b>Radiotherapy</b>			
	<i>General OPD</i>	3,657	68,122	71,779
	<i>Specialty Clinics</i>			
	Radiotherapy in gynaecology	267	5,223	5,490
	Radiotherapy in surgery	381	3,473	3,854
<b>10.</b>	<b>Dental Surgery</b>			
	<i>General OPD</i>	28,385	23,653	52,038
	<i>Specialty Clinics</i>			
	Orthodontics	858	4,339	5,197
	Combined cleft palate	64	216	280
	Tri-neuralgia	129	343	472
	Restorative-cum-endodontic	2,889	3,637	6,526
	Oral prophylaxis	942	5,603	6,545
	Prosthodontics-cum-maxillofacial prosthesis	1,572	2,531	4,103

<b>(C) Others</b>		<b>New cases</b>	<b>Old cases</b>	<b>Total</b>
1.	EHS	107,922	71,946	179,868
2.	Casualty	176,959	–	176,959
3.	Nutrition	2,099	444	2,543
4.	Marriage counselling	11,265	2,601	13,866
5.	Physical medicine and rehabilitation	2,294	7,557	9,851
<b>Total</b>		<b>750,111</b>	<b>775,299</b>	<b>1525,410</b>

## 6.2 Hospital Dietetics Services

### **Chief Dietician**

Alka Mohan Chutani (Officiating)

### **Dietician**

Swapna Chaturvedi

### **Assistant Dieticians**

R. Vasuki (from April 2006 to Nov 2006, posted to JPNTC Dec 2006 onwards)

Gurdeep Kaur

Richa Jaiswal

### **EDUCATION**

1. Dietetic short-term training for MSc Nutrition students for 6–12 weeks
2. Dietetics short-term training for PG Diploma Dietetic students for 3 months
3. Dietetics short-term training for BSc Nursing and Post-certificate nursing students
4. Department conducts Nutrition classes for BSc (Hons) Nursing, first year as part of the curriculum
5. Department also undertakes Nutrition classes for medical students
6. The Department of Dietetics runs a daily clinic for outdoor patients for nutrition counselling.

### **CME**

1. Nutrition lectures were organized on 21 August 2006 at MS Seminar Room on 'Role of diet in epilepsy' and 'Nutrition in ICU'.
2. Nutrition lectures were organized on 18 December 2006 at AIIMS on 'Epidemiology of CHD in India' and 'Role of homocysteine in CVD'.

### **National and International Conferences**

#### ***Lectures delivered***

#### **Swapna Chaturvedi**

1. 'Introducing complementary feeding while protecting breastfeeding. Modifying family's diet for infants and young children home made instant foods', 31 May 2006, 2 June 2006 and 8 June 2006 and on 24 January 2007, 29 January 2007 and 1 February 2007 during orientation training camps on Nutrition education of ICDS workers, organized by Ministry of Women and Child Development, Food and Nutrition Board New Delhi at ICDS centres, New Delhi.



2. 'Diet for diabetics', NTPC, on the occasion of Diabetes Education-cum-screening programme, Thermal Power Station, Badarpur; 19 July 2006.
3. 'Role of nutrition in tackling childhood obesity', Asian Conference on 'Management and prevention of childhood obesity through nutrition strategies and physical activity', International Life Sciences Institute (ILSI), Le Meridien Hotel, New Delhi; 14 October 2006.
4. 'Promoting production and consumption of coarse grains, pulses, glv's and other foods from milk and milk products to achieve food and nutrition security, along with role of instant mixes to combat malnutrition under 2 years of age', 'World Food Day' organized by the Ministry of Women and Child Development, Food and Nutrition Board, New Delhi at Rehabilitation Centre, Lajpat Nagar; 16 October 2006.
5. 'Nutrition assessment and monitoring—anthropometry, dietary, biochemical and clinical methods', Workshop of 12th Annual Conference of the Indian Society for Parenteral and Enteral Nutrition (ISPEN), Science Centre, Kolkata; 4 November 2006.
6. 'Importance of balanced diet in growing children', Mitter Foundation, Children's Day at Special Protection Group Complex, Dwarka; 14 November 2006.
7. 'Diet-related chronic diseases, role of fruit and vegetables, fibre and antioxidants', 'Nutrition for elderly—diet for healthy ageing', 'Inculcating healthy eating and life styles in children', during orientation training courses for trainers of ICDS, Government of Haryana, organized by Ministry of Women and Child Development, Food and Nutrition Board, at Vikas Sadan, Gurgaon; 29 November 2006 and the same topic on 22 December 2006 at School Health Services for trainers of ICDS, Government of Uttar Pradesh at NOIDA, (UP).
8. 'Nutrition, health and hygiene for adolescent girls', Department of Social Welfare and NGO in programme of *Kishori Shakti Yojna* at Chaman Wara, Tilak Bazaar, Delhi; 29 December 2006.

### **Gurdeep Kaur**

1. 'Healthy eating habits', Health Awareness Programme at Modicare Ltd, New Delhi; 28 November 2006.
2. 'Importance of balanced diet during pregnancy', Mitter Foundation, 'Womens' Day', at Hindon Airforce Hospital, Hindon Airforce Station; 8 March 2007.
3. 'Proteins and their importance' and 'The role of fat in balanced diet' for BSc (Hons) Nursing at the Nursing College, AIIMS; 18 September 2006, 19 September 2006, 25 September 2006 and 26 September 2006.

### **Richa Jaiswal**

1. 'Energy: Measurement of energy, requirement in different categories of people, BMI, BMR, determinants and factors affecting, carbohydrates—classification, RDA, dietary sources, functions, digestion, absorption and storage, metabolism of carbohydrates,

malnutrition—deficiencies and over consumption’, Nursing College, AIIMS; 29 August 2006, 4, 5, 11 and 12 September 2006.

### **PATIENT CARE**

1. Assessment of nutritional status of indoor patients, planning normal and therapeutic diets and nutrition counselling for indoor patients and outdoor patients.
2. Indoor and outdoor patients referred from different wards and Specialty clinics like Endocrinology, Gastroenterology, Paediatrics, Orthopaedics, Nephrology, Haematology, GI Surgery, Oncology, Transplant cases and AIDS patients are assessed and counselled for diet as per disease condition based on dietetics principles.
3. The Department organized diet stalls and diet exhibits for participants of ‘Diabetes Mela’ organized by Diabetics Self Care Foundation.
4. The Department of Dietetics participated in Health Awareness Week for Hon’ble MPs at Parliament House for diet counselling.
5. The Department of Dietetics is involved in diet preparations for patients of Main Hospital, C.N. Centre, R.P. Centre and BRA IRCH.

Number of indoor patients served different diets

Total number of diets	5,59,357
Normal diets	3,05,882
Semisolid	21,540
Therapeutic diets	1,31,088
Enteral feeds	39,728
Private ward diets	61,119

### **Nutrition clinic—outpatients**

New patients	7,274
Old patients	1,490

## 6.3 Medical Social Welfare Unit – AIIMS Hospital

Medical Social Welfare Services were organized in various OPDs, wards, clinics and the casualty by present strength of two Chief Medical Social Service Officer, two Supervising Medical Social Service Officers; two Medical Social Service Officers Grade I; three Medical Social Service Officers Grade II and 16 part-time Social Guides under the able guidance supervision of the Medical Superintendent.

This unit provides central services in the form of guidance to patients, financial assistance from the Poor Fund, exemption of levy charges to poor and indigent patients, counselling, accommodation in the *dharamshala* for outstation patients, adoption of orphans, coordination regarding these activities in different departments and centres, help in obtaining railway concession to specific patients.

During peak hours, this unit provides guidance and counselling to patients and try to sort out their minor grievances on spot, which helps in smooth running of the OPDs. On an average, 2,700 patients every day require guidance and counselling in all OPDs including the Emergency. To achieve this, the part-time social guides are deployed at important places such as the main enquiry counter, X-ray counter, Emergency, Blood Collection centre as well as all the OPDs counters in five floors.

### **Counselling**

Over 40,000 patients were given counselling and information about their diagnosis, prognosis and treatment after discussion with concerned doctors.

Over 6000 patients were given special counselling and case work services. Services were also offered to solve their social, emotional and psychosomatic problems which come in the way of achieving best results of treatment. Patients were also motivated and helped for regular follow-up whenever required. Over 25 home visits were also made.

### **Rehabilitation services**

Over 350 destitute/unknown/unattended/road accident patients were rehabilitated in different rehabilitation centres under the Delhi Administration and other welfare institutions as well as their homes.

Twenty patients were rehabilitated by helping them to get jobs or find work avenues. Fifteen wheelchairs, 4 tricycles. 2 sewing machines, 45 crutches and 2 weighing machines, were given to poor and needy patients. Fifteen unweaned mothers were rehabilitated in other agencies till their delivery as their parents were unable to keep them at home.

Relatives of over 2200 patients were informed about unknown/unattended patients.

About 5500 senior citizens were provided special help in OPDs and laboratories.

**Financial assistance**

A total of Rs 69,902 was given to 198 poor patients from the 'Fund for Poor Patients' provided by the hospital authorities, whereas another large number were helped from other sources such as donations from philanthropic organizations for very expensive drugs and appliances such as crutches, wheel chairs, hearing aids, etc. Necessary help was also extended for food, travel and funeral to a large number of cases.

Over 175 patients were given blankets and clothes. Over 20 patients were given chappals. A large number of patients were referred to the Ali Yaver Jung Institute for the Hearing Handicapped. Over 50 patients were given colostomy bags.

A total of 577 patients were provided expensive chemotherapy drugs costing Rs 7,32,038 with the help from the Cancer Patients Aid Association and over Rs 1,00,000 from other associations. Besides this many other articles such as books, radios, chocolates, sweets, fruits, tape recorders were distributed among poor cancer patients by Cancer Patients Aid Association.

Cancer Patients Aid Association also created a play-room in Paediatric ward complete with all the equipment such as toys, games, colours, books, cycle, etc.

Medicines worth more than Rs 40,000 were distributed to patients suffering from tuberculosis of any organ/part other than chest, for full course of antituberculosis medicines from a philanthropic organization—Sewa Prakalap Mahila Mandal Trust. Over 150 urograffin vials costing nearly Rs 25,000 were given to poor patients from donations received.

Over 391 patients were motivated and guided to obtain necessary financial help from the Prime Minister's and Health Minister's Discretionary Funds out of which 159 patients got grant worth Rs2,21,31,280/-.

Food was provided to over 2000 poor patients.

**Railway concession facilities**

Over 17,200 patients suffering from cancer, tuberculosis, leprosy, etc. were helped to obtain railway concession facilities for coming to hospital and going back home. A similar facility was also provided to deaf and dumb patients.

**Accommodation**

Nearly 2000 patients and their attendants who came from outside Delhi were helped in obtaining accommodation in different dharamshalas in the vicinity of the hospital at cheaper rates.

**Exemption of levy charges**

Over 2600 indigent and poor patients were exempted from payment of different types of investigations and admission charges.

**Referral**

About 1400 patients of pulmonary tuberculosis and other diseases were referred to different TB hospitals/clinics of respective areas for treatment and issuance of drugs. Over 23,500 patients from Casualty were referred to other hospitals.

**Health education**

Demonstrations in wards like Children, Surgical and Gynae wards were given with the help of students of Social Work and NSS workers on maintenance of personal hygiene, balanced nutrition, health and family welfare, Preoperative and Postoperative care.

Festivals such as Diwali, Rose Day and Christmas were celebrated in the wards and a puppet show was organized for the entertainment of patients in children's ward. Toys were distributed in the children's surgical ward on Good Friday.

**Special help**

Five patients were helped in getting an instant grant of Rs 3,00,000 for their cardiac surgery.

A large number of patients were helped during Dengue outbreak.

Over 550 of poor indoor patients were provided life-saving drugs/medicines worth over a couple of lakh rupees from the medical stores/local purchase after proper scrutiny and work-up by the Medical Social Service Officers.

**Training and teaching**

Orientations were given to visitors from various organizations. Besides this about 40 National Services Scheme (NSS) volunteers from various schools and colleges were also given orientation in dealing with patients and hospital-related problems.

Six postgraduate students of MSW from the Department of Social Work, Delhi and other Institutes, and 2 undergraduate students from Aditi College, 3 undergraduate students from Ambedkar College Delhi University, and 2 postgraduate students from Kaladi University were given on-the-job/field work training in Medical Social Services under close supervision during this period. A team of 2 students from Kuttikkanam, Kerala were given on-the-job training for 30 days.

## 6.4 Welfare Unit

Patients and employees welfare services were organized by the Welfare Officer, Mrs Preeti Ahluwalia.

### Patients Welfare

Patient care: Rs 58,58,000 (approximately) raised as donation

Purpose	Donation	Donor	
For treatment and surgery of poor and needy patients who are undergoing treatment in the Main Hospital and Centres.	Rs 8,83,500	Shri Sai Bhakta Samaj (Regd.)	
	Rs 2,55,000	Indo Global Social Service Society	
	Rs 2,99,500/-	Sahu Jain Trust	
	Rs 1,19,500	Anmol Sahara	
	Rs 71,707	Sewa Prakalp Mahila Mandal Trust	
	Rs 70,000	Lal Devi Charitable Trust	
	Rs 65,000	Rajendra Bhawan Trust	
	Rs 32,557	Other Donors	
	Rs 25,000	Industrial Importers	
	Rs 25,000	Shri Deepak Sharma	
	Rs 13,000	Vijaya Gujral Foundation	
	AIIMS Poor Fund Account	Rs 5,000	Shri B.R. Bhatia
		Rs 5,000	Shri N.B. Mathur
		Rs 5,000	Smt Poonam Mathur
Rs 2,000		Smt Vimmi Bhutani	
Anti-cancer drugs provided Free to cancer patients by Gopal Foundation.	Rs 32,76,609	Gopal Foundation	
For purchase of battery-operated vehicles to ferry patients in the Hospital and Centres	Rs 7,05,000	Smt Usha Sharma	

In addition to the above, poor and needy patients are also assisted financially from the Prime Minister National Relief Fund. In this regard, an amount of Rs 8,37,500 was sanctioned from P.M. National Relief Fund for the treatment and surgery of poor patients. Further, patients living below the poverty line were assisted to avail financial assistance for their

treatment from *Rashtriya Arogya Nidhi* (National Illness Assistance Fund) and other sources.

Assistance to poor patients from the Hospital Poor Patient Fund was also extended and they were also helped the admission, exemption of levy charges and investigation charges, etc. Sewing machines were also provided for the rehabilitation of two patients namely Kumari Pinki and Smt Neeraj and two folding wheelchairs were provided to physically impaired patients namely Shri Pammi and Shri Bijender Kumar by Sewa Prakalp Mahila Mandal Trust.

### **Dharamshalas**

As a welfare activity, through the aegis of the AIIMS Hospital Social Welfare Society, the Rajgarhia Vishram Sadan, Sureka Vishram Sadan and Shri Sai Vishram Sadan provided shelter to over 18,500 patients and their attendants who were undergoing treatment at the Institute and its Centres. In special cases, food was arranged for the needy poor patients/ attendants who were staying in the Vishram Sadan through individual donors.

Seven hundred and eighty woollen blankets were received as donation from various donors for the Vishram Sadans while 153 blankets were distributed to the inmates by 'Shristi', an NGO.

### **Employees' Welfare**

#### ***Appointment on compassionate grounds***

Cases for appointment on compassionate grounds were dealt with. Counselling services and moral support was provided to family members so as to assist them to accept/overcome the great loss they had suffered and thereby enable them to shoulder the responsibilities that had fallen on them. Assistance for funeral expenses were also provided, where ever required, to the relatives of the deceased employees.

#### ***Counselling services***

Counselling services were provided to employees, patients and their relatives so as to enable them to overcome/adjust to their physical, social, emotional, economic, familial and marital problems and thereby enhance their social functioning.

#### ***Redressal of grievances***

Services are provided for redressal of grievances to staff members and patients.

#### ***Communal Harmony Campaign Week***

The Communal Harmony Campaign Week was observed from 19–25 November 2006 and Flag Day on 24 November 2006. On this occasion a Painting competition, Essay writing competition and Slogan writing competition was organized for the 'AIIMS Family'. Besides this, an evening of Dance and Qawwali was organized which was sponsored by Sahitya

Kala Parishad. A sum of Rs 6,500 was collected through donation on Flag Day for the National Foundation for Communal Harmony.

***Assistance for education***

Assistance for education is being provided to the needy and deserving children of employees/patients through donors. Scholarships for the poor and needy students was arranged through Shri Sai Bhakta Samaj. They are also extended guidance and assistance for vocational rehabilitation/employment.

***Free hearse van facility***

Free hearse van facility is being organized through Shri Sai Bhakta Samaj (Regd) to enable easy transportation of the dead body by the distressed relatives to their homes/crematorium in Delhi.

Mrs Vimmi Bhutani celebrated Diwali with the wards of our employees studying in the Nursery and Primary School being run by MIRWA



## 6.5 Hospital Billing Section

Following is the amount of donation received and payments made to the patients during the financial year 2006–2007.

Donations received from donors:	Rs 1,18,407.49
(Bank interest + donations + Poor fund boxes)	

Payment made to [78+120] patients:	Rs 69,902.00
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(The amount disbursed to these poor patients is from the donations received from donors during the year as well as from the previous balance lying in the 'AIIMS Poor Fund Account').

## 6.6 Casualty

### Census for the year 2006–07

Month	Total patients	Admissions	Transfers			Total deaths	Brought dead	Total EHS	Total surgeries
			SJG	IDH	Trauma				
April	14,735	362	1,041	51		115	16	12	721
May	11,224	345	366	59		97	38	11	683
June	13,899	480	902	35		121	32	10	813
July	14,529	350	910	41		147	51	13	739
August	15,579	298	942	24		190	34	14	769
September	16,234	329	1006	14		189	42	17	810
October	30,759	417	950	08		115	25	25	689
November	13,906	149	964	16		178	41	20	626
December	11,040	408	950	07	122	144	39	13	914
January	10,583	312	867	03	78	126	41	14	587
February	10,990	281	882	04	78	102	25	18	565
March	13,481	324	934	09	64	136	29	06	690
Annual census (2006–07)	1,76,959	4,055	10,714	271	372	1,660	413	173	8,606
Average Monthly census*	14,747	338	893	23	29	138	34	14	717
Average Daily census*	492	11	30	1	1	6	1	1	24

\*Figures in decimals have been rounded off to the nearest whole numbers

## 6.7 CSSD

### 1.4.2006 to 31.3.2007

S. No.	Name of Sterilizers	Capacity	Quantity
1.	Bulk M. Shah No. I to II	96 cu.ft	2
2.	Small M. Shah No. I to VII	36 cu.ft	7
3.	NAT Steel No. I to II	36 cu.ft	2
		<b>TOTAL</b>	<b>11</b>

### Manpower

S. No.	Category	Quantity
1.	Technical Assistant.	1
2.	OT Technician	4
3.	OTA	6
4.	Hospital Attendant	27 + 1
5.	Sanitary Attendant	2

### Autoclaving Workload cu.ft

#### 1.4.2006 to 31.3.2007

Month	Year	Total Workload
April	2006	38,598 cu.ft
May	2006	30,768 cu.ft
June	2006	32,692 cu.ft
July	2006	37,180 cu.ft
August	2006	39,844 cu.ft
September	2006	40,720 cu.ft
October	2006	37,251 cu.ft
November	2006	38,368 cu.ft
December	2006	40,232 cu.ft
January	2007	39,616 cu.ft
February	2007	37,580 cu.ft
March	2007	43,310 cu.ft
<b>TOTAL</b>		<b>456,159 cu.ft</b>

(Four lakh fifty-six thousand one hundred and fifty-nine)

## 6.8 Hospital Laundry

The mechanized laundry of AIIMS hospital is providing its services to all the departments of AIIMS Hospital, Dr R.P. Centre, Dr B.R. Ambedkar Institute Rotary Cancer Hospital, Cardiothoracic and Neurosciences Centre.

Hospital Laundry was visited by several batches of Hospital Administrators attending courses at the National Institute of Health and Family Welfare and by several teams of Doctors from other hospitals in the country. These visits have helped the participants to gain first hand knowledge of the mechanized laundry with a view to start a similar system in their respective hospitals.

### Workload during the year 2006–2007

1. Total pieces processed	49,33,838
2. Total weight (in kg)	15,17,829
3. Total cost of washing material (Rs)	11,77,641
4. Cost of washing material per piece	0.2386
5. Cost of washing material per kg of linen	0.7758

## 6.9 Blood Bank (Hospital)

### ACTIVITIES

#### Blood collection in donor room

1. Total relative donors	22,267
2. Total voluntary donors	8,639
(From donation camps	7,759)
(From AIIMS Blood Bank	882)
(From Mobile Donation	Nil)
3. Collected from CNC	1,495
IRCS	308
Others	796
<b>Total collection</b>	<b>33,505</b>

Total camps organized 108

#### Routine Laboratory

1. Total patients	46,551
2. Total ABO grouping	1,13,561
3. Total Rh	70,299
4. Total OPD grouping and Rh	3,289
5. Total cross-match (Emergency and Routine)	55,767
6. Total donor grouping	67,010
7. Total ICT	804
ICT-positive	139
8. Total titre	101
9. Total A/B	43,262
10. Total DCT	300
DCT-positive	25
11. Total blood issued	33,648
12. Total receive back	675
13. Total small units	660
14. Total blood discarded	943
15. Blood issued but not transfused	Nil
16. Total blood issued to private ward	2,127
17. Total component issued to private ward	2,599
18. Total blood issued to outside hospital	1,532
19. Total component issued to outside hospital	476
20. Total cross-match but not transfused	10,502

21. Blood issued to IRCH	3,291
IRCS	Nil
CNC	161
<b>Total</b>	<b>4,57,720</b>

### **Special Procedure Laboratory**

1. Minor grouping	432
2. Platelet antibody	78
3. Reagent cell thawing	720
4. Cell freezing	1,596
5. DAT	21
6. Cross matching discrepancy	65
7. Group discrepancy	08
8. AB screening	44
9. Blood thawing	08
<b>Total</b>	<b>2,972</b>

10. Quality control	6,202
11. Students trained	18

### **Component Laboratory**

1. Platelet-rich concentrate	24,147
2. Fresh-frozen plasma	15,553
3. Liquid plasma	14,848
4. Cryoprecipitate	630
5. Red blood cells	29,401
6. Single donor platelet pheresis (SDP)	124
<b>Total components prepared</b>	<b>84,703</b>

7. Platelet pheresis in IRCH	1,054
8. Stem cell (IRCH)	97
9. Stem cell in blood bank	Nil

### **Infection Laboratory**

1. HIV test	48,770
2. HBV test	40,179
3. Anti-HBc test	39,303
4. HCV test	42,418
5. VDRL	36,507
<b>Total</b>	<b>2,17,177</b>

## 7. College of Nursing

### Principal

Manju Vatsa

### Lecturers

Meena Agarwal

Ashia Qureshi

Sandhya Gupta

Deepika C. Khakha

Rachel Andrews

Kamlesh Sharma

### Senior Nursing Tutor

Geeta Razdan

### Nursing Tutors

M. Sharma

Poonam Joshi

Shashi Mawar

Kiran Singh Simak

Sucheta

Babita Sahoo

Gayatri Batra

Manju Dhandhapani

## EDUCATION

### Undergraduate

Fifty-three students graduated from the four-year BSc (Hons) Nursing course, while 16 students graduated from the two-year BSc Nursing (Post-certificate) course.

### Postgraduate

*MSc (Hons) Nursing*: 13 students graduated from M Sc Nursing course. There are 15 students continuing in the second year MSc Nursing course and 14 students have joined the programme this year (13 Indian and 1 from Nepal) in the following seven specialties:

1. Paediatric Nursing
2. Psychiatric Nursing
3. Cardiology/CTVS Nursing
4. Neurosciences Nursing
5. Oncology Nursing
6. Critical Care Nursing
7. Nephrology Nursing

### Continuing Nursing Education (CNE)

1. The College of Nursing has organized the following short-term courses/symposium/workshops (CNE programmes).

A ten-day workshop on 'Quality assurance in nursing' was held for nursing personnel from the northern region of India, sponsored by the Ministry of Health and Family Welfare. A total of 34 participants registered for the workshop. Coordinator: Sandhya Gupta.

- A two-day workshop on 'Substance use disorder nursing' was held for 20 nurses from NDDTC, AIIMS. Coordinator: Sandhya Gupta.
  - 'Cardiology Nursing Update' was held for two days. A total of 28 nurses from AIIMS attended the update. Coordinator: Rachel Andrews.
  - 'Oncology Nursing Update' was held for two days. A total of 22 nurses from AIIMS attended the update. Coordinator: Rachel Andrews.
  - 'Nephrology Nursing Update' was held for two days. A total of 20 nurses from AIIMS attended the update. Coordinator: Deepika Khakha.
  - Workshop on 'Paediatric intensive care nursing' sponsored by Indian Nursing Council was held for two days. A total of 30 nurses from hospitals of Delhi and AIIM attended the workshop. Coordinators: Manju Vatsa and Poonam Joshi.
  - 'Mental Health Nursing Update' was held for two days. A total of 39 nurses from AIIMS attended the update. Coordinator: Sandhya Gupta.
  - 'Neurological Nursing Update' was held for two days. A total of 20 nurses from AIIMS attended the update. Coordinator: Meena Agarwal.
  - A three-month 'Clinical training programme' was organized for two WHO fellows from Myanmar from 2 January 2007 to 27 April 2007.
  - Workshop on 'Domestic Violence Act' was held for one day. A total of 370 participants from AIIMS attended the workshop. Coordinator: Sandhya Gupta.
2. The College of Nursing also conducted orientation/briefing sessions for:
- Two groups of visitors from abroad and 8 groups of visitors from various educational institutions of India visited the department.

## **RESEARCH**

### **Ongoing Projects**

1. Pilot delivery of model HIV prevention and health promotion programme in India by nurses, Sub-project of ICOHRTA for AIDS/TB, UCLA. Manju Vatsa, AIIMS and Adey Nyamathi, School of Nursing, UCLA, USA.



## **CLINICAL AND COMMUNITY SERVICES**

1. The faculty and students participated in outdoor and indoor patient-care activities of all the departments of the Institute.
2. The faculty and students organized and conducted Pulse Polio programme at 45 centres of South Delhi, organized by the Government of the NCT of Delhi. A. Qureshi and Kiran Singh coordinated and supervised the programme.
  - Fifty health education sessions in rural areas and 100 in urban slums and OPDs on various health issues such as hygiene, HIV/AIDS, prevention and treatment of URI, diarrhoeal diseases, tuberculosis, family welfare, etc.
  - Street plays (10) and exhibitions on various health-related topics for urban slums.
  - Health talks and exhibition on AIDS on the occasion of international AIDS Day in the urban community.
  - ‘Prevention of substance abuse’, a community awareness and educational camp was held in Trilok Puri.
  - ‘Prevention of health and psychosocial problems of adolescent girls’, an educational camp was organized in Navodaya girl’s school, Trilok Puri.

## **PUBLICATIONS**

### **Journals**

1. Oomen A, Vatsa M. Gender issues in health. *Prism’s Nursing Practice* 2005;**1**:47–53.
2. Gupta S. ‘Substance misuse among nurses’, Proceedings of the Sixth National Conference on Substance Abuse organized by Indian Society of Psychiatric Nursing, Society of Psychiatry Nursing, Ludhiana; 1–3 March 2007:19–20.
3. Gupta S. ‘Psychiatric emergencies’, Proceedings of the Sixth National Conference of Indo-US Emergency Medicine, AIIMS; January 2007.
4. Andrews R. ‘Cardiac emergencies’, Proceedings of the Sixth National Conference of Indo-US Emergency Medicine, AIIMS; January 2007.
5. Khakha DC. ‘Burnout among critical care nurses’, Proceedings of the Conference of Indo-US Emergency Medicine, AIIMS; January 2007.
6. Gupta S. ‘Role of nurses in Substance abuse in community health care settings’,

Proceedings of WHO-Consultative on planning for treatment of substance abuse in community, AIIMS in collaboration with WHO; 2006.

### **AWARDS AND HONOURS**

**Dr Manju Vatsa** is continuing as a Member of the faculty of Nursing at the Baba Farid University of Health Sciences, Faridkot, Punjab; Member, Indian Nursing Council and its Executive, Education and Equivalence Committees; National Advisory Board Member for *Prism's Nursing Practice, Journal of Clinical Nursing, Education, Training and career development*. She has also been nominated as Organizing Secretary, VI International Neonatal Nursing Conference to be held in New Delhi in 2007; nominated as Coordinator for KMC and Lactation management workshop during Annual Convention of National Neonatology Forum at Varanasi; nominated as Expert Member, Indian Nursing Council for expert committee on Amendment of the MTP Act, Ministry of Health and Family Welfare.

**Dr Manju Vatsa and Ms Sandhya Gupta** continue to be in Review Panel of the *Indian Journal of Nursing and Midwifery*.

**Ms Sandhya Gupta** has been nominated as a Member of the Board of Studies, Punjab University, Chandigarh and as a Chairperson, Scientific sessions for sixth National Conference of the Indian Society of Psychiatric Nurses, Ludhiana; March 2007.

### **CONSULTANCY AND PARTICIPATION AS EXPERT**

1. Dr Manju Vatsa participated as a core group member for 'Development of PhD consortium in India', coordinated by the Indian Nursing Council; as an expert member for establishing 'National Institute for advancement of standards in Nursing', Ministry of Health and Family Welfare; as an expert for revision of MSc Nursing curriculum and ANM curriculum of the Indian Nursing Council; as an expert member for development of 'Strategic framework for Nursing in India' by Sir Edward Dunlop Hospitals, coordinated by Indian Nursing Council.

Dr Vatsa is guiding five PhD students of the PhD consortium of Indian Nursing Council, WHO and Rajiv Gandhi University of Health Sciences; as an examiner for PhD candidates of RGUHS and Manipal academy of Higher Education, Manipal; TOT in 'Essential Newborn Care', Government of Gujarat; Attended National consultation for accelerating pre-service IMNCI-WHO CC, Department of Paediatric, AIIMS; Conducted 6 Video-conferencing teaching sessions for PhD scholars of the consortium of PhD in nursing by Indian Nursing council, WHO and RGUHS; Appointed as organizing secretary of VI International neonatal nursing conference being organized at Delhi in September 2007.

2. Manju Vatsa, Sandhya Gupta and Deepika Khakha participated as experts for development of curriculum for training programme and resource materials for trainers for HIV/AIDS

initiative organized by Clinton foundation in collaboration with NACO and the Indian Nursing Council under 'Nurses Training Initiative—Clinton Foundation'; Review of modules for trainers and for nurses in HIV/AIDS, organized by Clinton foundation in collaboration with NACO and the Indian Nursing Council.

3. Rachel Andrews and Deepika Khakha participated in two TOT programmes for HIV/AIDS initiative organized by Clinton foundation in collaboration with NACO and the Indian Nursing Council, held in Hyderabad and Mumbai.
4. Sandhya Gupta presented a paper on 'Role of nurses in substance abuse in community healthcare settings', WHO-SEARO Consultative Meeting held at NDDTC, AIIMS; Took educational and consultative sessions for Telemedicine conferences organized by department of Computer Facility, AIIMS.
5. Kamlesh Sharma participated in Revision of ANM curriculum as a co-opted member of education committee of Indian Nursing Council; as Resource person 'Neocon XXVI at Varanasi' in December 2006; as Resource person for 'Tool preparation for assessment of ANM Training schools' for Indian Nursing Council.
6. Faculty members of the College participated in the conduct of inspections and examinations in various colleges of nursing and universities in India.
7. M. Vatsa and other faculty members participated as Resource persons/Committee Members for the following organizations:
  - Indian Nursing Council: General body, executive committee and education committee
  - Baba Farid University of Health Sciences: Faculty of Nursing
  - Ministry of Health and Family Welfare, Government of India
  - R.A.K. College of Nursing
  - Adjunct faculty, CMET, AIIMS
  - National Medical Library, Book Selection Committee
  - Punjab University, Chandigarh: Board of Studies in Nursing.
  - PGI Chandigarh, BPKIHS, NEIGRIHMS Shillong, DAV Management Committee, NIMHANS: Selection Committee
  - Indira Gandhi National Open University: Core/expert group member
  - Trained Nurses Association of India
  - *Indian Journal of Nursing and Midwifery*: Review Committee
  - GGS Indraprastha University: Institutional Assessment Committee
  - Dharamshila Cancer Hospital

- VIMHANS
- National Institute of Social Defence
- Indian Academy of Hospital Administration
- Indian Society of Psychiatric Nurses
- NACO-Clinton Foundation
- Various committees at AIIMS
  - Convocation Committee
  - DPC
  - AIIMS website
  - Communal Harmony campaign
  - Dean's Committee
  - Hindi Committee
  - Screening Committee
  - Supervisors for 'Pulse'

8. Faculty members of the College attended 17 workshops/conferences and delivered 45 lectures for 20 CNE programmes held during this year.

## 8. Research Section

As per the mandate given to the All India Institute of Medical Sciences, research forms an important component. AIIMS has been at the forefront of conducting high quality research, both in the fields of basic and applied sciences. During the year under review, the faculty of the AIIMS drew extramural grants for various research projects from national and international agencies amounting to nearly Rs 52 crore. At present, 430 extramurally funded projects are being conducted in the Institute.

This section deals with the administration of all the extramural research conducted at the AIIMS. The Research Committee constituted by the Director is as follows:

1. Professor Nikhil Tandon  
Acting Dean (Academic) (till 3.4.2006)  
Professor T.P. Singh  
Acting Dean (Academic) (w.e.f. 10.4.2006 to 4.5.2006)  
Professor R.C. Deka  
Dean (Academic) (w.e.f. 4.5.2006)  
Chairman
2. Dr.P.P. Kotwal  
Professor of Orthopaedics and  
Professor-in-Charge (Research Section)  
Chairman
3. Dr Nikhil Tandon  
Sub-Dean (Academic) (till 3.4.2006)  
Dr Neerja Bhatia  
Sub-Dean (Academic) (w.e.f. 3.4.2006 to 14.6.2006)  
Vice-Chairman
4. Dr Sunil Chumber  
Sub-Dean (Academic) (w.e.f. 14.6.2006)  
Dr K.K. Deepak  
Sub-Dean (Exam) (till 11.09.2006)  
Dr A.K. Dinda  
Sub-Dean (Exam) (w.e.f. 12.09.2006)  
Member
5. Deputy Director (Administration)  
Dr G.K. Rath  
Member
6. Professor and Head of Radiotherapy  
Dr N.K. Mehra  
Member
7. Professor and Head of TII (w.e.f. 12.2.2007)  
Dr S.K. Panda  
Member
8. Professor and Head of Pathology (w.e.f. 12.2.2007)  
Dr N.R. Jagannathan  
Member
9. Professor and Head of Nuclear Magnetic Resonance

10. Dr A. Malhotra  
Professor and Head of Nuclear Medicine  
Member
11. Dr Subrata Sinha  
Professor and Head of Biochemistry  
Member
12. Dr K.S. Reddy  
Professor and Head of Cardiology (till 11.2.2007)  
Dr V.K. Bahl  
Professor and Head of Cardiology (w.e.f.12.2.2007)  
Member
13. Dr. R.M. Pandey  
Professor and Head of Biostatistics (w.e.f. 12.2.2007)  
Member
14. Dr Kameshwar Prasad  
Professor of Neurology (w.e.f. 12.2.2007)  
Member
15. Dr S.P. Garg  
Professor of Ophthalmology (w.e.f. 12.2.2007)  
Member
16. Dr Shobha Broor  
Professor of Microbiology  
Member
17. Dr R. Guleria  
Professor of Medicine  
Member
18. Dr J.S. Tyagi  
Professor of Biotechnology (w.e.f. 12.2.2007)  
Member
19. Dr Nikhil Tandon  
Professor of Endocrinology and Metabolism  
Dr Chitra Sarkar  
Professor of Pathology (till 11.2.2007)  
Member
- Dr N.K. Arora  
Professor of Paediatrics (till 11.2.2007)  
Member
- Dr R.B. Vajpayee  
Professor of Ophthalmology (till 11.2.2007)  
Member
- Shri V.P. Gupta  
Registrar (till 9.12.2006)  
Member
20. A representative of the ICMR  
to be nominated by DG, ICMR  
Member
21. Financial Adviser  
Member
22. Shri S.P. Mahla  
Finance and Chief Accounts Officer (Research).  
Member
23. Shi K.C. Chhoker  
Administrative Officer (Research)  
Member
24. A representative of SYS  
Member

**ONGOING RESEARCH PROJECTS FUNDED BY INDIAN AGENCIES**

<b>Investigator</b>	<b>Project</b>	<b>Funding agency</b>	<b>Funds (Rs)</b>
<b>Anatomy</b>			
1 RANI KUMAR	Role of cell cycle regulatory genes in breast cancer patients: On hormonal therapy	DBT	4,99,569
2 RIMA DADA	Genomics of male infertility	ICMR	2,25,270
3 RIMA DADA	Genomic diversity in five ethnic groups of Rajasthani population	DBT	1,91,987
4 S.B. RAY	Effect of alterations in intracellular calcium concentration on ORL1 [opioid receptor-like 1] opioid receptors in the rat central nervous system during morphine tolerance	ICMR	2,41,990
5 SHASHI WADHWA	Effects of prenatal auditory stimulation on chick hippocampus	DBT	2,64,341
<b>Biochemistry</b>			
6 D.N. RAO	Developing new generation peptide-based vaccine using F1 and V antigens of <i>Yersinia pestis</i> (plague)	DST	11,19,910
7 D.N. RAO	To evaluate the correlation between levels of cytokines (IL-6, IL-8, IL-10) in seminal plasma in different groups of infertile men and correlation with sperm morphology functions and bacterial infection in semen	ICMR	5,67,578
8 D.N.RAO	Technological feasibility and immunological potential of multivalent single-injection microsphere vaccine incorporating diphtheria, pertussis, tetanus and hepatitis B antigen	DBT	1,91,049

9	KALPANA LUTHRA	Frequency distribution of three HIV-I resistance conferring polymorphisms SDF 3 alpha CCR2-641, and CCR-5 delta 32 in Asian Indians	DST	3,46,249
10	KALPANA LUTHRA	Differential cell response of goat granulose cell to LH or hCG stress in cell culture system. To analyse the signal transduction pathway in the two	ICMR	5,00,920
11	KALPANA LUTHRA	Genetic polymorphism of cholesterol ester transfer protein in hyperlipidemic patients. A case-control study	ICMR	5,38,704
12	M.R. RAJESWARI	Studies on expression of HMGA and their interaction with DNA	DST	1,53,604
13	M.R. RAJESWARI	Proteomic analysis of outer membrane of Acinetobacter baumannli and its resistant strains	DBT	5,15,736
14	N.C. CHANDRA	Studies on the possible development of hyperlipomia by oral contraceptives: An <i>in vitro</i> model	Ministry of Health and Family welfare	1,00,000
15	NEETA SINGH	Functional analysis of S29 ribosomal protein in apoptosis	DST	5,02,383
16	NEETA SINGH	Mitochondria in apoptosis and human cancer	ICMR	5,02,625
17	NEETA SINGH	Identification of differentially expressed genes in lung cancer using cDNA library subtraction	DBT	4,69,249
18	NEETA SINGH	Development of HPV vaccine prototype	DBT	15,21,833
19	NEETA SINGH	Development of human papilloma virus vaccine prototype/s—Molecular epidemiology of HPV types prevalent in India and identification of HPV-16 L1 and E6 variants	DBT	8,47,610



20	NIBHRITI DAS	Expression and modulation of complement receptors: Significance in the pathophysiology and prognosis of autoimmune disorders	CSIR	5,32,457
21	P. CHATTOPADHYAY	Effect of tumour-specific Hsp 90 inhibitor, geldanamycin, on CpG island methylation and survival of hypoxic glial tumour cell lines	CSIR	2,04,231
22	P. CHATTOPADHYAY	Hypoxia and CpG island methylation of selected loci in tumour cell genome: Modulation of methylation and subsequent effects on cell proliferation and chemotherapeutic response	ICMR	5,02,065
23	RANJU RALHAN	Role of genomic instability due to alterations of recombination factors p53 and breast in the pathogenesis of breast cancer	ICMR	41,721
24	RANJU RALHAN	Functional analysis and clinical significance of novel molecular targets in cytoskeleton reorganization and locoregional spread of oral cancer using proteomics	DBT	7,67,832
25	RANJU RALHAN	Designing of methylation target arrays for breast cancer	DBT	5,08,963
26	S.S. CHAUHAN	Identification and characterization human cathepsin L. alternate promoter	CSIR	2,00,000
27	S.S. CHAUHAN	Characterization of the positive regulatory region of the first exon of human cathepsin L gene	DST	8,23,646
28	SUBRATA SINHA	Interaction of DNA repair genes and p53 in determining the cellular response to genotoxic agents in glial tumour cell-lines	DST	5,02,545
29	SUBRATA SINHA	Funds for improvement of S&T infrastructure (FIST)	DST	16,96,095

30	SUBRATA SINHA	Generation and characterization of phage displayed recombinant antibodies to biochemically and immunologically relevant epitopes of the oncodevelopmental antigen heat stable alkaline phosphatase	ICMR	4,70,145
31	SUBRATA SINHA	Expression of recombinant antibody in <i>E.Coli</i> : Processes for improving binding characteristics on antibodies to hepatitis B surface antigen (HbsAg)	DBT	2,91,460
32	SUBRATA SINHA	Ligand-based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofetal) isozyme of alkaline phosphatase: Characterization and validation in clinical cancers	DBT	6,41,373
<b>Biophysics</b>				
33	A. SRINIVASAN	Infrastructural support for clinical proteomics	DBT	27,493,22
34	A. SRINIVASAN	Proteomics of human body fluids: Structural characterization of proteins and target identifications for diagnosis and drug discovery	DBT	-5,62,575
35	KRISHNA DALAL	Improvement of S&T infrastructure in universities and higher educational institutions (FIST)	DST	1,08,925
36	KRISHNA DALAL	Randomized clinical trial (RCT) of reflexology therapy and usual drug treatment in the management of intractable epilepsy	Central Council for Research in Yoga and Naturopathy	7,08,718
37	NAGENDRA SINGH/ T.P. SINGH	Structure-based rational drug design inflammation, arthritis and rheumatism using phospholipase A-2 (PLA-2), cyclooxygenase-2 (COX2) and lipooxygenase as target macromolecules	DST	1,64,993

38	PUNIT KAUR	Three dimensional structure determination of disintegrin from venom of Indian saw scale by X-ray diffraction method and structure and functional relationship with its complex with integrin	CSIR	1,50,000
39	SAVITA YADAV	Purification crystallization and structure determination of disintegrin and integrin–disintegrin complex	DST	7,423
40	SHARMISTHA DEY	Structure-based rational drug design: Development of specific anti-inflammatory agents using phospholipase A2 and cyclooxygenase-2 as target enzymes	CSIR	3,00,591
41	SHARMISTHA DEY	Design synthesis and evaluation of inhibitors of lipooxygenase anti-inflammatory agents	DST	9,22,200
42	SUJATA SHARMA	Search of a magic drug: Isolation, purification, crystallization and three-dimensional structure determination of the functional c-lobe and antimicrobial peptides of lactoferrin and their applications in antimicrobial drug discovery	DST	81,918
43	SUJATA SHARMA	Structural studies of signalling proteins expressed during involution/breast cancer and ligand design	DST	6,66,805
44	SUJATA SHARMA	Determination of amino acid sequence and three-dimensional structure of phospholipase A2 from Indian red scorpion	DST	3,63,750
45	SUJATA SHARMA	Isolation and three dimensional structure determination of the novel signalling protein SPX-40 from memory gland secretion during involution	DST	6,83,850
46	T.P. SINGH	Cloning expression and structural investigation on human endothelin receptors A and B	DST	1,47,332

**Biostatistics**

47 R.M. PANDEY	Development of appropriate prevention and intervention strategies for non-communicable nutrition-related disorders among women in post-reproductive period	DST	8,65,020
48 S.N. DWIVEDI	Multilevel epidemiological analysis to assess the role of community level effects on public health/family welfare	ICMR	1,52,178

**Biotechnology**

49 H.K. PRASAD	Molecular basis of dysregulation of interferon of generation and function in tuberculosis patients	ICMR	4,10,255
50 H.K. PRASAD	Study of transmission of livestock derived pathogenic mycobacteria and its prevalence among humans (zoonotic tuberculosis)	DBT	15,89,631
51 J.S. TYAGI	Isolation identification and characterization of peptides that interact with two component system proteins DEVR and RC 2027c of <i>Mycobacterium tuberculosis</i>	CSIR	6,71,690
52 J.S. TYAGI	Evaluation of devR mutant of <i>Mycobacterium tuberculosis</i> in animal model of tuberculosis and in cultured bacilli: Virulence and gene expression analysis	DBT	4,87,416
53 J.S. TYAGI	High throughput PCR assays for diagnosing tuberculosis caused by <i>Mycobacterium tuberculosis</i> and <i>M. bovis</i> using molecular beacons	DBT	31,87,420
54 SATYA N DAS	Evaluation of antiproliferative apoptotic and immunomodulatory activity of some Indian system and homeopathic anticancer drugs	Ministry of Health and Family welfare	2,59,450

55	Y.D. SHARMA	Establishment of flowcytometry facility for financial assistance from DBT under creation of infrastructure facility	DBT	3,465
<b>Blood Bank</b>				
56	D.K. SHARMA	Prevention of infection and strengthening the blood banking system in the country	Ministry of Health and Family welfare	6,41,143
<b>Cardiac Anaesthesiology</b>				
57	UJJWAL KR. CHAWDHARY	Emerging biochemical markers of myocardial injury following coronary artery bypass grafting (CABOC) with or without cardiopulmonary bypass (CPB)	ICMR	1,94,291
<b>Cardiac Biochemistry</b>				
58	R. LAKSHMY	Recovery and stability of routine chemistry analytes and enzymes from serum/whole blood spotted on filter paper	ICMR	2,99,609
59	R. LAKSHMY	LDL particle heterogenicity and its association with other established risk factors for CHD in an industrial population: Role of CETP gene	ICMR	5,78,877
60	R. LAKSHMY	Association between low-birth weight and autoimmune markers of diabetes in a young Delhi cohort	ICMR	1,51,295
61	R. LAKSHMY	Relation of candidate gene variants regulating triglyceride metabolism to serial changes in childhood body mass index and coronary artery disease risk factors in young adulthood	ICMR	9,34,085
<b>Cardiology</b>				
62	BALRAM BHARGAVA	A twelve week, randomized, double-blind, parallel-group, multicentric, dose escalation study to evaluate the efficacy and safety of aliskiren administered alone and in combination with atenolol in patients with essential hypertension	Novartis India	12,906

63	G. KARTHIKEYAN	Comparison of plasma homocysteine levels in patients with mitral stenosis with and without left atrial thrombus	ICMR	39,267
64	G. KARTHIKEYAN	Role of homocysteine in coronary artery disease genetics and epigenetic studies	DBT	6,35,864
65	G. KARTHIKEYAN	Non-invasive detection of subclinical disease activity inpatients with established rheumatic valvular heart disease	DBT	12,85,000
<b>Cardiothoracic and Vascular Surgery</b>				
66	BALRAM AIRAN	Surgical treatment for ischaemic heart (STICH) failure trial	Clinirx Research	17,38,705
<b>Centre for Behavioural Sciences (Psychiatry)</b>				
67	MANJU MEHTA	Risk factors of substance use and abuse in offspring of substance abuse patients	ICMR	4,62,828
68	MANJU MEHTA	Road rage—a study of aggressive behaviour and intervention strategies	Ministry of Health and Family welfare	2,77,903
69	RAJESH SAGAR	A multi-centre, double-blind, randomized, placebo-controlled, parallel group flexible dose titration, add-on study of mecamlamine 2.5 to 7.5 mg, in the treatment of major depressive disorder with subjects who are partial responders or non-responders to citalopram.	Synergy Network India	2,71,207
70	RAJESH SAGAR	Phase III randomized placebo-controlled , double-blind trial evaluating the safety and efficacy of sublingual asenapine vs olanzapine and placebo in inpatients with an acute manic episode (A7501005)	Pfizer	13,92,278

**Centre for Community Medicine**

71	PUNEET MISHRA	Development of appropriate prevention and intervention strategies for non-communicable nutrition-related disorders among women in post-reproductive period	DST	4,57,578
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**Dental Surgery**

72	RITU DUGGAL	Detection of apoptosis in human periodontal ligament during orthodontic tooth movement	ICMR	2,85,281
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**Department of Dietetics**

73	REKHA SHARMA	Efficacy of soy phytoestrogens on osteoporosis and cardiovascular profile of postmenopausal women	DBT	98
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**Dermatology and Venerology**

74	NEENA KHANNA	Evaluation of ovarian function in female patients with multibacillary leprosy	ICMR	6,19,023
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75	NEENA KHANNA	Role of parthenium hysterophorus N pathogenesis and exacerbations of atopic dermatitis	DBT	1,88,436
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**Dr B.R. Ambedkar Institute Rotary Cancer Hospital**

76	ATUL SHARMA	A multicentric, open comparative, randomized, study to optimize dose, duration safety, efficacy, and cost of two treatment regimens with liposomal amphotericin (fungisome) in the treatment of systemic fungal infections in India	DBT	18,06,356
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77	B.K. MOHANTI	Patterns of care and survival studies in cancers registry programme	ICMR	1,82,000
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78	LALIT KUMAR	Expansion of adult human bone marrow and cord blood stem cells for reprogramming into hepatocytes	ICMR	3,75,652
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79	LALIT KUMAR	Neoadjuvant chemotherapy followed by interval debulking surgery versus upfront surgery followed by chemotherapy in patients with stage IIIc and stage IV (with pleural effusion) epithelial ovarian carcinoma: A randomized study	Dabur Research Foundation	95,893
80	LALIT KUMAR	<i>In vitro</i> expansion and establishment of human fetal liver hematopoietic stem cell line	DBT	27,71,403
81	LALIT KUMAR	Grastim (G-CSF) mobilized peripheral blood progenitor cell (PBPC) transplantation (allogeneic or autologous): A multicentric study	Dr Reddy's Laboratories	1,92,250
82	MADHABANANDA KAR/N.K. SHUKLA	<i>In vivo</i> magnetic resonance spectroscopic evaluation with pathological and radiological correlation of metabolic imaging of soft tissue tumours	DST	1,49,086
83	N.K. SHUKLA	Characterization and functional analysis of differentially expressed genes in esophageal cancer	DST	8,57,757
84	P.K. JULKA	A phase III trial of ALIMTA versus docetaxel in patients with locally advanced or metastatic non-small cell lung cancer	Ranbaxy/Eli Lilly	2,46,129
85	P.K. JULKA	A phase II randomized, double-blind, placebo controlled, multicentre comparative study of ZD 1839 250mg (Iressa TM) given either continuously or concomitantly with cisplatin plus radiotherapy for the treatment of patients with previously untreated unresected tumours	Quintiles Spectral India	11,99,963
86	P.K. JULKA	(Study 3066A1 -303-WW) A phase III randomized, double-blind study of oral CCI-779 administered in combination with letrozole vs letrozole alone as first-line hormonal therapy in postmenopausal women with locally advanced or metastatic breast cancer	Quintiles Spectral India	1,59,581



87	P.K. JULKA	A randomized, double-blind, parallel-group, multicentre, phase III study comparing the efficacy and tolerability of fulvestrant (FASLODEX) 500 mg with fulvestrant (FASLODEX) 250 mg in postmenopausal women with oestrogen receptor positive advanced breast carcinoma	Quintiles Spectral India	3,61,559
88	RAJIVE KUMAR	Characterization of testis-specific sperm associated antigen 9 (SPAG9) gene expression and humoral immune response in various human cancers	DBT	1,21,846
89	V. RAINA	A multicentre study of cremophor free, polymeric, nanoparticle formulation of paclitaxel (DONDR/O2) in locally advanced and metastatic breast cancer	Dabur Research Foundation	1,89,676
90	VINOD KOCHUPILLAI	Antioxidants as adjunct to chemotherapy of lung cancer: <i>In vitro</i> study	Dr Reddy's Laboratories	3,14,305
91	VINOD KOCHUPILLAI	An <i>in vitro</i> study of antiproliferative and apoptotic effects of gefitinib on lung cancer cell lines	NATCO Pharma India	3,45,219
<b>Dr R.P. Centre for Ophthalmic Sciences</b>				
92	GITA SATPATHY	Novel molecular diagnostics for eye diseases and low vision enhancement devices	CSIR	4,92,833
93	NAZIMA NISAR/ N.R. BISWAS	Diagnostic approaches for the rapid and specific diagnosis of mycoplasma pneumonia infection in asthmatics	DST	1,70,109
94	NIRANJAN NAYAK	Standardization of antifungal susceptibility testing for filamentous fungi and characterization of drug-sensitive and drug-resistant fungal isolates in mycotic keratitis	ICMR	2,32,294

95	ROHIT SAXENA	Study on the prevalence, therapeutic option and outcome measures of amblyopia	DST	7,42,473
96	T. VELPANIDAN	Evaluation of the bio-disposition of xanthophylls in Indian donor eyes and detection of their content in commonly available fruits and vegetables	DST	2,98,216
97	T. VELPANIDAN	Development of topical ocular formulation of calcium dobesilate and evaluation of its formulation characteristics	Ozone Pharmaceuticals	2,76,422
98	T. VELPANIDAN	Development and validation of sensitive HPLC method and evaluation of taxanes in various taxux species especially found in Himalayan regions to support the tribal welfare	Auxilium Management Services	50,000
<b>Endocrinology and Metabolism</b>				
99	A.C. AMMINI	Assessment of the prevalence of osteoporosis in adult population of India	ICMR	6,43,535
100	A.C. AMMINI	Comparison of efficacy of metformin and spironolactone in the management of polycystic ovarian syndrome	ICMR	2,00,299
101	A.C. AMMINI	Demographic and clinical profile of young diabetics in a tertiary care hospital in north India	ICMR	5,33,231
102	A.C. AMMINI	Postmenopausal evaluation and risk-reduction with lasofoxifene (Pearl)	Pfizer	14,98,521
103	A.C. AMMINI	Effects of arzoxifene on vertebral fracture incidence and on invasive breast cancer incidence in postmenopausal woman with osteoporosis or with low bone density	Quintiles Spectral India	19,83,022

104 NIKHIL TANDON	Hyperglycemia and its effect after acute myocardial infarction on cardiovascular outcomes in patients with type 2 diabetes (HEART2D)	Ranbaxy/Eli Lilly	1,76,357
105 NIKHIL TANDON	A multicentre, randomized, double-blind, active controlled study to compare the effect of 24 weeks treatment with combination therapy of LAF 237 and pioglitazone to LAF 237 monotherapy or pioglitazone monotherapy in drug-naive patients with type 2 diabetes	Novartis India	45,870
106 R. GOSWAMI	Diabetes mellitus and vulvovaginal candida prevalence of infection and its rational management	ICMR	1,24,668
107 R. GOSWAMI	Vitamin D status of subjects residing in rural north India	Vulimini Ramalingaswami Foundation	53,802
108 R. GOSWAMI	Encapsulation of potentially immunotherapeutic/ immunopropylactic peptides in novel biocompatible nanosized carriers for targeted delivery in IDDM	DBT	2,71,177
<b>ENT (Otorhinolaryngology)</b>			
109 R.C. DEKA	Amphotericin B nasal lavage and corticosteroid nasal spray combination therapy in allergic fungal sinusitis	ICMR	1,50,552
110 R.C. DEKA	Development of educational and training material for rehabilitation cochlear implantees and Empowerment	Ministry of Social Justice	-31,941
111 SUDHIR BAHADUR	Phase II/III randomized placebo controlled clinical trial of curcumin in squamous head and neck cancers	DBT	20,96,314

### Gastroenterology and Human Nutrition

112 ANOOP SARAYA	Role of enteral nutrition in preventing complications in severe acute pancreatitis in a randomized control trial	ICMR	1,56,924
113 GOVIND K. MAKHARIA	Double-blind randomized placebo-controlled study of a probiotic preparation VSL \$3 for the treatment of mild to moderate active ulcerative colitis	CD Pharma India	4,77,261
114 PRAMOD GARG	Role of genetic factors in tropical pancreatitis	ICMR	88,176
115 RAKESH AGGARWAL	Epidemiological studies on hepatitis E	DBT	2,52,681
116 S.K. ACHARYA	FIST infrastructure in universities and higher educational institutes	DST	53,35,000
117 S.K. ACHARYA	Multicentric study of interferon–glycyrrhizin combination therapy and interferon–ribavirin combination therapy in the management of chronic hepatitis C (coordinating centre)	ICMR	2,34,176
118 S.K. ACHARYA	Multicentric study of interferon–glycyrrhizin combination therapy and interferon–ribavirin combination therapy in the management of chronic hepatitis C (study centre)	ICMR	2,87,193
119 S.K. ACHARYA	Advanced Centre for Liver Diseases	ICMR	53,89,730
120 S.K. ACHARYA	Randomized controlled trial of pegylated interferon (PEG-IFN) monotherapy and combination of PEG-INF with lamivudine among patients with chronic hepatitis B	Fulford India	9,38,039
121 UMESH KAPIL	Prevalence of obesity and associated diseases among well-to-do adolescent children in the National Capital Territory of Delhi	ICMR	8,42,767

122	UMESH KAPIL	Epidemiology of gallbladder cancer with special reference to nutritional risk factor	ICMR	3,97,401
123	UMESH KAPIL	Resolution of Bitot spots after administration of megadose of vitamin A in a cohort of children in 1–5 years of age with Bitot spots	ICMR	5,99,089
124	UMESH KAPIL	Food safety and quality control of drugs	National Institute of Nutrition	2,84,736
125	UMESH KAPIL	Assessment of zinc deficiency among children of 6 months of age in different regions of India	DBT	16,12,126
126	VINEET AHUJA	Comparison of diagnostic efficacy of immunohistochemistry with histology (Warthin Starry stain) and urea-based tests (rapid urea test, C-14 urea before and after eradication therapy for <i>H. Pylori</i> in peptic ulcer disease	ICMR	1,00,246
127	VINEET AHUJA	Curcumin for the treatment of ulcerative colitis	Himalaya Drug	1,71,329
128	VINEET AHUJA	A phase III, randomized, multicentre, double-blind, parallel group, active comparator study to compare the efficacy and safety of SPD476 (measalazine) 2.4 g/day once daily (QD) with asacol 1.6 g/day twice daily (BID) in the maintenance of remission in patient with ulcerative colitis	PPD Pharmaceutical Development India	6,07,915
129	VINEET AHUJA	A randomized, double-blind controlled trial of the probiotic preparation VSL 3 for assessing clinical and histological response in patients with microscopic colitis	CD Pharma India	4,46,043
130	Y.K. JOSHI	Effect of glutamine of intestinal structure and function in patients with inflammatory bowel diseases	ICMR	4,99,007

**Gastrointestinal Surgery**

131 PEUSH SAHNI	Design and development of syringe pump and online peristaltic pump for drug delivery	Ministry of Communication and Information and Technology	0,50,944
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**Haematology**

132 RENU SAXENA	A study to characterize the von Willebrand disease and its correlation with molecular defects	DST	4,31,595
133 RENU SAXENA	Fund for improvement of S&T infrastructure in university and higher educational institutions (FIST)	DST	-5,29,838
134 RENU SAXENA	Organization of proficiency testing programme for testing haemogram	DST	2,15,904
135 RENU SAXENA	Haemostatic and molecular defects predisposing to acute non-embolic stroke in children and young Indians	ICMR	1,99,779
136 RENU SAXENA	Elucidation of molecular genetics of acute leukemia in India	ICMR	5,59,288
137 RENU SAXENA	Characterization of mutations underlying haemophilia A and B	DBT	3,26,559
138 RENU SAXENA	Diagnosis and counselling of genetic disorders using cytogenetics and molecular methods	DBT	6,02,081
139 RENU SAXENA	Organization of ISHTM AIIMS external quality assurance programme	ISHTM	2,27,637
140 TULIKA SETH	Evaluation of the thermal camera pre-cancer lesions or cancers in early stages and to study the effect of <i>pranayam</i> and <i>sudershan kriya</i> (breathing processes) in reversing pre-cancerous lesions	DST	3,94,363

141 TULIKA SETH	Assessment of the effect of planned intervention on awareness, perception and attitude regarding common cancers in Delhi: A community-based longitudinal study	The Cancer Foundation	2,31,750
142 V.P. CHOUDHRY	Thalassemia awareness and screening programme for detection of thalassemia trait	National Thalassemia Welfare Society	96,084
<b>Laboratory Medicine</b>			
143 M. IRSHAD	Development of rapid diagnostic test for detection of auto antibodies in myasthenia gravis by plate and dot-blot ELISA	ICMR	3,64,049
144 M. IRSHAD	Prevalence and significance of transfusion transmitted virus (TTV) in various forms of liver diseases	ICMR	8,01,439
145 M. IRSHAD	Optimization of carbohydrate–protein conjugates as vaccine for prevention of enteric fevers	DBT	8,94,744
146 SARMAN SINGH	Evaluation of toxicity and anti-leishmanial efficacy of liposomal amphotericin B (KALSOMETM) in a mouse model	DST	8,21,751
147 SARMAN SINGH	Transmission of drug-resistant hepatitis B virus in close family contracts of HBV-related chronic liver disease patients	DST	6,79,000
148 SARMAN SINGH	Rapid and accurate diagnosis of tuberculosis using a novel set of primers directly from clinical samples	ICMR	7,60,293
149 SARMAN SINGH	Expression, purification and characterization of recombinant kinesin-like protein of VL and PKDL causing Indian strains of leishmania donovani and developing ELI-SA and other rapid test methods	DBT	70,032

150	SARMAN SINGH	Comparative evaluation of various <i>in vitro</i> methods for diagnosing pulmonary and extra-pulmonary tuberculosis	Biomerieux India	1,01,206
<b>Medicine</b>				
151	A.B. DEY	Determinants of the functional status of the older Indian	ICMR	10,24,774
152	A.B. DEY	Assessment of bone health in older Indian women	Helpage India	27,966
153	ASHOK KUMAR	Methotrexate in rheumatoid arthritis: Pharmacogenetics and clinico-immunological correlates	DBT	1,29,404
154	G.C. KHILNANI	Effect of outdoor and indoor air pollution in children's health in Delhi: A controlled study	Ministry of Environment and Forest	3,40,967
155	AVAL K. VIKRAM	To investigate the relationship between growth hormone insulin-like growth factor axis and hypothalamopituitary adrenal axis body composition insulin sensitivity	DST	14,784
156	NAVAL K. VIKRAM	Double-blind randomized placebo-controlled trial of our herbal compound MA-471 for diabetes mellitus	Maharishi Ayurveda	322
157	R. HANDA	Prevalence of osteoporosis in Indian patients with RA	Bone and Joint Decade India	9,000
158	RANDEEP GULERIA	Assessment of efficacy of hydroxychloroquine as an alternative to corticosteroids in the treatment of sacroidosis	DST	4,02,027
159	RANDEEP GULERIA	Spectrum of pulmonary infection in HIV-positive patients: Indian scenario	Ministry of Health and Family Welfare (NACO)	8,30,674



160	RANDEEP GULERIA	Design and development of personal use respiratory device for patients with respiratory failure	Ministry of Information and Technology	6,78,444
161	RANDEEP GULERIA	Double-blind randomized placebo-controlled trial of herbal compound MA-364 in patients with mild to moderate bronchial asthma	Maharishi Ayurveda	53,600
162	ROHINI HANDA	Herbal-based preparations for degenerative disorders: Osteoarthritis (OA) and rheumatoid arthritis (RA)	CSIR	34,451
163	S.K. SHARMA	Genomic and molecular studies on the immunopathogenesis of bronchial asthma	DBT	2,74,750
164	S.K. SHARMA	Efficacy and safety of immunomodulator <i>Mycobacterium w, mw</i> as an adjunct therapy in pulmonary tuberculosis	DBT	60,52,985
165	S.K. SHARMA	Anti-retroviral treatment	Ministry of Health and Family welfare	8,62,131
166	S.K. SHARMA	Treatment outcome and drug resistance among category II pulmonary tuberculosis under RNTCP	Delhi Tapedik Unmulan Samiti	3,89,379
167	S.K. SHARMA	Programme support for immuno-proteomics based diagnostics of infectious diseases	DBT	1,16,400
168	SANJEEV SINHA	Study of early versus delayed initiation of antiretroviral therapy for HIV infected patients with tuberculosis on antituberculosis chemotherapy in Indian subjects	Ministry of Health and Family Welfare (NACO)	20,46,591

**Microbiology**

169 ARTI KAPIL	Study of carbapenemase production among nosocomial isolates of Gram-negative bacteria in a tertiary care hospital	ICMR	4,48,848
170 B.K. DAS	Study of haemophilus influenzae isolates from invasive and non-invasive disease	DST	5,32,438
171 B.K. DAS	Pneumococcal surface adhesin A (Psa.A) DNA construct as a vaccine candidate against <i>Streptococcus pneumoniae</i> —An immune response study	DBT	5,94,444
172 B.K. DAS	Optimization of lab diagnosis of pertussis	DBT	8,24,408
173 B.R. MIRDHA	DNA amplification study by polymerase chain reaction (PCR) to detect subclinical <i>Pneumocystis carinii</i> infection and colonization in at-risk patients with for (or without respiratory symptoms)	DST	3,29,796
174 B.R. MIRDHA	Detection, identification and molecular characterization of intestinal coccidia and microsporidia in patients with chronic diarrhoea and malabsorption syndromes	ICMR	1,93,697
175 BENU DHAWAN	Role of ureaplasma urealyticum in prematurity and diseases in the newborn	DST	4,542
176 BENU DHAWAN	Phenotypic and genotypic characterization of methicillin and mupirocin research staphylococci	DBT	7,27,374
177 LALIT DAR	Congenital CMV infection in offsprings of immune mothers	ICMR	13,43,873
178 LALIT DAR	Health programme-central plan scheme of national HIV/AIDS reference centre	Ministry of Health and Family Welfare (NACO)	3,10,000

179	MADHU VAJPAYEE	External quality assessment programme	Ministry of Health and Family Welfare (NACO)	2,70,000
180	MADHU VAJPAYEE	Voluntary counselling and testing centre (VCTC)	Ministry of Family Welfare (NACO)	2,36,581 Health and
181	PRADEEP SETH	Screening of western Himalayan plants for anti-HIV (human immunodeficiency virus) activity	Ministry of Health and Family Welfare	26,463
182	RAMA CHAUDHARY	Cloning and expression of mycoplasma pneumoniae P1 gene and its fragments to study their role in cytoadherence	ICMR	6,44,565
183	RAMA CHAUDHARY	Development of multiplex real time quantitative PCR assay to detect <i>Chlamydia pneumoniae</i> , legionella pneumophila and <i>Mycoplasma pneumoniae</i> in community-acquired pneumonia	DBT	8,59,171
184	SHOBHA BROOR	A multicentric study on detection and characterization of human caliciviruses (HuVCs) in acute gastroenteritis and food-borne disease	ICMR	3,06,453
185	SHOBHA BROOR	Multisite monitoring of human influenza viruses in India	ICMR	12,502,66
186	SHOBHA BROOR	Research programme on SARS virus detection systems, research biology and mechanism of pathogenesis (development of PCR test for SARS virus)	DBT	3,86,871

**National Drug Dependence Treatment Centre**

187 RAJAT RAY	A post-marketing surveillance of addnole-N	Russan Pharma	6,75,000
188 RAKESH LAL	Study to evaluate the safety and efficacy of ESD-27 for insomnia in patients with major depressive disorder	Himalaya Drug	3,79,984

**Nephrology**

189 S.K. AGARWAL	An open labelled prospective, multicentric trial to evaluate the efficacy and safety of lanthanum carbonate in patients of hyperphosphatemia of chronic kidney disease	Panacea Biotech	1,04,233
190 S.K. AGARWAL	Linezolid vs vancomycin in the treatment of haemodialysis patients with catheter-related Gram-positive blood stream infections	Pfizer	2,99,135

**Neurobiochemistry**

191 S.VIVEKANANDHAN	Impact of nutritional strategies and multiple antioxidant therapy of progression and management of Parkinson's disease	ICMR	2,55,873
192 S.VIVEKANANDHAN	Molecular study on mitochondria dysfunction in Parkinson's disease	ICMR	9,693
193 S.VIVEKANANDHAN	Genetic polymorphism of drug metabolizing enzymes CYP2D6 CYP2C19 and CYP2C9 and GST genes in patients developing toxicity to specific antiepileptic drug-phenytoin	ICMR	2,39,470

**Neurology**

194 MADHURI BEHARI	A longitudinal study to estimate proportion of patients with dementia and cognitive decline in Parkinson's disease, its clinical correlates with special reference to apolipoprotein E alleles	ICMR	5,43,663
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195 MADHURI BEHARI	Phase III, double-blind, placebo-controlled study to determine the efficacy and safety of a low 50–100 mg/day and high (150–200 mg/day) dose range of safinamide, as add-on therapy, in patients with early idiopathic Parkinson's disease treated with a stable dose of a single dopamine agonist	Quintiles Spectral India	14,74,465
<b>Neurosurgery</b>			
196 RAJINDER KUMAR	A randomized, double-blind, placebo-controlled, multi-centre, dose-escalation study to evaluate the safety and preliminary efficiency of recombinant factor via (Novoseven/Nita stase) in subjects with brain contusions	Nova Nordisk India	1,71,050
<b>Nuclear Magnetic Resonance</b>			
197 N.R. JAGANNATHAN	Evaluation of the role of proton MR spectroscopy in non-invasive detection, assessment of treatment response and tumour metabolism in breast cancer	DST	6,27,358
198 N.R. JAGANNATHAN	Upgradation of the existing animal MR scanner for biomedical research	DST	19,68,810
<b>Nuclear Medicine</b>			
199 G.P. BANDOPADHYAYA	To evaluate radiolabelling and efficacy of radiolabelled betacyclodextrin for infection imaging	ICMR	3,96,076
200 G.S. PANT	Radiation-induced chromosome aberrations and their use in biodosimetry	Atomic Energy Regulatory Board	1,94,060
<b>Obstetrics and Gynaecology</b>			
201 ALKA KRIPLANI	Diagnosis of genital tuberculosis in infertile women and the effect of anti-tubercular therapy	ICMR	4,30,523

202 ALKA KRIPLANI	Efficacy and safety of administration of evanova capsules in the management of menopausal symptoms	Charak Pharma	1,47,586
203 DEEPIKA DEKA	I.V Ig for the treatment the recurrent abortions	Bharat Serums and Vaccines	81,623
204 NEERJA BHATLA	Association of chlamydia infection with cervical intraepithelial neoplasia and cervical cancer	ICMR	2,26,449
205 NEERJA BHATLA	A comparative study of VIA cytodiagnosis, HPV testing and colposcopy as tools for cancer screening	DBT	2,72,437
206 NEERJA BHATLA	Development of HPV candidate vaccine/s preparation of clinical trial site/cohort for vaccine testing	DBT	29,43,759
207 NUTAN AGGARWAL	Weekly 70 mg oral alendronate therapy in postmenopausal osteopenic women	Troikaa Pharmaceutical	1,34,858
208 NUTAN AGGARWAL	Clinical effects of human placental extract (placentrex) in pelvic inflammatory disease.	Khandelwal Laboratories	18,682
209 SUNEETA MITTAL	Human Reproduction Research Centre	ICMR	14,65,000
210 SUNEETA MITTAL	Clinical trial with pippalyadi yoga	Central Council for Research in Ayurveda and Sidha	15,92,623
211 SUNEETA MITTAL	Prevention of mother-to-child transmission of HIV	Delhi State Control Society/AIDS	1,70,400

212 SUNEETA MITTAL	Sexual and reproductive health for rural and urban women with application of molecular genetics	DBT	6,44,014
213 SUNEETA MITTAL	Aneuploidies leading to mental retardation and fetardation and fetal loss	DBT	6,83,426
214 SUNESH JAIN	Evaluation of curcumin in the management of advanced cancer cervix	DBT	27,27,000
<b>Orthopaedics</b>			
215 A. JAYASWAL	Role of free radical scavengers and the effects of antioxidants on their levels in patients with ankylosing spondylitis to investigate the possible role of antioxidants as therapeutic agents in ankylosing spondylitis	ICMR	2,97,050
216 RAJESH MALHOTRA	Comparison of recovery and complications and recurrence rate after endoscopic versus open carpal tunnel release	ICMR	95,223
217 SURYA BHAN	A new hip hemiarthroplasty option based on femoral stem design suitable for the morphology of proximal femur of elderly Indian population	CSIR	6,05,922
<b>Paediatric Surgery</b>			
218 D.K. GUPTA	<i>N-myc</i> gene amplification by polymerase chain reaction in neuroblastoma tumour surveillance by detecting tyrosine hydroxylase protein using RT-PCR	DBT	3,67,971
219 M. BAJPAI	Pelvi-ureteric junction obstruction: A study on apoptosis and mRNA upregulation in patients with ACE I/D gene polymorphism with respect to disease aetiopathogenesis and monitoring therapy by molecular markers or renin angiotensin system activation	DST	11,25,200

220 MINU BAJPAI	ACE I/D gene polymorphism in posterior urethral valve and its correlation with transforming growth factor-B tumour necrosis factor (TNF)- $\alpha$ soluble TNF receptor - I, interleukin-6 (IL-6), microalbuminuria, angiotensin II and plasma renin activity in the early diagnosis of renal damage	DST	3,03,845
221 MINU BAJPAI	Study of angiotensin-converting enzyme insertion/deletion gene polymorphism in vesicoureteric reflux and its correlation with molecular markers of renin angiotensin system activity in the early diagnosis of renal damage	DBT	7,33,268
<b>Paediatrics</b>			
222 ARVIND BAGGA	An open label long term study to evaluate the safety of eplerenone in the treatment of hypertension in children	Pfizer	4,70,045
223 ARVIND BAGGA	A double-blind, randomized, multi-centre study followed by 12 months open-label treatment to evaluate the dose response and safety of valsartan in paediatrics hypertensive patients 1–5 years of age	Novartis India	3,54,136
224 ARVIND BAGGA	Dose ranging study to evaluate the safety and efficacy of olmesartan medoxomil in children and adolescents with hypertension	Quintiles Spectral India	8,09,218
225 MADHULIKA KABRA	An integrated approach for mutation analysis and identification of new gene (S) for X-linked mental retardation	DBT	4,77,478
226 PRATIMA RAY	Cloning and expression of NSP4 enterotoxin of rotavirus in <i>E. coli</i> and evaluation of NSP4-specific immune responses during natural rotavirus infection in children	DST	8,35,176



227 PRATIMA RAY	Reactogenicity and immunogenicity of live, attenuated rotavirus vaccine candidate strains 116E and I321 in health adults	DBT	3,07,704
228 PRATIMA RAY	Characterization of rotavirus strains from a multicentric rotavirus surveillance study at AIIMS, New Delhi	DBT	11,20,389
229 RACHNA SETH	To understand the deviation in cell signalling pathway autism through neurotrophic factors (insulin-like growth factor-1) and undertake a randomized blind trial with olanzapine to evaluate its effects on insulin-like growth factor-1 (IGF-1) clinical symptom	DST	1,90,000
230 S.K. KABRA	Effectiveness of 3-day amoxicillin versus 5-day co-trimoxazole in the treatment of non-severe pneumonia in children aged 2–59 months of age—A multicentric open-labelled trial	ICMR	1,70,604
231 S.K. KABRA	High dose and low dose azithromycin in cystic fibrosis: An intervention study to evaluate effect on disease parameter	ICMR	2,05,292
232 S.K. KABRA	Capacity building for sweat chloride estimation test by indigenously developed method	Solvey Pharma	1,20,051
233 SAMPATH MUKHOPADHAYAY/ M.K.BHAN	Impact of zinc when it interacts on iron and copper status in children	DST	1,19,003
234 SHEFFALI GULATI	National Polio Certification Committee for polio eradication	Ministry of Health and Family welfare	4,48,462
235 SHINJINI BHATNAGAR	Aetiological significance of microscopic colitis in chronic diarrhoea in children and its pathogenesis	ICMR	3,87,320

236 SHINJINI BHATNAGAR	Zinc as an immunomodulator in the treatment of possible serious bacterial infections in infants more than 7 days and up to 2 months of age	DBT	11,221,53
237 VEENA KALRA	FIST in subject area life sciences for level II support	DST	87,30,000
238 VEENA KALRA	Molecular, biological and serological detection of parameters of association of <i>Campylobacter jejuni</i> infection in children with Guillain–Barre syndrome	DBT	2,68,410
239 VEENA KALRA	Lead pollution and health in Delhi—a follow up study	Ministry of Environment and Forest	1,68,777
<b>Pathology</b>			
240 A.K. DINDA	Development of biodegradable hydrogel for controlled drug release for the treatment of osteomyelitis: Phase II. To evaluate immunotoxicity of implantable network polymers (IPNs) hydrogels for human uses	Ministry of Defence (DRDO)	Nil
241 A.K. DINDA	Genomic and molecular studies on the immunopathogenesis of bronchial asthma	DBT	1,66,966
242 CHITRA SARKAR	Myopathic disorders: A comparative clinico-pathological and <i>in vitro</i> proton magnetic resonance spectroscopy study on muscle biopsies	ICMR	5,92,973
243 S. DUTTA GUPTA	Multicentric study of interferon–glycyrrhizin combination therapy and interferon–ribavirin combination therapy in the management of chronic hepatitis C	ICMR	2,08,463
244 S.K. PANDA	To study of site reflection of hepatitis E virus (HEV) by localizing the viral replicase (RdRq) into the subcellular compartments by transfection studies using HepG2/Huh 7 cells and a fusion reporter construct	DST	11,28,017

245 S.K.PANDA	Development of non-radioactive antigen specific reporter release cytotoxicity assay and analysis of cytotoxicity against HEV proteins	DBT	17,60,179
246 S.K. PANDA	Development of small interfering RNAs (siRNAs) for inhibition of hepatitis E virus (HEV) replication and transcription	DBT	10,03,560
<b>Pharmacology</b>			
247 Ch.V. RAO/KAMAL KISHORE	Development of herbal formulation(s) used in treatment of neurodegenerative diseases like Alzheimer's	DBT	2,86,703
248 D.S. ARYA	Pharmacological and molecular studies on cardioprotective potential	CSIR	3,34,515
249 D.S. ARYA	Pharmacological and molecular studies on cardioprotective potential of medicinal plants	Ministry of Health and Family welfare	3,06,912
250 D.S. ARYA	Pharmacological and molecular studies on cardioprotective potential of some Unani drugs in experimentally induced myocardial infarction	Central Council for Research in Unani Medicine	8,03,700
251 N.R. BISWAS	Ophthalmic drug formulations using polymeric nanoparticles as carriers	ICMR	60,000
252 S.K. MAULIK	Moldulatory effect of phytoadaptogens on cardiovascular and neurological changes induced by experimental stress in rats	DST	8,24,500
253 S.K. MAULIK	Clinical trial of a standardized preparation of <i>Terminalia arjuna</i> in patients with left ventricular dysfunction	DBT	6,69,130

254	Y.K. GUPTA	Evaluation of herbal compounds in a rat model of sporadic dementia of Alzheimer's type	DST	2,01,947
255	Y.K. GUPTA	Antiemetic study of ginger against cancer chemotherapy induced emesis	Dabur Research Foundation	8,14,042
256	Y.K. GUPTA	National Pharmacovigilance Programme	Ministry of Health and Family welfare	1,10,920
<b>Physiology</b>				
257	DEBABRATA GHOSH	An MRNA expression array cluster analysis of human first trimester placental trophoblast cell functions	DST	4,60,000
258	DEBABRATA GHOSH	Effect of (Ala 8,13,18)-magainin II amide on human trophoblast cells <i>in vitro</i>	ICMR	4,04,048
259	H.N. MALLICK	Role of the warm receptors of the preoptic area in altering sleep	Ministry of Defence (DRDO)	1,40,204
260	K.K. DEEPAK	Development of digital ECG amplifier and essential hardware for the autonomic function tests (heart rate variability)	DST	5,27,262
261	K.K. DEEPAK	Yogic relaxation in the management of ulcerative colitis	Central Council for Research in Yoga and Naturopathy	1,83,163
262	K.K. DEEPAK	A psychophilosophical study: Application of <i>Astang</i> yoga as a tool in the treatment of psychosomatic disorders	Indian Council of Philosophical Research	69,000

263 K.K. DEEPAK	Multicentric trial of integrated software for quantification of autonomic tone	Ministry of Information and Technology	12,77,007
264 RASHMI MATHUR	Motor responses to noxious/non-noxious stimuli in spinalized humans and rats: Role of electromagnetic stimulation in recovery	DST	11,23,163
265 RATNA SHARMA	Randomized controlled trial on the efficacy of yogic intervention in premenstrual syndrome	ICMR	4,38,335
266 RATNA SHARMA	A study to assess acute mental stress induced changes in EEG, cognitive behaviour and neurosteroids across the menstrual cycle and effect of meditation on stress-induced changes	Central Council for Research in Yoga And Naturopathy	8,13,155
<b>Surgery</b>			
267 ANURAG SRIVASTAVA	Relationship between genetic polymorphism in drug metabolizing enzymes, cyplal and gastmi and risk of developing oral precancer and cancer among consumers of tobacco and chewing products	ICMR	18,68,860
268 SANDEEP GULARIA	Evaluation of efficacy and tolerability of tacrolimus in patients undergoing renal transplantation	Panacea Biotech	1,83,940
<b>Transplant Immunology and Immunogenetics</b>			
269 N.K. MEHRA	Comparative study on the immunogenetic similarities between European gypsies and north Indians to improve the utilization of bone marrow donor registries for diverse ethnic groups and to function Genome Programme	DST	1,80,000
270 N.K. MEHRA	Monitoring T-cell activation markers and cytokine production following allogenic renal transplantation	ICMR	4,80,443

271 N.K. MEHRA	Programme support for advanced programme in histocompatibility and transplant immunology (PS-APHTI)	DBT	9,30,712
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**Ongoing research projects funded by World Health Organization**

<b>Investigator</b>	<b>Project</b>	<b>Funds (Rs)</b>
<b>Centre for Community Medicine</b>		
1 K. ANAND	Sentinel health monitoring centres in India: Risk factors surveillance for non-communicable disease	1,24,156
<b>ENT (Otorhinolaryngology)</b>		
2 R.C. DEKA	Assessment of aetiological factors for conductive hearing impairment in rural population	18,890
<b>Haematology</b>		
3 RENU SAXENA	A multicentric study to test the efficacy and the feasibility of using the haemoglobin colour scale for haemoglobin estimation in Indian setting	8,52,046
<b>Neurology</b>		
4 MANJARI TRIPATHI	A prospective study in Indian women: How pregnancy and epilepsy interact to produce psychological and mental health morbidity	53,084
<b>Obstetrics and Gynecology</b>		
5 NEERJA BHATLA	Evaluation of the comparative efficacy of single- and double-freeze technique of cryotherapy in controlling CIN lesion: Multicentre randomized clinical trial	2,14,316
<b>Paediatrics</b>		
6 A.K. DEORARI	Multicentric study of clinical sign of predicting illness in young infants	3,95,693

7	ARVIND BAGGA	Impact of zinc supplementation on mortality and hospitalization in children aged 2–23 months	2,21,525
8	V.K. PAUL	South East Asia regional neonatal–perinatal database network	3,65,400

**Ongoing research projects funded by international agencies**

<b>Investigator</b>	<b>Project</b>	<b>Funding Agency</b>	<b>Funds (Rs)</b>
<b>Biochemistry</b>			
1 KALPANA LUTHRA	Characterization of HIV-1 subtypes from Indian subjects	National Institutes of Health, USA	5,81,271
<b>Biotechnology</b>			
2 H.K. PRASAD	Immune reactivity of specific secreted antigens of <i>M. tuberculosis</i> in TB patients and their contacts	INDO-US	2,371
<b>Centre for Community Medicine</b>			
3 C.S. PANDAV	Health systems reforms and ethics: Private practitioners in poor neighbourhoods in urban India, Indonesia and Thailand: A multidisciplinary comparative study	DANDIA Research Council	1,73,218
4 K. ANAND	Evaluation of safe water systems intervention project in urban slums of Dehradun and Haridwar	INCLEN and USAID	13,77,538
5 K. ANAND	Strengthening health services in rural area using information technology development of a replicable model for India	Media Lab Asia	10,56,169
6 K. ANAND	Monitoring and evaluation of community-based intervention for integrated prevention of non-communicable diseases—Ballabgarh, Haryana	KOBE, Japan	9,41,232

**Computer Facility**

7	R.S. TYAGI	Mainstreaming HIV/AIDS concerns in on going drugs demand reduction programmes in South Asia	UN International Drug and crime Control Programme	10,31,876
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**Dermatology and Venereology**

8	V.K. SHARMA	A prospective, randomized, double-blind, placebo-controlled, parallel group, multicentre, 52-week trial to assess the efficacy and safety of adjunct mycophenolate mofetil (mmf) to achieve remission with reduced corticosteroids in subjects with active PEM	Aspreva Pharmaceutical Corporation, Canada	2,13,917
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9	V.K. SHARMA	A randomized, double-blinded study to evaluate the safety and efficacy of intralesional administration of PCNA synthetic chimeric ribozyme (VIT 100) (Chelase) in the treatment of keloids and hypertrophic scars when administered concurrently with 5 FU and kanalog	Clincyte, USA	4,92,500
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**Dr B.R. Ambedkar Institute Rotary Cancer Hospital**

10	V. RAINA	Randomized trial of adjuvant endocrine therapy and chemotherapy in women with early breast cancer: The adjuvant breast cancer trial (ABC trial)	Institute of Cancer Research UK Co-ordination Committee	6,85,067
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11	V. RAINA	Adjuvant tamoxifen long against short (ATLAS) trial	Oxford University, UK	8,69,625
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12	VINOD KOCHUPILLAI	Role of antioxidant vitamins in human lung cancer: A randomized study	Terry Fox Foundation/ Canadian High Commission	91,000
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**Haematology**

13 RENU SAXENA      Molecular characterization and treatment of acute lymphoblastic leukemia on protocol MCP-943      INCTR,USA      10,00,752

14 TULIKA SETH      Training in low cost cancer screening methods for medical health workers: A pilot study      Terry Fox Foundation/ Canadian High Commission      27,595

**Medicine**

15 NAVEET WIG      Phase I planning grant to the international clinical, operational and health services research training for AIDS/TB programmes      National Institutes of Health, USA      58,42,216

16 S.K. SHARMA      Evaluation of management strategy for pulmonary embolism      International Atomic Energy Agency      2,50,253

17 S.K. SHARMA      A double-blind, placebo-controlled, parallel, multicentre study on extended VTE prophylaxis in acutely ill medical patients with prolonged immobilization      Aventis Pharmaceuticals, USA      1,46,254

**Microbiology**

18 RAMA CHAUDHARY      Prevention of infection in India neonates      University of Maryland      8,02,889

19 SHOBHA BROOR      Metapneumovirus infection of children in India      The University of Alabama, USA      35,55,344

**National Drug Dependence Treatment Centre**

20 ANJU DAWAN      To test the effectiveness of oral substitution with      UN      17,99,486

		buprenorphine and to establish a protocol for oral substitution with buprenorphine	International Drug and Crime Control Programme	
	<b>Nuclear Medicine</b>			
	21 CHETAN D. PATEL	Role of cerebral perfusion SPECT in the differential diagnosis of dementia	International Atomic Energy Agency	4,84,154
	22 RAKESH KUMAR	Role of radionuclide technique in the management of neonatal hydronephrosis	International Atomic Energy Agency	2,04,553
	<b>Paediatrics</b>			
	23 ARVIND BAGGA	Impact of zinc supplementation in low birth weight infants on severe morbidity and zinc status: A randomized controlled trial	KLPF, USA	18,59,112
	24 MADHULIKA KABRA	Gene mapping of non-syndromic hearing impairment: A multicentric study	National Institutes of Health, USA	57,456
	25 PRATIMA RAY	The Indo-US collaboration to develop rotavirus vaccine	National Institutes of Health, USA	12,28,543
	26 S.K. KABRA	Randomized blind placebo-controlled trial of amoxycillin in the treatment of non-severe pneumonia with wheeze in children aged 2–59 months of age: A multi-centric double-blind trial	INCLLEN and USAID	16,322

27	S.K. KABRA	Development of Continuing Medical Education (CME) programmes to strengthen AIDS treatment in India	National Institutes of Health, USA	9,33,189
28	S.K. KABRA	A randomized, 2-period multicentre, double-blind, parallel-group study comparing the effect of 2 doses of montelukast granules in the treatment of respiratory symptoms associated with respiratory syncytial virus associated bronchiolitis in children aged 3–24 months	Siro Clin Pharma	3,63,687
29	SHEFFALI GULATI	Model infection centres (MICs): A programme to improve infection practices in the country	INCLIN and USAID	99,08,838
30	SHINJINI BHATNAGAR	Institutional capacity and competence building in research and education for promotion of child health and nutrition in South	University of Bergen, Norway Asia	20,37,570
31	SHINJINI BHATNAGAR	Extended studies on safety and efficacy of zinc ORS compared to alone in hospitalized children with severe and complicated acute diarrhoea	Norad, Norway	19,30,744
32	SHINJINI BHATNAGAR	Specific targeted research or innovation project	University of Bergen, Norway	56,45,631
33	V.K. PAUL	Enhancing networking capacity for advancing newborn health in South East Asia	Saving Newborn Lives, USA	1,92,404
<b>Radio Diagnosis</b>				
34	D.N.SRIVASTAVA	Management of liver cancer using radionuclide methods with special emphasis on early diagnosis, intra-arterial locoregional therapy	International Atomic Energy Agency	169,721

**Surgery**

35 ANURAG SRIVASTAVA	Adjuvant tamoxifen: Longer against shorter (ATLAS) for breast cancer patients	Oxford University, UK	76,063
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**New research projects funded by national agencies**

<b>Investigator</b>	<b>Project</b>	<b>Funding agency</b>	<b>Funds (Rs)</b>
<b>Anatomy</b>			
1 SHASHI WADHWA	Influence of prenatal auditory stimulation on the development of synaptic proteins brain-derived neurotrophic growth factor and spatial memory in chick hippocampus	DBT	7,86,240
<b>Biochemistry</b>			
2 D.N. RAO	Development defensin(s) as a mucosal adjuvant/imicrobicife with peptide antigens of HIV	ICMR	62,400
3 D.N. RAO	Development defensin(s) as a mucosal adjuvant/imicrobicife with peptide antigens of HIV	DBT	9,23,000
4 N.C. CHANDRA	Studies on SREBP-mediated regulation of low-density lipoprotein receptor (LDLR), low-density lipoprotein receptor-related protein (LRP) and receptor-associated protein (RAP)	DST	1,100,000
5 N.C. CHANDRA	An <i>in vitro</i> model study of hyperlipoproteinemia on the degree of LDL receptor expression in placental trophoblast cells: Correlation with oral steroid contraceptive-induced hyperlipoproteinemia	ICMR	3,06,702

6	NEETA SINGH	A study of molecular and biological factors in pathogenesis of ovarian cancer	ICMR	1,97,512
7	NIBHRITI DAS	Evaluation of the role of free radical homeostasis cell adhesion molecules, nitric oxide, HDL and associated gene polymorphisms in relation to the risk and severity of coronary artery disease	ICMR	6,71,560
8	SUBRATA SINHA	Therapy of infectious and chronic diseases. Targeted gene delivery and long-term specific modulation of gene expression	DBT	55,48,000
<b>Biomedical Engineering Unit</b>				
9	J.C. BHARDWAJ	Reversibility of injectable intravasal contraceptive for the male technology development and multicentric non-human primates study	Ministry of Health and Family welfare	5,43,180
10	J.C. BHARDWAJ	Study of fallopian tube function with luminal implant	Markansas Research Division	2,84,700
<b>Biophysics</b>				
11	KRISHNA DALAL	A randomized clinical trial on the effect of reflexology in the management of patients suffering from diabetic neuropathy: Case studies	ICMR	2,98,185
12	PUNIT KAUR	Setting up bioinformatics centres at AIIMS, New Delhi	ICMR	7,90,316
13	SUJATA SHARMA	Clinical proteomics: Structural and functional studies of proteins present in pleural fluid	DST	5,55,000
<b>Biostatistics</b>				
14	V. SREENIVAS	A multicentric randomized controlled clinical trial of	ICMR	96,980

		lamivudine, lamivudine and adefovir, glycyrrhizin and adefovir in HBV related decompensated cirrhosis		
<b>Cardiac Anaesthesiology</b>				
15 POONAM MALHOTRA KAPOOR	Myocardial preconditioning against infarction in patients undergoing coronary artery bypass surgery: A comparison of isoflurane and sevoflurane	ICMR	3,07,476	
<b>Cardiac Radiology</b>				
16 SANJEEV SHARMA	Induction of therapeutic angiogenesis in critical limb ischaemia by intra-arterial delivery of autologous bone marrow derived stem cells	DBT	20,09,000	
<b>Cardiology</b>				
17 D. PRABHAKARAN	Serum fatty acid levels and their correlation with other CVD risk factors in industrial populations from Delhi and Trivandrum	ICMR	8,80,441	
<b>Centre for Behavioural Sciences (Psychiatry)</b>				
18 MANJU MEHTA	National Mental Health Programme	Ministry of Health and Family Welfare	1,50,000	
<b>CTVS, CNC</b>				
19 P. VENUGOPAL	Use of autologous bone marrow stem cells for myocardium regeneration use of autologous bone marrow stem cells for myocardium regeneration	DBT	80,42,600	
<b>Dental Surgery</b>				
20 AJOY ROYCHOUDHRY	A randomized double-blind placebo-controlled study of efficacy of lactobacillus CD2 lozenge in patients with chronic periodontitis	CD Pharma India	3,30,166	
21 O.P. KHARBANDA	Development of visual analog scale for smile characteristics	ICMR	3,21,592	

following orthodontic treatment and its correlation with the treatment outcome

**Dermatology and Venereology**

22	KAUSHAL K.VERMA	Randomized clinical trial of azathioprine weekly pluse versus daily azathioprine for the treatment of parthenium dermatitis	ICMR	1,86,072
23	V.K. SHARMA	Evaluation of cytophosphamide pulse therapy as adjuvant in the management of pemphigus	ICMR	1,10,680

**Dr B.R. Ambedkar Institute Rotary Cancer Hospital**

24	RITU GUPTA	SERC fast track scheme immunophenotypic characterization of plasma cells by flow cytometry in health and disease with particular reference to plasma cell myeloma	DST	6,76,000
25	ATUL SHARMA	A randomized double-blind study of efficacy of lactobacillus CD2 lozenges in preventing radiation and chemotherapy induced oral mucositis in head and neck	CD Pharma India	1,34,036
26	G. K.RATH	A randomized controlled comparative trial to evaluate the efficacy and safety of 2-deoxy-d-glucose (2DG) as a radiomodifier in the treatment of glioblastoma multiforme	Dr Reddy's Laboratories	1,07,461
27	LALIT KUMAR	Neoadjuvant chemotherapy followed by interval debulking surgery versus upfront surgery followed by chemotherapy in stage III and stage IV epithelial ovarian carcinoma	ICMR	2,13,622
28	V. RAINA	A treatment protocol for patients with gastrointestinal stromal tumour who are ineligible for participation in other SU011248 protocols and are refractory to or intolerant of imatinib mesylate	Pfizer	89,624

29	V. RAINA	An ascending dose, sequential group, placebo-controlled, multicentre, phase I study of RWJ 800088 in subject with cancer receiving platinum based chemotherapy regimens protocol 800088-NAP-1002:phase I	Johnson and Johnson	94,390
30	V. RAINA	A SU011248 expanded access protocol for systemic therapy of patients with metastatic renal cell carcinoma who are ineligible for participation in other SU011248 protocols but may derive benefit from the treatment with SU011248	Pfizer	1,47,107
<b>Dr R.P. Centre for Ophthalmic Sciences</b>				
31	GITA SATPATHY	Evaluation of polymerase chain reaction assay (PCR) for detection of HSV genome in tear specimens as a rapid diagnostic tool for laboratory diagnosis of HSV keratitis particularly stromal keratitis and atypical epithelial keratitis vis-a-vis antigen detection and genomic DNA detection by PCR assay in corneal scraping	ICMR	2,74,100
32	RADHIKA TANDON	Ocular surface reconstruction with alternative autografts of non-ocular origin	DST	4,80,000
33	T. VELPANIDAN	Evaluation of characterization of colours and documentation of their ocular toxicity in the northern states of India during the festival of colours (Holi)	DST	2,00,000
<b>Endocrinology and Metabolism</b>				
34	M.L. KHURANA	A pilot study to assess micronutrient profile among preschool children (6–71 months) of Assam and Rajasthan—A multicentre study	ICMR	18,91,703
35	M.L. KHURANA	Nutritional profile of Assam, Manipur and Meghalaya—An ICMR task-force multicentre study	ICMR	39,29,659



36	NIKHIL TANDON	Registry of people with diabetes in India with young age at onset	ICMR	6,36,458
37	NIKHIL TANDON	A multicentre, double-blinded, randomized, placebo-controlled , study of the MK-0431 in patients with type 2 diabetes mellitus who have inadequate glycaemic control	MSD, India	9,59,769
38	NIKHIL TANDON	A phase 3 open label parallel group study to evaluate the efficacy and safety of human insulin inhalation power (HILP) compared to preprandial injectable insulin in insulin-naïv patients with type 2 diabetes mellitus	Ranbaxy/Eli Lilly	1,28,865
39	NIKHIL TANDON	A phase 3 open label, parallel group study, to evaluate the efficacy of preprandial human insulin inhalation powder (HIP) compared to preprandial injectable insulin in patient with type I diabetes mellitus	Ranbaxy/Eli Lilly	1,11,413
40	R. GOSWAMI	Pattern and significance of single nucleotide polymorphism at select sites in two important candidates genes, i.e. vitamin D receptor and parathormone genes in subjects with osteoporosis	Ministry of Defence (DRDO)	4,27,000
41	RAVINDER GOSWAMI	Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameter (double-blind, randomized, placebo-controlled, clinical trial)	DBT	21,51,000
<b>ENT (Otorhinolaryngology)</b>				
42	R.C. DEKA	Efficacy of intratympanic dexamethasone in the management of tinnitus and its effect on improving quality of life: A clinical study	ICMR	1,80,765
<b>Gastroenterology and Human Nutrition</b>				
43	ANOOP SARAYA	Genetic basis of alcohol-induced pancreatic disorders	ICMR	97,166

44	RAKESH AGGARWAL	A mathematical decision-analysis model to study the efficacy and cost-effectiveness of prophylactic cholecystectomy in preventing complications, especially gallbladder cancer in patients with a symptomatic gallstones	ICMR	2,40,978
45	S.K. ACHARYA	A multicentric randomized controlled clinical trial of lamivudine and adefovir, glycyrrhizin and adefovir in HBV related decompensated cirrhosis	ICMR	3,07,980
46	Y.K. JOSHI	Assessment of intestinal permeability in chronic liver disease and its consequences	ICMR	17,06,669
<b>Laboratory Medicine</b>				
47	SARMAN SINGH	Proteomic analysis of the <i>M. Tuberculosis</i> during the stage of acquisition of resistance to the isoniazid and rifampicin	DBT	9,00,000
<b>Medicine</b>				
48	ANANT MOHAN	Study of the prevalence of respiratory virus infections in hospitalized patients with acute exacerbation of chronic obstructive pulmonary disease and their impact on morbidity and mortality	ICMR	2,00,603
49	NAVAL K. VIKRAM	Investigation of genetic basis and gene-lifestyle interactions in generalized and regional obesity, insulin resistance and diabetes in Asians	DBT	21,39,000
50	R. HANDA	Prevalence of rheumatic disorders in Ballabgarh Tehsil, district Faridabad NCR Delhi	Bone and Joint Decade India	1,90,000
51	RANDEEP GULERIA	Assessment of nutritional and antioxidant enzyme status in mechanically ventilated critically ill patients. Effect on	DST	10,00,000

	mortality and strategies for improving nutritional support		
52 S.K. SHARMA	Efficacy of thrice weekly intermittent short course antituberculosis chemotherapy in tuberculosis patients with and without HIV infection	Ministry of Health and Family Welfare (NACO)	29,13,000
53 S.K. SHARMA	Incidence of deep venous thrombosis (DVT) among patients admitted in medical wards and intensive care unit (ICU) of a tertiary care hospital—A protocol study	Pfizer.	4,05,877
54 S.K. SHARMA	A population-based study of prevalence and risk factors in sleep disorders breathing in south Delhi	Pfizer	2,50,000
55 S.K. SHARMA	Evaluation of the efficacy of thrice weekly DOTS regimen in TB pleural effusion at 6 months	Directorate General of Health Services	7,18,308
56 S.K. SHARMA	Efficacy of oral zinc administration as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters	DBT	6,06,000
57 S.K. SHARMA	Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameter (double-blind, randomized, placebo-controlled, clinical trial)	DBT	8,37,000
58 S.K. SHARMA	Efficacy and safety of immunomodulator ( <i>Mycobacterium w</i> ) as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters	DBT	17,89,000
59 SANJEEV SINHA	Study of prevalence and types of baseline HIV drug resistance in the antiretroviral treatment-naive and previously treated HIV	Ministry of Health and	47,29,440

	infected Northern India population	Family Welfare (NACO)	
<b>Microbiology</b>			
60 B.K. DAS	Pneumolysin DNA construct as a vaccine candidate against <i>Streptococcus pneumoniae</i> —An immune response study	DST	10,00,000
61 BENU DHAWAN	Detection of ureaplasma urealyticum and <i>Mycoplasma hominis</i> in patients with lower genitourinary tract infection by PCR assay: Association of urealyticum biovars with clinical outcome	ICMR	3,48,076
62 RAMA CHAUDHARY	Detection and identification of thermophilic <i>Compylobacter</i> spp. (C.j, C.C, C.U and C.L) and molecular sub-typing of <i>Campylobacter jejuni</i> in fecal samples of diarrhoeic patients and in food samples using multiplex PCR, PCR REFO and PRGE	ICMR	2,74,236
63 RAMA CHAUDHARY	To study colonization and immunomodulatory effect of probiotic strains in Indian children	DBT	76,76,580
64 SHOBHA BROOR	Multi-site epidemiological and virological monitoring of human influenza viruses in India	Sanofi Pasteur India	60,000
65 URVASHI B. SINGH	Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters (double-blind, randomized, placebo-controlled, clinical trial)	DBT	0
<b>Nephrology</b>			
66 S.K. AGARWAL	Validation and development of predicting formula for estimation of glomerular filtration rate in Indian adults with various degree of renal function	ICMR	2,92,748

67	S.K. AGARWAL	Detection of HCV core antigen (HCVc-Ag) for diagnostic screening of HCV infection in patients on maintenance haemodialysis	ICMR	4,91,024
<b>Neurology</b>				
68	KAMESHWAR PRASAD	Intravenous autologous bone marrow stromal cells (MSC) or mononuclear cells (MMC) for patients with acute ischaemic stroke: A multi-institutional project	DBT	20,48,000
69	MADHURI BEHARI	A phase III, double-blind, placebo-controlled study to determine the efficacy and safety of a low (50–100 mg/day) and high (150–200 mg/day) dose range of safinamide as add-on therapy, in patients with idiopathic Parkinson's disease with motor fluctuations	Clinirx Research	1,17,987
70	MADHURI BEHARI	Implantation of adult human retinal pigment epithelial (hRPE) cells in the 6-OHDA lesioned rat model of Parkinson's disease	DBT	20,77,400
<b>Neuroradiology</b>				
71	AJAY GARG	SERC fast track proposal for young scientist scheme phase imaging and diffusion tensor imaging novel MR contrasts in the evaluation of cryptogenic focal epilepsy	DST	7,40,000
<b>Neurosurgery</b>				
72	B.S. SHARMA	DST FIST Programme 2006	DST	70,00,000
<b>Nuclear Medicine</b>				
73	G.P. BANDOPADHYAYA	Synthesis and chemical characterization of different formulations of alginate-tamoxifen beads	DST	8,30,000
<b>Obstetrics and Gynaecology</b>				
74	ALKA KRIPLANI	Role of mifepristone (RU-486) in the management of uterine bleeding	ICMR	1,80,636

75	ALKA KRIPLANI	Phase-I phase-II clinical trials on safety and capability of probiotic selected strains of lactobacilli to colonize in vagina for reproductive health of women	DBT	2,16,600
76	SUNEETA MITTAL	Pretreatment with misoprostol before vacuum aspiration versus MVA: A double-blind RCT	Ministry of Health and Family welfare	5,00,000
<b>Orthopaedics</b>				
77	SURYA BHAN	Some medico-technical issues determining mechanical properties of ligaments and development of sterop-cameras for operative/anatomic videosequences	ICMR	4,40,682
78	SURYA BHAN	Evaluation of efficacy of platelet concentrate in the treatment of non-union of fractures of long bones	ICMR	3,57,668
<b>Paediatrics</b>				
79	ARVIND BAGGA	Daily corticosteroids to prevent infection-associated relapses in patients with frequently relapsing nephrotic syndrome	ICMR	3,09,536
80	PANKAJ HARI	Antibiotic prophylaxis in the management of vesicoureteric reflux: A multicentric randomized double-blind placebo-controlled trial	ICMR	3,80,605
81	SHINJINI BHATNAGAR	Efficacy of stem cell in improvement of left ventricular function in patients with acute myocardial infarction	DBT	5,59,600
<b>Pathology</b>				
82	A.K. DINDA	Development of nanoparticulate system for selective receptor specific macrophage targeting	DBT	17,76,000
83	S.K. PANDA	FIST Programme	DST	17,000,00

**Pharmacology**

84 SURENDER SINGH Standardization and pharmacological studies of widely practised anti-arthritic Unani preparation *Majoon Suranjam* based on clinical Unani literature ICMR 441,392

**Physiology**

85 DEBABRATA GHOSH Defining endometrial receptivity for blastocyst implantation using cDNA-based array technology DST 17,50,000

86 H.N. MALLICK The role of lateral preoptic area in regulation of body temperature, thermal preference, sleep-wakefulness and homeostatic restoration of sleep during chronic exposure in rats ICMR 1,09,744

87 SUMAN JAIN Prenatal auditory sound stimulation: Effect on spatial memory and expression of synaptic protein in chick hippocampus CSIR 5,59,667

**Reproductive Biology**

88 ASHUTOSH HALDER Prevalence of 22q 11 deletion syndrome in children with structural cardiac malformation: A tertiary care referral hospital-based study in Delhi ICMR 3,46,934

**Surgery**

89 SANDEEP GULERIA Save the Kidney Rajiv Gandhi Foundation 3,20,101

**Transplant Immunology and Immunogenetics**

90 D.K. MITRA Efficacy of oral zinc administration as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters DBT 8,22,000

91 D.K. MITRA Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameter (double-blind, randomized, placebo-controlled, DBT 10,00,000

	clinical trial)		
92	D.K. MITRA	Studies on T-cell mediated suppression of immunity in visceral leishmaniasis patients	DBT 24,00,000
93	N.K. MEHRA	HLA profile of raica community of Rajasthan	ICMR 10,07,546
94	N.K. MEHRA	Genomic analysis of MHC genes (HLA and non HLA) in type 1 diabetes in the Indian population	ICMR 8,37,413
<b>Urology</b>			
95	AMLESH SETH	Molecular analysis of gene markers in urine cytology and tissue histology specimens of Indian patients with superficial and muscle invasive transitional cell carcinoma of urinary bladder	ICMR 4,71,922
<b>New research projects funded by World Health Organization</b>			
	<b>Investigator</b>	<b>Project</b>	<b>Funds (Rs)</b>
<b>Dental Surgery</b>			
1	NASEEM SHAH	Analysis of data for multicentric oral health survey	1,03,800
<b>Haematology</b>			
2	RENU SAXENA	Evaluation of efficacy of haemoglobin colour scale with Sahlis method for haemoglobin estimation	1,60,800
<b>Medicine</b>			
3	A.B. DEY	Evaluation of health status and health needs of old home residents and establishment of minimum standards of health services on long stay institutions in India	1,35,000



**Paediatrics**

4	SHINJINI BHATNAGAR	Efficacy of zinc (given as an adjunct) in the treatment of severe and very severe pneumonia in hospitalized children 2–24 months of age		17,43,267
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**New research projects funded by international agencies**

Investigator	Project	Funding agency	Funds (Rs)	
<b>Dr B.R. Ambedkar Institute Rotary Cancer Hospital</b>				
1	ATUL SHARMA	A randomized phase 3 study of the efficacy and safety of glufosfamide compared with best supportive care in metastatic pancreatic adenocarcinoma previously treated with gemcitabine	Threshold Pharmaceuticals, USA	2,94,759
2	P.K. JULKA	An open label randomized multicentre phase III study of trastuzumab in combination with a fluoropyrimidine and cisplatin versus chemotherapy alone as first-line therapy in patients with HER2-positive advanced gastric cancer	Siro Clin Pharma	44,625
3	V. RAINA	Indox Cancer Trials Network Centre	Oxford University, UK	10,62,500
4	V. RAINA	An open-label study to evaluate the efficacy and safety of human recombinant granulocyte colony stimulating factor (G-CSF) in patients with chemotherapy induced neutropenia	Clinigene International	1,52,232
<b>Gastroenterology and Human Nutrition</b>				
5	RAKESH AGGARWAL	Landscape analysis of zinc and its effect on child morbidity and mortality	National Institutes of Health, USA	3,56,000
<b>Medicine</b>				
6	NAVAL K. VIKRAM	Evaluation of efficacy and safety of 'SD 002' tablets in newly diagnosed patients with type 2 diabetes	Solumiks Herbaceuticals	2,62,700

7	NAVAL K. VIKRAM	Body fat and its relationship with metabolic syndrome indicators in overweight pre-adolescents and adolescents	International Atomic Energy Agency	3,83,707
<b>Nephrology</b>				
8	S.K. AGARWAL	A randomized double-blind, placebo-controlled, four arm, parallel group, multicentric, multinational, safety and efficacy trial of 100 mg, 300 mg and 900 mg of abetimus sodium in systemic lupus erthrematosus (SLE) patients with a history of renal disease	Lajolla Pharmaceutical Company, California	2,15,662
<b>Neurosurgery</b>				
9	ASHISH SURI	A multi-national, multicentre, open-label, active-controlled, randomized parallel-group, dose-finding study to evaluate the efficacy and safety and two doses of AP 12009-G004 in adult patients with recurrent high-grade glioma, administered intratumorally	Antisense Pharma GmbH, Germany	71,736
<b>Nuclear Medicine</b>				
10	RAKESH KUMAR	Role of nuclear cardiology techniques in ischemia assessment with exercise imaging in asymptomatic diabetes	International Atomic Energy Agency	1,38,073
<b>Obstetrics and Gynecology</b>				
11	NEERJA BHATLA	A phase III B, double-blind, randomized, controlled study to evaluate the immunogenicity and safety of Glaxosmithkine biologicals HPV-16/18...18–35 years	GlaxoSmith Kline Asia	3,79,315
<b>Paediatrics</b>				
12	MADHULIKA KABRA	Economic modelling study non-invasive (NI) RhD testing in Europe and Asia under SAFE Network	University of Warwick, UK	5,65,720

<p>13 RAKESH LODHA 18,266,79</p>	<p>Integrated management of neonatal and childhood illnesses:  Baseline assessment of childhood morbidity and mortality in selected districts in India</p>	<p>UNICEF</p>
<p>14 S.K. KABRA 4,10,525</p>	<p>Strengthening of cystic fibrosis services at AIIMS</p>	<p>Cystic Fibrosis/  World Wide, USA</p>
<p>15 SHINJINI 11,96,000 BHATNAGAR</p>	<p>Efficacy of zinc (given as an adjunct) in the treatment of severe  and very severe pneumonia in hospitalized children 2–24 months of age</p>	<p>Johns Hopkins  Bloomberg School of Public Health (JHBSPH)</p>
<p><b>Physiology</b></p>		
<p>16 H.N. MALLICK 4,45,250</p>	<p>Role of glutamate in the preoptic area in the regulation of  sleep-wakefulness</p>	<p>Ajinomota,  Japan</p>
<p><b>Transplant Immunology and Immunogenetics</b></p>		
<p>17 N.K. MEHRA 1,17,400</p>	<p>Type 1 Diabetes Genetics Consortium (TIDGC): An international  effort</p>	<p>National  Institutes of Health, USA</p>

## 9.1 Anaesthesiology

### Professor and Head

Chandralekha (till 28 November 2006)  
Ravi Saksena (w.e.f. 29 November 2006)

### Professors

M.K. Arora	D.K. Pawar	R.K. Batra
S. Rajeswari	A. Trikha	Maya Dehran

### Additional Professors

D. Shende (RPC)	L. Kashyap	G. Prasad
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### Associate Professors

V. K. Mohan		V. Rewari
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### Assistant Professors

A.P. Bhalla	Rani Sunder	V. Darlong
Anjolie Chhabra	Renu Sinha (RPC)	ChhaviSawhney (JPNATC)
Jyotsna Punj	Babita (JPNATC)	R. Pandey
Rashmi Ramachandran	Sanjay Verma (ad hoc)	(Casualty)

Dr Babita and Dr Chhavi were shifted to Trauma Centre in October 2006

Dr Lokesh Kashyap, who was abroad, re-joined the Department in January 2007

### EDUCATION

Undergraduate and Postgraduate

Academic activities of undergraduates, postgraduates and paramedical staff (BSc Nursing, MSc Nursing) are continuing as before.

### SHORT- AND LONG-TERM TRAINING

Training of doctors and technicians from India and abroad in various aspects of anaesthesia, intensive care management, pain medicine and emergency care is continuing.

### SHORT-TERM TRAINING OF DOCTORS FROM VARIOUS MEDICAL COLLEGES IN

—Pain clinic	1
—ICU	2
—Anaesthesia	1

### Continuing Medical Education

#### Lecture delivered

#### Professor M.K. Arora

- 'Morbidly obese patient', at UCMS and GTBH; 11 September 2006

**Professor A. Trikha**

- ‘Full stomach, difficult airway for emergency caesarean section: Anaesthesia implications’, CME on ‘Obstetric anaesthesia’, Nagpur Branch of ISA, Nagpur; July 2006.
- ‘Medicolegal implications in obstetric anaesthesia’, CME on ‘Obstetric anaesthesia’, Nagpur Branch of ISA, Nagpur; July 2006.
- ‘Lignocaine versus bupivacaine for neuraxial block’, CME on ‘Obstetric anaesthesia’, Nagpur Branch of ISA, Nagpur; July 2006.
- ‘Fiberoptic intubation’, 6th Annual CME, Hyderabad branch of ISA; August 2006.

**Dr V. Rewari**

- ‘The menace of blood thinning drugs perioperatively: How to proceed for GA and regional blockage’, 6th Annual CME (HYCOME ISA 2006), Hyderabad; 12–13 August 2006.
- ‘Recovery and discharge criteria in day care patients; What is safe?’, 6th Annual CME (HYCOME ISA 2006), Hyderabad; 12–13 August 2006.

**National and International Conference**

International Conference on ‘Paediatric anaesthesia’, Department of Anaesthesia; 4–5 November 2006.

**Lectures delivered****Dr Rani Sunder**

- ‘Therapeutics recent trends—Sedation, analgesia and BIS monitoring in critical care’, 2nd South Asian Critical Care Congress, Karachi, Pakistan; 9–10 December 2006.

**Professor S. Rajeshwari**

- ‘Perioperative management of pheochromocytoma’, ENDOSURG 2007, Department of Surgery, AIIMS; March 2007.

**Dr A. Chhabra**

- ‘Airway management in critically ill patients’, 2nd South Asian Critical Care Congress, Karachi; 4–10 December 2006.

**Professor A. Trikha**

- Invasive versus Non-invasive ventilation for COAD patients. Pro/Con session. ‘Invasive ventilation in COAD patients’, Annual Conference of Indian Society of Anaesthetists, Delhi branch, New Delhi; April 2006.
- ‘Only general anaesthesia should be delivered in severe PIH’, National Conference of the Research Society of Anaesthesiology Clinical Pharmacology, Pune; November 2006.
- ‘Myofascial pain syndrome’, National Conference of Indian Society for Study of Pain, Lucknow; March 2007.

### **Dr V. Rewari**

- Key points for short case discussion. The teleconferencing session for DNB students at IGNOU, New Delhi; 22 January 2007.
- An update on recent advances in labour analgesia. 22nd Annual Conference of the Indian Society for Study of Pain, Lucknow; 2–4 February 2007.
- Airway Management Workshop at JLN Hospital and Research Centre, Bhilai; 24–25 March 2007.

### **Dr Ravinder Kumar Batra delivered the following lectures:**

- “Preparation for Anaesthesia Examination both Theory and Practical” at IGNOU, New Delhi. Dec, 2006.
- “Preparation for Anaesthesia Practical Examination – long case presentation” at IGNOU, New Delhi. Jan, 2007.
- “Advances in Anaesthesia” at IGNOU, New Delhi, 13<sup>th</sup> April, 2007
- “Protocol, Research and Thesis” Moderated the panel discussion on 3<sup>rd</sup> May, 2007 at teleconferencing session at IGNOU.
- “How to attempt short questions with examples from previous year papers” at IGNOU teleconferencing session on 17<sup>th</sup> May, 2007.
- Moderated session on Trauma and Resuscitation and took lecture on “Airway Management in trauma patients”, 31<sup>st</sup> May, 2007

### **RESEARCH**

Funded Projects Nil

#### **Department Projects**

##### **Completed**

1. Airway anaesthesia for awake fiberoptic guided orotracheal intubation: Comparison of three different techniques.
2. Comparison of efficacy of continuous epidural infusion of morphine, fentanyl and combination of morphine and fentanyl with bupivacaine for post-operative analgesia in children.

##### **Ongoing**

1. Effect of glutamine supplementation in critically ill patients
2. Peri-operative entropy in paediatric day care surgery
3. Spinal anaesthesia in children: Effect of ketorolac for post-operative pain relief
4. Efficacy of paravertebral block as analgesic technique for laproscopic cholecystectomy
5. Topical analgesia for cataract surgery in infants: Comparison with fentanyl
6. Comparison of four analgesia regimens for pain relief after enucleation for retinoblastoma in children
7. To study the effect of dexamethasone on post-operative pain in day care laparoscopic operative gynaecological surgery. A dose response study

8. Intramuscular ketorolac versus intramuscular diclofenac for post-operative analgesia in children undergoing lower abdominal surgery under spinal anaesthesia
9. Advancement of epidural catheter up to thoracic intervertebral space in Children – comparison of two gauzes catheter
10. Percutaneous dilatational tracheostomy—Griggs guide wire-dilating technique: A prospective randomized study

## **Collaborative Projects**

### **Ongoing**

1. Comparison of single tube vs two tube technique of submental intubation (with Dental Surgery)
2. Evaluation of the effect of epidural volume extension during CSE anaesthesia (with Obstetrics and Gynaecology)
3. Safety and efficacy of regional anaesthesia for laparoscopic hernia repair (with Surgery)
4. Feasibility of minimally invasive parathyroid surgery for hyper parathyroidism (with Surgery)
5. Comparison of pain and post-operative nausea vomiting following vitreoretinal surgery under general anaesthesia with sub-tenons block versus general anaesthesia with intravenous fentanyl in paediatric patients (with Ophthalmology)

## **PUBLICATIONS**

### **Journals**

1. Arora MK, Nagaraj G, Lakhe ST. Combined spinal-epidural anaesthesia for a child with Freeman-Sheldon syndrome with difficult airway. *Anesth Analg* 2006;**103**:1624.
2. Arora MK, Karamchandani K, Trikha A. Combination of inhalational, intravenous and local anaesthesia for intubation in neonates with congenital lobar emphysema. *Paediatr Anaesth* 2006;**16**:998–9.
3. Batra RK. Thyroid: Anaesthetic Implications. *Journal of Post graduate Education, Research and Training*, 2006; vol 1, No 1 & 2, 55-58
4. Batra RK and Mehta M. Anaesthesia for Breast Surgery –A Review. *Journal of Postgraduate Medical Education, Training & Research* Vol, 2006; 1, No 3, 52 -56
5. Chhabra A, Arora MK, Gupta A, Dehran M, Agarwal S. Intraoperative anaphylaxis with a complicated pulmonary hydatid cyst. *Paediatr Anaesth* 2007;**17**:195–7.
6. Chhabra A, Chaitra M, Karamchandani K, Aggarwal A, Subramaniam R. Near fatal ventricular arrhythmias because of central venous pressure catheter tip migration during laparoscopic hemicolectomy. *Anesth Analg* 2006;**103**:1626–7.
7. Chhabra A, Malhotra N. Anesthetic management of a pregnant patient with Dengue hemorrhagic fever for an emergency lower segment cesarean section. *Int J Obstet Anesth* 2006;**15**:306–10.
8. Hari MS, Trikha A, Madan R, Kaul HL. Acute effects of nitric oxide in ARDS: A dose finding study at steady state kinetics. *Indian J Crit Care Med* 2006;**10**:74–9.

9. Jindal L, Gupta AK, Mumtaz F, Sunder R, Hemal AK. Laparoscopic nephroplication and nephroplexy as an adjunct to pyeloplasty in UPJO with giant hydronephrosis. *Int Urol Nephrol* 2006;**38**:443–6.
10. Karamchandani K, Rewari V, Trikha A, Batra RK. Evaluation of Bispectral Index for Assessing Sedation in Critically Ill Patients. *Anaesthesiology* 2006;**105**:A1244.
11. Karamchandani K, Darlong V, Mohan V. Intraoperative bronchospasm following inhalation of organophosphate fumigation. *Anesth Analg* 2006;**102**:1291–2.
12. Mathew PJ, Chhabra A. Deliberate dural puncture with epidural needle in failed combined spinal epidural anaesthesia in a high risk patient. *J Anaesth Clin Pharmacol* 2006;**22**:307–8.
13. Mohan V, Darlong V, Saluja V, Lokesh Kashyap. Anaesthetic management of a patient with AICD. *J Anaesth Clin Pharmacol* 2006;**22**:195–8.
14. Pandey R, Darlong V, Punj J. Metaclopramide is not safe as premedication in patients with torsion dystonia undergoing surgery. As e-letter *Br J Anaesth* 2007:7–8.
15. Punj J, Velupandian. Contamination of morphine ampoules. *Can J Clin Pharmacol* 2007;**14**:86.
16. Punj J, Mitra J. Perioperative management of morbid obese. *The Internet Journal of Anesthesiology* ISSN:1092–406X.
17. Pawar D, Kempanna UR, Prasad G. Comparing priming time and cost of halothane, isoflurane and sevoflurane using low flows in children. *Anesthesiology* 2006;**105**:A951.
18. Ranjana, Trikha A. Pain control after total knee arthroplasty. *Orthopedics Today* 2006;**VIII**:125–9.
19. Rewari V, Gandhi R, Singh S. Epidural anaesthesia for caesarean section in a parturient with coarctation of aorta. *J Anaesth Clin Pharmacol* 2006;**22**:299–302.
20. Rewari V. Reflex vocal cord closure. *Anesth Analg* 2007;**104**:469.
21. Rewari V. Direct laryngoscopy after fiberoptic intubation. *Anaesthesia* 2006;**61**:1012.
22. Rewari V. Post-operative paradoxical vocal cord movement due to non-organic conversion disorder. *Acta Anaesthesiol Scand* 2006;**50**:900.
23. Saxsena AK, Ramachandran R, Singh A, Mahendra K, Rajaram S, Goel N. Neurolytic superior hypogastric plexus block for the management of intractable cancer pain in a terminal case of sarcoma botryoides. *J Anaesth Clin Pharmacol* 2007;**23**:85–8.
24. Sharma S, Gupta DK, Venugopal P, Kumar L, Dattagupta S, Arora MK. Therapeutic use of stem cells in congenital anomalies: A pilot study. *J Indian Assoc Pediatr Surg* 2006;**11**:4.
25. Shewta S, Trikha A. Noise levels in the operation theatre environment. *Natl Med J India* 2006;**19**:112–13.
26. Sunder RA, Joshi C. Author's reply. *Pediatric Anesthesia* 2006;**16**:896–7.
27. Sunder RA, Toshnical G. Tourniquet pain: An atypical presentation. *Acta Anaesthesiol Scand* 2006;**50**:525.
28. Sunder RA, Singh M. Pseudohypoparathyroidism: A series of three cases and an unusual presentation of ocular tetany. *Anaesthesia* 2006;**61**:394–8.
29. Sunder RA, Aggarwal A. Anesthetic management of a patient with orithine transcarbamylase



- deficiency (OTCD). *Acta Anaesthesiol Scand* 2006;**50**:1310–11.
30. Tripathi M, Pandey R. Short thyromental distance: A predictor of difficult intubation or an indicator for small blade selection? (Clinical Investigations). *Anaesthesiology* 2006; **104**:1131-6
31. Trikha A, Venkataraju AJ, Sadara GS. Anaesthesia for a patient with congenital methaemoglobinaemia and temporomandibular joint ankylosis. *Anaesth Intensive Care* 2006;**34**:83-7.

## **PATIENT CARE**

The following facilities are available in the department:

1. Pre-anaesthesia clinic (PAC), 3 days in a week (Monday/Wednesday/Friday), 2–5 pm.
2. Pain clinic, 3 days in a week (Monday/Wednesday/Friday), 2–5 pm.
3. Interventional pain management procedures done in the operation theatre on Thursdays.

## **Number of operations/procedures done**

### **1. Main Operation Theatres**

General Surgery	2,384
Gastrointestinal Surgery	329
Urology	1,246
Otorhinolaryngology	1,070
Gynaecology	998
Paediatric Surgery	1,451
Dental Surgery	125

### **2. Peripheral Operation Theatres**

Maternity OT	1,585
Orthopaedics	2,090
Dr R.P. Centre for Ophthalmic Sciences	5,377
Casualty OT	3

### **3. Interventional pain management procedures** 441

### **4. Procedures done under GA in peripheral areas**

Modified ECTs (Psychiatry OPD)	462
MRI	244
Paediatric USG (RPC)	121
CECT	686

### **AB8/ICU**

Total number of patients admitted	388
Number of patients discharged	314

Number of deaths	73
<b>AB8 emergency duty</b>	
Emergency operations done	3,161
Emergency calls attended (from wards, peripheral ICUs and casualty)	2,274

OPD CLINICS: Total number of patients attended the clinic	
Pre-anaesthesia clinic	7,439
Pain clinic	3,728

### **Voluntary community service**

**Dr Maya Dehran** provided voluntary medical community services at the Bhatti Centre in Radha Soami Satsang, New Delhi for 17 days. She also provided first-aid services, resuscitation and critical care till the patients were shifted to a major hospital.

She also provided medical service at the OPD of the dispensary at Bhatti Centre on all Sundays of the year except on weekend emergency call duty at AIIMS.

**Dr R.K. Batra** provided Anaesthesia services for a Charitable orthopaedics camp organized by Shri Anandpur Charitable Hospital, Shri Anandpur, Distt Ashok Nagar MP from 29<sup>th</sup> Jan to 2<sup>nd</sup> Feb, 2007.

### **AWARDS AND HONOURS**

**Dr Ravindra Pandey** was appointed as a Judge to assess the 'Poster cum free paper presentation session' in 22nd Annual National Conference of Indian Society for study of pain (ISSPCON 2007) held in SGPGI MS, Lucknow; 2-4 February 2007.

**Dr Ganga Prasad** became Member of Bureau of Indian Standards and is also an Executive Member of India Society of Anaesthesiologists (Delhi); Dr Ganga was invited as Technical Expert for the selection of Medical Officer for selection of Medical Officers by UPSC, Allahabad (UP).

**Dr R.K. Batra** is teleconferencing Co-ordinator at AIIMS: Co-ordinator from Department of Anaesthesiology for teleconferencing session. He is an active member of "Curriculum Committee for Anaesthesia", National Board of Examinations, New Delhi. He is a team leader of OSCE formation group for DNB, Anaesthesia Examination at National Board of Examinations, New Delhi.

## 9.2 Anatomy

### Professor and Head

Kiran Kucheria  
(superannuated on 30 April 2006)

Rani Kumar  
(w.e.f. 01 May 2007)

### Professors

Shashi Wadhwa

Raj D. Mehra

T.S. Roy

### Additional Professors

A. Shariff

Pushpa Dhar

S.B. Ray

### Associate Professors

T.K. Das  
(Electron Microscopy)

Rima Dada  
(Genetics)

Arundhati Sharma

T.C. Nag  
(Electron Microscopy)

Renu Dhingra

### Assistant Professor

Ritu Sehgal

## EDUCATION

### Undergraduate

The department conducts MBBS, BSc (Hons) Nursing and post-certificate Nursing, Ophthalmic, Radiographic technique and Speech Therapy training courses. Five MBBS students from AIIMS were awarded Summer Research Fellowships for carrying out research in Genetics/ Neuroanatomy and submitted short-term projects under *Kishore Vagyanik Puruskar Yojna* (KVPY).

### Postgraduate

Besides training MD, MSc and PhD anatomy students, the department conducted course on gross and developmental neuroanatomy for students of DM Paediatric Neurology. A new course on Human Genetics has been introduced for the PG students of the Department of Biotechnology, AIIMS. The faculty taught human genetics (practical and theory) to these students. A MSc student from Jiwaji University, Gwalior was trained in neuroanatomical techniques. A PhD student from DIPAS was trained in neurohistology and image analysis.

### Short-term training

A WHO trainee from Burma was trained for one month in neuroanatomical techniques. A student from Bundelkhand University and student from AIIMS, MMS 5th semester received short-term training in genetics. The department provided training in genetics to 6 WHO fellows from different parts of India. Two MSc Biotechnology students from Mahatma Jyoti Rao Phoolé, PG Mahila Vidyalaya, Jaipur, 2 MSc Biotechnology students from MD

University, Rohtak and one biomedical engineering student from BITS, Mesra received training on basic cyto- and molecular genetic techniques.

### **Continuing Medical Education**

A National Symposium on 'Neural plasticity and a repair' and a workshop on 'Evaluation of plasticity in pain' was organized at AIIMS along with the Department of Physiology.

### **National and International Conferences**

#### **Lectures delivered**

##### **Professor Rani Kumar**

- 'Modified technique for viewing deeper structures and their interrelationship in situ', Department of Anatomy and Cell Biology, Medical University of Vienna, Austria.

##### **Professor S. Wadhwa, Professor T.S. Roy, Dr S.B. Ray, Dr Rima Dada and Dr Arundhati Sharma**

- A series of 14 lectures for MSc Neurosciences, MSc Molecular Genetics at the Department of Zoology, School of Life Sciences, Jiwaji University, Gwalior.

##### **Dr P. Dhar**

- 'Toxicological impacts of arsenic on human health and bioethics in medical sciences', Indraprastha University, Delhi and NISTADS, Delhi, respectively.

#### **Attended/participated**

##### **Professor Rani Kumar**

- 13th International Conference on 'Plastination', Medical University of Vienna, Austria.

##### **Professor S. Wadhwa, Professor T.S. Roy, Dr P. Dhar and Dr T.C. Nag**

- Symposium on 'Neural plasticity and repair' and workshop on 'Evaluation of plasticity in pain', AIIMS; 18–19 October 2006. **Dr R. Sehgal** also participated in the symposium.

##### **Professor S. Wadhwa, Professor T.S. Roy and Dr R. Sehgal**

- 3rd International Conference, NBRC; 13–15 December 2006. Professor Wadhwa chaired a session in the symposium.

##### **Professor S. Wadhwa, Professor R.D. Mehra and Dr P. Dhar**

- International update on 'Basic and clinical neuroscience advances' and XXIV Annual Conference of Indian Academy of Neurosciences, Lucknow; 17–20 December 2006. Professor S. Wadhwa, Professor R.D. Mehra and Professor T.S. Roy chaired sessions in various symposiums.

**Professor R.D. Mehra, Dr S.B. Ray and Dr R. Dada**

- 54th Annual Conference of the Anatomical Society of India, AIMS, Kochin, Kerala; December 2006.

**Professor S. Wadhwa and Professor T.S. Roy**

- Indo-US symposium/workshop on ‘Developmental neuroscience and imaging’, NBRC, New Delhi; 19–21 February 2007.

**Professor Shashi Wadhwa**

- Chaired a session at the Centenary commemoration of Alzheimer’s disease and 12th Annual Conference of Alzheimer’s and Related Disorders Society of India, AIIMS; 9–11 November 2006.

**Professor R.D. Mehra**

- 3rd International Winter School in Immunology at Goa; August 2006.
- ‘Trends and techniques in molecular neuroendocrinology’, Hyderabad; November 2006.
- Resource faculty for IBRO-APSN and NSSL International workshop on ‘Molecular biology’ and symposium on ‘Neurodegeneration and stem cell research’.
- ‘*In-situ* hybridization histochemistry—theory and practice’ and carried out a laboratory workshop on the *in-situ* hybridization histochemistry techniques, Colombo.

**Dr P. Dhar**

- ‘Biomechanics of ankle and foot—anatomical aspect’, Indian foot and ankle society conference, JALMA, Agra; October 2006.

**Dr Rima Dada**

**Participated**

- Asian Congress of Andrology, Shanghai, China in October, 2006.
- National conference on ‘Genomics: Impact on human health’, Osmania University, Hyderabad in January, 2007.
- ICMR meeting and symposium on ‘Indian contraceptive technology’, New Delhi in June 2006.
- International conference and workshop on ‘Genetics and the basis and diagnosis of genetic disorders’, Sri Ramachandra Medical College and Research Institute in February, 2007.
- Indo-US workshop on ‘Mitochondrial medicine and research’, CCMB, Hyderabad
- ICMR symposium on ‘Hazards of environmental pollution and changing lifestyle on human reproduction’, Indian Institute of Science, Bangalore
- Workshop cum symposium on ‘Electromagnetic fields in environment: Implications

- and solutions', School of Environmental Sciences, JNU, New Delhi and Conference on 'Recent advances and challenges in reproductive health research', ICMR and ISSRF, Delhi.
- Presented papers on 'Yq microdeletion and reproductive failure, chromosomal aneuploidies and human reproduction'; 'Genetic basis of infertility'; 'Role of genetics and occupational factors on male reproductive health: Impact of environment and genetic factors' and 'Recent advances and challenges in reproductive health research' in various conferences.
  - Presented a poster on 'Genetic screening in men with oligozoospermia and non-obstructive azoospermia'.

**Dr Arundhati Sharma**

- National workshop on 'Emerging trends in medical education', KL Wig CMET, AIIMS.

**Dr Renu Dhingra**

- Guest lecture on 'Anatomy of flexors of hand in IOACON', New Delhi.

**RESEARCH**

**Funded Projects**

**Completed**

1. Role of cell cycle regulatory molecules in breast cancer patients on hormonal therapy. Rani Kumar. Funded by DBT, BT/PR3785/BRB/10/317/2003 for 3 years (2003–2006). Funds: Rs 17.15 lakh.
2. Effect of prenatal sound stimulation on chick hippocampus. Shashi Wadhwa. Funded by DBT, BT/PR3148/BRB/10/276/2002 for 3 years (2003–2006). Funds: Rs 17.85 lakh.
3. Effect of alterations in intracellular calcium ion concentration on ORL1 opioid re-ceptors in the rat central nervous system during morphine tolerance. S.B. Ray. Funded by ICMR for 3 years (2003–2006). Funds: Rs 7,06,990,
4. L- and N-type calcium ion channels in the spinal cord of morphine tolerant rat: An immunohistochemical study. S.B. Ray. Funded by AIIMS for one year (2005–2006). Funds: Rs 80,000.
5. The effect of arsenic exposure during early postnatal period on rat cerebellum. Pushpa Dhar. Funded by AIIMS for 4 years (2002–2006). Funds: Rs 1,25,000.
6. Multicentric project on genomic analysis in male infertility, in collaboration with National Institute of Immunology. R. Dada. Funded by ICMR for 3 years (2003–2006). Funds: Rs 19 lakh.
7. Apoptosis in placental membranes in pre-eclampsia: An immunohistochemical study. R. Dhingra. Funded by AIIMS for 2 years (2004–2006). Funds: Rs 1,25,000.

### **Ongoing**

1. Influence of prenatal auditory stimulation on the development of synaptic proteins, brain derived neurotrophic growth factor and spatial memory in chick hippocampus. Shashi Wadhwa. Funded by DBT, BT/PR6771/BRB/10/448/2005 for 3 years (2006–2009). Funds: Rs 18.43 lakh.
2. Studies on immuno-expression of antiapoptotic and transcription marker molecules in ovariectomized rat hippocampus. R.D. Mehra. Funded by ICMR for 3 years (2004–2007). Funds: Rs 5,21,000.
3. Role of cyclic AMP response element-binding (CREB) protein expression in the spinal cord of rat in nimodipine induced potentiation of morphine analgesia: An immunohistochemical study. S.B. Ray. Funded by AIIMS for one year (2006–2007). Funds: Rs 99,600.
4. Genomic diversity in 5 ethnic tribes of Rajasthan. Rima Dada. Funded by DBT for 3 years (2004–2007). Funds: Rs 25 lakh.
5. Mutations in the oxidative phosphorylation (OXPHOS) pathway and spermatogenic arrest in infertile males. Rima Dada. Funded by AIIMS for 2 years (2006–2008). Funds: Rs 1.25 lakh.
6. Prospective case control study to evaluate the role of GST gene deletion in breast cancer patients. Arundhati Sharma. Funded by AIIMS for 2 years (2005–2007). Funds: Rs 80,000.

### **Departmental Projects**

#### **Completed**

1. AZF microdeletions and their correlation with cryptorchidism
2. Comparison of Yq microdeletions in geneomic DNA isolated from blood and sperm

#### **Ongoing**

1. Role of cell cycle regulatory molecules in breast cancer patients
2. Apoptotic changes in pre-eclamptic patients at different gestational ages
3. Apoptosis in trophoblastic cells in human placenta in pre-eclampsia
4. Hippocampal regulation of immune mechanism
5. Development of the human auditory system
6. Age changes in the human oculomotor nerve
7. Age changes in the human cochlear nerve
8. Morphology of the fetal and adult human pancreatic duct system
9. Effects of arsenic exposure during early postnatal period on the rat hippocampus
10. Effects of perinatal arsenic exposure on rat testis: A morphological study
11. Effect of lipoic acid as an anti-oxidant supplement on arsenic induced toxicity in developing rat hippocampus

## Collaborative Research

### Ongoing

1. Mutation spectrum of the CYP1B1 gene in north Indian primary congenital glaucoma patients (with RP Centre, AIIMS)
2. Mutational analysis of corneal dystrophies in north Indian patient population. Department of Biotechnology funded project (with RP Centre, AIIMS)
3. Mutation analysis of 5q31-linked autosomal dominant corneal dystrophy in north Indian patients. AIIMS funded project (with RP Centre, AIIMS)

## PUBLICATIONS

### Journals

1. Aggarwal P, Nag TC, Wadhwa S. Age related decrease in rod bipolar cell density of the human retina: An immunohistochemical study. *J Biosciences* 2007;**32**:293–8.
2. Arora L, Dada R. Vascularization of myocutaneous L dorsal flap. *Indian Med J* 2006;**100**:111–3.
3. Arora L, Dada R. Superficial Ulnar artery: A Case report. *J Postgraduate Medical Education, Training and Research* 2006;**1**:81–4.
4. Chaudhury S, Nag TC, Wadhwa S. Prenatal acoustic stimulation influences neuronal size and the expression of calcium-binding proteins (calbindin D-28K and parvalbumin) in chick hippocampus. *J Chem Neuroanat* 2006;**2**:117–26.
5. Dada R, Kumar R, Kucheria KA. 2-year-old baby with Downs syndrome, cryptorchidism and testicular tumour. *Eur J Med Genet* 2006;**49**:265–8.
6. Dada R, Kumar R, Sharma RS, Kucheria KA. Sperm AZF microdeletion screening and assisted reproduction. *J Postgraduate Medicine, Education and Research* 2006;**1**:141–2.
7. Dada R, Kumar R, Shamsi MB, *et al.* Occupational environmental factors and male infertility. *Embryo Talk* 2006;**1**:86–100.
8. Dhar P, Mohari N, Mehra RD. Preliminary morphological and morphometric study of rat cerebellum following sodium arsenite exposure during rapid brain growth (RBG) period. *Toxicology* 2007;**234**:10–20.
9. Kumar R, Dada R, Kucheria KA. Importance of genetic analysis prior to ICSI. *Obs and Gynae Today* 2006;**8**:461–3.
10. Gupta H, Verma D, Ahuja RK, Srivastava DN, Wadhwa S, Ray SB. Intrathecal co-administration of morphine and nimodipine produces higher antinociceptive effect by synergistic interaction as evident by injecting different doses of each drug in rats. *Eur J Pharmacol* 2007;**561**:46–53.
11. Lall K, Dhar P. A case of unilateral high division of sciatic nerve and bipartite piriformis muscle. *Int Med J* 2007;**14**:55–8.
12. Sharma K, Mehra RD, Dhar P, Vij U. Chronic exposure to estrogen and tomosifen regulates synaptophysin and phosphorylated CAMP response element—binding



- (CREB) protein expression in CAI of ovariectomized rat hippocampus. *Brain Research* 2007;**1132**:10–19.
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2. Dada R, Kumar R, Sharma RS, Kucheria K. Assisted reproduction and genetics. In: Manna GK, Roy SC (eds). *Perspectives in cytology and genetics*. Kolkata: Manna Publication, 2006;12:1–7.
3. Dada R, Kumar R, Ammini AC, Kucheria K. In: Manna GK, Roy SC (eds). *Haematological malignancy and Klinefelter syndrome*. Kolkata: Manna Publication, 2006;12:497–99.
4. Kamboj S, Dada R, Kucheria K. In: Manna GK, Roy SC (eds). Effect of cartap hydrochloride exposure on cultured human lymphocytes: An *in vitro* study. *Perspectives in cytology and genetics*. Kolkata: Manna Publication, 2006;12:1–7.

## PATIENT CARE

Embalming of dead bodies	472
Cytogenetic analysis	256
Yq microdeletion analysis	182
Chromosome analysis	161
Amniotic fluid/CVS/cord blood	62
DNA /PCR (Yq microdeletion analysis)	

## Fluorosis diagnostic laboratory: Fluoride estimation

Urine	72
Blood/serum	67
Drinking water	124

## AWARDS, HONOURS

**Rakesh Kumar**, PhD Scholar, received the GPTalwar Gold Medal Award for the best poster presentation at the conference on ‘Recent advances and challenges in reproductive health research 2007’.

## SIGNIFICANT EVENTS

**Professor Rani Kumar** was invited as a visiting professor in the Department of Human Anatomy at the Oman Medical College, Muscat, November 2006; invited as a Member, Publication Advisory Committee, National Academy of Medical Sciences; Member, Editorial Board, *Journal of Anatomical Society of India*; continued to be a Member, Gulf Medical College, Ajman (UAE); Chairperson, Store Purchase Committee and Curriculum Committee phase-1 MB,BS, AIIMS.

**Professor Shashi Wadhwa** was nominated and acted as member of Selection Committee of SSB awardees; Advisory Panel for election of Fellows of NAMS and syllabus revision committee of UPSC; nominated Subject Expert, Punjab Public Service Commission; continues as member, Board of Studies and Scientific Advisory Committee (SAC), National Brain Research Centre (NBRC), Manesar, Gurgaon; invited as Subject Expert, Selection Committee, Jawaharlal Nehru University, New Delhi; continued to be a Member, Travel Awards committee of CSIR; Member, Editorial Boards, *J Biosciences*, *J Anatomical Society of India* and *Annals of Neurosciences*.

**Professor Raj D. Mehra** was invited as Visiting Professor at the Department of Human Anatomy, Oman Medical College; Chaired the sessions on Tulsabai Somani Educational Trust Award and Dr D.M. Kar prize in Annual Conference of Indian Academy of Neurosciences; invited as a member, Selection Committee of the Punjab Public Service Commission.

**Professor T.S. Roy** was member of the Expert Committee for upgradation of Kolkata Medical College and Grant Medical College, Sir JJ Group of Hospitals, Mumbai, under the Pradhan Mantri Swastha Suraksha Yojna; continued to be a member, Editorial Board of *Pancreas*.

**Dr P. Dhar** continues as Vice president of All India Association of Bioethics.

**Dr P. Dhar, Dr S.B. Ray and Dr Rima Dada** chaired Scientific Sessions at 54th National Conference of the Anatomical Society of India, held at Kochi, Kerala.

**Dr Rima Dada** chaired a scientific session in the meeting of the Asian Congress of Andrology at Shanghai, China; helped Delhi Police in sex identification of unidentified bodies; invited for meeting as a Member, Ethics Committee in Delhi University; Member of Editorial Board, *Indian Journal of Practicing Doctor*, *Online Journal of Health and Allied Sciences*.

**Dr R. Dhingra** became a member of International Society of Plastination.

#### VISITING SCIENTISTS

1. Howard Nornes, Colorado State University, USA delivered a lecture on 'Attempts to make CNS/spinal cord more receptive to transplant by upregulation of Trk receptors'.
2. Curtis L Lowery, University of Arkansas for Medical Sciences, Arkansas, USA delivered a lecture on 'In utero fetal brain assessment with fetal magneto-encephalography'.

## 9.3 Biochemistry

	<b>Professor and Head</b> Subrata Sinha	
	<b>Professors</b>	
Neeta Singh	D.N. Rao	Nibhriti Das
Ranju Ralhan	S.S. Chauhan	
	<b>Additional Professor</b> M.R. Rajeswari	
	<b>Associate Professors</b>	
P.P. Chattopadhyay		Kalpana Luthra
	<b>Assistant Professors</b>	
Alpana Sharma	Kunzang Chosdol	N.C. Chandra*

(\*adhoc)

### EDUCATION

#### Undergraduate

The department continues with its undergraduate teaching programmes which include MBBS (two semesters), Nursing (one semester) and BSc (Hons) Nursing (one semester). For the MBBS students, an innovative blend of problem-based/case-oriented small group discussions, interactive lectures and lab-based exercises is streamlined to facilitate self-directed reason-based learning of biochemical concepts and their applications in clinical problem-solving. New problem-based modules on pH and electrolyte balance, endocrine–metabolic interrelationships have been incorporated to facilitate the understanding of various concepts of biochemical regulation and molecular medicine.

#### Postgraduate

These include 8 MSc (1st year and 2nd year) students and 8 MD students. The department also has 40 PhD students.

#### Short-term training

Summer training in research was provided to MBBS students from AIIMS. Eight MBBS (1st year) students conducted projects for the KVPY Scheme of the DST in different labs of the department and one student has been awarded the fellowship. Twenty students from India received short-term training for 3 to 6 months. The department also imparted short-term training (one month) to 2 MSc students from Dr B.P. Koirala Institute for Health Sciences, Dharan, Nepal.

#### Continuing Medical Education

The department organized 33rd Indian Immunology Society Conference, AIIMS; 28–31 January 2007.

## **National and International Conferences**

### **Lectures delivered**

#### **Dr Subrata Sinha**

- ‘Role of genomics and proteomics in cancer’, Institute of Cytology and Preventive Oncology, Noida; 20 September 2006
- ‘Biomarkers in cancer’, 46th Annual Conference of the NAMS; 27 October 2006.

#### **Dr Neeta Singh**

- ‘Nanoparticles—New horizon in medical sciences’, IUAC, New Delhi; 31 October 2006.
- ‘Gene expression profiling in practitioners of *Sudershan kriya*’ National symposium on ‘Science of holistic living and its global application and CME on therapeutic lifestyle changes for management of chronic health problems’, MGIMS Sevagram, Wardha; 16 November 2006.
- ‘Preventing cervical cancer with HPV vaccine’, panel discussion, 15th Annual Conference of Gynaecological Oncologists of India, New Delhi; 25 November 2007.
- ‘HPV vaccine and cervical cancer’, Cancer Update, Smt Susheela Tiwari Forest Hospital, Haldwani, Uttarakand; 11 December 2006.
- ‘Alterations in mitochondrial DNA and its correlation with mitochondrial related apoptosis in human cancer and mitochondrial myopathies’, SFRK, Indian Satellite meeting, Cochin; 4 January 2007.
- ‘HPV typing and p53 codon 72 polymorphism in Cervical Cancer’, 30th All India cell biology conference and symposium on ‘Molecules to compartments: Cross-talk and networks’, New Delhi; 3 February 2007.
- ‘Apoptosis in health and disease’, 7th Indo-US workshop on Flow Cytometry, JNU, New Delhi; 10 February 2007.
- ‘Diagnostic markers of lung cancer’, panelist at the 2nd Conference of Indian Society for study of lung cancer on ‘Tobacco control and lung cancer’, Tata Memorial Hospital, Mumbai; 27 February 2007.

#### **Dr D.N. Rao**

- Biotechnology meeting, Andhra University, Vishakhapatnam; 8–10 October 2006.
- XVII National conference on ‘Veterinary parasitology’, Pondicherry; 15–17 November 2006.
- National seminar on ‘Recent diagnostic trends and control strategies for haemotoprotozoan infection in live stock’, Gujarat Agriculture and Veterinary University, Dantiwada; 9–11 February 2007.
- 1st Indian peptide symposium, Hyderabad; 22–23 February 2007.

### **Dr Nibhriti Das**

- ‘Essentials of problem-based learning: Tutors’ attributes’, National workshop on emerging trends in medical education, K.L. Wig CMET, AIIMS, New Delhi; 23–25 November 2006.
- ‘Assessment of (apo) ECA, paraoxonase and eNOS gene polymorphisms as risk genes for coronary artery disease and essential hypertension in northern Indian subjects’, Industry academia interaction on contemporary issues, Pharmacogenomics symposium-2006, Department of Pharmacology, AIIMS and Ranbaxy Research Laboratories, Gurgaon, Haryana; 20 May 2006.

### **Dr Ranju Ralhan**

- ‘Clinical cancer proteomics: Tools to develop novel potential biomarkers and drug targets’, 26th Annual Convention of the Indian Association for Cancer Research, Bhubaneswar; 17–19 January 2007.
- ‘Novel potential targets in head and neck cancer: Challenges and opportunities’, Charles A Le Maistre visiting professor lecture, MD Anderson Cancer Center, Houston, USA; November 2006.
- ‘Head and neck cancer: Challenges and opportunities’, Center for Research in Mass Spectrometry, York University, Toronto, Canada; September 2007.
- ‘Molecular epidemiology of oral precancer’, Keynote speaker, 11th International Congress on ‘Oral cancer’, Grado, Italy; May 2006.
- ‘Molecular profiling of esophageal squamous cell carcinoma’, Gujarat Cancer Research Institute, Ahmedabad; May 2006.

### **Dr S.S. Chauhan**

- 33rd Annual National Conference of the Association of Clinical Biochemists of India, Pune; 23–26 November 2006.
- Cancer Update 2006, symposium on ‘Molecular markers, positron emission tomography and role of medicine in cancer in past genomic era’, Haldwani, Nanital; 10–11 December 2006.
- International conference on ‘Cardio-pulmonary regulation in health and disease: Molecular and systemic integration’, V.P. Chest Institute, Delhi; 22–24 February 2007.

### **Dr M.R. Rajeswari**

- ‘Clinical applications of proteomics’, International symposium on ‘Biochromatography and Nanotechnology’, Vellore Institute of Technology, Vellore, Tamil Nadu; February 2007.

### **Dr Kalpana Luthra**

- International conference on 'World AIDS Day 2006', China; December 2006.
- 'Pharmacogenomics symposium', Delhi; May 2006.

### **Dr Alpana Sharma**

- 'Effect of neo-adjuvant chemoradiation on cytokine profile and therapeutic response in patients with advanced cervical cancer', 26th Annual convention of the Indian Association for Cancer Research and International symposium on 'Translational research in cancer', Bhubaneswar; 17–19 January 2007.
- 33rd National Conference of the Association of Clinical Biochemists of India (33rd ACBICON 2006), Pune; 23–26 November 2006.

## **RESEARCH**

### **Funded Projects**

#### ***Completed***

1. Identification of differentially expressed genes in lung cancer using library subtraction. Neeta Singh. Funded by DBT for 3 years (2003–2005). Funds: Rs 28.22 lakh.
2. Functional analysis of S29 ribosomal protein apoptosis. Neeta Singh. Funded by DST for 3 years (2003–2006). Funds: Rs 18.24 lakh.
3. Gene expression profiling in the practitioners of *Sudershan kriya*. Neeta Singh. Funded by Ministry of Health and Family Welfare for 3 years (2003–2006). Funds: Rs 22 lakh.
4. Designing of methylation target arrays for breast cancer. Ranju Ralhan. Funded by DBT for 1 year (2005–2006). Funds: Rs 22.16 lakh.
5. Relationship between polymorphisms in drug metabolizing enzymes, CYP1A1 and GSTM1 and the risk of developing oral precancer and cancer among consumers of tobacco and chewing products. Ranju Ralhan. Funded by ICMR for 5 year (2002–2007). Funds: Rs 155 lakh.
6. Role of genomic instability due to alterations of recombination factors p53 and BRCA1 in the pathogenesis of breast cancer. Ranju Ralhan. Funded by ICMR for 4 years (2002–2006). Funds: Rs 33 lakh.
7. Studies on expression of HMGA proteins in tumour growth and their interaction with DNA. M.R. Rajeshwari. Funded by DST for 3 years (2003–2006). Funds: Rs 18.06 lakh.
8. Frequency distribution of three HIV-1 resistance conferring polymorphisms SDF-3'A, CCR2-64 I, and CCR5- delta 32 in Asian Indians. Kalpana Luthra. Funded by the DST for 3 years (2003–2006). Funds: Rs 19.5 lakh.
9. Expression of leukocyte function associated antigen-1 (LFA-1) in normal and pre-eclamptic human placenta. Kalpana Luthra. Funded by AIIMS for 2 years (2004–2006). Funds: Rs 1.3 lakh.
10. Characterization of novel genetic alterations preferentially involved in low grade

human astrocytic tumours. Kunjung Chosdol. Funded by DST for 3 years (2003–2006). Funds: Rs 11.7 lakh.

### Ongoing

1. Expression of recombinant antibody in *E. coli*: Processes for improving binding characteristics of antibodies to hepatitis B surface antigen (HbsAg). Subrata Sinha. Funded by DBT for 4 years (2002–2006). Funds: Rs 40.38 lakh.
2. Ligand-based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofetal) isozyme of alkaline phosphatase: Characterization and validation in clinical cancers. Subrata Sinha. Funded by DBT for 3 years (2005–2008). Funds: Rs 25.63 lakh.
3. Generation and characterization of phage displayed recombinant antibodies to biochemically and immunologically relevant conformations and epitopes of the oncodevelopmental antigen. Subrata Sinha. Funded by ICMR for 3 years (2006–2009). Funds: Rs 13.48 lakh.
4. Therapy of infectious and chronic diseases: Targeted gene delivery and long-term specific modulation of gene expression. Subrata Sinha. Funded by DBT for 5 years (2006–2011). Funds: Rs 101.89 lakh.
5. Funds for improvement of S and T infrastructure in universities and higher educational institutions (FIST). Subrata Sinha. Funded by DST for 5 years (2005–2010). Funds: Rs 115 lakh.
6. Development of a human papillomavirus vaccine prototype. Neeta Singh. Funded by DBT for 2 years (2005–2007). Funds: Rs 36.49 lakh.
7. Molecular epidemiology of HPV types prevalent in India and identification of HPV-16 L1 and E6 variants in cervical cancer. Neeta Singh. Funded by DBT for 2 years (2005–2007). Funds: Rs 13.94 lakh.
8. Mitochondria in apoptosis and human cancer. Neeta Singh. Funded by ICMR for 3 years (2005–2008) Funds: Rs 9.43 lakh.
9. A study of molecular and biological factors in pathogenesis of ovarian cancer. Neeta Singh. Funded by ICMR for 3 years (2007–2009). Funds: Rs 14.68 lakh.
10. Developing new generation peptide-based vaccine using F1 and V antigen of *Y. pestis* (Plague). D.N. Rao. Funded by DST for 3 years (2006–2009). Funds: Rs 24 lakh.
11. To evaluate the correlation between levels of cytokines (IL-6, IL-8, IL-10) in seminal plasma in different groups of infertile men and correlation with sperm morphology, functions and bacterial infection in semen. D.N. Rao. Funded by ICMR for 3 years (2006–2009). Funds: Rs 15 lakh.
12. Chronic immune activation associated with leprosy: Role of hypo-responsiveness and anergy. D.N. Rao. Funded by CSIR for 2 years (2007–2009). Funds Rs 12 lakh.
13. Immuno capture based diagnostic assay for the detection of *plasmodium falciparum* HRP-2 and LDH antigens. D.N. Rao. Funded by ICMR for 2 years (2007–2009).



Funds: Rs 10 lakh.

14. Developing defensins as a mucosal adjuvant/microbicide with peptide antigens of HIV. D.N. Rao. Funded by DBT for 3 years (2006–2009). Funds: Rs 25 lakh.
15. T Reg cells and other negative regulatory elements of IL-2 in leprosy patients. D.N. Rao. Funded by CMR for 2 years (2007–2009). Funds: Rs 13 lakh.
16. Expression and modulation of complement receptors: Significance in the pathophysiology and prognosis of autoimmune disorders. Nibhriti Das. Funded by CSIR for 3 years (2005–2008). Funds: Rs 11.96 lakh.
17. Evaluation of the role of free radical homeostasis, cell adhesion molecules, nitric oxide, HDL and associated gene polymorphisms in relation to the risk and severity of coronary artery disease. Nibhriti Das. Funded by ICMR for 3 years (2006–2009). Funds: Rs 20.50 lakh.
18. Functional analysis and clinical significance of novel molecular targets in cytoskeletal reorganization and locoregional spread of oral cancer using proteomics. Ranju Ralhan. Funded by DBT for 3 years (2005–2008). Funds: Rs 38 lakh.
19. Characterization and functional analysis of differentially expressed genes in esophageal cancer. Ranju Ralhan. Funded by DST for 3 years (2005–2008). Funds: Rs 20 lakh.
20. Phase II/ III randomized placebo-controlled clinical trial of curcumin in respectable stage III and IV squamous head and neck cancers (oral cancers). Ranju Ralhan. Funded by DBT for 3 years (2006–2008). Funds: Rs 45.41 lakh.
21. Characterization of the positive regulatory region of the first exon of human cathepsin L gene. S.S. Chauhan. Funded by DST for 3 years (2005–2008). Funds: Rs 22.30 lakh.
22. Identification and characterization of human cathepsin L alternate promoter. S.S. Chauhan. Funded by CSIR for 3 years (2005–2008). Funds: Rs 7.0 lakh.
23. Proteomic analysis of outer membrane of *acinetobacter baumannii* and its resistant strains. M.R. Rajeswari. Funded by DBT for 3 years (2005–2008). Funds: Rs 17.39 lakh.
24. Hypoxia and CpG island methylation of selected loci in tumour cell genome: Modulation of methylation and subsequent effect on cell proliferation and chemotherapeutic response. P.P. Chattopadhyay. Funded by ICMR for 3 years (2005–2008). Funds: Rs 16.75 lakh.
25. Effect of tumour specific Hsp90 inhibitor geldanamycin, on CpG island methylation and survival of hypoxic glial tumour cell lines. P.P. Chattopadhyay. Funded by CSIR for 3 years (2005–2008). Funds: Rs 9.0 lakh.
26. Characterization of HIV-1 subtypes in Indian subjects, a nested part of RO1 project. ‘Design and use of HIV V3 mimetic immunogens’. Kalpana Luthra. Funded by NIH, USA for 5 years (2005–2010). Funds: Rs 39.00 lakh.
27. CETP polymorphism in hyperlipidemia. Kalpana Luthra. Funded by ICMR for 3 years (2006–2009). Funds: Rs 13.13 lakh.
28. Signalling pathways in ovarian granulosa cells. Kalpana Luthra. Funded by ICMR for 3 years (2005–2008). Funds: Rs 11.49 lakh.
29. HIV resistance conferring polymorphisms in DCSIGN in high-risk individuals: A

- pilot study. Kalpana Luthra. Funded by AIIMS for one year (2006–2007). Funds: Rs 1.45 lakh.
30. Assessment of beta-2 microglobulin, IL-6 and IL-2R as prognostic factors in Indian patients of multiple myeloma. Alpana Sharma. Funded by Institute's Research Grants, AIIMS, for 2 years (2005–2007). Funds: Rs 1.0 lakh.
  31. Determination of genetic polymorphism in North Indian population using RAPD-PCR DNA Fingerprinting. Kunzang Chosdol. Funded by Institute's Research Grants, AIIMS for 2 years (2005–2007). Funds: Rs 1.0 lakh.
  32. Studies on the possible development of hyperlipomia by oral contraceptives: An *in vitro* model. N.C. Chandra. Funded by Ministry of Health and Family Welfare for 3 years (2003–2006). Funds: Rs 10.27 lakh.
  33. To study the role of insulin, estradiol and epidermal growth factor on the transcriptional regulation of LDL-receptor (LDLR). N.C. Chandra. Funded by AIIMS for 3 years (2005–2008). Funds: Rs 1.0 lakh.
  34. An *in vitro* model study of hyperlipoproteinemia on the degree of LDL receptor expression in placental trophoblast cells: Correlation with oral steroid contraceptive induced hyperlipoproteinemia. N.C. Chandra. Funded by ICMR for one year (2006–2007). Funds: Rs 6.98 lakh.
  35. Studies on SREBP-mediated regulation of low-density lipoprotein receptor (LDLR), low-density lipoprotein receptor-related protein (LRP) and receptor-associated protein (RAP). N.C. Chandra. Funded by DST for 3 years (2006–2009). Funds: Rs 22.99 lakh.
  36. Development of HPV candidate vaccine/s; preparation of clinical trial site/cohort for vaccine testing. Neerja Bhatla (PI) and Neeta Singh (Co-PI). Funded by DBT for 3 years (2005–2008). Funds Rs 84.98 lakh.
  37. Effect of curcumin on advanced human cervical carcinomas. Sunesh Kumar Jain (PI) and Neeta Singh (Co-PI). Funded by DBT for 3 years (2006–2009). Funds: Rs 59 lakh.
  38. Culture of limbal stem cells for ocular surface reconstruction in stem cell deficiency disorders. Radhika Tandon (PI) and Neeta Singh (Co-PI). Funded by DBT for 3 years (2005–2008). Funds: Rs 27.10 lakh.
  39. Detection of apoptosis in human periodontal ligament during orthodontic tooth movement. Ritu Duggal (PI) and Neeta Singh (Co-PI). Funded by ICMR for 2 years (2005–2007). Funds: Rs 5.79 lakh.
  40. Programme support for production of diagnostics and development of prophylactics for neglected infectious disease with filariasis as a model. D.N. Rao. Funded by DBT for 2 years (2007–2009). Funds Rs 13 lakh.
  41. Investigations of genetic basis and gene-lifestyle interactions in generalized and regional obesity, insulin resistance and diabetes in Asian Indians. Kalpana Luthra (Co-PI). Funded by DBT for 3 years (2006–2009). Funds: Rs 46.79 lakh.
  42. Molecular analysis of gene markers in urine cytology and tissue histology specimens

of Indian patients with superficial and muscle invasive TCC of urinary bladder. Alpana Sharma (Co-PI). Funded by ICMR for 2 years (2007–2009). Funds: Rs 9.99 lakh.

## Departmental Research

### Ongoing

1. Molecular detection and genotyping of HPV in uterine cervix: A population-based study
2. Molecular insights into the pathogenesis of cervical cancer: An *in vitro* study
3. Effect of curcumin on advanced cervical cancer
4. Development of HPV-16 candidate vaccine prototype
5. Evaluation of efficacy of curcumin as an adjuvant along with radiotherapy and chemotherapy in advanced cases of cervical carcinoma
6. Role of eNOS gene polymorphisms in coronary artery disease in the Indian subjects
7. Paraoxonase and its gene polymorphism in relation to CAD
8. Elucidation of the expression of complement regulatory proteins in relation to the pathophysiology and severity of SLE
9. Role of complement receptors in cell signaling and microbicidal properties of macrophages in relation to *mycobacterium tuberculosis*
10. Complement receptor 1 and its gene polymorphism in relation to the pathophysiology and susceptibility to severe malaria

## Collaborative Projects

### Completed

1. A study of the expression and targeting of IAPs *in vitro* and an analysis of their expression in head and neck cancer
2. Study of the function of mitochondria in apoptosis and human disease
3. Analysis of apoptotic signalling mechanism induced by benzamide riboside and ATP analogs
4. Evaluation of molecular markers and anticancer agents in lung cancer
5. HPV and the genetics of cervical cancer
6. Molecular and biological factors in the pathogenesis of ovarian cancer
7. Expression of leukocyte complement receptor 1, its modulation and significance in the pathophysiology of systemic lupus erythematosus (SLE)
8. A comparative evaluation of levels of interleukin-1<sup>-2</sup> in GCF during canine distraction and canine refraction (with Dental Surgery, AIIMS)

### Ongoing

1. Elucidation of the role of the hypermethylation in cancer (HIC-1) gene in glial tumorigenesis (with Pathology, Neurosurgery)
2. Role of 1p and 19q loss of heterozygosity in human gliomas (with Pathology,

- Neurosurgery)
3. DNA fingerprinting methods for study of genetic alterations in gliomas (with Pathology, Neurosurgery)
  4. MRI studies on murine liver and skin tumours (with NMR)
  5. Histopathological investigations on murine skin and liver tumors (with Histopathology)
  6. Isolation and analysis of the outer membrane proteins, beta lactamases of *Acinetobacter baumannii* (with Microbiology)
  7. Structural investigations on the native and mutated outer membrane protein from *Acinetobacter baumannii* (with Bioinformatics, JNU)
  8. Levels of interleukin-1-<sup>2</sup> in GCF during retention after successful orthodontic treatment (with Dental Surgery)
  9. Neurological disorders Freidreich's ataxia and spiniocerebellar ataxia associated with DNA trinucleotide repeats: Identification and development of protein biomarkers and circulating DNA for clinical diagnosis (with Neurology)
  10. Utility of antigen detection from the epidermis of Indian patients in pemphigus vulgaris (with Dermatology and Venereology)
  11. A prospective study of oxidative stress markers and antioxidant levels in patients with pre-eclampsia (with Obstetrics and Gynecology)
  12. T-cell response in parthenium-induced contact dermatitis (with Dermatology and Venereology)
  13. A pilot study to evaluate the inter-relationship of insulin, insulin receptor and LDL receptor in patients of type 1 diabetes mellitus (with Endocrinology and Metabolism, Cardiology)
  14. A case control pilot study on LDL receptor expression and serum lipid profile in cancer patients (with Obstetrics and Gynecology, Surgery)

## **PUBLICATIONS**

### **Journals**

1. Anupam K, Tusharkant C, Gupta SD, Ralhan R. Loss of disabled-2 expression is an early event in esophageal squamous tumourigenesis. *World J Gastroenterol* 2006; **12**:6041–5.
2. Arora V, Mandal AM, Grover R, Kumar A, Chattopadhyay P, Das N. Modulation of complement receptor 1 transcript in systemic lupus erythematosus by interferon gamma and immune complex. *Mol Immunol* 2006;**44**:1733–9.
3. Arya S, Isharwal S, Misra A, Pandey RM, Rastogi K, Vikram NK, et al. C-reactive protein and dietary nutrients in urban Asian Indian adolescents and young adults. *Nutrition* 2006;**22**:865–7.
4. Bagadi SA, Prasad CP, Srivastava A, Prashad R, Gupta SD, Ralhan R. Frequent loss of Dab2 protein and infrequent promoter hypermethylation in breast cancer. *Breast*

- Cancer Res Treat* 2006. [Epub ahead of print]
5. Bose B, Khanna N, Acharya SK, Sinha S. Generation and characterization of a high affinity chimeric antibody against hepatitis B surface antigen. *Biotechnol Appl Biochem* 2006;**43**:93–101.
  6. Bose B, Khanna N, Acharya SK, Sinha S. Generation and characterization of a single gene mouse–human chimeric antibody against hepatitis B surface antigen. *J Gastroenterol Hepatol* 2006;**21**:1439–47.
  7. Das SS, Das N, Srivastava LM. Role of ascorbic acid on *in vitro* oxidation of low density lipoprotein derived from hypercholesterolemic patients. *Clinica Chimica Acta* 2006;**372**:202–5.
  8. Deepak T, Biswas K, Vinita T, Rao DN. Development of diagnostic reagents: Raising antibodies against synthetic peptides of Pf HRP-2 and LDH using microsphere delivery. *Immunobiol* 2006;**211**:797–805.
  9. Jain V, Saini D, Goswami P, Sinha S. A phage antibody to the active site of human placental alkaline phosphatase with higher affinity to the enzyme–substrate complex. *Mol Immunol* 2007;**44**:369–76.
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### Abstracts

36. Sharma H, Singh N. Antisense treatment against anti-apoptotic genes induces apoptosis and act as chemoadjuvants in HNSCC (Abs). Proceedings of 14th ECDO Euroconference on Apoptosis, Chia, Sardinia, Italy, 19 September–4 October 2006.
37. Sen S, Ateeq B, Sharma H, Datta P, Datta Gupta S, et al. Identification of differentially expressed genes in human lung SCC in Asian Indian using suppression subtractive hybridization (Abs). Proceedings of 1st AACR International Conference on 'Molecular diagnostic in cancer therapeutic development: Maximizing opportunities for individualized treatment', Chicago, USA; 12–15 September 2006.
38. Das N, Arora V, Biswas B. Regulators of complement activation (RCA): Significance in autoimmune disorders (meeting abstract). *J Immunol* 2006;**36**:163.
39. Khandpur S, Sharma VK, Sharma A, Pathria G, Satyam A, Comparison of desmoglein ELISA test and immunoblot assay in the diagnosis of pemphigus vulgaris in Indian patients. *J Am Acad Dermatol Supplement* 2007;**56**:AB 115.

### PATIENT CARE

Marker tests for pregnancy and prostate cancer:

PSA	:	300 samples
b̢-HCG	:	325 samples

### AWARDS AND HONORS

**Dr Subrata Sinha** has been elected as Fellow, Indian National Science Academy; delivered the National Science Day lecture, 'Harnessing science to fight cancer', University of Hyderabad, 28 February 2007.

**Dr Neeta Singh** was appointed as an Executive Committee Member, Indian Association for Cancer Research; Secretary (Delhi Chapter) of Indian Association for Cancer Research; continued to be Member, International Union Against Cancer (UICC); Member, American

Association for Cancer Research (AACR); Member, Indian Society of Cell Biologists; Member, Indian Women Scientists Association; Member, Indian Society of Lung Cancer; Member, Indian Society for Free Radicals Research in India.

**Dr Nibhriti Das** was appointed as a Member, Indian Immunology Society; Member, IUIS; Member, Indian Society of Cell Biology; Member, International Complement Society; nominated Member, Library Committee, NML Invited as an expert, ICMR INSERM Workshop, 22–24 January 2007; Guest of Honour to the National Conference on ‘Cancer Update’, Sushila Devi Tiwari Trust Forest Medical College, Haldwani, Nanital.

**Dr Ranju Ralhan** was a LeMaistre Visiting Professor, M.D. Anderson Cancer Center, Houston-2006; UICC NCI–Novartis Transitional Cancer Research Fellowship (TCRF) 2006.

**Dr Kalpana Luthra** was awarded the CMCL–FAIMER fellowship after successful completion of project on Medical Education; January 2007.

### **Significant events**

**Dr Subrata Sinha** was appointed Member of following committees: Project Review Committee (PRC), Chronic Diseases, Department of Biotechnology (DBT) (2005–07); PRC, Biotechnology Products and Process Development, DBT, (2005 till date); PRC, Cell and Molecular Biology, ICMR, (2005); Special Committee, Centre for Molecular Medicine, JNU, 2001 till date; Special Committee, Centre for Biotechnology, JNU, 2000 till date; Member of the Institutional Biosafety Committee and Ethical Committee of the National Institute of Immunology (2000 till date); Institutional Ethics Committee, Jawaharlal Nehru University (2001 till date); Academic Committee, Centre for Cellular and Molecular Biology, JNU (2006–07); Research Council, SGPGIMS, Lucknow; Chairman, Organizing Committee, 33rd National Conference of the Indian Immunology Society, AIIMS, New Delhi, 28–31 January 2007; Co-convener, NII–AIIMS symposium on Translational Research, New Delhi, 6 October 2006.

**Dr Neeta Singh** was appointed Member, Research Advisory Committee and Programme Advisory Committee of the ICMR; Member, National Advisory Committee for World Conference on ‘Expanding paradigms: Science, consciousness and spirituality’; Member, Scientific Advisory Committee of DRDO; Co-organizer, 7th Indo–US workshop on Flow Cytometry, JNU, 10–14 February 2007.

**Dr D.N. Rao** was nominated as Organizing Secretary, 33rd Indian Immunology Society Conference, AIIMS, 28–31 January 2007; continue to be the Chairman and Member, Technical Advisory Committee of ICMR, ICMR Selection Committee for SRF; Member, Board of Studies of Biochemistry of Jamia Hamdard University; Selection Committee Member,



Rajasthan Public Service Commission; Member, Ethical Committee, Project Review Committee of DBT, DST, CSIR and ICMR; Reviewer for *Vaccine*, *Parasite International*, *Molecular Pharmaceutics*, *Indian Journal Medical Research*, *Journal of Biochemistry and Biophysics*.

**Dr Nibhriti Das** attended XXI International Complement Workshop, Beijing, China, 22–26 October 2006 and presented a paper; Organizing Committee Member, 33rd Indian Immunology Society Conference, AIIMS, 28–31 January 2007 and National Workshop on emerging trends in Medical Education, K.L. Wig CMET, AIIMS, 23–25 November 2006; chaired a session, 33rd Indian Immunology Society, 28–31 January 2007.

**Dr Ranju Ralhan** chaired special symposium on ‘Breast cancer’, 26th Annual Convention of Indian Association of Cancer Research, Bhubaneswar, 17–19 January 2007; chaired a Symposium on ‘Genetic and Molecular Biology’, 11th International Congress on Oral Cancer, Grado, Italy, 14–17 May 2006.

**Dr M.R. Rajeswari** is Local Organizing Committee Member, National Symposium on Biophysics; Member, Project Review Committee, ICMR; Reviewer, *Indian J Biochem Biophys*, Indian Council for Medical Research projects; invited as an External Examiner, PhD and MTech thesis.

**Dr Kalpana Luthra** was nominated as Joint Organizing Secretary, 33rd Indian Immunology Society National Conference, AIIMS, January 2007; Member, Project Advisory Committee of ICMR for Nephrology; Judge, Fine Arts Event and Choreography competition, Pulse 2006.

**Dr Alpana Sharma** was nominated as Organizing Committee Member, 33rd Indian Immunology Society Conference, AIIMS, January 2007; Member, Review Committee, *Int J Gynecol Cancer*, *Clinica Chimica Acta*, *Biomedical Research*.

**Dr N.C. Chandra** was selected as Treasurer, 33rd Indian Immunology Society Conference; 28–31 January 2007.

## 9.4 Biomedical Engineering

	<b>Professor and Head</b> Sneh Anand	
	<b>Professors</b>	
Dinesh Mohan	Harpal Singh	Alok Ranjan Ray
	<b>Associate Professor</b>	
	Veena Koul	
	<b>Principal Scientific Officer-I</b>	
	Nivedita Karmakar Gohil	
	<b>Senior Design Engineer</b>	
	S.M.K. Rahman	
	<b>Scientist</b>	
	J.C. Bhardwaj	

### EDUCATION

The department participates in the PhD and M.Tech programme.

### Continuing Medical Education

#### Seminars

#### Lecture delivered

#### Professor Harpal Singh

- 'Diabetes and insulin delivery system', radio talk on All India Radio Indraprastha Channel; 19 June 2006.
- 'Polymer in healthcare: Recent trends and advances', Jamia Millia Islamia; March 2007.

#### Professor Sneh Anand

- International conclave on Traditional Medicine, New Delhi.
- Indo-US Partnership conference, Bangalore; December 2006.

#### Dr Ashok Sharma

- Plasma polymerization: A technique used in designing new surfaces for biomedical applications; 19 July 2006.

#### Dr Sreeram Dhurjaty

- Digital radiography: Fundamental and advances; 12 December 2006.

#### Professor S. Homer-Vanniasinkam, Consultant of Translational Vascular Medicine, University of Bradford and Clinical Sub-Dean Leeds Medical School

- Vascular tissue engineering: A clinician's perspective; 10 November 2006.

## **Dr Sadhana Sharma, University of Illinois, Chicago, USA**

- Micro- and nanoengineered platforms for biology and medicine; 3 January 2007.

## **National and International Conferences**

### **Professor Sneh Anand**

- ‘Electromagnetics and material for biomedical applications’, International Conference on ‘Design of biomaterials (BIND-06)’, IIT, Kanpur; December 2006.
- ‘Blending EBM and traditional knowledge to develop technology for mass healthcare’, National Conference on ‘Scientific validation and technical evaluation of ancient medical systems (SVTEAMS)’, IIT, Delhi; February 2006.
- ‘Introduction to INAE’, Symposium on ‘Biology inspired nanotechnology’, JNU, New Delhi; March 2007.

### **Professor A.R. Ray**

Presented a paper at the 5th International conference on ‘Advanced engineering design on development of monolithic reservoirs for controlled release of drugs from pH-sensitive copolymers based on acrylic acid (AA) and N-{3 (Dimethylamino)-Methacrylamide (DMAPMA)’, Prague, Czech Republic; June 2006

### **Dr Veena Koul**

Presented a paper at the Indo-Australian conference on ‘Biomaterials, implants, tissue engineering and regenerative’, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala; January 2007.

## **RESEARCH**

<b>Project title</b>	<b>P.I. Name</b>	<b>Funding agency</b>	<b>Duration up to</b>	<b>Total fund (in Rs lakh)</b>
Development of low-cost rapid biosensor for identification of pathogenic bacteria	Harpal Singh	DBT	2010	56.00
Reversibility of injectable contraceptive for male technology development	J.C. Bhardwaj	Ministry of Health	2009	6.27
Analysis of autonomic nervous system correlates and health benefits of rhythmic breathing techniques	Sneh Anand	AYUSH, MHFW	2009	29.63
Development of nanoparticulate system for macrophage targeting	Veena Koul (Co-PI)	DBT	2009	30.00
Process optimization	Veena Koul (Co-PI)	DBT	2008	17.17

Sustainable urban transport in less motorized countries: Research and training	Dinesh Mohan	Volvo Research Foundations	2008	6.40 crore
Development of artificial bone material (RP01721)	Alok Ranjan Ray	ICMR	2008	8.74
Pre-clinical trails of a portable electrically enhanced transdermal drug delivery system (RP01890)	Sneh Anand	DST	2008	18.18
To develop an external counter pulsation device (RP01913)	Sneh Anand	Department of Information and Technology	2008	57.60
Development of biocompatible adhesive (RP01734)	Alok Ranjan Ray	DST	2007	18.82
Development of blood compatible polymeric biomaterials for medical devices (RP01621)	Alok Ranjan Ray	MHRD	2007	12.00
Development of polymer matrices from renewable resources for enzyme-linked immunosorbent assay (RP01653)	Harpal Singh	DST	2007	26.00
Studies of the fallopian tube function with luminal implants	J.C. Bhardwaj	M/s Marksas Ltd.	2007	5.17
Design and development of technological interfaces to rehabilitate spinal injury patients	Sneh Anand (Co-PI)	MSJ & E	2007	26.33
Design and development of BCI using peripheral blood flow	Sneh Anand (Co-PI)	MHRD	2007	12.0
Smart macromolecular therapeutics design synthesis and evaluation of tailor made anti-cancer drug conjugates and local hypothermia for selective lysis of cancer cell (RP01713)	Veena Koul	LSRB (DRDO)	2007	18.16
MEMS based micro-cantilevers for chemical and biochemical sensors	Nivedita K. Gohil (Co-PI)	DST	2007	24
Iodine release from polymeric carriers for disinfection of drinking water (RP01610)	Harpal Singh	DST	2006	4.98
Pathophysiological,	Sneh Anand	ICMR	2006	13.65

biomechanical and metallurgical study of orthopaedic implants (RP01604)				
Sustainable urban transport in less motorized countries research and training	Dinesh Mohan	Volvo Research and Educational Foundations (VREF)	2008	13.0 crore
Implementation of high capacity bus	Dinesh Mohan	Government of National Capital Territory of Delhi	2006	15.00
Implementation of high capacity bus system/ electric trolley bus corridors	Dinesh Mohan	Government of National Capital Territory of Delhi	2007	15.00
Measuring impact properties of human body parts	Dinesh Mohan	DST	2007	15.00
Development of methodology for modelling of airbags	Dinesh Mohan	Japan Automobile Research Institute	2007	15.00
Technological evaluation of RTVs	Dinesh Mohan	Government of National Capital Territory of Delhi	2007	18.00
Development of a training manual for road traffic injury prevention	Dinesh Mohan	WHO	2006	18.00

### Departmental Projects

1. Polymeric hydrogels for biomedical application
2. Development of carrier system for enzyme/drug immobilization for biomedical application
3. Development and pharmacoscintigraphic evaluation of polymer-based transdermal preparation(s) for local vasodilator action
4. Tissue engineering for biomedical applications
5. Intranasal drug delivery
6. Intelligent telemedicine system
7. Synthesis, characterization and evaluation of hydrogels for cancer targeting
8. Synthesis and Characterization of Biocompatible Biodegradable polymers
9. Physical and chemical enhancement techniques for transdermal delivery of bioactives
10. Development of biosensor
11. Optimization techniques for classification of EEG signal during five mental tasks
12. Bioreactive polyester for tissue engineering
13. Assessment of cardiovascular regulation and arterial stiffness using photoplethysmographic signal

14. Temperature sensitive polymers for cancer targeting
15. Interaction of advanced glycation end products in diabetes
16. Molecular trafficking from polymeric particles
17. Molecular and immunological characterization of rotavirus proteins
18. Biomedical instrumentation
19. Biomedical instrumentation for mental handicaps
20. Biomedical signal processing
21. Development of polymers for biomedical application
22. Development of hydrogel-based wound dressing and its evaluation in biological systems
23. Electro magnetically controlled intelligent prosthesis components
24. Brain mapping
25. Preparation and characterization of materials for medical application
26. Iron profile in haematological disorders
27. Sol-gel based sensors for biomedical applications
28. Synthesis of bone submitted materials
29. Non-invasive diagnosis of knee osteoarthritis
30. Development of polymeric hydrogel devices for insulin delivery
31. Development of polymer for biomedical application
32. Studies on haeme proteins mimetic materials
33. Effect of biomechanical stresses on the morphological and biochemical properties of knee joint articular cartilage chondrocytes: a tissue culture study

### **Collaborative Projects**

1. Resonant field imaging system, INMAS, New Delhi
2. The influence of different spacers in the immunogen and enzyme conjugates on the sensitivity and specificity of cortisol assay, NIHFV, New Delhi
3. Application of conducting polymers to nucleic acid, NPL, New Delhi
4. Development of 17-OH progesterone assay using different spacers in tracer and immunogens, NIHFV, New Delhi
5. Cortical reorganization after sight onset, MIT, USA
6. Intelligent upper/lower limb prosthesis, CSIO, Chandigarh

### **PUBLICATIONS**

#### **Journals**

1. Murari BM, Anand S, Gohil KN, Chaudhury KN. Fluorescence spectroscopic study of dip- coated sol gel thin film internal environment using fluorescent probes Hoechst 33258 and Pyranine. *J Sol-Gel Sci Technol* 2007;**41**:149–55.
2. Singh D, Choudhary V, Koul V. Radiation synthesis of interpenetrating polymer networks based on N- vinyl pyrrolidone–acrylic acid copolymer and gelatin I.

- swelling, morphology and thermal characterization for biomedical applications. *J Appl Polym Sci* 2007;**104**:1456–63.
3. Prasad R, Koul V, Anand S, Khar RK. Effect of DC/mDC iontophoresis on transdermal permeation of methotrexate: *In vitro* study. *Int J Pharm* 2007;**333**:70–8.
  4. Punyani S, Deb S, Singh H. Contact killing antimicrobial acrylic bone cements: Preparation and characterization. *J Biomaterial Sci Polymer Ed* 2007;**18**:131–45.
  5. Punyani S, Narayana P, Vasudevan P, Singh H. Sustained release of Iodine from a polymeric hydrogel device for water disinfection. *J Appl Polymer Sci* 2007;**103**:3340.
  6. Singh D, Kucking D, Choudhary V, Adler H-J, Koul V. Synthesis and characterization of poly (N-isopropylacrylamide) films by photopolymerization. *Polym Adv Technol* 2006;**17**:186–92.
  7. Punyani S, Singh H. Preparation of quaternary amine acrylate based polymeric hydrogel and their contact killing antimicrobial properties. *J Appl Poly Sci* 2006; **102**:1038.
  8. Bhaskar MM, Anand S, Gohil NK, Choudhury NK. Sensing of myoglobin using fluorescent probes Hoechst 33258 and pyranine. *Spectrochimica Acta* 2007;**41**:147–55.
  9. Anand S, Jayaraman G, Marimuthu P, Agarwal R. Assessing respiratory morbidity through pollution status and meteorological conditions for Delhi. *Environ Monit Assess* 2006;**114**: 489–504.
  10. Anand S, Yadav R, Agarwal R. Electrical impedance plethysmography technique in estimating pulmonary function status. *J Med Eng Technol* 2006:1080.
  11. Kumar A, Anand S. EEG signal processing for monitoring depth of anesthesia. *IETE Technical Review* 2006:23.
  12. Kumar A, Anand S, Yaddanapudi LN. Fuzzy model for estimating induction dose for general anaesthesia. *J Sci Ind Res* 2006;**65**:325–8.
  13. Parhi P, Ramanan A, Ray AR. Preparation and characterization of alginate and hydroxyapatite-based biocomposite. *J Applied Polymer Science* 2006;**102**:5162–65.
  14. Verma V, Verma P, Kar S, Ray P, Ray AR. Fabrication of agar-gelatin hybrid scaffolds using a novel entrapment method for in vitro tissue engineering applications. *Biotechnol Bioeng* 2007;**96**:392–400.
  15. Parhi P, Singh SN, Ray AR, Ramanan A. Mechanochemically assisted room temperature solid state metathesis reaction for the synthesis of  $\text{MMoO}_4$  (M=Ca, Sr and Ba). *Bull Mater Sci* 2006;**29**:115–18.
  16. Parhi P, Ramanan A, Ray AR. Synthesis of nano-size alkaline-earth hydroxyapatite through microwave assisted metathesis reactions. *Mater Lett* 2006;**60**:218.
  17. Parhi P, Ramanan A, Ray AR. Hydrothermal synthesis of nanocrystalline powder of alkaline-earth hydroxyapatite  $\text{A}_{10}(\text{PO}_4)_6(\text{OH})_2$  (A=Ca, Sr, Ba). *J Mater Sci* 2006; **41**:1455.
  18. Parhi P, Ramanan A, Ray AR. Nanocrystalline powders of alkaline–earth phosphate as precursors for bioceramics. *Amer J Biochem Biotech* 2006;**2**:61.

## PATENTS APPLIED

S. No.	Name of the instrument/ product	Name of person who developed	Patent
1.	A novel contact killing antimicrobial quaternary amine acrylate copolymer and their applications thereof	Professor Harpal Singh (Supriya Singh)	DEL/2525
2.	Bioactive ABO blood grouping card	Professor Harpal Singh) (Lomas Tomar, Charu	230DEL2005
3.	Modulated DC iontophoretic device	Professor Sneh Anand, Dr Veena Koul (Rachna Rastogi)	710/DEL/2006
4.	Nanoporous polymeric micro particles for oral insulin delivery	Professor Harpal Singh (Amit Tyagi)	Patent applied
5.	Electro-oculogram based multi-mode controller	Professor Sneh Anand, Dr Jayashree Santhosh	Patent applied

## AWARDS AND HONOURS

### Professor Sneh Anand

1. Best Project Award in I<sup>2</sup> Tech -2005
2. Best Project Award in EOG Based assistance device to assist severely disabled in I<sup>2</sup> Tech-2006
3. Silver Medal for Best innovation in India international Trade Fair, Pragati Maidan, New Delhi, 2006

## MEMBERSHIPS

**Professor Sneh Anand:** Member (Life), Biomedical Engineering Society of India; Fellow, Indian National Academy of Engineers (INAE); Member, Institution of Engineers; Editor, JIETE, Institution of Electronics and Telecommunication Engineers (IETE); Fellow and Life Member, Indian Academy of Medical Physics; Member, Bureau of Indian Standards, New Delhi; Technical Committee Member, Ministry of Social Justice and Empowerment, New Delhi; Expert Committee Member, All India Council for Technical Education (AICTE); Vice President, Indian Society of Biomechanics; Member of Expert Committee, Department of Science and Technology (DST); Member, National Design and Research Foundation, Bangalore; Selection Committee Member, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shilong (NEIGRIHMS); Project Evaluation Committee Member, Central Council for Research in Homoeopathy (CCRH); Committee Member, Central Research Institute for Ayurveda (CIA); Member, National Institute of Industrial Engineering (NITIE); Expert Committee Member, Ministry of Health and Family Welfare; Expert Committee Member, Indian Council of Medical Research (ICMR); Expert Committee



Member TIFAC-CORE, Mumbai; Research Council Member, Central Scientific Instruments Organization, Chandigarh; Ministry of Information and Technology (MIT).

**Professor A.R. Ray:** Chairman, Task Force on Bioengineering, Government of India, Department of Biotechnology; Expert Committee on Biomedical Engineering, All India Council for Technical Education (AICTE), Government of India; Ministry of Human Resource Development, Government of India, Committee on Education in Human Values; Department of Science and Technology (DST), Expert Committee on Biomedical Engineering; Indian Council of Medical research (ICMR), Programme Advisory Committee on Non-communicable diseases; (Chairman, Bioengineering section); Technology Information, Forecasting and Assessment Council (TIFAC), Review Committee on Home grown Technology; Board of Research Studies, Faculty of Sciences and Engineering, Delhi University; Advisory Board, National Institute of Technology, Rourkela; Board of Studies, Biju Pattnaik Technical University; Board of Research Studies, Faculty of Sciences, Jamia Hamdard; Council of Academic Affairs (Life Sciences) M.D. University; Board of Post Graduate Studies, Faculty of Sciences, Bundelkhand University; Research Advisory Committee of Shriram Institute for Industrial Research.

**Professor Harpal Singh:** Member, Surgical Dressings, Bureau of Indian Standards, New Delhi; Member, Standing Committee to Review the Life Saving Drugs.

**Dr Veena Koul:** Member, Nano-Tech Project on Drug Delivery, a collaborative participation between IITD and AIIMS.

#### **VISITING SCIENTISTS**

1. Dr Sudhir Bagga (Specialized in Allergy and Immunology), Science of Life, USA, delivered a lecture on 'Science of Life: Integration of therapies', Centre for Biomedical Engineering; 7 November 2006.
2. Dr Pawan Sinha, MIT, USA delivered a lecture on 'Topographical and learning and recognition', Centre for Biomedical Engineering; 10 October 2006.

## 9.5 Biophysics

<b>Professor and Head</b>		
T.P. Singh* (upto 31.8.2006)		Gita Subba Rao** (w.e.f. 1.9.2006 to 30.9.2006)
<b>Administrative In-Charge</b>		
T.D. Dogra (w.e.f. 1.10.2006)		
<b>Emeritus Professor</b>		
R.K. Mishra		
<b>Distinguished Biotechnologist (DBT)</b>		
T.P. Singh (w.e.f. 28.11.2006)		
<b>Associate Professors</b>		
Krishna Dalal	A. Srinivasan	Punit Kaur
<b>Assistant Professors</b>		
Savita Yadav		Sujata Sharma
<b>Scientists</b>		
Sharmistha Dey	S. Baskar Singh	Asha Bhushan

Dr. T.P. Singh superannuated on 31.8.2006\*, Dr. Gita Subba Rao superannuated on 30.9.2006\*\*

### EDUCATION

The faculty and scientists are actively involved in teaching and guiding students for PhD degree, MSc (Biophysics) and MD (Biophysics) and imparting long- and short-term training to students from different institutes and universities.

### Continuing Medical Education

#### Dr Krishna Dalal

- ‘Stress management and hence drug abuse prevention acupressure foot reflexology’, invited talk as a resource person in the basic training course on ‘Drug abuse prevention’, Society for Promotion of Youth and Masses, Vasant Kunj, New Delhi; 20 October 2006.
- ‘Management of common ailments through alternative therapies’, demonstration and invited lecture to the orientation course, Direct Taxes Regional Training Institute, Income Tax Department, Mahalaxmi, Mumbai; 22 September 2006.
- Invited talk on ‘Stress management’, International Conclave on Traditional Medicine, New Delhi; 16–17 November 2006.
- Dalal K. Tackle your sleeplessness. *Life Matterz* 2006;**1**:34–5.

- Dalal K. Sexuality and spirituality. *Life Matterz* 2006;1:16.

## **National and International Conferences**

### **Lectures delivered**

#### **Professor T.P. Singh**

- Plenary lecture in the Drug Development Conference for the Third World, Trieste, Italy; 5–9 June 2006.

#### **Dr K. Dalal**

- ‘Role of reflexology in integrated medicine’, Proceedings of 25 years’ celebrations of Indian Research Institute for Integrated Medicine, Kolkata, West Bengal; 8–10 December 2006.
- ‘Reflexology: A possible tele-medical therapy for acute and chronic ailments’, Proceedings of Indian conference on ‘Medical informatics and telemedicine’, Indian Institute of Technology, Kharagpur; 18–20 December 2006.
- ‘Reflexology for management of difficult to control epilepsy’, India Habitat Centre, New Delhi; 2006.

#### **Dr A. Srinivasan**

- 52nd National Conference of the Association of Physiologists and Pharmacologists of India, Surat Municipality Institute of Medical Education and Research, Surat, Gujarat; 19–23 December 2006.
- Guest lecture on ‘Disease biomarkers’, NIIT, New Delhi; 30 December 2006.
- Guest lecture on ‘Protein structure’, Department of Biotechnology; March 2006.

#### **Dr Punit Kaur**

- Attended and presented paper in 36th National seminar on ‘Crystallography’, Department of Crystallography and Biophysics, University of Madras, Chennai; 22–24 January 2007.
- Presented paper in the 6th Annual Symposium on ‘Frontiers in biomedical research’; 30 November–2 December 2006.
- Presented paper on ‘Trends in biomedical research’, IBS 2007, Department of NMR and MRI facility AIIMS, New Delhi; 13–15 February 2007.

#### **Dr Savita Yadav**

- Attended and presented paper on ‘Drug development for the Third World’, Trieste, Italy; 5–9 June 2006.
- Attended and presented papers in HUPO, 5th Annual World Congress, Long Beach, California; 28 October–1 November 2006.

- Attended and presented paper in the 6th Annual Symposium on 'Frontiers in biomedical research', ACBR, Delhi; 30 November–2 December 2006.
- Attended and presented paper in the 36th National Seminar on 'Crystallography', Department of Crystallography and Biophysics, University of Madras, Chennai; 22–24 January 2007.
- Presented paper on 'Trends in biomedical research', IBS 2007, Department of NMR and MRI facility AIIMS, New Delhi; 13–15 February 2007.
- Presented paper in the 11th ADNAT Convention, Symposium on 'Advances in structural biology and structure prediction', CCMB, Hyderabad; 23–25 February 2007.

#### **Dr Sujata Sharma**

- Attended and presented paper on 'Drug development for the Third World', Trieste, Italy; 5–9 June 2006.
- Presented three papers in the 35th National Seminar on 'Crystallography', Chennai; 22–24 January 2007.
- Presented paper in the 35th National Symposium on 'Biophysics: Trends in biomedical research', New Delhi; 13–15 February 2007.

#### **Dr Sharmishtha Dey**

- Attended and presented paper in 14th IRA International Conference, Maryland, USA; 15–19 October 2006.

#### **Ms Asha Bhushan**

- Presented paper in the National Symposium on 'Biophysics: Recent trends in biomedical research'; 13–15 February 2007.
- Attended and presented paper in the 35th National Seminar on 'Crystallography'; 22–24 February 2007.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

1. Clinical proteomics facility at AIIMS. T.P. Singh. Funded by DBT for 5 years (2004–2009). Funds: Rs 4.5 crore.
2. Structural studies on disintegrin from snake venom and its complexes with integrins'. Savita Yadav. Funded by DST for 3 years (2004–2007). Funds: Rs 8 lakh.
3. Search of a magic drug: Isolation, purification, crystallization and three dimensional structure determination of the functional C-lobe and antimicrobial peptides of lactoferrin and their applications in antimicrobial drug discovery. Sujata Sharma. Funded by DST for 3 years (2004–2007) Funds: Rs 8.5 lakh.

4. Proteomics of human body fluids: Structural characterization of proteins and target identification for drug discovery. A. Srinivasan. Funded by DBT for 3 years (2005–2008). Funds: Rs 34 lakh.
5. Three-dimensional structure determination of disintegrin from venom of Indian saw scale by X-ray diffraction method and structure and function relationship with its complex with integrin. Punit Kaur. Funded by CSIR for 3 years (2005–2008). Funds: Rs 7 lakh.
6. Design, synthesis and evaluation of inhibitors of lipooxygenase as anti-inflammatory agents. Sharmistha Dey. Funded by DST for 3 years (2005–2008). Funds: Rs 20 lakh.
7. Structure based rational drug design: Development of specific anti-inflammatory agents using phospholipase A<sub>2</sub> and cyclooxygenase-2 as target enzymes. Sharmistha Dey. Funded by CSIR for 3 years (2005–2008). Funds: Rs 8.7 lakh.
8. Structural studies of signalling proteins expressed during involution/breast cancer and ligand design. Sujata Sharma/T.P. Singh. Funded by DST for 3 years (2005–2008). Funds: Rs 38.5 lakh.
9. Randomized clinical trial (RCT) of reflexology therapy and usual drug treatment in the management of intractable epilepsy. Krishna Dalal. Funded by Central council for research in Yoga and Naturopathy, Department of AYUSH, Ministry of Health and Family Welfare, Government of India for 3 years (2005–2008). Funds: Rs 31 lakh.
10. Protein structure determination and new ligand/drug design against inflammatory disorders/breast cancers. T.P. Singh. Funded by DBT for 3 years (2006–2009). Funds: Rs 15 lakh.
11. Centre for medical bioinformatics. Punit Kaur. Funded by ICMR for 3 years (2006–2009). Funds: Rs 24 lakh.
12. A randomized clinical trial on the effect of reflexology in the management of patients suffering from diabetic neuropathy—case studies. Krishna Dalal. Funded by ICMR for 3 years (2006–2009). Funds: Rs 21.5 lakh.

### **Departmental Projects**

1. Structural and functional studies of lactoperoxidase
2. Structural and functional studies of phospholipase A<sub>2</sub> enzymes
3. Structure based drug design against inflammatory disorders
4. Structural studies of lactoferrin and its fragments and ligand design
5. Structural and functional studies of venom and plant allergens
6. Biochemical and structural studies of ZAG-PIP complex, PSA and other heparin binding proteins from human body fluids
7. Proteomic studies of human salivary proteins and amniotic fluid
8. Molecular modelling and ligand design
9. Effect of reflexology on patients suffering from different neurological disorders: C. palsy, supranuclear palsy and Parkinson disease

## PUBLICATIONS

### Journals

1. Dey S, Kumar A, Somvanshi RK, Das U, Srinivasan A, Singh TP. SPR Analyses of designed peptides with human inflammatory recombinant protein (COX-2). *Inflamm Res* 2006;**55**:S106.
2. Dey S, Somvanshi RK, Kumar A, Sharma S, Singh TP. Structure-based rational drug design against inflammation, rheumatism and arthritis. *Inflamm Res* 2006;**55**:S106.
3. Dhanda S, Singh H, Singh J, Singh TP. Isolation, purification and characterization of a DPP-III homologue from goat brain. *Protein Expr Purif* 2006;**52**:297–305.
4. Ethayathulla AS, Srivastava DB, Kumar J, Saravanan K, Bilgrami S, Sharma S, *et al.* Structure of the buffalo secretory signalling glycoprotein at 2.8 Å resolutions. *Acta Crystallogr* 2007;**F63**:258–65.
5. Jabeen T, Singh N, Singh RK, Jasti J, Sharma S, Kaur P, *et al.* Crystal structure of a heterodimer of phospholipase A<sub>2</sub> from *Naja naja sagittifera* at 2.3 Å resolution reveals the presence of a new PLA<sub>2</sub>-like protein with a novel Cys32–Cys49 disulphide bridge with a bound sugar at the substrate-binding site. *Proteins: Struc Funct Bioinformatics* 2006;**62**: 329–37.
6. Kidwai M, Mothsra P, Somvanshi RK, Ethayathulla AS, Dey S, Singh TP. One-pot synthesis of highly substituted imidazoles using molecular iodine: A versatile catalyst. *Journal of Molecular Catalysis A: Chemical* 2007;**265**:177-82.
7. Kidwai M, Bansal V, Mothsra P, Somvanshi RK, Dey S, Singh TP. Molecular iodine: A versatile catalyst for the synthesis of bis (4-Hydroxycoumarin) methanes in water. *Journal of Molecular Catalysis A: Chemical* 2007; **268**: 76-81.
8. Kumar J, Ethayathulla AS, Srivastava DB, Singh N, Sharma S, Kaur P, *et al.* Carbohydrate-binding properties of goat secretory glycoprotein (SPG-40) and its functional implications: Structures of the native glycoprotein and its four complexes with chitin-like oligosaccharides. *Acta Crystallogr* 2007;**D63**:437–46.
9. Kumar V, Hasan I, Nautiyal J, Yadav S, Singh TP. Proteomics of heparin binding proteins from human seminal plasma. *Mol Cell Proteomics* 2006;**5**:S79.
10. Kumar J, Ethayathulla AS, Srivastava DB, Sharma S, Singh SB, Srinivasan A, *et al.* Structure of a bovine secretory signalling glycoprotein (SPC-40) at 2.1 Å resolution. *Acta Crystallogr* 2006;**D62**:953–63.
11. Singh B, Das U, Ethayathulla AS, Kaur P, Singh TP, Srinivasan A. Cloning, sequence analysis and homology modelling of a novel phospholipase A<sub>2</sub> from *Heterometrus fulvipes* (Indian black scorpion). *DNA Sequence* 2007;**18**:242–6.
12. Sharma M, Ethayathulla AS, Jabeen T, Singh N, Saravanan K, Yadav S, *et al.* Crystal structure of a highly acidic neurotoxin from scorpion *buthus tamulus* at 2.2 Å resolution reveals novel structural features. *J Struct Biol* 2006;**155**:52–62.
13. Shee C, Singh TP, Kumar P, Sharma AK. Crystallization and preliminary X-ray diffraction

- studies of *murraya koenigii* trypsin inhibitor. *Acta crystallogr* 2007;**F63**:318–19.
14. Sherawat M, Kaur P, Betzel Ch, Einspahr HM, Singh TP. Crystal structure of a complex formed between trypsin and a designed inhibitor 2-[3 $\phi$ -{5 $\phi$ - methoxy-2 $\phi$ - (N-p-diaminomethyl phenyl)amido}-1 $\phi$ -pyrido]-5-(N-2 $\phi$ -tertiary-butylethanol)amido benzoic acid (C<sub>28</sub>H<sub>32</sub>N<sub>5</sub>O<sub>6</sub>) in the presence of benzamidine at 0.97Å resolution *Acta Crystallogr* 2006;**D63**:500–7.
  15. Srivastava DB, Ethayathulla AS, Kumar J, Somvanshi RK, Sharma S, Dey S, *et al.* Carbohydrate binding properties and carbohydrate induced conformational switch in sheep secretory glycoprotein (SPS-40): Crystal structures of four complexes of SPS-40 with chitin-like oligosaccharides *J Struct. Biol.* 2007; **158**: 255-66.
  16. Srivastava DB, Ethayathulla AS, Kumar J, Singh N, Sharma S, Das U, *et al.* Crystal structure of a secretory signalling glycoprotein from sheep at 2.0 Å resolution. *J Struct Biol* 2006;**156**:505–16.
  17. Singh N, Jabeen T, Somvanshi RK, Sharma S, Dey S, Srinivasan A, *et al.* Specific binding of non-steroidal anti-inflammatory drugs (NSAIDs) to phospholipase A<sub>2</sub>: Structure of the complex formed between phospholipase A<sub>2</sub> and diclofenac at 2.7 Å resolution. *Acta Crystallogr* 2006;**D62**:410–16.
  18. Singh N, Jabeen T, Pal A, Sharma S, Perbandt M, Betzel Ch, *et al.* Crystal structures of the complexes of a group IIA phospholipase A<sub>2</sub> with two natural anti-inflammatory agents, anisic acid and atropine reveal their modes of binding. *Proteins: Struct Funct Bioinformatics* 2006;**63**:386–95.
  19. Singh N, Somvanshi RK, Sharma S, Dey S, Kaur P, Singh TP. Structural elements of ligand recognition site in secretory phospholipase A<sub>2</sub> and structure based design of specific inhibitors. *Curr Top Med Chem* 2007;**7**:757–64.
  20. Somvanshi RK, Singh N, Sharma S, Dey S, Singh TP. Design of specific anti-inflammatory agents using structure-based approach: Crystal structure of complex formed between phospholipase A2 and tetrapeptide inhibitor dehydro Val-Ala-Arg-Ser. *Inflamm Res* 2006;**55**:S124.
  21. Somvanshi RK, Dey S, Singh TP. Effects of branched beta-carbon residues on conformations of peptides containing dehydro—Residues. *J Pept Sci* 2006;**12**:S1492.
  22. Somvanshi RK, Singh N, Ethayathulla AS, Kumar A, Sharma S, Srinivasan A, *et al.* Structure-based drug design with alpha, beta—dehydro—amino acid residues. *J Pept Sci* 2006;**12**:S1557.
  23. Yadav S, Hasan I, Kumar V, Biligrami S, Kaur P, Singh TP. Clinical and structural proteomics of human seminal plasma. *Mol Cell Proteomics* 2006;**5**:S63.

### Protein Data Bank entries

The total number of protein coordinates sets submitted to Protein Data Bank (PDB) during the year: 75. Following are the PDB IDs of structures of proteins and their complexes

submitted to the Protein Data Bank:

2AYW, 2DO2, 2DOJ, 2DP4, 2DP5, 2DP8, 2DPE, 2DPZ, 2DQK, 2DQV, 2DS9, 2DSF, 2DSU, 2DSV, 2DSW, 2DSZ, 2DT0, 2DT1, 2DT2, 2DT3, 2DUJ, 2DV8, 2DVC, 2DWA, 2DWH, 2DWI, 2DWJ, 2DXR, 2DXY, 2DYX, 2E0S, 2E1S, 2E9E, 2EFB, 2EHA, 2FDM, 2FNX, 2G41, 2G58, 2G5J, 2G8Z, 2G93, 2G9M, 2GJ1, 2GJM, 2GNS, 2H4I, 2HCA, 2HD4, 2HPZ, 2ICN, 2IKC, 2IPS, 2J4U, 2NQX, 2NUV, 2NWJ, 2O1L, 2O1N, 2O51, 2O86, 2O92, 2O9O, 2OCU, 2OJV, 2OLH, 2OLI, 2OTF, 2OTH, 2OTV, 2OUB, 2OXS, 2OYF, 2P1S, 2PB8

### **Gene Bank submission**

The total number of nucleotide and amino acid sequences submitted to Gene Bank 2. Following are the details of c-DNA sequences submitted to the gene bank by the department in the year 2006–07:

1. *Phormidium tenue* c-phycoerythrin gene, partial cds. Accession No: EF414443.
2. *Capra hircus* lactoperoxidase (LPO) mRNA, complete cds. Accession No: EF363153.

### **PATIENT CARE**

The following services are provided by the department for patient care:

1. Characterization and analysis of kidney gallstones using X-ray diffraction techniques. More than 61 stones have been analyzed by this technique in the current year.
2. Protein N-terminal sequencing
3. Characterization of biomolecules using MALDI-TOF
4. Receptor-ligand binding studies-Biacore
5. Peptide synthesis
6. X-ray intensity data collection for small molecules
7. X-ray intensity data collection for macromolecules

### **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor T.P. Singh** has been awarded Professor G.N. Ramachandran CSIR Gold Medal for Excellence in Science and Technology 2006; Distinguished Biotechnologist Award of DBT 2006; selected as Vice-President (International Affairs) of Indian National Science Academy 2007–2009; Member, International group of Academies of G8 (USA, UK, Germany, France, Canada, Italy, Japan and Russia) and O5 (India, China, Brazil, South Africa and Mexico) countries; Member, Inter-Academy group of countries (2006–07); Member, Board of Governors, IIT Kharagpur (2007); Member, Research Council of the Central Drug Research Institute (CSIR), Lucknow (2007–09); Member, Research Council of the Institute of Genomics and Integrative Biology (CSIR), Delhi (2007–09); Member, Council of Indian National Science Academy, New Delhi (2007–09). He delivered the Foundation day Oration of the Institute of Bioinformatics and Applied Biotechnology, Bangalore (Government of



Karnataka); received G.N. Ramachandran INSA Medal lecture at Jawaharlal Nehru University, 2007; Member, Editorial Board, *Indian Journal of Biochemistry and Biophysics*, *Indian Journal of Physics*, *Physiology and Molecular Biology of Plants*.

**Dr Krishna Dalal** has been awarded corresponding membership of American Epilepsy Society, USA.

**Dr A. Srinivasan** became a reviewer for indexed international journals such as *Biotechnology Letters* and *Biotechnology Progress*. He was also included in the review committees of national bodies and institutions including Department of Science and Technology, Department of Biotechnology.

**Dr Punit Kaur** organized an ICMR-sponsored workshop on 'Bio-medical informatics: Drug-design using GCG and discovery studio'.

**Dr Sujata Sharma** won the Best poster award in 35th National seminar on 'Crystallography', Chennai; 22–24 January 2007 and Best poster award in 35th National symposium on 'Biophysics: Trends in biomedical research' New Delhi; 13–15 February 2007.

**Dr S. Dey** won best poster award in the Indian Biophysical Society meeting, SINP, Kolkata; 7–9 January 2006. She is also a life member of European Peptide Society and life member of Indian Peptide Society.

**Ms Asha Bhushan** has received the outstanding scientist of the 21st century award by International Biographical Centre, Cambridge, England.

## VISITING SCIENTISTS

Following noted scientists and eminent academicians have visited the department for presenting lectures and scientific cooperation in the last year.

Professor Ch. Betzel, Germany; Professor R.K. Arni, Brazil; Professor P. Chandra, Germany; Professor H.S. Sharat Chandra, Bangalore; Dr C.M. Gupta, Lucknow; Professor A. Varma, New Delhi; Professor K.L. Khanduja, Chandigarh; Professor Faizan Ahmad, New Delhi; Professor R. Bredehorst, Germany; Dr K.P. Mishra, Mumbai.

## CENTRAL FACILITIES

Infrastructure Facility for Clinical Proteomics (DBT supported)

Bioinformatics Centre for Drug Designing (ICMR supported)

## 9.6 Biostatistics

### Professor and Head

R.M. Pandey

### Additional Professor

S.N. Dwivedi

### Associate Professor

V. Sreenivas

### Scientists

R.K. Ahuja

Guresh Kumar

Rajvir Singh (on leave)

M. Kalaivani

### Statisticians

Ombir Singh

K.S. Kapoor

### Statistical Assistants

Ashish Datt Upadhyay

Bhupender Kumar

## EDUCATION

The department was actively involved in teaching Biostatistics and essentials of Research Methods in the undergraduate, paramedical and postgraduate courses, viz. MB,BS, BSc (Hons) in Medical Technology in Radiology, M. Biotech, MSc Nursing and MD Community Medicine.

The department also provides short-term training (2–3 months) in practical applications of Biostatistics for fresh postgraduates in Statistics/Biostatistics. During the year 2006–07, two candidates were trained.

Two training workshops on the software STATA were conducted for the students, residents and faculty of the Institute during the year.

## Continuing Medical Education

### Lectures delivered

#### Dr R.M. Pandey

- Conducted a workshop on 'Research methodology for fresh BNYS graduates', National Institute of Naturopathy, Pune; 9 November 2006.
- Resource faculty in the workshop for young researchers in the area of nutrition, ICMR, Mahatma Gandhi Medical College, Indore; 19–22 November 2006.
- Conducted a workshop on 'Research methodology and Biostatistics for postgraduate students', S.N. Medical College, Agra; 27 November 2006.
- Resource faculty for the workshop on 'Research Methodology', BPKIHS, Dharan, Nepal; 14–16 February 2007.
- 'Randomized controlled clinical trial: Design and statistical issue', the Annual Conference of Indian society of Nephrologists; 19–22 March 2007.

### **Dr S.N. Dwivedi**

- 'Technical aspects of estimating maternal mortality ratio', Annual Conference of Indian Society for Medical Statistics, Coimbatore; 1–3 December 2006.
- 'Agreement analysis', International Conference on 'Environmental and ecological statistical with applications', Indian Statistical Institute, Kolkata; 21–23 March 2007.

### **Dr V. Sreenivas**

- Two lectures on 'Clinical trials', Workshop-cum-reorientation training programme on 'Research methodology', Central Council for Research in Unani Medicine (CCRUM), Department of AYUSH, Ministry of Health and Family Welfare, New Delhi; 2–3 December 2006.
- 'Data collection and quality control with special reference to neonatal data', Workshop on WHO South East Asia Regional Neonatal-Perinatal Database, AIIMS, New Delhi; 4–6 January 2007.
- 'Analysis of cohort studies', Workshop on 'Fundamentals of clinical research methodology', Clinical Epidemiology Unit, AIIMS, New Delhi; 15–18 February 2007.

### **Dr Guresh Kumar**

- 'Epi-Info for in-service statisticians and medical officers', National Institute of Health and Family Welfare, New Delhi; 7–8 December 2006.

### **Ms M. Kalaivani**

- 'Application of SPSS', Indian Nursing Council, New Delhi; 19 January 2007.
- 'Application of SPSS', Training workshop on 'Research Methodology in Yoga and Naturopathy', WHO, New Delhi; 1–3 September 2006.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

1. Development of appropriate prevention and intervention strategies for non-communicable nutritional related disorders among women in post-reproductive period. R.M. Pandey. Funded by DST for 3 years (2004–2007). Funds: Rs 29 lakh.
2. A multicentric randomized controlled clinical trial of adefovir, adefovir+lamivudine, and combination of adefovir and glycyrrhizin in HBV related decompensated cirrhosis. V. Sreenivas. Funded by ICMR for 3 years (2007–2010). Funds: Rs 6 lakh.
3. Task force project on 'Multilevel epidemiological analysis to assess the role of community level effects on public health/family welfare'. S.N. Dwivedi. Funded by ICMR for one year and four months (2005–2006 and 2006–2007). Funds: SRF.

4. An analytical perspective of missing data analysis in clinical trial of thyroid cancer. S.N. Dwivedi. Funded by ICMR for 2 years (2004–2006). Funds: SRF.
5. Some epidemiological studies on unwanted pregnancy. S.N. Dwivedi. Funded by ICMR. Funds: SRF.
6. Task Force Project on ‘Multilevel epidemiological analysis to assess the role of community level effects on Public Health/Family Welfare. S.N. Dwivedi. Funded by ICMR for one year and four months (2006–2007 and 2007–2008). Funds: SRF.

### **Completed**

1. An analytical perspective of missing data analysis in clinical trial of thyroid cancer. S.N. Dwivedi. Funded by ICMR for 3 years (2004–2007). Funds: SRF.
2. Some epidemiological studies on Unwanted Pregnancy. S.N. Dwivedi. Funded by ICMR for 3 years (2004–2007). Funds: SRF.

### **Departmental Projects**

#### **Ongoing**

1. Biostatistical aspects of randomized controlled clinical trial on remnant ablation in differentiated thyroid cancer (with Nuclear Medicine)
2. Biostatistical aspects in case control studies on unintended pregnancies (with Obstetrics and Gynaecology)
3. A biostatistical study on pattern of referral and timing of treatment of cancer patients with special reference to breast cancer (with IRCH)
4. Some statistical models related to the survival of Acute Liver Failure (with Gastroenterology)

### **Completed**

Nil

#### **Collaborative Projects**

Faculty members and the scientists are involved in large number of ongoing projects in almost all the departments of the institute.

## **PUBLICATIONS**

#### **Journals**

1. Dada T, Gupta V, Deepak KK, Pandey RM. Narrowing of the anterior chamber angle during Valsalva maneuver: A possible mechanism for angle closure. *Eur J Ophthalmol* 2006;**16**:81–91.
2. Titiyal JS, Sinha R, Sharma N, Sreenivas V, Vajpayee RB. Contact lens rehabilitation following repaired corneal perforations. *BMC Ophthalmol* 2006;**6**:11.
3. Dwivedi SN, Singh R, Sahu D, Pandey A. Epidemiological analysis of contraceptive

- use in India: An application of hierarchical models. *Demogr India* 2006;**35**:145–58.
4. Vikram NK, Tandon N, Misra A, Srivastava MC, Pandey RM, Mithal A, *et al.* Correlates of type 2 diabetes mellitus in children, adolescents and young adults in north India: A multisite collaborative case-control study. *Diabet Med* 2006;**23**:293–8.
  5. Maria A, Gupta A, Aggarwal R, Sreenivas V, Paul VK, Deorari AK. Incidence of Periventricular Leucomalacia among a cohort of very low birth weight neonates (<1500 g). *Indian Pediatr* 2006;**43**:210–16.
  6. Bhatt SP, Handa R, Gulati GS, Sharma S, Pandey RM, Aggarwal P, *et al.* Atherosclerosis in Asian Indians with systemic lupus erythematosus. *Scand J Rheumatol* 2006;**35**:128–32.
  7. Ojha RK, Singh SK, Batra S, Sreenivas V, Puliye JM. Lactate: Creatinine ratio in babies with thin meconium staining of amniotic fluid. *BMC Pediatrics* 2006;**6**:13.
  8. Chowdhury UK, Pradeep KK, Patel CD, Singh R, Kumar AS, Airan B, *et al.* Noninvasive assessment of repaired tetralogy of fallout by magnetic resonance imaging and dynamic adionuclide studies. *Ann Thorac Surg* 2006;**81**:1436–42.
  9. Kapil U, Singh P, Dwivedi SN, Pathak P. Status of iodine nutriture and universal salt iodisation at beneficiaries levels in Kerala State. *J Indian Med Assoc* 2006;**104**:165–7.
  10. James J, Tiwari L, Upadhyay PK, Sreenivas V, Bhambhani V, Puliye JM. Evaluation of pulse-oximetry oxygen saturation taken through skin protective covering. *BMC Pediatrics* 2006;**6**:14.
  11. Goswami A, Reddaiah VP, Kapoor SK, Singh Bir, Dey AB, Dwivedi SN, *et al.* Prevalence and determinants of cognitive impairment in rural elderly population in India. *Helpege India—Research and Development Journal* 2006;**12**:8–15.
  12. Kumar V, Jagannathan NR, Kumar R, Das SC, Jindal L, Thulkar S, *et al.* Correlation between metabolite ratios and ADC values of prostate in men with increased PSA level. *J Magn Reson Imaging* 2006;**24**:541–8.
  13. Aggarwal P, Sharad S, Handa R, Dwivedi SN, Irshad M. Comparison of nebulised magnesium sulphate and salbutamol combined with salbutamol alone in the treatment of acute bronchial asthma: A randomized study. *Emerg Med J* 2006;**23**:358–62.
  14. Kumar M, Jagannathan NR, Seenu V, Dwivedi SN, Julka PK, Rath GK. Monitoring the therapeutic response of locally advanced breast cancer patients: Sequential *in vivo* proton MR spectroscopy study. *J Magn Reson Imaging* 2006;**24**:325–32.
  15. Bal CS, Kumar A, Chandra P, Dwivedi SN, Pant GS. A prospective clinical trial to assess the efficacy of radioiodine ablation as an alternative to completion thyroidectomy in patients with differentiated thyroid cancer undergoing sub-total thyroidectomy. *Acta Oncologica* 2006;**45**:1067–72.
  16. Kumar A, Tripathi M, Pandey RM, Ramakrishnan L, Srinivas M, Luthra K. Apolipoprotein E in temporal lobe epilepsy: A case-control study. *Dis Markers* 2006;**22**:335–42.
  17. Bhal S, Tyagi V, Kumar N, Sreenivas V, Puliye JM. Signs of inflammation in children that can kill (SICK score): Preliminary prospective validation of a new non-invasive measure

- of severity-of-illness. *J Postgrad Med* 2006;**52**:102–5.
18. Mohan A, Goyal A, Singh P, Singh S, Pathak AK, Bhutani M, *et al.* Survival in small cell lung cancer in India: Prognostic utility of clinical features, laboratory parameters and response to treatment. *Indian J Cancer* 2006;**43**:67–74.
  19. Misra R, Mangi S, Joshi S, Mittal S, Gupta SK, Pandey RM. LycoRed as an alternative to hormone replacement therapy in lowering serum lipids and oxidative stress markers: A randomized-controlled clinical trial. *J Obstet Gynaecol Res* 2006;**32**:299–304.
  20. Kaushik S, Vajpayee M, Sreenivas V, Seth P. Correlation of T-lymphocyte subpopulations with immunological markers in HIV-1-infected Indian patients. *Clin Immunol* 2006;**119**:330–8.
  21. Walia M, Gaind R, Paul P, Mehta R, Aggarwal P, Kalaivani M. Age-related clinical and microbiological characteristics of enteric fever in India. *Trans R Soc Trop Med Hyg* 2006.
  22. Kabra SK, Lodha R, Pandey RM. Antibiotics for community acquired pneumonia in children. *Cochrane Database Syst Rev* 2006;**3**:CD004874.
  23. Sharma SK, Tahir M, Mohan A, Smith-Rohrberg D, Mishra HK, Pandey RM. Diagnostic accuracy of ascitic fluid IFN-gamma and adenosine deaminase assays in the diagnosis of tuberculosis ascites. *J Interferon Cytokine Res* 2006;**26**:484–8.
  24. Gadepalli R, Dhawan B, Sreenivas V, Kapil A, Ammini AC, Chaudhry R. A clinico-microbiological study of diabetic foot ulcers in an Indian tertiary care hospital. *Diabetes Care* 2006;**29**:1727–32.
  25. Sharma SK, Vasudev C, Sinha S, Banga A, Pandey RM, Handa KK. Validation of the modified Berlin questionnaire to identify patients at risk for the obstructive sleep apnoea syndrome. *Indian J Med Res* 2006;**124**:281–90.
  26. Senthamizhchelvan S, Pant GS, Rath GK, Julka PK, Nair O, Joshi RC, *et al.* Biodosimetry using chromosome aberrations in human lymphocytes. *Radiat Prot Dosimetry* 2006.
  27. Arya S, Isharwal S, Misra A, Pandey RM, Rastogi K, Vikram NK, *et al.* C-reactive protein and dietary nutrients in urban Asian Indian adolescents and young adults. *Nutrition* 2006;**22**:865–71.
  28. Bajjal N, Puliye J, Berri RS, Sreenivas V. Prone versus supine position in mechanically ventilated children. (Abstract). *J Paediatr Child Health* 2006;**42**:A8.
  29. Kumar U, Deepak KK, Sreenivas V. Cross sectional study to evaluate cardiovascular autonomic functions and its correlation with dysphagia in systemic sclerosis in Asian Indians. (Abstract). *Mod Rheumatol* 2006;**16** (Suppl):186.
  30. Walia M, Paul L, Satyavani A, Lodha R, Kalaivani M, Kabra SK. Assessment of inhalation technique and determinants of incorrect performance among children with asthma. *Pediatr Pulmonol* 2006;**41**:1082–7.
  31. Marwaha RK, Tandon N, Singh Y, Aggarwal R, Grewal K, Mani K. A study of growth parameters and prevalence of overweight and obesity in school children from Delhi. *Indian Pediatr* 2006;**43**:943–52.
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- gastro-intestinal obstruction in children: Causes and implications. *Indian J Gastroenterol* 2006;**25**:320–2.
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## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Dr R.M. Pandey** was elected as Secretary of the Indian Clinical Epidemiology Network for a period of three years; continues to be a member of the Governing Body and the Institutional Review Board (IRB) of the Indian Clinical Epidemiology Network (IndiaCLEN); Coordinator of the Regional Statistical Support Group (RSSG) of the WHO for the STEPS based NCD risk factor surveillance studies in SEAR member countries, visited Kathmandu, Nepal, in the capacity of Temporary Advisor, WHO; Member, Research Committee, at All India Institute of Medical Sciences; continues to be a member of the Research Committee of BPKIHS, Dharan, Nepal; appointed as a statistical reviewer for *Journal of Clinical Epidemiology* and *British Journal of Public Health*; continues to be a reviewer for the scientific journals *IJMR*, *Indian Pediatrics*, *Indian Journal of Pediatrics*; and *National Medical Journal of India*.

**Dr S.N. Dwivedi** continued as elected Member of the International Union for Scientific Study of Population (IUSSP), France; Member, International Society for Clinical Biostatistics, Geneva; elected Member, International Statistical Institute, Netherlands; Member, International Epidemiological Association, USA; Fellow, Royal Statistical Society, UK; Member, Scientific Advisory Committee of National Institute of Medical Statistics, ICMR, New Delhi; External Expert Member, Board of Studies on Health Statistics, Institute of Medical Sciences, BHU, Varanasi; Member, Training Programme Committee, Indian Society for Medical Statistics (ISMS); Member, ISMS Award Committee; Executive Council Member, International Biometric Society (Indian Region) for the period 2006–2007; Correspondent, Indian Region, Biometric Bulletin of the International Biometric Society being published by its Editor; Member, Expert Group on Issues Related to Sample Size and Sample Design for Sero-surveillance under Yaws Eradication Programme, Ministry of Health and Family Welfare, Government of India; Member, Project Advisory Committee of a pilot study on the 'Magnitude, carrier profile and professional achievements of the PhDs in Science Faculty from the selected Central Universities/Institutions in India' of the Division of NDTMIS, DST; External Examiner in Biostatistics for setting question paper as well as for evaluation of answer-sheets of MSc students at Jamia Hamdard (Hamdard University), New Delhi; continued as Chairman/Member of the Screening/ Selection Committee at: (i) National Institute of Medical Statistics, New Delhi (ii) Indian Council of Medical Research, New Delhi (iii) All India Institute of Medical Sciences, New Delhi and (iv) DRDO, Delhi; Member, Editorial Board, *Indian Journal of Chest Diseases and Allied Sciences*; Reviewer, *Indian Journal of Medical Research*, *International Society for Clinical Biostatistics*, *Assam Statistical Review*, *Demography India*, member of the Editorial Advisory Committee of International Journal *Biometrics*; Member, Editorial Advisory Board, *Demography India*; Statistical Consultant, *Indian Journal of Psychiatry (IJP)*; Reviewer, *Contribution to Applied and Mathematical Statistics* being published from Guwahati University; as Paper-setter for preparing MCQs (Multiple Choice Questions) for MSc Health Statistics at Banaras Hindu University, Varanasi; as a Member of the Task Force Group constituted by the ICMR to look into the current status of activities and provide directions to future research needs regarding toxic gas exposed people at Bhopal.



**Dr V. Sreenivas** continued to be a member of the International Epidemiological Association (IEA), Indian Clinical Epidemiology Network (IndiaCLEN), and the Indian Society for Medical Statistics; involved with ICMR as Chairman/Member of the Screening/Selection Committees, Member of Expert groups. He has been invited to co-ordinate a 7 centre ICMR randomized trial on HBV related decompensated cirrhosis; Member secretary, Data Monitoring and Safety Board for some DBT sponsored studies; Advisor, Biostatistics to the *Journal of Neonatology* (India) and Consultant Biostatistician to the *Journal of Indian Association for Child and Adolescent Mental Health (JIACAM)*; Reviewer of the journals *Indian Pediatrics* and *Indian Journal of Medical research*.

## 9.7 Biotechnology

### **Professor and Head**

Y.D. Sharma

### **Professors**

J.S. Tyagi

H.K. Prasad

### **Additional Professor**

S.N. Das

### **Assistant Professor**

Anushree Gupta

## **EDUCATION**

The Bioinformatics course was expanded to a 2.5 credit course, with the introduction of pharmaco-genomics and computer-aided drug design. Experts from JNU and IGIB, Delhi, besides faculty of AIIMS from various specialties such as the Computer facility, Departments of Biophysics and NMR representing multiple disciplines were involved in conducting the expanded course. The MBiotech programme was revised and additional topics and courses were introduced during the year.

### **Short-term training**

The Faculty of the department provided summer training to students from the Universities of Rajasthan, Meerut, and institutions such as Jaipur Engineering College and Research Centre and K.J. Research Foundation, Chennai.

### **Long-term training**

Two DBT-post doctoral fellows (DBT-PDF) are currently undergoing training.

## **National and International Conferences**

### **Lectures delivered**

#### **Dr Y.D. Sharma**

- 'Molecular epidemiology of drug-resistant malaria', Symposium on 'Recent advances in biotechnology and bioinformatics', Jawaharlal Nehru Technological University, Hyderabad; July 2006.
- 'Molecular epidemiology of drug-resistant malaria', National Biotechnology Conference on 'Current trends and future perspective', IIT Roorkee; September 2006.
- 'Molecular epidemiology of drug-resistant malaria', Regional Medical Research Centre (ICMR), Bhubaneswar; August 2006.

### **Dr J.S. Tyagi**

- ‘DevR: Basic biology and applications’, Indo-EU workshop on ‘Infectious diseases of the poor and immuno-compromised individuals’, IISc, Bangalore; 5–6 June 2006.
- ‘Challenges and solutions to the diagnosis of tuberculosis: Our experience’, symposium under the auspices of the Indian Academy of Sciences, Bangalore; 13 July 2006.
- ‘Diagnosis of tuberculosis: Our experience’, International symposium on ‘New frontiers in tuberculosis research’, International Centre for Genetic Engineering and Biotechnology, New Delhi; 4–6 December 2006.

### **Dr H.K. Prasad**

- ‘DNA binding protein of *M. tuberculosis* is a laminin binding adhesin’, Molecular Immunology Forum 2007, Indian Institute of Science and JNCASR, Bangalore; 1–2 March 2007.
- ‘Prevalence of mycobacterial pathogens in human meningitis, indicative of occurrence of zoonotic tuberculosis’, International symposium on ‘New frontiers in tuberculosis research’, International Centre for Genetic Engineering and Biotechnology, New Delhi; 4–6 December 2006.
- ‘Modulation of interferon gamma receptor a by live *Mycobacterium tuberculosis*: An immune evasive mechanism’, International symposium on ‘New frontiers in tuberculosis research’, International Centre for Genetic Engineering and Biotechnology, New Delhi; 4–6 December 2006.
- ‘Tuberculosis—Time to re-define preventive strategies’, Guha Research Conference-2006, Institute of Genomics and Integrative Biology, Leh, Ladakh, J&K; 3–8 September 2006.
- ‘HupB a DNA binding protein of *M. tuberculosis* facilitates association of *Mtb* and host cells’, ‘Murine monoclonal antibody specific for histone binding protein (HupB, Rv2986c) of *Mycobacterium tuberculosis*’, Indian Immunology Society, AIIMS, New Delhi; 28–31 January 2007.
- ‘Fundamentals of flowcytometry’, Department of Paediatrics, AIIMS, New Delhi; 1–3 March 2007.
- ‘Zoonotic tuberculosis’, ‘Review meeting on TB in Asian Elephants’, National Tuberculosis Institute, Bangalore; 29 March 2007.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

1. Malaria vaccine related field studies in Jabalpur. Y.D. Sharma. Funded by ICMR. Funds: Rs 48 lakh.

2. Postgraduate training programme in biotechnology with special application to biomedicine. Y.D. Sharma. Funded by DBT for 9 years (1998–2007). Funds: Rs 8 lakh per year.
3. Post MD/MS long-term training programme in medical biotechnology for in-service candidates. Funded by DBT for 9 years (1998–2007). Funds: Rs 4 lakh per year.
4. Biotechnology Informatics System. Y.D. Sharma. Funded by DBT for 9 years (1998–2007). Funds: Rs 4 lakh per year.
5. Evaluation of *devR* mutant of *Mycobacterium tuberculosis* in animal model of tuberculosis and in cultured bacilli: Virulence and gene expression analysis. J.S. Tyagi. Funded by DBT for 3 years (2005–2008). Funds: Rs 50.37 lakh.
6. Multicentric evaluation of a smear microscopy technique for the detection of acid-fast bacilli in sputum specimens. J.S. Tyagi. Funded by WHO for 2 years (2005–07). Funds: US\$ 64,418.
7. Study of transmission of livestock derived pathogenic mycobacteria and its prevalence among humans (Zoonotic tuberculosis). H.K. Prasad. Funded by DBT for 3 years (2005–2008). Funds: Rs 33.192 lakh.
8. Evaluation of anti-proliferative, apoptotic and immuno-modulatory activity of some Indian system and homoeopathic anti cancer drugs. S.N. Das. Funded by Ministry of Health and Family Welfare, AYUSH for 4 years. Funds: Rs 22 lakh.
9. Modulation of endothelin-1 in coronary artery bypass grafting patients imparted with pre-operative relaxation therapy. A. Gupta. Funded by AIIMS for one year (2006–2007). Funds: Rs 1 lakh.

## Completed

1. Isolation, identification and characterization of peptides that interact with two-component system proteins DevR, DevS and Rv2027c of *Mycobacterium tuberculosis*. J.S. Tyagi. Funded by CSIR for 3 years (2004–2007). Funds: Rs 17.96 lakh.
2. Molecular basis of dysregulation of Interferon- $\gamma$  generation and function in tuberculosis patients. H.K. Prasad. Funded by ICMR for 3 years (2003–2006). Funds: Rs 30 lakh.

## Departmental Projects

### Ongoing

1. Mutations and expression of COX2 gene in breast cancer patients (with Biophysics, Dr B.R. Ambedkar IRCH)
2. Mutations and expression of COX2 gene in Oral cancer patients (with Biophysics, ENT)
3. Anti-proliferative, apoptotic and anti-tumour activity of some indigenous herbal preparations
4. Studies to evaluate neo-adjuvant chemotherapy followed by postoperative chemotherapy and assess the expression of multi-drug resistance gene and cell cycle spe-

- cificity in locally advanced gastric and gastroesophageal junction adenocarcinoma (with Dr B.R. Ambedkar IRCH)
5. Innate immunity to *Mycobacterium tuberculosis*
  6. Humans immune response to *Mycobacterium tuberculosis*
  7. Further characterization of the HupB protein of mycobacteria
  8. Zoonotic tuberculosis

## Completed

1. NF- $\kappa$ B signalling and TNF and TNF Receptor gene Polymorphism in Oral cancer (with ENT)
2. Polymorphisms in apoptosis regulating genes Fas and Fas L in patients with Oral cancer (with ENT)
3. Studies on anti-proliferative, apoptotic and anti-tumour activity of capsaicin
4. Development of an Integrated Data Management Platform for Biomolecular Data pertaining to the Human Endothelin System (with Computer Facility, AIIMS)

## Collaborative Projects

### Ongoing

1. High throughput PCR-assays for diagnosing tuberculosis caused by *Mycobacterium tuberculosis* and *M. bovis* using molecular beacons (with Public Health Research Institute, Newark, New Jersey, USA)
2. Imbalance between Endothelin-1 and plasma nitric oxide products influence the outcome in children suffering from severe pulmonary hypertension due to congenital heart disease (with Cardiac Anesthesia, CTC, AIIMS)

## PUBLICATIONS

### Journals

1. Ahmed A, Lumb V, Das MK, Dev V, Wajihullah, Sharma YD. Prevalence of mutations associated with higher levels of sulfadoxine-pyrimethamine resistance in *plasmodium falciparum* isolates from Car Nicobar island and Assam, India. *Antimicrobial Agents Chemother* 2006;**50**:3934–8.
2. Alam MT, Bora H, Bharti PK, Saifi MA, Das MK, Dev V, *et al.* Similar trends of pyrimethamine resistance associated mutations in *plasmodium vivax* and *P. falciparum*. *Antimicrobial Agents Chemother* 2007;**51**:857–63.
3. Alam MT, Das MK, Dev V, Ansari MA, Sharma YD. Identification of two cryptic species in the anopheles (*Cellia*) annularis complex using ribosomal DNA PCR-RFLP. *Parasitol Res* 2007;**100**:943–8.
4. Alam MT, Das MK, Dev V, Ansari MA, Sharma YD. PCR-RFLP method for the

- identification of four members of the *anopheles annularis* group of mosquitoes (Diptera: Culicidae). *Trans R Soc Trop Med Hyg* 2007;**101**:239–44.
5. Baniasadi V, Narain N, Goswami R, Das SN. Promoter region-318 C/T and -1661 A/G *CTLA-4* single nucleotide polymorphisms and type 1 diabetes in North Indians. *Tissue Antigens* 2006;**67**:383–9.
  6. DaRe JT, Mehlotra RK, Michon P, Mueller I, Reeder J, Sharma YD, *et al.* Micro satellite polymorphism within *pfcr* provides evidence of continuing evolution of chloroquine-resistant alleles in Papua New Guinea. *Malar J* 2007;**6**:34.
  7. Das SN, Baniasadi V, Kapuria V. Association of –308 TNF- $\pm$  promoter polymorphism with type-1 Diabetes in North Indians. *Int J Immunogenet* 2006;**33**:411–16.
  8. Devarapu SK, Sharma SC, Das SN. Triggering of T-cell mediated immune responses with allogenic whole tumour cell vaccine in patients with oral cancer. *Immunopharmacol Immunotoxicol* 2006;**28**:387–95.
  9. Manchanda P, Sharma SC, Das SN. Differential regulation of IL-2 and IL-4 in patients with tobacco-related oral squamous cell carcinoma. *Oral Dis* 2006;**12**:455–62.
  10. Nambam B, Prasad HK, Sherwal BL, Aneja S, Jain A. Comparative analysis of a *hup B* gene based diagnostic PCR with other conventional techniques for paediatric tuberculosis meningitis. *J Pediatr Infect Dis* 2006;**1**:143–8.
  11. Sarin R, Sharma YD. Thioredoxin system in obligate anaerobe *Desulfovibrio desulfuricans*: Identification and characterization of a novel thioredoxin 2. *Gene* 2006;**376**:107–15.
  12. Sarin R, Tomar N, Ray D, Sharma YD, Goswami R. Absence of pathogenic calcium sensing receptor mutations in sporadic idiopathic hypoparathyroidism. *Clin Endocrinol* 2006;**65**:359–63.
  13. Sawhney M, Mathew M, Valarmathi, TM, Das SN. Age related changes in *Fas* (CD95) and *Fas Ligand* gene expression and cytokine profiles in healthy Indians. *Asian Pac J Allerg Immunol* 2006;**24**:47–56.
  14. Shah NP, Singhal A, Jain A, Kumar P, Uppal SS, Srivatsava MVP, *et al.* Occurrence of the overlooked zoonotic tuberculosis: Detection of *Mycobacterium bovis* in human cerebrospinal fluid. *J Clin Microbiol* 2006;**44**:1352–8.
  15. Sharma D, Bose A, Shakila H, Das TK, Tyagi JS, Ramanathan VD. Expression of mycobacterial cell division protein, FtsZ, and dormancy proteins, DevR and Acr, within lung granulomas throughout guinea pig infection. *FEMS Immunol Med Microbiol* 2006;**48**:329–36.
  16. Sharma D, Tyagi JS. The value of comparative genomics in understanding mycobacterial virulence: *Mycobacterium tuberculosis* H37Ra genome sequencing: A worthwhile endeavour. *J Biosci* 2007;**32**:185–9.
  17. Tyagi JS. The timeless legacy of Robert Koch. *Resonance* 2006;**11**:20–8.

## PATIENT CARE

### Patents

International Application #PCT/N03/00302 dated 9 September 2003 on 'The characterization of *HupB* gene encoding histone like protein of *Mycobacterium Tuberculosis*' has been filed in the name of DBT and AIIMS.

- |             |                           |
|-------------|---------------------------|
| 1. Indian   | 1274/DEL/2002             |
| 2. European | 03813287.4-2402-IN0300302 |
| 3. US       | 10/540,086-IN0300302      |
| 4. Chinese  | 03825875.7-IN0300302      |

### Patents Awarded

- |                  |                      |
|------------------|----------------------|
| 1. South African | 2005/05007-IN0300302 |
|------------------|----------------------|

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Professor Y.D. Sharma** is a Member of Sectional Committee of National Science Academy (FNA); continues to be a Member, Rajasthan Government State Biotechnology Advisory Board; Member, DBT Task Force Sub-committee on Human Resources Development and Selection Committee for DBT Overseas Associate ship; Task Force Member, DBT's International Project Advisory Committee (IPAC); Member, JRF examination of DBT. He was chairman of Sub-group on Medical Biotechnology Task Force of DBT, Research Advisory Committee on Parasite Biology of NIMR, Delhi; Member, Board of Research Studies of NICD-IP University; Member, Research Advisory Panel of DIPAS (DRDO), Academic Committee of Guru Nanak Dev University, Amritsar; Member, Board of Studies in Biotechnology, Jawaharlal Nehru University, New Delhi; Interdisciplinary Biotechnology Unit at Aligarh Muslim University, Aligarh; Expert Member; Board of PG Studies in Biotechnology of Kurukshetra University; Expert Member, Teaching Advisory Committee of Devi Ahilya University, Indore; Member, Editorial Board, *Indian Journal of Malariology*; Member, International Reviewer Panel of 'Medical Science Monitor'; Member, Editorial Board, *Biotechnology*; Member, NML Book Selection Committee; Member, Research Committees of AIIMS; Member, Recombinant DNA Bio-safety Committee of AIIMS; Member, Selection Committee for Scientists for ICMR; Indian Veterinary Research Institute, Bareilly; Faculty positions at GNDU, Amritsar; Expert, Review Committee of NII.

**Dr J.S. Tyagi** is a Member, Special Committee, School of Life Sciences and Centre for Molecular Medicine, Jawaharlal Nehru University, New Delhi; Member, Scientific Advisory Committee, Tuberculosis Research Centre, Chennai.

**Dr H.K. Prasad** is a Member, Guha Research Conference (GRC); Member, Organizing Committee, 33rd Annual conference of the Indian Immunology Society, AIIMS, New Delhi;

IAEC Nominee of Committee for the purpose of control and supervision of experiments of animals (CPCSEA); Member, Expert group of the Technical Committee, Central JALMA Institute for leprosy and other mycobacterial diseases, Agra; Member, Scientific Advisory Committee, National Institute of Biologicals (NIB-SAC), Ministry of Health and Family Welfare, Government of India, Noida; Expert Member, Committee of the NII, ICMR, DBT, ICGB.

**Dr S.N. Das** is a Fellow, International Academy of Biotherapy and Modern Cancer Treatment, Guangzhu, China; Active Member, American Association for Cancer Research, Elected Member, National Academy of Medical Sciences, India; Member, DKFZ Alumni Association, German Cancer Institute, Heidelberg, Germany; Member, Task Force Group on Cancer Cervix, DBT, Government of India; Member, Terry Fox Run Grant Committee on Cancer Research, AIIMS; Member, Editorial Board, *International Journal of Osteoporosis and Metabolic Disorders*; Reviewer, *International Journal of Immuno-genetics*.

## VISITING SCIENTISTS

1. Dr S. Pentyla, Director of Translational Research, Anesthesiology, Stony Brook, NY, USA.
2. Dr H. Friden Fil, Programme Manager, Biotechnology Department, Swedish Agency for Innovation Systems, Vinnova, Stockholm, Sweden.
3. Dr Khin-Myat-Tun, Director (Research), Department of Medical Research, Yango, Myamar, visited the department.
4. Professor A.A. Cataldi, Head, Division of Mycobacterial and Infectious Diseases, Institute of Biotechnology, INTA, Argentina, visited the department and delivered a lecture on 'Role of *mce* operons in virulence of *M. tuberculosis* complex'.
5. Dr Suman Laal, Associate Professor of Pathology, New York University School of Medicine, NY, USA, visited the department on May 4, 2006 and delivered a lecture on 'TB markers: Evaluation in an endemic environment'.

## OTHER ACTIVITIES

### Bioinformatics Centre

The bioinformatics resource centre of the department provides database and bibliographical search facility, DNA and protein sequence, search and retrieval, e-mail, Internet services, training and assistance to students in graphics, statistics and data presentation. This facility is being widely used by students and faculty of this Institute as well as neighboring Institutes. A 512 kbps leased line for internet taken from VSNL is functional in the department.

### Liquid Nitrogen Plant

The department's liquid nitrogen plant supplies liquid nitrogen to users at AIIMS on request.



## 9.8 Centre for Community Medicine

	<b>Professor and Head</b> C.S. Pandav	
	<b>Professors</b> Shashi Kant	Sanjeev K. Gupta
Bir Singh	<b>Additional Professor</b> Kiran Goswami	
	<b>Associate Professor</b> K. Anand	
	<b>Assistant Professors</b>	
Sanjay K. Rai		Puneet Misra
Nongkynrih Baridalyne		Y.S. Kusuma Kumari

### EDUCATION

The education programmes for undergraduates, postgraduates, nursing and BSc Human Biology students remain unchanged.

#### Undergraduate

##### *Rural posting*

In rural areas, the programme remained the same. They are posted for five weeks in the VII Semester. It is a residential posting.

##### **Urban posting**

Fourth and fifth semester students are posted in urban slum areas for five weeks as part of their teaching programme.

The following events were organized:

- Eight health talks on 'Meningitis' were organized in different areas of Dr Ambedkar Nagar. Participants: 360 (approx.).
- Two role-plays were organized by V<sup>th</sup> semester students under Family Health Advisory Service at Dr Ambedkar Nagar. Participants: 250 and 270.
- 64 health talks on different topics were organized and supervised at the community level.
- 50 families were identified and allotted to undergraduates for clinical psychosocial case review and supervised for various intervention purposes and follow-up.
- Four research projects were undertaken by undergraduates during their field posting.

## **Internship**

The programme remains unchanged. Interns are posted for four weeks in either Dayalpur or Chhainsa primary health centre. It is a residential posting. Activities in both the areas were the same.

## **Postgraduates**

The postgraduates of Community Medicine were posted in rural areas for 18 months. This gives them adequate time to gain the necessary experience both at referral hospital and at primary health centres. They are encouraged to take active part in decision-making. With the help of the computer facility, postgraduate students are encouraged to use computers for analysis of the data collected for the thesis. Besides this, they conduct different field-based exercises during the posting. The regular teaching exercises include seminars, family and case presentations, etc.

## **Continuing Medical Education**

- The Centre organized 34th National Conference of Indian Association of Preventive and Social Medicine at AIIMS, New Delhi; 22–24 February 2007.
- A workshop on ‘Public health approaches for NCD prevention and control’, for officials from Health Departments of north Indian state governments and faculty of medical college, funded by WHO India as a part of the WHO-GOI collaborative programme, at Hotel Magpie; 4–8 December 2006.
- IAPSM Pre-Conference Workshop at Ballabgarh: CME on ‘Comprehensive rural health care—the way forward’ as part of the AIIMS Golden Jubilee Celebrations; 23–24 June 2006.
- Started a series Guest Lectures beginning from 21 July 2005:
  - a. 12th Guest Lecture on ‘Millennium Development Goals—Progress and challenges’, Dr Sanjiv Kumar, Regional Advisor, UNICEF, Geneva at CCM, AIIMS, New Delhi; 19 August 2006.
  - b. 13th Guest Lecture on ‘Stress-free 3iving’, Brother B.K. PIUS, Prajapita Brahma Kumaris Ishwariya, Vishwa Vidyalaya (PBKIVV) at CCM, AIIMS, New Delhi; 1 March 2007.
- Five foreign undergraduate students came from USA, Germany and Canada to the department for short-term training in Community Medicine during 2006–2007.

## **Lectures delivered**

### **Dr Sanjeev K. Gupta**

- ‘Data collection techniques including observational visits and status of corneal services in India’, Dissemination workshop on ‘Mapping of resources for control of childhood and corneal blindness in India and services for low vision and refractive errors’, Dr R.P. Centre, AIIMS, New Delhi; 30 April 2006.

- Participated as a resource person, ‘Manpower and management development workshop’, Dr R.P. Centre, AIIMS, New Delhi; 21–26 August 2006.
- Participated as a panelist in the symposium on ‘Community initiatives in eye care’, Venu Eye Institute and Research Centre, New Delhi; 7 October 2006.

### **Dr K. Anand**

- ‘Drug costs of epilepsy: Are we different from west?’, 6th Asia Oceania Epilepsy Congress, Kualalumpur, Malaysia; 18–19 November 2006.
- ‘Economic considerations in health policy, planning, management and evaluation of health care services’, Workshop on ‘Health economics’, NIHF, New Delhi.
- ‘Economics of screening for diabetic retinopathy’, Workshop on ‘Diabetic retinopathy’, Hotel Hill View, Faridabad; 28 March 2007.

### **Dr Baridalyne Nongkynrih**

- ‘Health issues in urban development’, Training programme, HSMI, HUDCO, Lodhi Road, New Delhi; 16 October 2006.
- ‘Experience with use of IT in rural health care’, Global Convention and Expo on ‘Telemedicine and e-health’; 17 August 2006.
- ‘Linking medical education to primary health care’, Symposium on ‘Primary health care initiatives’, Nutrition Foundation of India, India International Centre, New Delhi; 1 December 2006.
- ‘Issues in education of health personnel’, as a resource person in National Workshop on ‘Human resources in health: Challenges and options’, Ministry of Health and Family Welfare, Government of India and WHO, India Habitat Centre, New Delhi; 6 April 2007.
- ‘Use of IT in rural health care’, CME organized by CCM; June 2006.
- ‘Use of IT in rural health care’, AIIMS research presentation; October 2006.
- Lectures during the NCD workshop on 4–8 December 2006
  - a. Cervical cancer screening in India
  - b. Experiences with school health intervention in health promotion in relation to NCDs
  - c. Setting up NCD services in secondary and primary levels
- Made a presentation during the review of extramural projects on ‘Sentinel health monitoring centers in India: Risk factors surveillance for biochemical risk factors for non-communicable diseases’, AIIMS, New Delhi; 7 March 2007.
- Lectures delivered during the IAPSM annual conference
  - a. Management information system in CRHSP, Ballabgarh; 21 February 2007
  - b. Use of handheld computer in primary health care; 22 February 2007.

## **RESEARCH**

### **Funded Projects**

#### *Ongoing*

1. Development of a rapid assessment approach to estimate prevalence of non-communicable diseases and their risk factors. Sanjeev Kumar Gupta. Funded by AIIMS for one year. Funds: Rs 1 lakh.
2. Evaluation of safe water systems intervention project in slums of Uttaranchal. K. Anand. Funded by IndiaCLEN/USAID till June 2007. Funds: Rs 46.6 lakh.
3. Development of appropriate prevention and intervention strategies for non-communicable nutritional related disorders among women in post-reproductive period: A multisite study. Puneet Misra till March 2008. Funds: Rs.13.00 lakh
4. Field test SEARO questionnaire on Psychosis at CRHSP-AIIMS, Ballabgarh. Puneet Misra. Funded by WHO SEARO till May 2007. Funds: Rs.2.00 lakh.
5. Model Injection Centre (MICs): A programme to improve injection practice in the country. Sanjay K. Rai, C.S. Pandav, Shashi Kant, Puneet Misra. Funded by IPEN till March 2008. Funds: Rs 2.5 lakh.
6. Social and cultural determinants of hypertension in neo- and settled- migrants in Delhi preliminary study. Y.S. Kusuma. Funded by AIIMS for 1 year (2006–2007). Funds: Rs 97,000.

#### **Completed**

1. NCD surveillance STEP–3. K. Anand. Funded by WHO/ICMR till May 2006. Funds: Rs 5.3 lakh.
2. Strengthening rural services using IT, media laboratory. K. Anand. Funded by Asia, MIT till December 2006. Funds: Rs 24.6 lakh.
3. Monitoring and evaluation of integrated community-based intervention for the prevention of NCDs in Ballabgarh. K. Anand. Funded by WHO Kobe Centre till November 2006. Funds: Rs 10.31 lakh.

#### **Collaborative Projects**

##### **Completed**

1. Epidemiological study on pterygium in a rural population (with Community Ophthalmology, Dr R.P. Centre)
2. Epidemiological study on ocular trauma in an urban slum population of Delhi
3. Determination of quality of life and awareness of retinopathy among diabetic retinopathy patients

## Ongoing

1. Rapid assessment of trachoma in a previous hyperendemic area (with Community Ophthalmology, Dr RP Centre)
2. Development of an integrated predictive model for evidence-based eye care (with Community Ophthalmology, Dr RP Centre)

## Departmental Projects

### Completed

Nil

### Ongoing

1. School-based healthy lifestyle programme in Ballabgarh town
2. Quality of life in patients with breast cancer reporting to a tertiary care hospital

## PUBLICATIONS

### Journals

1. Anand K, Pandav CS, Kapoor SK, Leowski J. Integrated community based intervention against the risk factors for NCDs: Early lessons from the demonstration project undertaken at Ballabgarh, India. *Regional Health Forum, WHO-SEAR* 2006;**10**:11–21.
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3. Anand K, Kapoor SK. National health promotion initiative: An idea whose time has come. *Indian J Community Medicine* 2006;**31**:51–2.
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5. Acharya A, Yadav K, Baridalyne N. Reproductive tract infections/sexually transmitted infections in rural Haryana: Experiences from the family health awareness campaign. *Indian J Community Medicine* 2006;**31**:274–6.
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8. Goswami A, Reddaiah VP, Kapoor SK, Singh B. Prevalence and determinants of cognitive impairment in rural elderly population in India. *Helpage India* 2006;**12**:8.
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- in young adults in south India. *Lancet* 2006;**368**:114; author reply 115–16.
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  12. Murthy GVS, Gupta SK, Maraini G, Camparini M, Price GM, Dherani M, *et al.* Prevalence of lens opacities in North India: The INDEYE feasibility study. *Inves Ophthalmol Vis Sci* 2007;**48**:88–95.
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  15. Pandav CS, Ray SK. Report of national workshops on National Rural Health Mission. *Indian J Public Health* 2006;**50**:101–28.
  16. Reddy KS, Prabhakaran D, Chaturvedi V, Jeemon P, Thankappan KR, Ramakrishnan L, *et al.* Methods for establishing a surveillance system for cardiovascular diseases in Indian industrial populations. *Bull World Health Organ* 2006;**84**:461–9.
  17. Sankar R, Moorthy D, Pandav CS, Tiwari JS, Karmarkar MG. Tracking progress towards sustainable elimination of iodine deficiency disorders in Bihar. *Indian J Pediatr* 2006;**73**:799–802.
  18. Singh R, Gupta SK. BCG Immunization: Is it really efficacious and cost-effective? Selected Summary. *Natl Med J India* 2006;**19**:323–324.
  19. Singh AK, Maheshwari A, Sharma N, Anand K. Lifestyle associated risk factors in adolescents. *Indian J Pediatr* 2006;**73**:901–6.
  20. Sohal GPS, Garg N, Singh D, Mehta S, Anand K, Kapoor SK. Antibiotic prescription practice at primary and secondary level hospitals of a medical college. *Indian Practitioner* 2006;**59**:789–94.
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## Abstracts

Abstract published in the souvenir of 34th National conference of Indian association of Preventive and Social Medicine; 22–24 February 2007.

- 1) Shukla A, Pandav CS, Sankar R, Karmarkar MG, Chakrabarty A. 'Status and progress towards elimination of iodine deficiency disorders in India', ICCIDD, New Delhi; All India Institute of Medical Sciences, New Delhi; No. P-313, p. 254.
- 2) Pandav CS, Sankar R, Moorthy D, Anand K, Karmarkar MG. 'Policy environment and national health programmes: A case study of the national iodine deficiency disorders control programme (NIDDCP) In India', Centre for Community Medicine,

- AIIMS, New Delhi; The Micronutrient Initiative, Delhi; ICCIDD, India; No. P-314, p. 255.
- 3) Moorthy D, Tewary AK, Sankar R, Pandav CS, Karmarkar MG, Chakrabarty A, Shukla A. 'Tracking progress towards elimination of iodine deficiency disorders in Bihar, India', All India Institute of Medical Sciences, New Delhi; State Nutrition Cell, Bihar; The Micronutrient Initiative, New Delhi; ICCIDD, New Delhi; No. P-315, p. 255.
  - 4) Pandav CS, Zodpey SP, Karmarkar MG, Saboth P, Sankar R, Shukla A, Chakrabarty A. 'Tracking progress towards elimination of iodine deficiency disorders in Jharkhand, India', All India Institute of Medical Sciences, New Delhi; Government Medical College, Nagpur, Maharashtra; ICCIDD, New Delhi; No. P-316, p. 256.
  - 5) Moorthy D, Leelamoni K, Rajamohanam, Vijayakumar K, Sankar R, Pandav CS, Karmarkar MG. 'Tracking progress towards elimination of iodine deficiency disorders in Kerala, India', All India Institute of Medical Sciences, New Delhi; Medical College, Thiruvananthapuram, Kerala; The Micronutrient Initiative, New Delhi; ICCIDD, New Delhi; No. P-317, p. 256.
  - 6) Moorthy D, Gupte MD, Sankar R, Pandav CS, Karmarkar MG, Chakrabarty A, Shukla A. 'Tracking progress towards elimination of iodine deficiency disorders in Orissa, India', All India Institute of Medical Sciences, New Delhi; Institute of Public Health, Chennai; The Micronutrient Initiative, New Delhi; ICCIDD, New Delhi; No. P-318, p. 257.
  - 7) Moorthy D, Krishnamurthy P, Piruthivi V, Vasanthi, Sankar R, Pandav CS, Karmarkar MG, Chakrabarty A, Shukla A. 'Tracking progress towards elimination of iodine deficiency disorders in Tamil Nadu, India', All India Institute of Medical Sciences, New Delhi; Institute of Public Health, Chennai; The Micronutrient Initiative, New Delhi; ICCIDD, New Delhi; No. P-319, p. 257.
  - 8) Pandav CS, Moorthy D, Leelamoni K, Rajamohanam, Vijayakumar K, Sankar R, Karmarkar MG, Kabir SR. 'The Kerala model: Key issues in sustainability of the progress towards elimination of Iodine deficiency disorders in Kerala', All India Institute of Medical Sciences, New Delhi; Medical College, Thiruvananthapuram; The Micronutrient Initiative, New Delhi; ICCIDD, New Delhi; No. P-320, p. 258.
  - 9) Moorthy D, Pandav CS, Sankar R, Karmarkar MG, Kabir SR. 'Problem based learning: Iodine deficiency disorders', Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi; The Micronutrient Initiative, New Delhi; ICCIDD, New Delhi; No. P-321, p. 258.
  - 10) Peter P, Moorthy D, Pandav CS, Karmarkar MG, Kabir SR. 'Partnership: Key to sustainability in elimination of iodine deficiency—Experience of ICCIDD with Bharat Scouts and Guides', ICCIDD, New Delhi; Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi; No. P-322, p. 259.

## **Chapters in Books**

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2. Sanjay K. Rai. *Health Policies and Programmes in India*. In: Taneja DK (ed). 6th ed. New Delhi: Doctor Publication; 2007.
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5. Singh B, Goswami A. Dengue Fever–Cause, treatment and prevention (booklet in English and Hindi). 2006. Pgs 14 – published by AIIMS, New Delhi.

## **PATIENT CARE**

This has been divided into five broad categories.

1. Comprehensive Rural Health Services (CRHS) Project, Ballabgarh
2. Urban Health Programme
3. National Service Scheme Unit, AIIMS
4. Sex and Marriage Counselling Clinic
5. AIDS Education and Training Cell

## **CRHS Project, Ballabgarh**

This has two components: (i) Referral Hospital, Ballabgarh; and (ii) Community Health Services.

## **Referral Hospital, Ballabgarh**

### **Outpatients**

The following outpatient departments are run:

- General OPD for adults
- Child Welfare Centre for children
- Ophthalmology (daily)
- ENT (twice a week)
- Dental (daily)
- Obstetrics and Gynecology (daily)
- Rehabilitation (two days a week)
- Psychiatry (once a week)
- ANC Clinic (thrice a week)
- Paediatric Surgery OPD-cum-surgery (once a week)
- NCD Clinic (once a week)



## OPD Load

New patients	81,946
ANC Registration	5,186
Immunization	7,520
Total OPD Patients	1,57,851

## Inpatients

The number of beds has remained unchanged at	50.
• Total number of admissions including hospital births	6,967
• Number of hospital births	1,452
• Bed occupancy rate (including newborns)	71.4%
(excluding newborns)	58.5%
• Average duration of stay	1.9 days
• Admissions	
—via emergency	4,222
—via OPD	1,293
—newborn	1,452

## Distribution of inpatients by specialty

Specialty	Number	Percentage
Medicine	1,890	27.1
Surgery	358	5.1
Obstetrics and Gynaecology	1,972	28.3
Paediatrics	1,220	17.5
Ophthalmology	75	1.1
Newborn	1,452	20.8
<b>Total</b>	<b>6,967</b>	<b>100.0</b>

## Casualty

• Number of patients registered	18,259
• Number of medicolegal cases	3,323

## Diagnostic tests performed

• Lab investigations (including malaria slides)	98,344
• X-ray (total)	6,801
• Malaria slides	6,822
Malaria cases	54
<i>P. vivax</i>	53
<i>P. falciparum</i>	1

### Total number of surgical procedures performed (by specialty)

Procedure	Number of cases	Percentage
General Surgery/Paediatric Surgery	997	60.6
Obstetrics and Gynaecology	555	33.8
Ophthalmology	92	5.6
<b>Total</b>	<b>1,644</b>	<b>100.0</b>

### Total number of surgical procedures (sex-wise)

Gender	Adults		Children		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Male	498	36.8	221	75.9	719	43.7
Female	855	63.2	70	24.1	925	56.3
<b>Total</b>	<b>1,353</b>	<b>100.0</b>	<b>291</b>	<b>100.0</b>	<b>1644</b>	<b>100.0</b>

### Revised National Tuberculosis Control Programme (RNTCP)

Ballabgarh hospital is a treatment unit under the RNTCP and has 4 microscopy centres under it. The total number of cases treated at Ballabgarh Treatment Unit was 1,195 in 2006. Of these, 453 were diagnosed at the microscopy centre of Ballabgarh.

### Break-up of cases treated at Ballabgarh Microscopy Centre

	Number	Percentage
Category I	205	45.3
Category II	95	21.0
Category III	153	33.8
<b>Total</b>	<b>453</b>	<b>100.0</b>
Sputum examination of new cases	2,367	
Sputum Positive among these	397	16.8

## Community Health Services

### Intensive field practice area (IFPA)

This comprises of the two primary health centres—Dayalpur and Chhainsa. Outpatient, domiciliary and referral services are being provided.

### 1. Indices

• Population	82,740
• Birth rate per 1000 population	22.94
• Death rate per 1000 population	6.62
• Neonatal mortality rate per 1000 live-births	25.80
• Infant mortality rate per 1000 live-births	49.5
• Maternal mortality rate per 100,000 live-births	158

## 2. Load of OPD patients at various centres in IFPA

Name of PHC	New cases	Repeat Visits	Total
Dayalpur	13,852	12,019	25,871
Chhainsa	10,617	12,746	23,363

### Family Welfare and Maternal Child Health

The Project area is dependent on the District Family Welfare and Immunization Offices for the supply of vaccines and other items.

• Total antenatal cases (new registration)	2,292
• Total antenatal cases carried over last year	760
• Pregnant women receiving AN care	100%
• Complete TT coverage of registered cases	91%
• Deliveries conducted by staff or hospital	596
• Eligible couple protection rate	59.5%
• Total number of persons who accepted family planning methods in the year 2006	1,760
— Tubectomy	268
— Vasectomy	25
— CC users	960
— IUD	249
— Oral pills	256

### Expanded Programme on Immunization

#### Coverage of 12–23 months of age

BCG	98.3%
OPV (3 doses)	97.7%
DPT (3 doses)	97.7%
Measles	97.2%
Complete primary immunization	97.1%

Beside this, oral polio vaccine was also given under the Intensified Pulse Polio programme on 15.01.06, 26.02.06, 09.04.06, 21.05.06, 10.09.06, and 12.11.06. The coverage was 99.9%. Each polio programme lasted for 6 days.

### National Programmes

#### I. Malaria

Collection of blood slides is done by active and passive surveillance in the IFPA.

Total number of slides collected	9,497
Total number of positive cases	Nil

#### Indices

* Annual blood examination rate	11.5%
* Annual parasite incidence rate	Nil
* Slide positivity rate	Nil

## 2. Tuberculosis

The RNTCP is carried out in the IFPA on the national pattern. Dayalpur PHC has been designated as a microscopy centre and caters to all villages under the IFPA. The break-up of patients treated in the total field practice area is as follows:

	<b>Number</b>	<b>Percentage</b>
Category 1	46	35.1
Category 2	45	34.4
Category 3	40	30.5
<b>Total</b>	<b>131</b>	<b>100.0</b>

### **Urban Health Programme**

Total number of patients seen at Dr Ambedkar Nagar	25,901
Total number of referrals	1,124

### **Immunizations**

	<b>Doses given</b>
O dose OPV	129
BCG	343
DPT I	391
DPT II	444
DPT III	431
DPT B	398
OPV I	391
OPV II	444
OPV III	431
OPV B	398
DT I + OPV	74
DT II + OPV	12
DT (Booster) + OPV	111
Measles	413
MMR	454
TT I (ANC)	191
TT II (ANC)	138
TT (Booster)	56
TT (Others)— above 6 years	72

### **Hepatitis B**

O dose	01
I dose	415
II dose	386
III dose	372
Typhoid	364

### **Vitamin A**

I dose–II dose	53
Folifer (Adult)	852 x 30
Folifer (Paedatric)	358 x 30
<b>Family planning acceptors</b>	
Nirodh	4,560
Oral contraceptive pills	82 Cycles

### **Laboratory Services**

Blood smear for malarial parasite	136
Haemoglobin	466
Urine routine/microscopic examination	171
Urine pregnancy test	100

### **Report of SMCC (1 April 2006 to 31 March 2007)**

New patients	2,294
Old patients	2,601
Total patients	4,895

### **Investigations**

Hormone analysis	807
Blood sugar	304
Semen analysis	575
C/S, VDRL, HIV	102
Urine (R/M)	107
Hb%	015
FNAC	177
USG Doppler/X-Ray	174

## **SPECIAL ACTIVITIES**

### **Health education activities**

#### **Organizing events/exhibitions**

- Cancer posters displayed at CCM, AIIMS; 1 April 2006.
- TB poster displayed at CCM, AIIMS; 4 April 2006.
- Exhibition on ‘Tuberculosis’, Dr Ambedkar Nagar; 6 April 2006.
- Pulse polio campaign for ‘Polio Ravivar’; 25–29 April 2006.
- ‘International day against drug abuse’, Dr Ambedkar Nagar; 26 June 2006.  
Participants: 120.
- Exhibition on ‘World Population Day’, Dr Ambedkar Nagar; 10 July 2006.  
Participants: 86.
- Lecture on ‘Importance of breastfeeding’, during ‘Breastfeeding week’, Dr Ambedkar

- Nagar; 3 August 2006. Participants: 48.
- Conducted an intervention programme on current local health problems (role play) at Dr Ambedkar Nagar under FHAS programme Batch I; 28 August 2006. Participants: 250.
  - Conducted an intervention programme on current local health problems (role play) at Dr Ambedkar Nagar under FHAS programme Batch II; 4 September 2006. Participants: 230
  - Distribution of 20,000 Dengue Booklet to various places, i.e. Casualties, Wards, OPDs, Residential Colony, Departments, Reception counters, Public utility places e.g. Mother Diary Booth, Railway Reservation Centre, State Bank of India, Post Office, Hostels, Cafeteria etc.; 5–10 September 2006.
  - Operated ‘Dengue Helpline’; 11–19 September 2006.
  - Setup a Dengue health education and Dengue information counter at Dengue screening OPD, and distributed 300 Hindi and English booklets and answered approximately 250 patients queries daily; 17–23 September 2006.
  - Exhibition on ‘Worlds AIDS Day’, Dr Ambedkar Nagar, our field practice area; 7 December 2006. Participants: 150.
  - Exhibition on ‘World Obesity Day’, Dr Ambedkar Nagar a resettlement colony, New Delhi; 13 December 2006. Participants: 56.
  - ‘Pulse Polio Ravivar campaign’, Dr Ambedkar Nagar, New Delhi; 21 January 2007.
  - ‘Pulse Polio Ravivar campaign’, Dr Ambedkar Nagar; 11 February 2007.
  - Guest lecture on ‘Stress management’ for CCM staff, Residents and Faculty; 1 March 2007.

### **IEC materials development**

- \* Four posters were modified on ‘Dengue’ and displayed at three places, i.e. Dengue screening OPD, AIIMS and at CCM and CRHSP, Ballabgarh, Faridabad, Haryana.
- \* Seven film shows were conducted under various teaching and training programmes.
- \* Two role plays were performed in the community on Alcoholism, Drug-addiction, Family Planning, Polio, Mother and Child Health and Gender Bias.

### **Social Services**

(Dr Anil Goswami and Mrs Neena Chawla)

Patients identified for social services	3,657
Financial help arranged	
Medicine	12
Education	02
Occupation	02
Charges exempted	25

## **Counselling**

Individual	3,000
Family	305
Group	200
Referral services to various social welfare organization	58

## **Rehabilitation services**

Jobs	2
Cancer patients	2
Handicapped	20
School dropout	06
Widows/deserted women	05
Nutritional supplement	08
Arranged cataract surgery	10

## **National Services Scheme Unit, AIIMS**

The NSS Unit of AIIMS is located at Centre for Community Medicine. Dr Bir Singh continued to be its Programme Coordinator and Dr Kiran Goswami, Dr Anil Goswami and Ms Kiran Singh continued to be the Programme Officers of this unit. Despite receiving no grants from the government, the unit continued to be active in the year under review. The following are the highlights of its achievements in the year under review:

- Organized a role-play on 'Diarrhoea' at Dr Ambedkar Nagar; 24 April 2006.
- Organized an exhibition on 'World No Tobacco Day' at Dr Ambedkar Nagar; 12 June 2006. Participants: 140.
- Participated in 'Walkathon' on the eve of International Day for older person at India Gate; 1 September 2006.
- Delivered a public lecture on 'HIV/AIDS' at Jamia Hamdard University, New Delhi; 12 September 2006.
- Organized an exhibition on 'Lifestyle diseases' and health check-up camp at Kamla Nehru College, University of Delhi, New Delhi; 6 December 2006.

## **AIDS Education and Training Cell**

Professor C.S. Pandav is the Chairperson and Professor Bir Singh is the coordinator of this Cell. The following activities were organized by the Cell in 2006-07.

- The telephone helpline on HIV/AIDS and contraception 'Shubhchintak' continued to be operated with usual popularity, attracting good number of calls daily.
- The Internet-based helpline 'e\_shubhchintak' on HIV/AIDS and contraception continued to be operated with usual popularity. It received 3-5 requisitions/day for IEC materials apart from queries on HIV/AIDS, sexual problems, STDs, contraception etc.

- The Cell produced and disseminated educational material on HIV/AIDS to general public in 2006–2007 also.
- About seventy new patients were given counselling personally on HIV/AIDS apart from repeat patients.
- Delivered a lecture on HIV/AIDS for NSS student leaders at Acharya Narendra Dev College, University of Delhi; 23 September 2006.
- Delivered a lecture on HIV/AIDS for students and teachers of Jamia Hamdard University, New Delhi; 12 September 2006.
- Organized a health talk cum exhibition on ‘HIV/AIDS Awareness’ in the Community on World AIDS Day; 1 December 2006.

## AWARDS AND HONOURS

**Dr C.S. Pandav** was conferred Certificate of Appreciation and JT Dunn Distinguished Achievement Award by the International Council for Control of Iodine Deficiency Disorders during Annual board meeting of ICCIDD at Manila, Philippines, February 2007; elected President, Indian Association of Preventive and Social Medicine (IAPSM) for the year 2007–08 during the 34th National Conference at AIIMS, New Delhi, 22–24 February 2007; elected Vice-President (North), Indian Public Health Association (IPHA) for the year 2007–2008 during the 51st All India Annual Conference at Kolkata; 19–21 January 2007; Awarded ‘The Pillars of Hindustani Society’ 2007 for contribution in the field of Public Health by the Trans Asian Chamber of Commerce and Industry, Mumbai, 24 February 2007.

**Dr Sanjeev Kumar Gupta** was conferred the Fellowship of the Indian Public Health Association in January 2007.

**Dr K. Anand** has been awarded Fellowship of Indian Public Health Association (FIPHA); Awarded Fellowship of Indian Association of Preventive and Social Medicine (FIAPSM).

## SIGNIFICANT EVENTS

**Professor C.S. Pandav** attended planning meeting on ‘Tracking progress towards sustainable elimination of iodine deficiency disorders’ at Ranchi, Jharkhand, 10 April 2006; attended the curriculum development workshop on ‘Public Health’ for ICMR School at NIE, Chennai, 12–13 July 2006; attended seminar on ‘sensitization about NRHM’ by the Family Welfare Training and Research Centre, Government of India, at IMA Hall, Haji Ali, Mumbai, 2 August 2006; attended the Scientific Advisory Committee of National AIDS Research Institute, Pune, 11 August 2006; attended the workshop on ‘Rheumatic musculoskeletal disorders in India—burden and profile’, at Pune, 14–15 October 2006; attended tracking progress towards sustainable elimination of iodine deficiency disorders, Jharkhand, 17 November 2006; visited Kasturba Medical College, Mangalore to carry out inspection of the physical and the other teaching facilities organized by the MCI, 20–21 November 2006;



attended the expert committee meeting of 'Impact study of comprehensive rural health project', at Jamkhed, Maharashtra, 29–30 November 2006; attended 'World Marathi Academy programme', World Peace Centre, MIT, Pune, 6 January 2007; attended the 51st Annual Conference of Indian Public Health Association at Kolkata, 19–21 January 2007; attended the review meeting of the Maharashtra Academy of Engineering and Educational Research, Pune, 5 March 2007; attended the curriculum development for PG Public Health at PGI, Chandigarh, 6–7 March 2007; attended the workshop on 'Micronutrients in Maternal and Child Health Development in South Asia' organized by UNICEF at Jaipur, 26–28 March 2007; Conducted MD Exams in PGI, Chandigarh, Kolkata and University of Pune, for the year 2006–07.

Dr Pandav continues to be Secretary, Thyroid Association (India); Secretary, Indian Coalition for Control of Iodine Deficiency Disorders (ICCIDD); President, Cine-Club, AIIMS; Regional Council Member, Federation of Film Societies of India; Member, Foundation for Prevention of Head Injury, Bangalore; Member, National Advisory Committee, The Micronutrient Initiative, South Asia Regional Office, New Delhi; Technical Adviser and Member, Governing Body Nutrition Syndicate; Executive Committee Member and Regional Coordinator, South East Asia and Pacific Region, International Council for Control of Iodine Deficiency Disorder; Member, SEA-IDDEA Group Steering Committee (Joint participation of WHO / UNICEF / MI / ICCIDD).

Dr Pandav participated in the 59th Session of the WHO Regional Committee for South-East Asia, Dhaka, Bangladesh, 22–25 August 2006; attended the consultative meeting to review and develop new strategies of the salt iodisation programme, Sri Lanka, 5 September 2006; attended the 1st World Congress of Public Health Nutrition/VII Congress of the Spanish Community Nutrition Society, Barcelona, Spain, 28–30 September 2006; attended the ICCIDD Board meeting and Asian Thyroid Association meeting at Manila, Philippines, 3–7 February 2007.

**Dr Bir Singh** was invited by ICMR's National AIDS Research Institute (NARI) as an expert on a brainstorming meeting on 'HIV/AIDS—social and behavioural research', Pune; delivered an invited lecture on 'Safe Sex and Condom Promotion' in a training programme organized by Delhi State AIDS Control Society, AIIMS and UCLA medical school (USA) at New Delhi; continued to be a member, National Technical Advisory Committee on Science and Technology Communication for Water Resources, Department of Science and Technology, Government of India; continued to be a member, Editorial Board, *Indian Journal of Pediatrics* and reviewer, *Indian Journal of Community Medicine*; Resource person for Consultative workshop on 'Vector-borne diseases' organized by Government of India; was a Resource Person and delivered a talk on 'Educational Objectives' in the National workshop on 'Emerging Trends in Medical Education' at AIIMS; Chaired a session in symposium on 'lifestyle diseases in young population' organized by IPHA at MAMC, New Delhi; Adviser

to UPSC for various Interview Boards for selecting medical officers, public health specialists and Assistant professors of Community Medicine (CHS); was a key person in managing outbreak of Dengue Fever in AIIMS Campus (September–November 2006); was a Resource Person for reviewing PPTCT–HIV/AIDS programme in the state of UP, organized by UP State AIDS Control Society and UNICEF (March 2007); was nominated as Convener and Medical Spokesperson for the Disease Outbreak Response Cell (DORC) at AIIMS; Organizing Secretary, 34th National conference of Indian Association of PSM, at AIIMS, February 2007; invited as an expert to interviewing candidates for scholarship offered by the Government of Norway organized by Department of Higher Education, Ministry of Human Resource Development, Shastri Bhawan, New Delhi; invited as a moderator for the session ‘Wastewater and its health impacts’, in the Youth conference on ‘Water management, wastewater recycling’, organized by The Energy Research Institute (TERI), New Delhi; elected as the Secretary General of Indian Association of Preventive and Social Medicine (IAPSM) for the years 2007–2010.

### **TV programmes conducted: 11**

1. HIV/AIDS (11 April 2006)
2. Migration and HIV/AIDS (14 June 2006)
3. HIV/AIDS (December 2006)
4. Eight TV programmes on Dengue Fever and Chikungunya Fever on different TV channels in October–November 2006.

### **Radio programmes conducted: Live phone-in programmes on**

1. Bronchial asthma (3 May 2006)
2. Water sanitation (29 May 2006)
3. Tobacco and health (31 May 2006)
4. Epilepsy and its treatment (7 June 2006)
5. Kidney-related diseases (21 June 2006)
6. Diseases spread by mosquitoes (28 June 2006)
7. Diseases of urinary system (12 July 2006)
8. Health of heart and best lifestyle (7 August 2006)
9. Reasons of malaria: Prevention and treatment (23 August 2006)
10. Head injury and its treatment (6 September 2006)
11. Question of safety of women and children infected with HIV (25 September 2007)
12. Dengue: Prevention and treatment (16 October 2006)
13. Health of old people in winter season (11 December 2006)
14. Fractures and their treatment (25 December 2006)
15. Fever in cold weather and its treatment (8 January 2007)
16. Leprosy and its treatment (29 January 2007)

### **Professor Sanjeev Gupta**

Dr Sanjeev Kumar Gupta is a member of the Staff Council of the AIIMS; Member, Research Committee, AIIMS (2006–07); Member, Doctoral Committee in respect of a PhD Thesis in the Department of Community Ophthalmology, Dr R.P. Centre, AIIMS; External examiner, six-month diploma course in ‘Community eye health’, LV Prasad Eye Institute, Hyderabad, 27 June 2006.

### **Dr Kiran Goswami**

- I. Participated as Central Coordinating Team (CCT) member, IPEN, IndiaCLEN—
  1. Attended ‘Basic training for health and ICDS workers’, UNICEF, Jamshedpur (East Singhbhum), 6–13 July 2006.
  2. Field supervision of Model Injection Centre programme at two of the twenty-five centres in India, i.e. Gwalior and Agra.
  3. ‘Rapid assessment of essential newborn care services and needs in NRHM priority status of India’, study by PATH and IPEN
    - a. Resource person for regional workshop at 2 out of 11 districts in one of seven selected states.
    - b. Quality assurance visits to supervise fieldwork in one of the 11 selected districts in country.
  4. Resource person for regional training workshop for ‘IMNCI: Baseline assessment of childhood morbidity and mortality in selected districts in India’ in one of the 16 selected districts in India.
- II. Quality assurance visits to supervise field work in two of the six states under ‘HIV Sentinel Surveillance’ (Central Region), NACO, i.e. Uttaranchal and Delhi.
- III. Participated as resource person under ‘MICs: A programme to improve injection practices in country’, AIIMS.
- IV. Transport Committee Chairperson in IAPSM Conference, February 2007.
- V. Visited Uttaranchal for over seeing the monitoring survey and conducting FGDs for the ‘Evaluation of safe water system project’.

Dr K. Anand attended ICMR workshop on ‘Stroke surveillance in India’, at New Delhi, 13–15 November 2006; attended the 51st Annual conference of Indian Association of Public Health, 18–20 January 2007; coordinated the session on public Health approaches to NCDs and mental health and IT in primary health care in the 34th National conference of IAPSM, at AIIMS, New Delhi, 22–24 February 2007; was a temporary advisor to WHO for the following workshops/meetings—WHO SEA Regional meeting on ‘Global strategy on diet and physical activity’, 16–20 October 2006; WHO SEA Regional meeting on ‘Data analysis and management of NCD RF surveys’ Kathmandu, 13–18 July 2006; Joined WHO/SEARO as a short-term Professional to support Regional NCD surveillance and prevention activities, 1–26 March 2007; was a member of the project review committee of ICMR for Cardiovascular

diseases and urban Mental Health Programme, Media Lab Asia projects on IT in health; the Ministry of Health working Group on Development of NCD Surveillance protocol under IDSP; Working Group on National Workshop on Developing protocols for Morbidity field Surveys organized by Institute for Research in Medical Statistics; was a reviewer for *Indian Pediatrics*, *National Medical Journal of India*, *Indian Journal of Community Medicine*, *Journal of Epidemiology and Community Health*.

### **Dr Sanjay K. Rai**

- Conducted oral and practical examination of final professional MB,BS examination (community medicine) of Delhi University at Maulana Azad Medical College, New Delhi; 17 April 2006. Nominated by Calcutta University as a member of the Board of Examiners in community medicine for 2006–2007 and was external examiner for 3rd professional MB,BS part 1 examination (community medicine), Kolkata University, Kolkata; 25 April 2006.
- Was external examiner for MD Community Medicine examination for Patna Medical College and Hospital, Patna; 13 May 2006.
- Participated in supervisory field visit to Model Injection Centre, Dharbhanga Medical College, Darbhanga; 14–15 May 2006.
- Attended National Orientation meeting for regional institutes and task force members for annual sentinel surveillance for HIV infection 2006 at National Institute of Health and Family welfare, 9–10 June 2006.
- Organized and chaired a CME session on ‘Comprehensive rural health care—The way forward’ during Golden Jubilee Celebration of AIIMS at CRHSP Ballabgarh; 24 June 2006.
- Conducted regional workshop on HIV Sentinel surveillance 2006 (central zone), at hotel Hill View, Suraj Kund, Faridabad; 5–6 August 2006.
- Participated in the meeting of IPHS for Sub-divisional and District hospital at Nirman Bhawan, New Delhi; 14 September 2006.
- Attended 6th INDEPTH Annual General Scientific Meeting (AGM) at Ouagadougou, Burkina Faso; 18–23 September 2006.
- Reviewed manuscript for publication in various journals, e.g. *Health and Population Perspective and Issues*, *Indian Journal of Public Health*, etc.
- Participated in International meeting on Dengue jointly organized by National Institute of Virology, ICMR, National Vector Borne Disease Control Programme, Ministry of Health and Family Welfare and International Vaccine Institute, Korea at Pune; 10 November 2006.
- Attended annual sentinel surveillance for HIV infection 2006 meeting to review

- supervision and monitoring plans by central team and regional institute, at National institute of Health and family welfare, New Delhi; 13 September 2006.
- Attended meeting of the task force on IPHS for Sub-District/sub-divisional Hospitals at Nirman Bhawan; 14 September 2006.
  - Participated as a recourse person on workshop on ‘Public health approach for prevention and control of NCDs’, Faridabad; 4–8 December 2006.
  - Participated as a recourse person in task force project on ‘Musculoskeleton disorders—training workshop for investigators and co investigators’, ICMR, New Delhi; 14–15 December 2006.
  - Attended meeting of Inter Institutional Working Group on Public Health Education, organized by Ministry of Health and Family Welfare and Public Health foundation of India, Nirman Bhawan; 22 December 2006.
  - Participated and chaired a session during 51st Annual Conference of IPHA at Kolkata; 18–21 January 2006.
  - Unanimously elected ‘Central Council Member’ (north zone) of Indian Public Health Association for the year 2007–2009.
  - Attended workshop on ‘National Consultation for Accelerating Pre Service IMNCI’, AIIMS; 19 February 2007.
  - Member organizing committee 34th National conference of IAPSM, CCM, AIIMS, New Delhi; 22–24 February 2006.
  - Participated as a resource person in ‘Integrated management of childhood illnesses: Baseline assessment of childhood morbidity and mortality in selected districts of India’, Gwalior, Madhya Pradesh; 7–10 March 2007.
  - Attended core committee meeting and sensitization programme of DOTS therapy on tuberculosis, AIIMS; 21 March 2007.

### **Presentation in Conferences**

In the Joint National Conference of Indian Public Health Association and Indian Association of Preventive and Social Medicine, Tirupati, Andhra Pradesh, 21–24 January 2006, the following presentations were made.

#### **Oral presentation**

- Haldar P, Gautam V, Kant S, Undergraduate students. Prevalence of conduct disorder in a secondary school of district Faridabad, Haryana.
- Sumit M, Goswami K, Sreenivas V, Singh B, Sagar R. Knowledge and sources of sexual health information of school going adolescents in southwest district of Delhi.

- Undergraduate students, Roopa S, Sahariah SA, Baridalyne Nongkynrih, Pandav CS, Kapoor SK. Comparison of 4-day food diary method with 24 hours recall method among schoolchildren in Rural Haryana.

**Poster presentation**

- Star Pala, Pandav CS, Anand K, Pandey RM. Family healthcare expenditure in an urban resettlement colony of South Delhi.
- Lal V, Goswami A, Anand K, Undergraduate students. Study of self-medication among residents of urban resettlement colony, New Delhi.
- Undergraduate students, Roopa S, Sahariah SA, Baridalyne Nongkynrih, Pandav CS, Kapoor SK. Study of nutritional status in schoolchildren in rural Haryana.

**VISITING SCIENTISTS**

Nil

## 9.9 Dermatology and Venereology

	<b>Professor and Head</b> Vinod K. Sharma	
	<b>Professors</b>	
Neena Khanna		Kaushal K. Verma
	<b>Additional Professor</b> M. Ramam	
	<b>Associate Professors</b>	
Binod K. Khaitan	Sujay Khandpur	G Sethuraman
	<b>Assistant Professor</b> Somesh Gupta	

### EDUCATION

#### Short- and long-term training

The department has provided short-term training (1 month) to 1 doctor from USA and 3 months training to 4 doctors from North Korea.

#### CME/National/International Conferences

##### Dr V.K. Sharma

1. 'Recent advances in sexually transmitted diseases', 24th Annual Conference of IADVL (CUTICON), Agra; 27 October 2006.
2. Delivered Dermatology invited guest lecture series on 'Issues in management of herpes genitalis', Bangalore Medical College, Bangalore; 23 February 2007.
3. 'Patch test', Annual Academic Session, Sri Lanka College of Dermatologists, Colombo, Sri Lanka; 11–12 March 2007.
4. Interpretation and relevance of Patch test, CODFICON, Mumbai; 4 November 2006.
5. Plant dermatitis clinical profile and epidemiology, CODFICON, Mumbai; 5 November 2006.

##### Dr K.K. Verma

1. 'Syndromic management of STI/RTI', Department of Medicine, AIIMS and Delhi State AIDS Control Society, CMET, AIIMS, New Delhi; 20 April 2006.
2. 'Wounds in chronic infection and their management', Indian Society of Wound Management and CME on Cosmetic Dermatology, Hotel Holiday Inn, Agra; 22 April 2006.
3. 'Lasers in Dermatology in Dermat Update 2006', Manipal College of Medical Sciences, Dhanwantan Auditorium, Manipal Teaching Hospital, Phulbari, Pokhara, Nepal; 22 July 2006.

4. 'Management of parthenium dermatitis', CODFICON-2006, LTM Medical College and LTM General Hospital, Sion, Mumbai; 4 November 2006.
5. 'CO<sub>2</sub> laser: Live demonstration', 7th Biennial Conference of Association of Cutaneous Surgeons of India, ACSICON 2006, New Delhi; 11 November 2006.
6. 'Mucocutaneous manifestations of HIV in Indian patients', 14th IUSTI Asia-Pacific Congress on STIs and HIV/AIDS, Kuala Lumpur; 27–30 July 2006.

**Dr M. Ramam**

1. Das S, Srivastava P, Sharma VK, Pandey RM, Ramam M. Risk factors in extensive vitiligo. 86th Annual Meeting of the British Association of Dermatologists, Manchester; 4–7 July 2006.
2. 'Cutaneous tuberculosis', Annual sessions of the Sri Lanka College of Dermatologists, Colombo; 11 March 2007.
3. 'An approach to vasculitis and cutaneous tuberculosis', 12th Annual State Conference of IADVL, MP State Branch, Indore; 28–29 October 2006.
4. 'Should dermatologists look at skin biopsies?', 10th Annual State Conference of IADVL, WB State Branch, Kolkata; 2–3 December 2006.
5. 'Dermatology: Past, present and future', Annual conference of the IADVL, Delhi State Branch, New Delhi; 24 December 2006.

**Dr Sujay Khandpur**

1. 'Comparison of ELISA test and immunoblot assay as a diagnostic test in pemphigus vulgaris in Indian patients', 65th Annual meeting of American Academy of Dermatology, Washington DC, USA; 2–6 February 2007.
2. 'Verruciform xanthoma of glans penis: First report from India', 10th Joint meeting of International Society of Dermatopathology, Washington DC, USA; 31 January–1 February 2007.
3. 'Laboratory procedures in Dermatology', National Board of Examinations, Teleconferencing session at IGNOU; 17 December 2007.
4. 'Sclerotherapy in vascular malformations', 7th Biennial conference of the Association of Cutaneous Surgeons of India, New Delhi; 10–12 November 2006.
5. 'Unusual panniculitis—A case of erythema induratum mimicking as erythema nodosum', 35th National conference of Indian Association of Dermatologists, Venereologists and Leprologists, Chennai; 25–28 January 2007.

**Dr Somesh Gupta**

1. 'Syndromic Management of STIs', International Union against Sexually Transmitted Infections (IUSTI) Asia-Pacific, Kuala Lumpur, Malaysia; July 2006.
2. 'How I manage: Keloids', National Conference of the Association of Cutaneous Surgeons of India (ACSI), New Delhi; November 2006.



3. 'Surgical management of vitiligo', World Congress of International Academy of Dermatology (IACD), Melbourne, Australia; December 2006.

## **RESERCH**

### **Funded Projects**

#### **Completed**

1. Azathioprine versus corticosteroids for the treatment of parthenium dermatitis. K.K. Verma. Funded by ICMR for 3 years (2003–2006). Funds: Rs 11 lakh.
2. Utility of antigen detection from epidermis of Indian patients in pemphigus vulgaris. Sujay Khandpur. Funded by AIIMS for 2 years (2004–2006). Funds: Rs 1 lakh.

#### **Ongoing**

1. Evaluation of mycophenolate mofetil as an adjuvant to corticosteroids in pemphigus vulgaris. V.K. Sharma. Funded by Aspreva Pharmaceuticals, Canada, in collaboration with Roche for 2 years (2005–2007). Funds: Rs 1,21,905 per patient recruited.
2. Safety and efficacy of intralesional PCNA synthetic chimeric ribozyme in Keloids and hypertrophic scars when concurrently administered with 5-FU and kenalog. V.K. Sharma. Funded by ClinCyte, USA for one year (2006–2007). Funds: Rs 5 lakh.
3. Role of cyclophosphamide pulse as adjuvant therapy in pemphigus vulgaris. Neena Khanna. Funded by ICMR for 2 years (2006–2008). Funds: Rs 15,32,269.20.
4. Role of parthenium hysterophorus in pathogenesis and exacerbations of atopic dermatitis. K.K. Verma. Funded by DBT for 2 years (2005–2007). Funds: Rs 14,34,330.
5. Randomized clinical trial of azathioprine weekly pulse versus daily azathioprine for the treatment of parthenium dermatitis. K.K. Verma. Funded by ICMR for 3 years (2006–2009). Funds: Rs 11 lakh.

### **Departmental Projects**

#### **Completed**

- Role of sclerotherapy in vascular malformations
- Clinical profile of portwine stains and other vascular malformations
- Sepsis in Dermatology ward

#### **Ongoing**

- Comparison of cyclophosphamide-dexamethasone pulse versus cyclophosphamide pulse alone in pemphigus vulgaris
- Clinical efficacy and cost-effectiveness of PUVA vs PUVAsol therapy in psoriasis
- Comparison of coal tar vs coal tar and topical steroid in palmoplantar psoriasis
- Role of ELISA testing in pemphigus
- Mucocutaneous manifestations of HIV-infection and correlation with CD4 count and HIV RNA levels

- Evaluation of mucocutaneous disorders in HIV infected patients and their correlation with CD4 lymphocytes
- CO2 laser as a therapeutic modality for the treatment of epidermal and sebaceous nevi
- Evaluation of CO2 laserabrasion as a therapeutic modality in extensive facial angiofibromas in tuberous sclerosis and acne scars
- Azathioprine as a corticosteroid-sparing agent in the treatment of air-borne contact dermatitis
- To evaluate the role of immunosuppressive drugs for the treatment of chronic urticaria
- Long-term safety and toxicity of azathioprine in patients of air-borne contact dermatitis
- Imiquimod cream for the treatment of basal cell carcinoma
- Imiquimod cream for the treatment of Bowen's disease
- Weekly azathioprine pulse (WAP) therapy for the treatment of extensive plaque psoriasis
- Challenge testing in drug reactions

### **Collaborative Projects**

1. Dermatological complications in renal transplant recipient patients: A follow up study (with Nephrology)
2. Role of electron beam radiation therapy for the treatment of mycosis fungoides (with Radiation Oncology)
3. Evaluation of topical cyclosporine in ocular involvement in Stevens-Johnson syndrome (with Ophthalmology, Dr R.P. Centre) (Funded by ICMR)
4. A cross-sectional study of infectious disease prevalence among prison inmates in the Tihar Jail complex Delhi (with Medicine, Microbiology)
5. A study of the psychosocial effects of vitiligo (with Psychiatry)
6. Evaluation of m-RNA PCR for the diagnosis of cutaneous tuberculosis (with Biotechnology, Pathology)

## **PUBLICATIONS**

### **Journals**

1. Sharma VK, Sethuraman G, Bansal A. Evaluation of photopatch test series in India. *Contact Dermatitis* 2007;**56**:168–9.
2. Sumanth K, Sharma VK, Khaitan BK, Kapoor A, Tejasvi T. Evaluation of oral methotrexate in treatment of systemic sclerosis. *Int J Dermatol* 2007;**46**:218–23
3. Sharma VK, Dutta B, Kahndpur S. Greater auricular nerve abscess in borderline tuberculoid leprosy masquerading as jugular vein thrombosis. *JAPI* 2006;**54**:585–7.
4. Malhotra AK, Gupta S, Khaitan BK, Sharma VK. Imiquimod 5% cream for prevention of recurrence after excision of presternal keloids. *J Dermatol* 2007;**569**.
5. Sharma VK, Prasad HRY, Khandpur S, Kumar A. Evaluation of desmoglein enzyme linked immunoassy (ELISA) in Indian patients with pemphigus vulgaris. *Int J Dermatol* 2006;**45**:518–22.

6. Sharma VK, Khandpur S. Pulsed dye laser for treatment of unilateral nevoid telangiectasia. *Int J Dermatol* 2006;**45**:960–4.
7. Sethuraman G, Khaitan BK, Yashpal M, Das S, Sirka CS, Singh M, Sharma VK. Verrucous epidermal nevus with unusual features. *Pediatr Dermatol* 2006;**23**:98–9.
8. Sethuraman G, Malhotra A, Khaitan BK, Singh M, Sharma VK, Das AK, *et al.* Osteoma cutis in pseudohypoparathyroidism. *Clin Exp Dermatol* 2006;**31**:225–7.
9. Sharma VK, Trilokraj T, Khaitan BK, Krishna SM. Profile of systemic sclerosis in a tertiary care center in North India. *Indian J Dermatol Venereol Leprol* 2006;**72**:416–20.
10. Sharma VK, Prasad HRY, Sethuraman G, Khaitan BK. Combination of sodium stibogluconate and rifampicin in post kala azar dermal leishmaniasis. *Indian J Dermatol Venereol Leprol* 2007;**73**:53–4.
11. Verma KK, Srivastava P, Minz A, Verma K. Role of azathioprine in preventing recurrences in a patient of recurrent erythema nodosum leprosum. *Lepr Rev* 2006;**77**:225–9.
12. Malhotra AK, Bansal A, Mridha AR, Khaitan BK, Verma KK. Superficial basal cell carcinoma on face treated with 5% imiquimod cream. *Indian J Dermatol Venereol Leprol* 2006;**72**:373–5.
13. Kaur J, Puri T, Julka PK, Gunabhusanam G, Iyer VK, Singh MK, *et al.* Adenocarcinoma of the gall bladder presenting with a cutaneous metastasis. *Indian J Dermatol Venereol Leprol* 2006;**72**:64–6.
14. Malhotra A, Bhaskar G, Nanda M, Kabra M, Singh MK, Ramam M. Griscelli syndrome. *J Am Acad Dermatol* 2006;**55**:337–40.
15. Sharma VK, Dutta B, Khandpur S. Greater auricular nerve abscess in BT leprosy masquerading as jugular vein thrombosis. *JAPI*. 2006;**54**:585–7.
16. Khandpur S, Malhotra AK, Khanna N. Melkerson rosenthal syndrome with diffuse facial involvement and multiple cranial nerve palsies. *J Dermatol* 2006;**33**:411–14.
17. Khandpur S, Minz A, Sharma VK. An unusual association of pigmentary mosaicism (hypomelanosis of Ito) with generalized hypertrichosis. *Clin Exp Dermatol* 2006;**31**:467–8.
18. Khandpur S, Bansal A, Sharma VK, *et al.* Twenty nail dystrophy in vitiligo. *J Dermatol* 2007;**34**:189–92.
19. De D, Gupta S, Malhotra AK. Indirect electrosurgery. *Dermatol Surg* 2006;**32**:1424.

### Chapters in Books

1. Sharma VK, Jerajani H, Srinivas CR, Valia A, Khandpur S. Therapeutic guidelines in the management of Stevens Johnson syndrome and TEN and psoriasis. First edition. GSK, Derma., 2007.
2. Gupta S, Olsson MJ, Kanwar AJ, Ortonne J-P (eds). *Surgical management of vitiligo*. Oxford: Blackwell Publications, 2006.

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr Vinod K Sharma** was appointed on the Editorial Board, *Journal of European Society of Contact Dermatitis* and *Journal of American Society of Contact Dermatitis*; Appointed Chairman, Technical Resource Group for Sexually Transmitted Infection for National AIDS Control Programme Phase III; appointed Editor-in-Chief, 2nd Edition of IASSTD and AIDS, *Textbook and Atlas of STD and AIDS*; Awarded Dr J C Patel and Dr B C Mehta Award for 2nd Best Correspondence entitled *Greater Auricular Nerve Abscess in Boderline Tuberculoid Leprosy Masquerading as Jugular Vein Thromboisis* in *Journal of the Association of Physicians of India*; Member, National Academic Committee, MCI-Issue Committee and Chairman, Therapeutic Guidelines Committee of the Indian Association of Dermatologists, Venereologists and Leprologists.

**Dr Kaushal K. Verma** was awarded Dr Bishnupriya Debi Award for the Best Research Paper published in 2006.

**Dr M. Ramam** was awarded the Ambady Oration Award 2007 of the Indian Association of Dermatologists, Venereologists and Leprologists; Editorial Board Member, IADVL textbook; Editorial Board Member, IJDVL.

**Dr Sujay Khandpur** elected Member, Therapeutic Guidelines Committee of the Indian Association of Dermatologists, Venereologists and Leprologists.

**Dr Somesh Gupta** invited as a Midlands Travelling Fellow in Genitourinary Medicine (GUM) to deliver two lectures for GUM physicians in Birmingham, UK.

## 9.10 Endocrinology and Metabolism

### **Professor and Head**

A.C. Ammini

### **Professor**

Nikhil Tandon

### **Additional Professor**

N. Gupta

### **Associate Professor**

R. Goswami

### **Assistant Professors**

V.P. Jyotsna

R. Khadawat

### **EDUCATION**

#### **Undergraduate, postgraduate and paramedical training**

The department was actively involved in regular training programmes of undergraduates and nursing students. Postgraduate students from MD Internal Medicine came for one-month posting in the department.

#### **Long- and short-term training**

- Four candidates completed their DM and four new candidates joined the department for the DM course
- Two student joined PhD (Endocrinology)
- Two students joined the department for short-term training of three months and eight students joined for six months training

#### **Continuing Medical Education**

##### **Lecture delivered**

The faculty and residents of the department participated in and delivered lectures/presented papers in the continuing medical education programmes, workshops, seminars, several national and international meetings on endocrinology and diabetes mellitus.

##### **Dr Nikhil Tandon**

- 'Current concepts in the treatment of postmenopausal osteoporosis', Endocrinology CME programme, Aligarh Muslim University; 26 April 2006.
- 'Management of osteoporosis', Endocrine CME programme, RNT Medical College, Udaipur; 2 September 2006.
- 'Endocrine hypertension', Endocrine CME programme, RNT Medical College, Udaipur; 2 September 2006.

- ‘Management of diabetes in special situations’, Round Table on ‘Diabetic retinopathy’, Ranbaxy Science Foundation, Venu Eye Institute; 17 September 2006.
- ‘Childhood obesity: An Indian perspective’, symposium organized by Global Alliance for prevention of obesity, Delhi; 18 September 2006.
- ‘Diabetes and CAD: The renal connection’, Conference on ‘Coronary artery disease’, Mumbai; 29 September 2006.
- ‘Vitamin D status: Impact on bone health’, Meeting on ‘Epidemiology of rheumatic musculoskeletal disorders in India’, Pune; 14 October 2006.
- ‘Challenges in diabetes management in today’s clinical practice’, for physicians in Delhi; 18 October 2006.
- ‘Epidemiology, medical and economic burden of diabetes mellitus in India’, Conference on ‘Fetal origins of health and disease’, Delhi; 8 November 2006.
- ‘Medical and economic burden of diabetes mellitus’, CME on ‘Fetal origins of health and disease’, Delhi; 9 November 2006.
- ‘Economic cost of diabetes care in adults’, Round Table on ‘Economic impact of low birth weight’; 10 November 2006.
- ‘Calcium and bone disease in thalassemia’, Annual Conference of Thalassemia Societies; 11 November 2006.
- ‘Iodine deficiency disorders: Current status’, Winter symposium, Christian Medical College, Vellore; 12 January 2007.
- ‘Bone density in India’, Winter symposium, Christian Medical College, Vellore; 12 January 2007.
- ‘Biomarkers in diabetes and CVD’, ICMR-INSERM meeting on biomarkers, Gurgaon; 24 January 2007.
- ‘Diagnosis and management of post menopausal osteoporosis’, CME on ‘Bone pathology’, AIIMS; 25 February 2007.
- ‘Childhood obesity’, Annual Ranbaxy Science Foundation Symposium, Delhi; 20 March 2007.
- ‘Epidemiology of diabetes in diabetic retinopathy’, Workshop organized by the International Centre for Eye Health and the RP Centre, AIIMS, Surajkund; 26 March 2007.
- ‘Management of hyperthyroidism: A physician’s perspective’, AIIMS Surgery Week, 28 March 2007.

**Dr R. Goswami**

- ‘Sporadic hypoparathyroidism in India’, Medicine Update 2006, Maulana Azad Medical college, New Delhi; 21–23 December 2006.
- ‘Genetics of vitamin D deficiency’, CME on ‘Women bone health’, Sri Venketshwar Institute of Medical Sciences, Tirupati; 22 February 2007.

**Dr R. Khadgawat**

- ‘Hypothyroidism and thyroiditis’, Annual CME, API Delhi, State Chapter, New Delhi; 28–29 October 2006.
- ‘Endocrine emergencies’, Critical Care Nursing Update, AIIMS, New Delhi; 29–30 November 2006.
- ‘Fetal origin of adult diseases’, Annual meeting of Sister Doctor’s Forum of India (SDFI), New Delhi; 28 February 2007.

**National and International Conferences****Conferences**

Nil

**Lecture delivered****Dr A.C. Ammini**

- ‘Adolescent PCOD’, 4th Biennial Scientific Meeting of Asia Pacific Pediatric Endocrine society 2006, Pattaya, Thailand; 1–4 November 2006.
- ‘Precocious puberty’, Annual Endocrine Society Meeting, Jaipur; November 2006.

**Dr Nikhil Tandon**

- ‘Vitamin D–PTH axis’, Training programme, Indian Society for Bone and Mineral Research, Mumbai; 14 May 2006.
- ‘Diagnosis of osteoporosis’, Training programme, Indian Society for Bone and Mineral Research, Mumbai; 14 May 2006.
- ‘Efficacy of strontium: Trial evidence’, Meeting for physicians, Mumbai; 14 May 2006.
- ‘Trouble shooting glycemic control in intensive group patients’, Annual Investigators meeting of ADVANCE, Hong Kong; 1 June 2006.
- ‘Thyroid status in the post salt-iodization scenario’, Annual Conference of the Pakistan Endocrine Society, Karachi; 5 September 2006.
- ‘Vitamin D status in Indian children’, Annual Conference of the Pakistan Endocrine Society, Karachi; 5 September 2006.
- ‘Vitamin D and bone health’, Training programme, Indian Society for Bone and Mineral Research, Kolkata; 10 September 2006.
- ‘Diagnosis of osteoporosis’, Training programme, Indian Society for Bone and Mineral Research, Kolkata; 10 September 2006.
- ‘Genetics of type 2 diabetes in North India’, Annual Conference of the Research Society for the Study of Diabetes in India (RSSDI), Delhi; 5 November 2006.
- ‘Bone health in children in India’, National Conference of the Indian Society for Bone and Mineral Research, Jaipur; 16 November 2006.
- ‘What is normal Vitamin D?’, Annual Conference of the Endocrine Society of India, Jaipur; 17 November 2006.

- ‘Childhood obesity in India’, Seminar, George Institute, Sydney; 22 November 2006.
- ‘Glucose control: Problems and solutions in Indian centres’, Investigators meeting of ADVANCE, Melbourne; 24 November 2006.

#### **Dr R. Goswami**

- ‘Factors affecting bone mineral health including genetic predisposition’, National Seminar on ‘Importance of nutrition for bone health’, International Life Sciences Institute India, New Delhi; 20 April 2006.
- ‘Idiopathic hypoparathyroidism: Etiologic evidences from India’, Annual Meeting of the Endocrine Society of India, Jaipur; 17–19 November 2006.

#### **Dr R. Khadgawat**

- ‘Bone density in Indians’, National Seminar on ‘Importance of nutrition for bone health’, International Life Sciences Institute (ILSI) Research Foundation, New Delhi; 20 April 2006.
- ‘Post-transplant osteoporosis’, 2nd National Conference of Indian Society of Bone Mineral Research (ISBMR), Jaipur; 16 November 2006.
- ‘Epidemiology of osteoporosis’, Training programme on ‘Osteoporosis’, Indian Society of Bone and Mineral Research (ISBMR), Gandhi Medical College, Musherrabad, Secunderabad; 4 February 2007.
- ‘Role of PTH–vitamin D axis in osteoporosis’, Training programme on ‘osteoporosis’, Indian Society of Bone and Mineral Research (ISBMR), at Gandhi Medical College, Musherrabad, Secunderabad; 4 February 2007.

## **RESEARCH**

### **Funded Projects**

#### **Completed**

- Assessment of prevalence of osteoporosis in adult population in India. A.C. Ammini. Funded by ICMR as a task force project.
- A multicentre, randomized, double-blind, active controlled study to compare the effect of 24 weeks treatment with combination therapy of LAF237 and pioglitazone to LAF237 monotherapy or pioglitazone monotherapy in drug naïve patients with type 2 diabetes. Nikhil Tandon. Funded by Novartis Pharma for 1 year (2005–2006). Funds: Rs 5 lakh.

#### **Ongoing**

- Postmenopausal evaluation and risk reduction and lasorfoxifene: A multicentric trial. A.C. Ammini. Funded by Pfizer India for 5 years. Funds: Rs 50 lakh.
- Demographic and clinical profile of young diabetics in a tertiary care hospital in North India. A.C. Ammini. Funded by ICMR for 3 years. Funds: Rs 14 lakh.



- Comparison of efficacy of management of metformin and spiranolactone in the management of polycystic ovarian disease. A.C. Ammini. Funded by ICMR for 3 years. Funds: Rs 32 lakh.
- A one-year multicentre, international, randomized, double-blind study with comparison of benflurex versus pioglitazone in combination with sulfonylurea administration orally for treatment of type 2 diabetes A.C. Ammini. Funded by Cheltern International for 1 year. Funds: Rs 10 lakh.
- Immunogenetic and humoral profile of diabetes mellitus in Asian Indians. Nikhil Tandon. Funded by INSERM-ICMR programme of the ICMR for 3 years (2004–2007). Funds: Rs 29,25,200.
- A phase IIb/III randomized, placebo-controlled clinical trial to study the safety and efficacy of MK0364 in overweight and obese patients with type 2 diabetes mellitus (T2DM). Nikhil Tandon. Funded by MSD for 6 months. Funds: Rs 4 lakh.
- A multicenter, double-blind randomized, placebo-controlled study of MK-0431 in patients with type 2 diabetes who have inadequate glycemic control. Nikhil Tandon. Funded by MSD for 6 months. Funds: Rs 2 lakh.
- Reduction in the occurrence of center threatening diabetic macular edema (B7A-MC-MBDL). Ruboxistaurin, is a protein kinase C inhibitor which has showed efficacy in diabetic retinopathy. Nikhil Tandon. Funded by Eli Lilly for 3 years (2005–2008). Funds: Rs 5 lakh.
- Fetal and childhood growth and the effect of lifestyle interventions on CHD risk factors in young Indian adults. Nikhil Tandon. Funded by the British Heart Foundation for 3 years (2005–2008). Funds: Rs 1,41,44,400.
- Hyperglycemia and its effect after acute myocardial infarction on cardiovascular outcomes in patients with Type 2 diabetes (HEART2D). Nikhil Tandon. Funded by Eli Lilly for 3 years (2004–2007). Funds: Rs 10 lakh.
- Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters. R. Goswami. Funded by DBT for 3 years (2006–2009). Funds: Rs 90.9 lakh.
- Pattern and significance of single nucleotide polymorphism at select sites in two important candidate genes, i.e. vitamin D receptor and parathormone genes in subjects with osteoporosis. R. Goswami. Funded by DRDO for 3 years (2006–2009). Funds: Rs 9.75 lakh.
- Bone health in patients of hyperthyroid graves disease in relation to duration of thyrotoxicosis and improvement after patient becomes euthyroid. V.P. Jyotsna. Funded by AIIMS. Funds: Rs 45,000.
- A phase III, multicentre, randomized, parallel group study of safety and efficacy of the LB03002, a new sustained release formulation of human recombinant growth hormone as compared to sustained daily therapy with genotropin in treatment naïve children with growth failure due to insufficient secretion of endogenous growth

- hormone. Rajesh Khadgawat. Funded by LG Life Sciences for 2 years (2007–2009). Funds: Euro 12,000.
- A randomized, double-blind, placebo-controlled, multicentric clinical study to evaluate the safety and efficacy of rimonabant tablet in obese subjects. Rajesh Khadgawat. Funded Torrent Pharmaceuticals (2007) for 6 months. Funds: Rs 50,000.

## PUBLICATIONS

### Journals

1. Prasad P, Tiwari AK, Kumar KM, Ammini AC, Gupta R, Thelma BK. Association of TGF beta 2, TNF alpha, CCR 2, and CCR 5 gene polymorphisms in type-2 diabetes and renal insufficiency among Asian Indians. *BMC Med Genet* 2007;Apr 12, 8-20.
2. Jyotsna VP, Rangel N, Pal S, Seith A, Sahni P, Ammini AC. Insulinoma: Diagnosis and treatment. Retrospective analysis of 31 cases. *Indian J Gastroenterol* 2006;**25**:244–7.
3. Gadepalli R, Dhawan B, Sreenivas V, Kapil A, Ammini AC, Choudhry R. A clinicomicrobiological study of diabetic foot ulcers in an Indian tertiary care hospital. *Diabetes Care* 2006;**8**:1727–32.
4. Prasad P, Tiwari AK, Kumar KM, Ammini AC, Gupta A, Gupta R, *et al.* Chronic renal insufficiency among Asian Indians with type 2 diabetes: Role of RAAS gene polymorphisms. *BMC Med Genet* 2006;**5**:7, 42.
5. Gupta DK, Shilpa S, Ammini AC, Gupta M, Aggarwal G, Deepika G, *et al.* Congenital adrenal hyperplasia: Long-term evaluation of feminizing genitoplasty and psychosocial aspects. *Pediatr Surg Int* 2006;**22**:905–9.
6. Nayak B, Guleria S, Varma M, Tandon N, Aggarwal S, Bhowmick D, *et al.* Effect of bisphosphonates on bone mineral density after renal transplantation as assessed by bone mineral densitometry. *Transplant Proc* 2007;**39**:750–2.
7. Marwaha RK, Tandon N, Reddy DH, Mani K, Puri S, Aggarwal N, *et al.* Peripheral bone mineral density and its predictors in healthy school girls from two different socioeconomic groups in Delhi. *Osteoporos Int* 2007;**18**:375–83.
8. Marwaha RK, Tandon N, Singh Y, Aggarwal R, Grewal K, Mani K. A study of growth parameters and prevalence of overweight and obesity in school children from Delhi. *Indian Pediatr* 2006;**43**:943–52.
9. Khadgawat R, Tandon N. Inhaled insulin. *Natl Med J India* 2006;**19**:183–6.
10. Vupputuri MR, Goswami R, Gupta N, Ray D, Tandon N, Kumar N. Prevalence and functional significance of 25-hydroxyvitamin D deficiency and vitamin D receptor gene polymorphisms in Asian Indians. *Am J Clin Nutr* 2006;**83**:1411–9.
11. Kanga U, Tandon N, Marwaha RK, Khanna R, Bhattacharya B, Singh S, *et al.* Immunogenetic association and thyroid autoantibodies in juvenile autoimmune thyroiditis in North India. *Clin Endocrinol (Oxf)* 2006;**64**:573–9.
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- regulation in asymmetric intrauterine fetal growth. *J Matern Fetal Neonatal Med* 2006;**19**:615–23.
13. Harinarayan CV, Kochupillai N, Madhu SV, Nandita G, Meunier PJ. Fluorotoxic metabolic bone disease: An osteo-renal syndrome caused by excess fluoride ingestion in the tropics. *Bone* 2006;**39**:907–14.
  14. Mathur RP, Dash SC, Nandita G, Prakash S, Saxena S, Bhowmik D. Effects of correction of metabolic acidosis on blood urea and bone metabolism in patients with mild to moderate chronic kidney disease: A prospective randomized single blind controlled trial. *Ren Fail* 2006;**28**:1–5.
  15. Mishra SK, Gupta N, Goswami R. Plasma ACTH values and cortisol response to 250- and 1- $\mu$ g ACTH stimulation in patients with hyperthyroidism before and after carbimazole therapy: case-control comparative study. *J Clin Endocrinol Metab* 2007. [Epub ahead of print]
  16. Ray D, Goswami R, Banerjee U, Dadhwal V, Goswami D, Mandal P, *et al.* Prevalence of *Candida glabrata* and its response to boric acid vaginal suppositories in comparison with oral fluconazole in patients with diabetes and vulvovaginal candidiasis. *Diabetes Care* 2007;**30**:312–7.
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  18. Goswami R, Marwaha RK, Goswami D, Gupta N, Ray D, Tomar N, *et al.* Prevalence of thyroid autoimmunity in sporadic idiopathic hypoparathyroidism in comparison to type 1 diabetes and premature ovarian failure. *J Clin Endocrinol Metab* 2006;**91**:4256–9.
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  20. Baniasadi V, Narain N, Goswami R, Das SN. Promoter region-318 C/T and -1661 A/G CTLA-4 single nucleotide polymorphisms and type 1 diabetes in North Indians. *Tissue Antigens* 2006;**67**:383–9.
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### Chapters in books

23. Dada R, Kumar R, Ammini AC, Kucheria K. Haematological malignancy and klinefelters syndrome. In: G.K. Manna, R.K. Das, S. Chatterjee, G.C. Sadhukhan (eds). *Perspectives in cytology and genetics*. All India Congress on Cytology and

- Genetics, 2006;12:497–9.
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  25. Bhatia R, Gupta N, Tripathi M, Dureja GP, Bijlani RL, Mathur R. Status of central opioidergic system and muscle spasm in chronic tension type headache: Perspective role in management. In: R. Mathur (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers, 2006.

## **PATIENT CARE**

### **OPD activity**

The department has OPD on all six working days with two specialty clinics, Paediatric and Adolescent Endocrinology clinic (PAEC) (every Monday, 2–5 pm), and Diabetes of Young clinic (DOY) (every Saturday 9–1 pm).

### **General Endocrine OPD**

Total number of new cases	8,820
Total number of old cases	21,168
Diabetes of Young clinic (DOY)	1,536

### **Pediatric and Adolescent Endocrinology clinic (PAEC)**

New cases	311
Old cases	552

### **Laboratory Investigations**

Total number of DXA scan done	1,705
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The total number of endocrine investigations done during this period was 31,642, while Metabolic laboratory of the department carried out 20,737 investigations. The break-up of these investigations is given below.

<b>S.No.</b>	<b>Hormone</b>	<b>Number of samples assayed</b>
1.	T4	6,400
2.	TSH	8,630
3.	TPO	1,201
4.	LH	1,285
5.	FSH	1,388
6.	PRL	1,235
7.	Testosterone	1,106
8.	Cortisol	2,902
9.	17-OH progesterone	334
10.	DHEAS	287

11.	ACTH	530
12.	25-OH vitamin D	1,313
13.	PTH	1,095
14.	Insulin	2,248
15.	C-peptide	1,061
16.	GAD antibody	307
17.	Growth hormone	320
	<b>Total</b>	<b>31,642</b>

### Investigations done in the Metabolic Laboratory

	<b>Investigation</b>	<b>Number of Samples</b>
1.	Blood sugar	12,000
2.	Glycosylated haemoglobin	4,536
3.	Urinary creatinine	1,400
4.	Urinary albumin	1,400
5.	Urine pH	201
6.	Osmolality	300
7.	Calcium	300
8.	Phosphorus	300
9.	Alkaline phosphatase	300
	<b>Total</b>	<b>20,737</b>

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Dr A.C. Ammini** was President, Endocrine Society of India; Vice President, Indian Thyroid Association; Member, Executive Committee, International Society for hypospadias and intersex disorders.

**Dr Nikhil Tandon** has been elected Fellow of the National Academy of Sciences, India; appointed on the Editorial Advisory Board of *Prevention*, a publication from the India Today Group; Member, Editorial Board, *DMA Journal*.

**Dr R. Goswami** was reviewer of the following journals; *Clinical endocrinology*, *Diabetes Care*, *International Journal of Immunogenetics*, *Diabetes Research and Clinical Practice (Asia Pacific)*, *Southern Medical journal*, *Journal of Bioscience*, *Journal of Post graduate Medicine*, *National Medical Journal of India*, *Indian Journal of Medical and Pediatric Oncology*, *Journal of the college of Physicians and Surgeons Pakistan*, *Experimental Review of Clinical Immunology and Mycoses*.

**Dr Rajesh Khadgawat** participated as representative of India Society of Bone and Mineral Research (ISBMR) in International Osteoporosis Federation meeting, Toronto, Canada; 2–6 June 2006.

## 9.11 Forensic Medicine

	<b>Professor and Head</b> T.D. Dogra	
	<b>Additional Professors</b>	
R.K. Sharma	O.P. Murty	D.N. Bhardwaj
	<b>Associate Professor</b> S.K. Gupta	
	<b>Assistant Professors</b>	
Millo Tabin	Sanjeev Lalwani (JPNATC)	Adarsh Kumar (JPNATC)
	<b>Scientist II</b> Anupuma Raina	
	<b>Chemist</b> A.K. Jaiswal	

### EDUCATION

The department is actively engaged in undergraduate and postgraduate teaching with five postgraduate (MD) students and one PhD student. The department is also imparting training in DNA fingerprinting and Toxicology to BSc/MSc students from other Indian universities. Twenty-eight such students got training in department.

### Continuing Medical Education

#### Conferences/Symposium/Workshop

1. South Asian and Seventh Annual National Conference of Indian Congress of Forensic Medicine and Toxicology (ICFMT) was organized at JLN Medical College, Aligarh in which department was an active collaborator. About 250 delegates from various countries participated in the conference.
2. Symposium on 'Emerging trends in medical toxicology' was organized at AIIMS as part of the Golden Jubilee Celebration of Institute. It was attended by about 150 participants.
3. Workshop on 'Training course on DNA techniques' was organized in collaboration with National Institute of Criminology and Forensic Science (NICFS), Rohini. It was attended by scientists of CFSL and FSLs from all over country.

#### Lectures

The departmental faculty/staff participated in training programmes organized by the Academy of CBI, NICFS, Academy of IAS trainees, Haryana Institute of Rural Development Nilokhari, Karnal (HR) Amity Institute. Lectures and demonstrations were held for CBI officials, police officers, judicial officers, medical officers and forensic science experts from all over country.

## Departmental Projects

### Completed

1. Auditing of medicolegal work
2. Comprehensive study of fire-arm related deaths
3. Comprehensive study of unnatural deaths among the elderly in South Delhi.

### Ongoing

1. A comprehensive autopsy study of sudden natural deaths in South Delhi
2. Inferring genetic diversity and molecular relatedness among the Indian Saraswat community at various STR loci.

## PUBLICATIONS

### Journals

1. Behra C, Sunay M, Millo T. Sudden death due to strangulated inguinal hernia: A forensic autopsy case report. *J For Med Toxicol* 2006;**23**:12–4.
2. Behra C, Jaiswal AK, Lalwani S, Bhardwaj DN, Sharma RK. Alcohol content in country made liquors: Forensic consideration. *Medico-legal Update* 2007;**7**:25–30.
3. Bhardwaj DN, Millo T, Lalwani S. Skeleton used for anatomical study brought for medico-legal autopsy: A case report. *Med Sci Law* 2007;**47**:86–7.
4. Jaiswal AK, Millo T, Gupta M. Gas chromatography and its forensic applications: A review *Int J Med Toxicol Legal Med* 2006;**8**:30–41.
5. Jaiswal AK, Millo T. Do's and Don'ts for sophisticated analytical instruments. *Int J Med Toxicol Legal Med* 2006;**9**:6–8.
6. Jaiswal AK, Moon M, Mohrana M, Gupta M. Determination of Barium in forensic samples by Atomic Absorption Spectrophotometer. *J Foren Med Toxicol* 2006;**23**:6–8.
7. Jaiswal AK, Millo T, Murty OP. Extraction, isolation and clean up methods for pesticides/insecticides and alkaloids from biological material. *Int J Med Toxicol Legal Med* 2006;**9**:28–32.
8. Kumar A, Vij K. The quality of citations in JIAFM: Where do we stand? *J Indian Acad Foren Med* 2006;**28**:1–4.
9. Kumath M, Kumar A, Lalwani S, Murty OP. Legal immunity in accidents (from victims perspective). *Int J Med Toxicol Legal Med* 2006;**9**:9–11.
10. Kumath M, Sharma RK. Artefact misinterpreted as strangulation. *Medico-legal Update* 2007;**7**:23–4.
11. Millo T, Mishra R, Girdhar S, Rautji R, Lalwani S, Dogra TD. Fatal pulmonary odema following laproscopic chromopertubation. *NMJ* 2006;**19**:78–9.
12. Millo T, Murty OP. Female victims of violent crimes and abuses: An overall view of Indian scenario. *Int J Med Toxicol Legal Med* 2006;**8**:18–24.
13. Raina A, Yadav BK, Lalwani S, Dogra TD. Effect of different preservatives on the human soft tissues stored at different temperatures and intervals of time for isolation

- of DNA for DNA fingerprinting. *Indian Internet J Foren Med Toxicol* 2006;**4**:2 [www.icfmt.org/index2.htm](http://www.icfmt.org/index2.htm)
14. Rautji R, Behra C, Lalwani S, Dogra TD. Epidemiological study of fatal road traffic accident cases: A study from South Delhi. *Indian Med Gaz* 2006; **CXL**:375–9.
  15. Rautji R, Bhardwaj DN, Dogra TD. The abbreviated injury scale and its co-relation with preventable traumatic accidental deaths: A study from South Delhi. *Med Sci Law* 2006;**46**:157–65.
  16. Singh D, Kumar Adarsh, Vij K, Gargi J. A Comparative study of deaths due to hanging and strangulation in the North West region of Punjab. *Indian Internet J Foren Med Toxicol* 2006;**4**:106–15 [www.icfmt.org/index2.htm](http://www.icfmt.org/index2.htm)

### **Chapter in Books**

1. Sharma RK. *MCQs in forensic medicine and toxicology*. 1st ed. New Delhi: Jaypee Brothers; 2006:126.

### **PATIENT CARE**

#### **Casualty Services**

The department continued to provide round-the-clock coverage to the casualty in medicolegal cases, e.g. injury, sexual offences, poisoning and other complicated medicolegal cases. The department is attending all the calls pertaining to medical examination in police and judicial custody.

#### **Medicolegal postmortem performed**

**1763**

The department provided consultation services to the CBI, crime branch and other central and state investigating agencies from various states in complicated medicolegal postmortem conducted at other centres of the country and also participated in board postmortem cases.

#### **Court attendance by the members of the department**

**2038**

Doctors of the department also attended court on behalf of the Medical Superintendent, other doctors who have left AIIMS as directed by the court. About 1200 such summons were attended by the department.

#### **Clinical forensic medicine**

The department examined cases of age estimation, medical examination, marriage disputes, potency, DNA fingerprinting, etc. referred by the court, CBI and other investigating agencies. Sixty-two such cases were dealt in 2006–07.

#### **DNA fingerprinting**

The department is providing training in DNA fingerprinting to the candidates sponsored by



various universities. It is performing DNA fingerprinting test in selected medicolegal cases. **101** samples were processed for DNA fingerprinting in 2006–07. The department also provided training to **28** students in DNA fingerprinting and Toxicology.

### **Medical Toxicology**

Tests for various poisons, e.g. heavy metals opiates, benzodiazepines and alcohol were done in the toxicology laboratory. One hundred-seventeen such tests were performed during this period. An exercise on ‘Comparison of Breath Analyzer (Alcometer) reading from different companies with that of GLC’ was done in collaboration with Delhi Traffic Police so that most sensitive and reliable breath analyser can be purchased by traffic police for alcohol estimation in drunken drivers.

### **Community services**

The department participated in training programmes organized by the Academy of CBI and NICFS. Lectures and demonstrations were held for CBI officials, police officers, medical officers, judges, public prosecutors and forensic science experts from all over country.

### **AWARDS AND HONOURS**

**Dr Anupama Raina**, Scientist II was awarded the fellowship of Indian Congress of Forensic Medicine and Toxicology (ICFMT).

## 9.12 Gastroenterology

### Professor and Head

S.K. Acharya

### Professors

Y.K. Joshi

Umesh Kapil  
(on foreign assignment)

Rakesh Aggarwal

Anoop Saraya

### Associate Professors

Pramod Garg

Vineet Ahuja

Govind K. Makharia

### EDUCATION

Undergraduate, postgraduate, PhD and paramedical training programme remained the same.

#### Short- and long-term training

Six candidates underwent training during 2006–2007; they were trained for a period of 3 months to 6 months. Twelve DM candidates and 8 PhD candidates underwent long-term training.

#### Continuing Medical Education

1. 'Current perspectives in liver disease (CPLD)', CME programme on liver disease, jointly organized by PGIMER, Chandigarh and AIIMS; 2–3 August 2006.
2. INDO-US symposium on 'Inflammatory Bowel Disease—Quo Vadis' in association with mid-term meeting of Indian Society of Gastroenterology; 24–25 March 2007.
3. One-day workshop on 'Research methodology and scientific writing', Annual Conference of Indian Orthodontics Society, Organized by Dr Rakesh Aggarwal (Gastroenterology) along with Dr Peush Sahni (Gastrointestinal Surgery), AIIMS, New Delhi; 24 February 2007.
4. Two workshops on 'Scientific writing' organized for CMET by Dr Rakesh Aggarwal (Gastroenterology) along with Dr Peush Sahni (Gastrointestinal Surgery), AIIMS.

#### National and International Conferences

The department faculty delivered 54 guest lectures in national and international conferences.

### RESEARCH

#### Funded Projects

##### Completed

1. Epidemiological studies on hepatitis E. Rakesh Aggarwal. Funded by the Department of Biotechnology, Government of India for 3.5 years. Funds: Rs 9 lakh.
2. Role of genetic mutations in chronic pancreatitis. Pramod Garg, M. Kabra. Funded by ICMR for 3 years. Funds: Rs 12 lakh.

3. Role of leptin in tropical pancreatitis. Pramod Garg, Anoop Mishra. Funded by AIIMS for one year Funds: Rs 27,500.
4. Prevalence, aetiological factors and treatment of malnutrition by dietary intervention in patients with chronic pancreatitis. YK Joshi, Pramod Garg, N. Singh. Funded by ICMR for 3 years. Funds: Rs 10.80 lakh.
5. Molecular epidemiology of *Helicobacter pylori*: Its implications in failure of eradication, recurrence of infection after successful eradication and route of re-infection in patients of peptic ulcer disease. Vineet Ahuja. Funded by Department of Science and Technology. Funds: Rs 8.10 lakh.
6. Comparison of diagnostic efficacy of immuno-histochemistry with histology (Warthin Starry stain) and urease based tests (rapid urease test, C14 urea breath test) before and after eradication of *helicobacter pylori* in peptic ulcer disease. Vineet Ahuja. Funded by ICMR for 3 years (2003–2006). Funds: Rs 4.10 lakh.
7. Standardization and validation of non-invasive tests of intestinal permeability and Standardization and validation of faecal calprotectin test as a noninvasive marker of intestinal inflammation. Vineet Ahuja. Funded by AIIMS intramural grant for 2 years (2005–2007). Funds: Rs 1 lakh.

### ***Ongoing***

1. Randomized trial of pegylated interferon vs. lamivudine followed by PEG-1 for 1 year among patients with CH-B. S.K. Acharya. Funded by Fulford India for 4 years. Funds: Rs 24 lakh.
2. Double-blind placebo-controlled randomized trial of L-ornithine-L aspartate among patients with acute liver failure. S.K. Acharya. Funded by Intas Pharmaceutical for 3 years. Funds: Nil (company supply drugs and placebo).
3. Advanced centre for liver disease (institute and different projects in liver diseases). S.K. Acharya. Funded by ICMR. Funds: Rs 12 crore.
4. A multicentric randomized controlled clinical trial of adefovir, adefovir + lamivudine and combination of adefovir and glycyrrhizin in HBV related decompensated cirrhosis. S.K. Acharya. Funded by ICMR for 3 years. Funds: Rs 2,36,35,699.
5. Effect of glutamine on intestinal structure and function in patients with inflammatory bowel diseases. Y.K. Joshi. Funded by ICMR for 3 years. Funds: Rs 12 lakh.
6. Assessment of intestinal permeability of chronic liver disease and its consequences. Y.K. Joshi. Funded by ICMR for 3 years. Funds: Rs 22 lakh.
7. A mathematical decision-analysis model to study the efficacy and cost-effectiveness of prophylactic cholecystectomy in preventing complications, especially gallbladder cancer in patients with asymptomatic gallstones. Rakesh Aggarwal. Funded by ICMR for 1.5 years (August 2006–February 2008). Funds: Rs 2.41 lakh for 1st year.
8. Prevalence of obesity and associated diseases amongst children in 5–18 years of age in the National Capital Territory of Delhi. Umesh Kapil. Funded by ICMR for 2 years and 6 months. Funds: Rs 12,00,000.

9. Epidemiology of gallbladder cancer with special reference to nutritional risk factors. Umesh Kapil. Funded by ICMR for 3 years. Funds: Rs 10,66,264.
10. Assessment of magnitude of zinc deficiency amongst children in 6 months to 60 months of age in different regions of India. Umesh Kapil. Funded by Department of Biotechnology for 2 years and 3 months. Funds: Rs 36,72,618.
11. Landscape analysis of zinc and its effect on child morbidity and mortality. Rakesh Aggarwal. Funded by Fogarty International Center, NIH, USA for 2 years. Funds: US\$ 18,900.
12. Is idiopathic chronic pancreatitis a pre-malignant disease? Pramod Garg. Funded by ICMR for 3 years. Funds: Rs 14 lakh.
13. Role of MCP-I gene polymorphism in acute pancreatitis. Pramod Garg. Funded by AIIMS for 2 years. Funds: Rs 1,27,000 per year.
14. Efficacy of curcumin and its effect on cytokine profile in rectal biopsies of patients with ulcerative colitis. Vineet Ahuja. Funded by Himalaya Drug Co for 3 years (2004–2007). Funds: Rs 4.2 lakh.
15. Comparison of single dose SPD 476 with mesalamine. Vineet Ahuja. Funded by Shire Pharma Ltd, Multicenter International trial. Funds: Rs 6 lakh.
16. An open labeled trial of probiotics (VSL3) versus mesalamine in patients with microscopic colitis. Vineet Ahuja. Funded by CD Pharma Ltd. Funds: Rs 4.5 lakh.
17. Double-blind randomized placebo-controlled study of a probiotic preparation VSL#3 for the treatment of mild to moderate ulcerative colitis. Govind Makharia. Funded by CD Pharma Ltd for 2 years (2005–2007). Funds: Rs 100,000.
18. Screening of patients with functional bowel disease, short stature, metabolic bone disease, amenorrhea and infertility for celiac disease. Govind Makharia. Funded by AIIMS for 2 years (2006–2008). Funds: Rs 94,000.

## **Departmental Projects**

### **Completed**

1. Non-alcoholic fatty liver disease is not severe in India
2. Vitamin E based therapy ameliorates transaminitis in NAFLD
3. Randomized trial of IV somatostatin and nitroglycerine vs IV somatostatin among cirrhotic patients with acute variceal bleeding
4. Coagulation abnormality and results of angioplasty among patients with HVOTO
5. Randomized controlled trial of MARS in patients with acute liver failure
6. Ammonia kinetics in acute liver failure
7. Dynamics of sepsis in acute liver failure
8. Seizures in acute liver failure
9. Randomized controlled trial of radiofrequency ablation and percutaneous acetic acid in patients with primary hepatocellular cancer
10. Effect of transdermal glyceryl trinitrate or pericoxib (valdecoxib) in the prevention of post ERCP pancreatitis

11. Role of anti-oxidants for pain relief in patients with chronic pancreatitis
12. Study of the characteristics and outcome of early severe acute pancreatitis
13. Incidence and spectrum of bacterial, viral, fungal and protozoal infection in inflammatory bowel disease
14. Prevalence of GERD in a rural community in Ladakh
15. Prevalence of secondary bacterial infection in untreated amebic liver abscess
16. Variations of presentation of celiac disease in India
17. Spectrum of microscopic colitis at a tertiary care center in India
18. Clinical features, endoscopic features, and histological features of intestinal lymphangiectasia

### ***Ongoing***

1. Assessment of quality of life in persons with chronic inactive hepatitis B virus infection
2. Meta-analysis of role of adefovir dipivoxil for adults with chronic hepatitis B
3. Randomized study of biliary drainage versus conservative therapy for hilar malignant biliary obstruction due to cancer of the gallbladder
4. The role of endosonography in the evaluation of obscure biliary obstruction
5. Prevalence of bactobilia in patients with malignant biliary obstruction and its influence on endoscopic biliary drainage
6. A study of the risk factors for cancer of the pancreas
7. A study of the risk factors for cancer of the gallbladder
8. A comparison of diagnostic efficacy of double balloon enteroscopy versus magnetic resonance enteroclysis in evaluating patients with abdominal tuberculosis and Crohn's disease
9. Genomic diversity of *E. histolytica* isolates and identification of genotype—clinical phenotype correlations
10. A randomized controlled factorial trial evaluating long term therapy for *H. pylori* eradication in peptic ulcer disease
11. A study of assessment of dietary fiber intake in patients with irritable bowel syndrome and healthy individuals
12. Relationship between intestinal permeability in anti-saccharomyces cerevisiae antibody in patients with Crohn's disease

### **Collaborative Projects**

#### ***Completed***

1. Analysis of surface promoter mutants detected in occult HBV infection (with Pathology)
2. Cost effectiveness of screening strategy to detect HCC among patients with cirrhosis (with Radiology)
3. Development of mouse and chiminic monoclonal antibody against HBsAg (with Biochemistry)

4. Study on hepatitis markers, transactivating proteins, proliferation markers, oncogenes in patients with primary liver cell cancers (with Pathology)
5. Randomized trail of endoscopic drainage versus percutaneous drainage in obstructive jaundice due to cancer of the gallbladder (with GI Surgery)
6. Evaluation of computerized tomography enteroclysis in identification of cause of obscure gastrointestinal bleeding.
7. Structure and functions of lungs in patients with achalasia cardia (with Medicine, Radiodiagnosis)
8. Magnetic resonance spectroscopy in differentiation of intestinal tuberculosis from inflammatory bowel disease.
9. A study of emerging parasitic agents intestinal coccidia and microsporidia in etiology of malabsorption syndrome

### ***Ongoing***

1. Nonalcoholic fatty liver disease in India (with Pathology)
2. Viral kinetics in chronic HBV infection (with Pathology)
3. HbeAg-ve chronic hepatitis B: Magnitude, natural course and therapeutic response (with Pathology)
4. Study on hepatitis markers, transactivating proteins, proliferation markers, oncogenes in patients with primary liver cell cancers (with Pathology)
5. Correlation of hepatitis B virus DNA in serum with viral core and surface antigen detection in liver tissue by Immunohistochemistry in occult hepatitis B virus infection (with Pathology)
6. Cellular immune responses to hepatitis E virus (HEV) infection. (with Department of Immunology, SGPGI, Lucknow)
7. Role of endotherapy and ESWL in the treatment of chronic pancreatitis (with Urology)
8. Randomized trial of endoscopic stenting versus cholecystojejunostomy in patients with peri-ampullary cancer with obstructive jaundice (with GI Surgery)
9. Functional magnetic resonance imaging and magnetic resonance imaging in patients with achalasia cardia (with Nuclear Magnetic Resonance)
10. PET-CT-enteroclysis: A new technique for evaluation of small intestinal inflammatory diseases (with Nuclear Medicine)
11. Autonomic and immune functions in inflammatory bowel disease: Effect of yogic intervention (with Physiology)
12. Prevalence of osteoporosis and osteopenia in patients with inflammatory bowel disease (with Endocrinology and Metabolism)
13. A comparison of metabolites in the involved and non-involved segment of the colon in patients with inflammatory bowel disease using MR spectroscopy (with Nuclear Magnetic Resonance)
14. A study of Mycobacterium paratuberculosis in patients with Crohn's disease (with Microbiology, Biotechnology)

15. Detection, identification and molecular characterization of intestinal coccidia and microsporidia in patients with chronic diarrhoea and malabsorption syndrome (with Microbiology)

## PUBLICATION

### Journals

1. Acharya SK, Sharma PK, Singh R, Mohanty SK, Madan K, Jha JK, *et al.* Hepatitis E virus (HEV) infection in patients with cirrhosis is associated with rapid decompensation and death. *J Hepatology* 2007;**46**:387–94.
2. Acharya SK, Madan K, Gupta DS, Panda SK. Viral hepatitis in India. *Natl Med J India* 2006;**19**:203–17.
3. Acharya SK, Panda SK. Hepatitis E virus: Epidemiology, diagnosis, pathology and prevention. *Trop Gastroenterol* 2006;**27**:63–8.
4. Sugiyama M, Tanaka Y, Kato T, Orito E, Ito K, Acharya SK, *et al.* Influence of hepatitis B virus genotypes on the intra- and extra-cellular expression of viral DNA and antigens. *Hepatology* 2006;**44**:915–24.
5. Bhatia V, Singh R, Acharya SK. Predictive value of arterial ammonia for complications and outcome in acute liver failure. *Gut* 2006;**55**:98–104.
6. Bose B, Khanna N, Acharya SK, Sinha S. Generation and characterization of a single-gene mouse human chimeric antibody against hepatitis B surface antigen. *J Gastroenterol Hepatol* 2006;**21**:1439–47.
7. Kumar A, Bal C, Srivastava DN, Thulkar SP, Sharma S, Acharya SK, *et al.* Management of multiple intrahepatic recurrences after radiofrequency ablation of hepatocellular carcinoma with rhenium-188-HDD-lipiodol. *Eur J Gastroenterol Hepatol* 2006;**18**:219–23.
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9. Sharma PK, Singh Rajvir, Mohanty SK, Madan K, Jha JK, Panda SK. Hepatitis E virus infection in-patients with cirrhosis is associated with rapid decompensation and death. *J Hepatology* 2006;**46**:387-94.
10. Bose B, Khanna N, Acharya SK, Sinha S. Generation and characterization of a high-affinity chimaeric antibody against hepatitis B surface antigen. *Biotechnol Appl Biochem* 2006;**43**:93–101.
11. Irshad M, Dhar J, Joshi YK. Significance of hepatitis C virus core protein in the diagnosis of hepatitis C virus infection in different liver diseases. *J Investig Med* 2006;**54**:478–83.
12. Irshad M, Joshi YK, Sharma Y, Dhar I. Transfusion transmitted virus: A review on its molecular characteristics and role in medicine. *World J Gastroenterol* 2006;**12**:5122–34.

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14. Singh V, Pal HR, Mehta M, Kapil U. Tobacco consumption and awareness of their health hazards amongst lower income group school children in National Capital Territory of Delhi. *Indian Pediatr* 2007;**44**:293-5.
15. Kapil U, Sharma TD, Singh P. Iodine status and goiter prevalence after 40 years of salt iodisation in the Kangra District, India. *Indian J Pediatr* 2007;**74**:135-7.
16. Kapil U, Singh P, Dwivedi SN, Pathak P. Status of iodine nutriture and universal salt iodisation at beneficiaries levels in Kerala State, India. *J Indian Med Assoc* 2006;**104**:165-7.
17. Kapil U. Vitamin A deficiency in children. *Indian J Med Res* 2006;**123**:711.
18. Aggarwal R. Hepatitis E and pregnancy (editorial). *Indian J Gastroenterol* 2007;**26**:3-5.
19. Madan K, Bhardwaj P, Thareja S, Gupta SD, Saraya A. Oxidant stress antioxidant status among patients with nonalcoholic fatty liver disease (NAFLD). *J Clin Gastroenterol* 2006;**40**:930-5.
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22. Garg PK, Tandon RK, Madan M. Is biliary microlithiasis a significant cause of idiopathic recurrent acute pancreatitis? A long-term follow-up study. *Clin Gastroenterol Hepatol* 2007;**5**:75-9.
23. Sathyanarayan G, Garg PK, Prasad HK, Tandon RK. Elevated level of interleukin-6 predicts organ failure and severe disease in patients with acute pancreatitis. *J Gastroenterol Hepatol* 2007;**22**:550-54.
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26. Makharia GK, Sachdev V, Gupta R, Lal S, Pandey RM. Anti-saccharomyces cerevisiae antibody does not differentiate between Crohn's disease and intestinal tuberculosis. *Dig Dis Sci* 2007;**52**:33-9.
27. Jain TP, Gulati MS, Makharia GK, Bandhu S, Garg PK. CT enteroclysis in the diagnosis of obscure gastrointestinal bleeding: Initial results. *Clin Radiol* 2007;**62**:60-7.
28. Byeon JS, Yang SK, Kim TI, Kim WH, Lau JY, Leung WK, *et al.* For the Asia Pacific working group for colorectal cancer. Colorectal neoplasm in asymptomatic



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  30. Panigrahi I, Ahmad F, Kapoor R, Sharma PK, Makharia G, Saxena R. Evidence for non-HFE linked hemochromatosis in Asian Indians. *Indian J Med Sci* 2006;**60**:491–5.
  31. Makharia GK. Colorectal cancer in India: Present status. *Trop Gastroenterol* 2006;**27**:139–41.
  32. Madan K, Chalamalasetty SB, Sharma M, Makharia G. Corrosive-like strictures caused by ingestion of aluminium phosphide. *Natl Med J India* 2006;**19**:313–4.
  33. Mahapatra M, Mishra P, Makharia G, Kumar R, Saxena R. Acquired von Willebrand's disease associated with gastrointestinal angiodysplasia and monoclonal gammopathy. *J Assoc Physicians India* 2006;**54**:963.
  34. Baba CS, Makharia GK, Mathur P, Ray R, Gupta SD, Samantaray JC. Chronic diarrhoea and malabsorption caused by leishmania donovani. *Indian J Gastroenterol* 2006;**25**:309–10.
  35. Wechalekar M, Falodia S, Gamanagatti S, Makharia GK. An extension of pancreatic pseudocysts in the neck. *Pancreas* 2007;**34**:171–3.
  36. Madan K, Sharma PK, Makharia G, Poojary G, Deepak KK. Autonomic dysfunction due to lead poisoning. *Auton Neurosci* 2007;**132**:103–6.
  37. Makharia G. Where are Indian adult celiacs? *Trop Gastroenterol* 2006;**27**:1–3.
  38. Makharia GK. Colorectal cancer in India: Present status (Invited Editorial). *Trop Gastroenterol* 2006;**27**:139–41.
  39. Sethuraman G, Malhotra AK, Khaitan BK, Sharma VK, Kumar R, Makharia GK, *et al*. Familial pachydermoperiostosis in association with protein-losing enteropathy. *Clin Exp Dermatol* 2006;**31**:531–4.
  40. Makharia GK, Seith A, Sharma SK. Pulmonary dysfunctions in patients with achalasia of the cardia. *J Clin Gastroenterol* 2006;**40** (8 Suppl 4):S187–8.
  41. Senthil SK, Makharia GK, Jagannathan NR. Brain activation pattern in patients with achalasia cardia using functional magnetic resonance imaging. *Indian J Gastroenterol* 2006;**25** (Suppl 2):A2.
  42. Behera B, Mirdha BR, Makharia GK, Bhatnagar S, Gupta DS, Samantaray JC. A study of intestinal Coccidia and Microsporidia and other parasitic infections in patients with malabsorption syndrome. *Indian J Gastroenterol* 2006;**25** (Suppl 2):A34.
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  44. Bhatnagar N, Singal A, Makharia GK, Prasad HK. Immunoglobulin G and IgA serum antibodies to Histone like protein og M tuberculosis (HupB, Rv2986C) in inflammatory intestinal diseases. *Indian J Gastroenterol* 2006;**25** (Suppl 2):A47.
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- enteroclysis in the evaluation of patients with obscure gastrointestinal bleeding: A pilot study. *Indian J Gastroenterol* 2006;**25** (Suppl 2):A159.
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### Chapters in Books

49. Krawczynski K, Aggarwal R. Hepatitis E. In: Feldman M, Friedman LS, Brandt LJ (eds). *Sleisenger and Fordtran's Gastrointestinal and Liver Disease*. 8th ed. London: Elsevier; 2006:1713–8.
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## PATIENT CARE

### Special clinics

Name of the clinic	New cases	Old cases
Liver	550	6,906
Gallstone and pancreas	314	558
Ulcer clinic	66	303
IBD clinic	177	900
Interventional clinic	314	558

### Routine clinic

New cases	17,216
Old cases	27,289

### Procedures

Endoscopy	5,000
Colonoscopy	700
EST and EVL	1,650
Sigmoidoscopy	170
Sideview	90
ERCP	540
EUS	130
Ultrasound	3,420

### Tests undertaken in the department

Serum ceruloplasmin	310
1. Serum copper	328
2. 24-hour urinary copper	312
3. TNF	180
4. Il-6	180
5. IL-1	180
6. Adeponectin	180
7. Leptin	180
8. Insulin	180
9. Lipid peroxidation	100
10. Total antioxidant capacity	100
11. Vitamin C	100
12. Vitamin A	100
13. Super oxide dismutase	100
14. Human anti-transglutaminase IgA autoantibodies	150
15. Catalase activity	100
16. Nitric oxide	100
17. Alpha feto protein	100
18. Neutrophil function test	100
19. Dxylose	608
20. Fecal chymotrypsin	105
21. Fecal fat	140
22. Hydrogen breath test	60
23. Fecal elastase	80
24. Anti-sacchromyces cerevical antibody A	80
25. Anti Sacchromyces cerevical antibody G	80

### AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Dr Rakesh Aggarwal** elected as Fellow of Indian Academy of Sciences, Bangalore (2007); Awarded a Commonwealth Scholarship for pursuing MSc (Epidemiology) course of the London School of Hygiene and Tropical Medicine and University of London by distance education; elected as an Associate Editor, *Indian Journal of Gastroenterology*;

**Dr Pramod Garg** was elected Governing Council Member of the Society of Gastrointestinal Endoscopy of India; nominated as a Member of the International editorial board of *Journal of Gastroenterology and Hepatology*.

**Dr Vineet Ahuja** was appointed as Editor of *Tropical Gastroenterology*.

**Dr Govind Makharia** was nominated as Coordinator, Indian Society of Gastroenterology Task Force on Inflammatory Bowel Disease; nominated as Member, Indian Society of Gastroenterology Task Force on Irritable Bowel Syndrome; Member, Asia Colorectal Polyp STUDY Group.

### **VISITING SCIENTISTS**

1. Dr K.K. Madhavan from Scotland, UK, visited the department on 31 July 2006.
2. Dr Robert Finberg, Chairman, Department of Medicine, University of Massachusetts, USA, visited the department on 29 September 2006.
3. Dr Sushil K. Sarna from the University of Texas Medical Branch, Galveston, USA, visited the department on 25 October 2006.
4. Dr Scott L. Friedman, Professor of Medicine, Chief Division of Liver Diseases, New York, USA, visited the department on 4 December 2006.
5. Dr Satish K. Singh, Professor of Medicine from Boston Medical Centre, USA, visited the department on 24 February 2007.
6. Dr Anupam Pal from IIT, Kanpur visited the department on 8 March 2007.
7. Professor Michael Kew, Chief of Hepatology, University of Johannesburg, South Africa, visited the department on 19 March 2007.

## 9.13 Gastrointestinal Surgery

### **Professor and Head**

Tushar K. Chattopadhyay

### **Additional Professor**

Peush Sahni

### **Assistant Professors**

Sujoy Pal

Nihar Ranjan Dash

## **EDUCATION**

### **Undergraduate and Postgraduate**

The department faculty is involved in the didactic teaching programme for undergraduates, surgical postgraduates and postdoctoral trainees. The department offers a 3-year superspecialty training in gastrointestinal surgery leading to an award of MCh in Gastrointestinal Surgery.

### **Long-term training**

One trainee sponsored by the World Health Organization and the Government of Nepal has joined the department for one-year training period. One trainee sponsored by the State Medical Services of Orissa continued his second year training.

## **Continuing Medical Education**

### **Conferences, Seminars and Workshops**

Dr Peush Sahni in collaboration with K.L. CMET, AIIMS conducted a workshop on 'How to write a scientific paper' on 9–10 March 2007. He also conducted a workshop on 'Research methodology and scientific writing' during the 11th Postgraduate Convention of the Indian Orthodontic Society, New Delhi on 24 February 2007.

## **National and International Conferences**

### **Professor T.K. Chattopadhyay**

1. 'Current concepts in the management of oesophageal cancer', Surgical education programme, Delhi chapter of Association of Surgeons of India, Apollo Hospital, Delhi; May 2006.
2. 'Surgical treatment of oesophageal cancer: Past, present and future', Annual Conference, West Bengal State Chapter of Association of Surgeons of India, Kolkata; September 2006.
3. 'Surgical treatment of Budd–Chiari syndrome', CME programme, Department of Gastroenterology, Postgraduate Institute of Medical Education and Research, Chandigarh; February 2007.

4. 'Tertiary peritonitis', Conference on intra-abdominal sepsis, Postgraduate Institute of Medical Education and Research, Chandigarh; March 2007.

#### **Dr Peush Sahni**

1. 'Liver resections', Scientific Meeting, Association of Surgeons of Assam, Dibrugarh; 2 May 2006.
2. 'Surgery for non-cirrhotic portal hypertension', Current perspectives in liver diseases 2006, New Delhi; 3 August 2006.
3. 'How to write a paper', Training workshop on 'Research Methodology in Yoga and Naturopathy', Central Council for Research in Yoga and Naturopathy, Delhi; 1 September 2006.
4. 'Cadaveric liver transplant in India. Is it still alive?', Mid-term meeting, Indian Association for the Study of the Liver, New Delhi; 19 January 2007.
5. 'Role of elective and emergency surgery', Consensus Development Meeting 2007, Asian Pacific Association for the Study of the Liver, New Delhi; 12 January 2007.
6. 'Hypersplenism in a non-bleeder: What surgery to do?', International update on 'Liver Transplantation and Portal Hypertension: Single theme conference', Indian Chapter IHPBA; 22 February 2007.
7. 'Has surgical therapy been neglected in ulcerative colitis', Mid-Term meeting, Indian Society of Gastroenterology and Indo-US Symposium on Inflammatory Bowel Disease: Quo Vadis?, New Delhi; 24 March 2007
8. 'Tables and figures: Making a figure worth a 1000 words' and 'One study=One Paper: Avoid slicing of papers', JPGM WriteCon 2007, A conference on 'Medical writing', KEM Hospital, Mumbai; 30–31 March 2007.

#### **Dr Sujoy Pal**

1. 'Surgery for chronic pancreatitis', XVI National Conference of Indian Association of Surgical Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow; October 2006.

## **RESEARCH**

### **Funded Projects**

#### ***Ongoing***

1. Design development and commercialization of an indigenous syringe pump. Peush Sahni. Funded by Department of Information Technology, Government of India for 30 months Funds: Rs 28 lakh.
2. Identification of novel oesophageal squamous cell carcinoma genes by using a combination of array-based CGH and gene expression microarrays. Murali Dharan Bashyam (PI), T.K. Chattopadhyay (Co-PI), Siddhartha Duttgupta and Sujoy Pal (Co-PI). Funded by DBT, Ministry of Science and Technology, Government of India for 36 months. Funds: Rs 73.26 lakh.

## **Departmental Projects**

### ***Completed***

1. A prospective study of the quality of life following endoscopic oesophageal stenting for inoperable patients with oesophageal carcinoma
2. Onco-gene assessment in younger age oesophageal cancer patients
3. An analysis of outcome following bilio-enteric bypass for post-cholecystectomy biliary stricture
4. Differentiation between benign and malignant hilar obstruction using laboratory and radiological investigations: A prospective study
5. A prospective randomized study comparing substernal and posterior mediastinal routes of gastric transposition following oesophagectomy
6. Study of gastric emptying following classical Whipple pancreaticoduodenectomy and pylorus-preserving pancreaticoduodenectomy using scintigraphic techniques
7. A study on quality of life following lateral pancreaticojejunostomy for patients with chronic pancreatitis

### ***Ongoing***

1. Randomized controlled study of comparison of outcome following ante-colic versus retro-colic reconstruction following pancreaticoduodenectomy
2. Randomized controlled trial of oesophageal resection versus bypass procedure following corrosive stricture of oesophagus
3. Prospective study of incidental carcinoma of gallbladder
4. A prospective randomized trial comparing preoperative radiotherapy and transhiatal oesophagectomy versus transhiatal oesophagectomy alone for squamous cell cancer of the lower third of oesophagus
5. A prospective randomized study to compare hand-sewn and stapled oesophago-gastric anastomosis following transhiatal oesophagectomy
6. Prospective evaluation of choledochoscopy for various biliary tract disorders
7. Prospective evaluation of the role of intraoperative enteroscopy in the management of obscure gastrointestinal bleeding

## **Collaborative Projects**

### ***Ongoing***

1. Role of neoadjuvant chemoradiotherapy in locally advanced carcinoma of gall bladder (with Radiation Oncology, Medical Oncology and IRCH)
2. A randomized controlled trial on proximal lienorenal shunt versus endoscopic variceal ligation/endoscopic sclerotherapy for patients with extrahepatic portal venous obstruction (with Gastroenterology)
3. Role of neoadjuvant chemoradiotherapy in adenocarcinoma of the gastro-oesophageal junction (with Radiotherapy)

4. Prospective study on the effect of lienorenal shunt on pericholedochal collaterals causing portal hypertensive biliopathy (with Gastroenterology)
5. A randomized controlled clinical trial of preoperative cholecystojejunostomy versus endoscopic stenting in surgical obstructive jaundice due to periampullary carcinoma (with Gastroenterology)
6. Endoscopic ultrasound for the evaluation of obstruction to the lower end of the biliary tree (with Gastroenterology)
7. The role of neoadjuvant chemotherapy in patients with locally advanced adenocarcinoma of the stomach (with Medical Oncology, IRCH)

## **PUBLICATIONS**

### **Journals**

1. Sud N, Sharma R, Ray R, Chattopadhyay TK, Ralhan R. Differential expression of G-protein coupled receptor 56 in human esophageal squamous cell carcinoma. *Cancer Lett* 2006;**233**:265–70.
2. Kumar A, Chattopadhyay TK, Dutta SG, Ralhan R. Loss of disabled-2 expression is an early event in esophageal squamous tumorigenesis. *World J Gastroenterol* 2006;**12**:6041–5.
3. Kumar A, Chattopadhyay TK, Raziuddin M, Ralhan R. Discovery of deregulation of zinc homeostasis and its associated genes in esophageal squamous cell carcinoma using cDNA microarray. *Int J Cancer* 2007;**120**:230–42.
4. Chava SP, Pal S, Ghatak S, Kumar R, Sahni P, Chattopadhyay TK. Splenectomy and proximal lieno-renal shunt in a factor five deficient patient with extra-hepatic portal vein obstruction. *BMC Surg* 2006;**6**:7.
5. Kandpal H, Sharma R, Saluja S, Sahni P, Vashisht S. Combined transmesocolic and left paraduodenal hernia: Barium, CT and MRI features. *Abdom Imag* 2006 Nov 7.
6. Saluja SS, Ray S, Gulati MS, Pal S, Sahni P, Chattopadhyay TK. Acute cholecystitis with massive upper gastrointestinal bleed: A case report and review of the literature. *BMC Gastroenterol* 2007;**7**:12.
7. Jyotsna VP, Rangel N, Pal S, Seith A, Sahni P, Ammini AC. Insulinoma: Diagnosis and surgical treatment. Retrospective analysis of 31 cases. *Indian J Gastroenterol* 2006;**25**:244–7.

### **Abstracts**

8. Saluja SS, Pal S, Pal H, Garg P, Gulati MS, Sahni P, *et al.* Quality of life assessment after palliative stenting in patients with carcinoma gallbladder. *HPB Surgery* 2006;**8** (Suppl 2):11.
9. Saluja SS, Pal S, Garg P, Gulati MS, Sahni P, Chattopadhyay TK. Endoscopic versus percutaneous biliary drainage for hilar block in carcinoma gallbladder: A randomized trial. *HPB Surgery* 2006;**8** (Suppl 2):17.
10. Saluja SS, Sharma R, Pal S, Sahni P, Chattopadhyay TK. Differentiation between benign and malignant hilar obstruction using laboratory and radiological investigations: A prospective study. *HPB Surgery* 2006;**8** (Suppl 2):87–8.



## Books

1. Chattopadhyay TK, Sahni P, Pal S (eds). *GI Surgery Annual. Volume 13*. New Delhi: Indian Association of Surgical Gastroenterology; 2006:1–219.

## Chapters in Books

1. Chattopadhyay TK. Advances in gastrointestinal surgery. In: Chattopadhyay TK, Sahni P, Pal S (eds). *GI Surgery Annual. Volume 13*. New Delhi: Indian Association of Surgical Gastroenterology; 2006:151–219.
2. Khiria LS, Pal S, Sahni P, Chattopadhyay TK. Total gastrectomy. *GI Surgery Annual, Volume 13, Supplement*. New Delhi: Indian Association of Surgical Gastroenterology; 2006:19–27.

## PATIENT CARE

### OPD and specialty clinics

Please see Chapter 6 (hospital), Appendix VI

Total number of new patients seen	1,724
Total number of old patients seen	4,195

### Special laboratory facilities

- Anal manometry
- Oesophageal manometry
- 24-hour ambulatory oesophageal pH monitoring

### Inpatients

Please see Chapter 6 (hospital), Appendix III

Total number of inpatient admissions (January 2006–December 2006): **613**

### Surgical procedures

Please see Chapter 6, Appendix V

Total number of operations performed	490
Elective operations	382
Emergency operations	108

### Number of operations performed (Special interest areas)

Surgical jaundice	97
Portal hypertension	41
Oesophageal cancer	56
Carcinoma gallbladder	35
Ulcerative colitis	19
Upper GI haemorrhage	17
Lower GI haemorrhage	14
Acute pancreatitis	13
Chronic pancreatitis	17
Liver resections	21

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr Peush Sahni** is Past President, World Association of Medical Editors (January 2006– December 2007); Editor, *The National Medical Journal of India*; Member, Editorial Board, *Indian Journal of Gastroenterology*; Member, National Advisory Board, *Medical Journal Armed Forces India*.

**Dr Sundeep Saluja**, a Research Associate, presented a paper on ‘Quality of life assessment after palliative stenting in patients with carcinoma gallbladder’, International Hepato-Pancreato-Biliary Association, Annual Meeting 2006, Edinburgh; 3–7 September 2006; presented a Presidential Poster on ‘Endoscopic versus percutaneous biliary drainage for hilar block in carcinoma gallbladder: A randomized trial and quality of life’, Annual Conference, Indian Society of Gastroenterology, Mumbai; 8–12 November 2006.

## **VISITING SCIENTISTS**

1. Mr K.K. Mahadevan, Consultant, Liver Transplant and Hepatobiliary Surgery, Royal Infirmary, Edinburgh, Scotland, UK.
2. Dr S. Hwang, Consultant Surgeon, Hepatobiliary Surgery and Liver Transplantation, Asian Medical Centre, Seoul, Korea.

## 9.14 Haematology

	<b>Professor and Head</b>	
	V.P. Choudhry	
	<b>Professors</b>	
R. Saxena	H.P. Pati	Rajat Kumar
	<b>Associate Professors</b>	
S. Tyagi		M. Mahapatra
	<b>Assistant Professors</b>	
Tulika Seth		P. Mishra
	<b>Scientist</b>	
	S. Sazawal	

### EDUCATION

The department is running a DM course in Clinical Haematology and Haematopathology. Presently, nine residents are undergoing training in Clinical Haematology and five in haematopathology. During this period, one candidate each passed, DM Clinical Haematology and DM Haematopathology. Currently, five students are registered for PhD, which is ongoing. The faculty continued to take undergraduate classes in Haematology and trained the MD Pathology students in Haematology.

### Short- and long-term training

The department has provided training in the field of clinical and laboratory haematology to eleven doctors from other institutions for period of 1 to 6 months. Seventeen MSc students undertook short-term training in molecular haematology varying from 1 to 6 months during the year.

### Continuing Medical Education

#### Conferences, seminars, workshops

- Second hands-on training programme for young science postgraduates/undergraduates/technologists on 'Diagnosis of genetic disorders using cytogenetics and molecular genetics methods', sponsored by Department of Biotechnology, Government of India, organized by the Departments of Anatomy, Paediatrics and Haematology, AIIMS, New Delhi; August 2006.
- Course on scientific writing at AIIMS, New Delhi; August 2006.
- Workshop on 'Venous access devices in haematology', Indian Society of Haematology and Transfusion Medicine Conference, Guwahati; November 2006.
- Wet workshop on 'Quality control' ISHTM annual meet, Guwahati; November 2006.
- Workshop on 'Apheresis' organized at Blood Bank AIIMS; 28 February 2007.
- Wet workshop on 'Quality control' organized at AIIMS, New Delhi; March 2007.
- Wet workshop on 'Leukaemia', organized at AIIMS, New Delhi; March 2007.
- National Haematology Update VI, organized at AIIMS, New Delhi; 1–2 March 2007.

## Lectures delivered

### **Dr V.P. Choudhry**

- ‘Platelet transfusion’, XIIIth National CME in Haematology, Bombay Hospital, Mumbai; January 2007.
- ‘When newborn has less blood’, XIIth National CME in Haematology and Haemato-Oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; April 2006.
- ‘Management of thalassemia—Indian perspective’, Golden Jubilee International Conference on ‘Emerging trends in haematology and immunohematology’, Mumbai; January 2007.
- ‘Management of thalassemia and thalassemia future prospects’, CME on Thalassemia, Rohtak; December 2006.

### **Dr R. Saxena**

- ‘Haemophilia’, CME at SN Medical College, Agra; 17 April 2006.
- ‘Haemoglobinopathies—Diagnosis including HPLC’, XIIth National CME in Haematology and Haemato-oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; April 2006.
- ‘When the boys bleed—Factor VIII and IX deficiency’, XIIth National CME in Haematology and Haemato-oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; April 2006.
- ‘vWD—A disease with multiple shades’, XIIth National CME in Haematology and Haemato-oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; April 2006.
- ‘Interpretation of electronic haemogram parameters’, XIIth National CME in Haematology and Haemato-oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; April 2006.
- ‘Automation in haemostasis’, CME on bleeding disorders, Gujarat Haematology Forum, Ahmedabad; June 2006.
- ‘Quality assurance for coagulation tests’, CME on bleeding disorders, Gujarat Haematology Forum, Ahmedabad; June 2006.
- ‘Carrier detection and prenatal diagnosis in Haemophilia’, First National Consensus Meeting for guidelines on ‘Management of Haemophilia’, India Habitat Centre, Lodhi Road, New Delhi; 3 June 2006.
- ‘Carrier Detection in Haemophilia’, at AFMC, Pune; July 2006.
- ‘Haemophilia: The disorder’, CME on ‘Haematological aspect in Haemophilia’, SRMS Medical College, Bareilly among the Doctors of Institute; September 2006.
- ‘ISHTM—AIIMS proficiency testing programme for haemogram’, ACBI Delhi Chapter meet, India habitat Centre, November 2006.
- ‘Heparin induced thrombocytopenia in India: Diagnosis and management’, XIIIth National CME in Haematology, Bombay Hospital, Mumbai; January 2007.
- ‘Molecular genetics in Haematology’, National Haematology Update 2007, AIIMS, New Delhi; March 2007.

**Dr H.P. Pati**

- ‘Hemoglobin E disorders and clinical relevance’, CME, Guwahati Medical College, Guwahati; April 2006.
- ‘Mild bleeding disorders and approach to diagnosis’, CME, Guwahati Medical College, Guwahati; April 2006.
- ‘Handicapped red cells (without enzymes)’, XIIth National CME in Haematology and Haemato-oncology; 20–23 April 2006.
- ‘When histiocytes attack’, XIIth National CME in Haematology and Haemato-oncology; 20–23 April 2006.
- ‘Leukaemic stem cell and normal stem cells’, National Conference on Stem Cell Transplant-2006, Army Hospital, New Delhi; 30 September–1 October 2006.
- ‘Virtual Microscopy’, XIIIth National CME in Haematology and Haemato-oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; 4–7 January 2007.
- ‘Wrong clinical information leads to wrong laboratory diagnosis’, XIIIth National CME in Haematology and Haemato-oncology, Bombay Hospital Institute of Medical Sciences, Mumbai; 4–7 January 2007.
- ‘Approach to hemolytic anaemia’, 2nd Annual CME in Haematology, Ushodhaya Hospital, Hyderabad; 4 February 2007.
- ‘Stem cells in non-haematological disorders’, National Haematology Update–VI, AIIMS, New Delhi; 1–2 March 2007.

**Dr Rajat Kumar**

- ‘DIC’, CME, SP Medical College, Bikaner, Rajasthan; 14 January 2007.
- ‘BMT: Current status’, CME, SP Medical College, Bikaner, Rajasthan; 14 January 2007.
- ‘Monoclonal gammopathies’, XIIIth National CME in Haematology and Haemato-oncology, Mumbai, 4–7 January 2007.
- ‘DIC’, XIIIth National CME in Haematology and Haemato-oncology, Mumbai; 4–7 January 2007.
- ‘Radiation injury, the haematologist and stem cells’, CME on Stem Cells, Armed Forces Medical College, Pune; 23–24 December 2006.
- ‘Stem cell plasticity—is it all hype?’, CME on Stem Cells, Armed Forces Medical College, Pune; 23–24 December 2006.
- ‘Scope and potential of cord blood cells’, symposium on ‘Stem cells in war and peace’, INHS Asvini, Mumbai; 17 September 2006.
- ‘DIC: Current concepts’, 1st Annual Conference of the UP Chapter of ISHTM, Banaras Hindu University; 26–27 August 2006.
- ‘Unexplained eosinophilia: How to interpret’, 1st Annual Conference of the UP Chapter of ISHTM, Banaras Hindu University; 26–27 August 2006.
- ‘Monoclonal gammopathies’, 2nd Annual Postgraduate Education Programme in Haematology, TN Medical College, Mumbai; 28 May 2006.

- ‘Central venous access devices’, 2nd Annual Postgraduate Education Programme in Haematology, TN Medical College, Mumbai; 28 May 2006.
- ‘The hype of umbilical cord blood transplantation’, XIIth National CME in Haematology and Haemato-oncology, Mumbai; 20–23 April 2006.
- ‘Take care: The tumour is being destroyed (tumour lysis syndrome)’, XIIth National CME in Haematology and Haemato-oncology, Mumbai; 20–23 April 2006.
- ‘Eosinophilia: An approach’, XIIth National CME in Haematology and Haemato-oncology, Mumbai; 20–23 April 2006.

#### **Dr Seema Tyagi**

- ‘Thalassemia intermedia’, National Haematology Update-VI, AIIMS, New Delhi; 1–2 March 2007.
- ‘External quality assessment in haematology’, wet workshop on quality control in haemogram at National Haematology Update-VI, AIIMS, New Delhi; 28 February 2007.

#### **Dr M. Mahapatra**

- ‘Antifungal prophylaxis in neutropenic patients’, National Haematology Update-VI, AIIMS, New Delhi; 1–2 March 2007.
- ‘Learning through interesting cases’, CME in ‘Haematology—Haematology in Medicine’, AIIMS, New Delhi; 7 August 2006.

#### **Dr Tulika Seth**

- ‘On demand therapy for haemophilia’, 44th National Conference of Indian Academy of Paediatrics, Mumbai; January 2007.
- ‘Low molecular weight heparin in paediatrics vs warfarin’, 44th National Conference of Indian Academy of Paediatrics, Mumbai; January 2007.

#### **Dr Pravas Mishra**

- ‘Anti-bacterial prophylaxis in neutropenic patients’, National Haematology Update-VI, AIIMS, New Delhi; 1–2 March 2007.

### **National and International Conferences**

#### **Lectures delivered**

##### **Dr R. Saxena**

- ‘Thrombosis and stroke in young: Indian scenario’, SASAAT Conference, Bangalore; October 2006.
- ‘Hypercoagulability and stroke in India’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati; November 2006.
- ‘An approach to thrombophilia in Indian patients’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati; November 2006.

- ‘Quality assessment in Haemogram’, Workshop on ‘external quality assurance programme’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati; November 2006.
- ‘Hypercoagulability in thalassemia’, 5th National Thalassemia Conference, National Thalassemia Welfare Society, at LHMC and KSC Hospital, New Delhi; November 2006.
- ‘Laboratory control of anticoagulants’, Annual Conference of Indian Academy of Pathologist and Microbiologist, Bangalore; December 2006.
- ‘Investigations for thrombophilia’, Golden Jubilee Conference on ‘Emerging trends in haematology and immunohaematology’, on the occasion of the Golden Jubilee of Institute of Immunohaematology, Mumbai; February 2007.

#### **Dr H.P. Pati**

- ‘Interpretation of peripheral blood smear’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati; 25 November 2006.
- ‘Haemoglobinopathies and thalassemias: Diagnostic approach’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati: 25 November 2006.
- ‘Quality control in haemogram’, Workshop on ‘External quality assurance programme’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati; November 2006.

#### **Dr Rajat Kumar**

- ‘Management of ITP’, Symposium on ‘ITP’, CME programme of Annual Conference of Association of Physicians of India, Goa; 15 February 2007.
- ‘Erythropoietin in anemia’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati, Assam; November 2006
- ‘Setting up a bone marrow transplant unit in a medical college’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati, Assam; November 2006.

#### **Dr Manoranjan Mahapatra**

- ‘Clinical approach to isolated splenomegaly’, 62nd Annual Conference of Association of Physicians of India, Goa; 16–18 February 2007.
- ‘Splenomegaly: A diagnostic dilemma’, 47th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Guwahati, Assam; November 2006.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

- Haemoglobin color scale by Sahlis method. R. Saxena. Funded by WHO 2006-2007. Funds: Rs 2,14,400.

- Elucidation of molecular genetics of acute leukaemia. R. Saxena. Funded by ICMR 2005-2008. Funds:Rs 5.5 lakh.
- Sub-characterization of vWD in Indians. R. Saxena. Funded by DST for 3 years (2003–2006). Funds: Rs 17 lakh.
- Characterization of mutations underlying haemophilia A and B.R. Saxena. Funded by DBT for 3 years (2004–2007). Funds: Rs 21.46 lakh.
- Molecular characterization and treatment of acute lymphoid leukaemia on protocol modified MCP 841. International Network for Cancer Treatment and Research. R. Saxena. Funded by INCTR 2001-2009. Funds: Rs 4.5 lakh per year.
- Role of TAFI in pathogenesis of young Indian stroke. R. Saxena. Funded by ICMR-INSERM for 3 years (2004–2006). Funds: Rs 5 lakh.
- Angiogenesis in myelodysplastic syndrome in bone marrow biopsy and its correlation with thalidomide therapy. M. Mahapatra. Funded by AIIMS for 2 years. Funds: Rs 64,500.
- Molecular cytogenetic study in acute leukaemia and myelodysplastic syndromes: Diagnosis and prognostic implications. Seema Tyagi. Funded by AIIMS for 2 years (2005–2007). Funds: Rs 53,000.
- Planned intervention to improve community cancer awareness: A longitudinal study. Tulika Seth. Funded by the Cancer Foundation for 2 years (2005–2007). Funds: Rs 5 lakh.

### **Completed**

- A multicentric study to test the efficacy and the feasibility of using the Hb color scale for Hb estimation in the Indian setting. R. Saxena. Funded by WHO for 1 year (2005–2006). Funds: Rs.9 lakh.

## **Departmental Projects**

### **Ongoing**

1. Role of molecular studies in pathogenesis of MDS in Indian patients
2. Genotypic and phenotypic characterization of Indian patients with glanzmann thrombasthenia
3. Role of hemostatic and molecular factors in the development of acute thrombotic stroke in young Indians
4. Molecular genetics of acute myeloid leukaemia
5. Homocysteine in DVT
6. HLA DR2 expression and its association with response to immunosuppression in aplastic anemia patients
7. Utility of combined modified DCIP and modified osmotic fragility as a cost effective screening tool in HbE disorders and thalassemias
8. Evaluation of response to thalidomide and cyclosporine in patients with De Novo Myelodysplastic syndrome
9. Evaluation of late effects of thalassemia in adults
10. JAK2 abnormalities in myeloproliferative and myelodysplastic disorders



11. Etiopathogenesis and natural course of DVT
12. To study the etiology of splenomegaly, massive splenomegaly and hypersplenism and correlate etiology with various clinical and laboratory variables
13. To compare the response to chlorambucil and fludarabine-cyclophosphamide and correlate with various prognostic markers including ZAP70 in patients with chronic lymphocytic leukaemia
14. To study the genotype phenotype correlation in patients with HbE<sup>2</sup> thalassemia
15. The evaluation of zoledronic acid for the treatment of osteoporosis in<sup>2</sup> thalassemia patients
16. An open label study for the evaluation of anti-D for the treatment of Immuno Thombocytopenic Purpura
17. Evaluation for eosin-5-maleimide flow cytometric test in diagnosis of hereditary spherocytosis
18. To determine the prevalence of clopidogrel resistance in CAD and to evaluate the role of P2Y<sub>12</sub> gene polymorphism in its pathogenesis
19. Efficacy of immunization against hepatitis B virus infection in acute leukaemia
20. Predictor of response to antithymocyte globulin (ATG) therapy in aplastic anaemia with special reference to absolute lymphocyte count and CD4, CD8 lymphocyte subsets
21. Lymphoid infiltrates in the bone marrow, morphology and immunohistochemistry
22. Stem cells in acute myeloid leukaemia standardization of a method for minimal residual disease detection
23. Oral antifungal prophylaxis in neutropenic patients with haematological malignancies: Randomized controlled trial of oral itraconazole versus fluconazole
24. Platelet dysfunction in myeloproliferative disorder excluding CML
25. Immunophenotypic analysis of blasts in MDS

## **Collaborative Projects**

### **Ongoing**

1. Development of new fluorescent bio sensor for evaluation of iron profiles in haematological disorders (with Biomedical Engineering, IIT)
2. GPIIb/IIIa and platelet neutrophil conjugates: NO+ Iloprost (with CTVS)
3. Profile and prevalence of aspirin and clopidogril resistance in Indian patients with CAD undergoing PCI (with Cardiology)
4. Role of homocysteine in primary infertility (with Urology surgery)
5. Role of ART in HIV positive patients (with Medicine)
6. Prevalence of DVT/pulmonary embolism in critically ill medical patients (with Medicine)
7. Evaluation of anemia in patients with solid tumours (with Oncology)
8. India Health Study. Multicentric project funded by NIH

### **Completed**

1. Efficacy of intramuscular vitamin K1 versus intramuscular vitamin K3 in prevention of subclinical classic Vitamin K deficiency (with Paediatrics)

2. To study subset of antiphospholipid syndrome defined by anti b2 GP1 antibody (with Medicine)
3. Haematological changes in HIV (with Medicine)

## PUBLICATIONS

### Journals

1. Bhattacharya M, Chatterjee T, Panigrahi I, Kanan M, Choudhry VP, Mahapatra M, *et al.* Therapy-related acute promyelocytic leukaemia after treatment of carcinoma breast: A case report. *Indian J Pathol Microbiol* 2006;**49**:251–4.
2. Chatterjee T, Kumar R, Panigrahi I, Pati HP, Mahapatra M, Choudhry VP, *et al.* Hairy cell leukaemia induced by methylisocyanate? *Indian J Hematol Transfusion Med* 2006;**XXII**:42–4.
3. Chatterjee T, Naithani R, Agrawal N, Bhattacharya J, Bhattacharya M, Dutta P, *et al.* Disseminated langerhans cell histiocytosis: An interesting case report with concise review of literature. *Indian J Pathol Microbiol* 2006;**49**:248–50.
4. Chatterjee T, Panigrahi I, Agrawal N, Naithani R, Mahapatra M, Pati HP, *et al.* Cytochemical, immunophenotypic and ultrastructural characterization of acute leukaemias: A prospective study of fifty cases—haematological malignancy. *Hematology* 2006;**11**:147–51.
5. Chaudhary A, Debnath J, Thulkar S, Seth T, Sinha A. Imaging findings in Hepatic Langerhans' cell histiocytosis. *Indian J Pediatr* 2006;**73**:1036–8.
6. Choudhary DR, Bhattacharya M, Mishra P, Mahapatra M, Kumar R. Granulocytic sarcoma of spine: An unusual initial presentation of acute myeloid leukaemia. *J Assoc Physicians India* 2006;**54**:897.
7. Dutta P, Bhattacharya J, Karak AK, Gupta M, Chatterjee T, Srinivas U, *et al.* Angiogenesis in myelodysplastic syndromes (MDS) in Indian patients. *Indian J Pathol Microbiol* 2006;**49**:218–20.
8. Dutta P, Hasan S, Bhattacharyya J, Kumar R, Mahapatra M, Saxena R, *et al.* Acute promyelocytic leukaemia with secondary myelofibrosis: Case report and review of the literature. *Am J Hematol* 2006;**81**:476–7.
9. Gupta PK, Kannan M, Chatterjee T, Dixit A, Mahapatra M, Choudhry VP, *et al.* Acquired von Willebrand's disease associated with gastrointestinal angiodysplasia: A case report. *Haemophilia* 2006;**12**:452–5.
10. Hasan SK, Sazawal S, Kumar B, Rashid A, Chaubey R, Mishra P, *et al.* Childhood CML in India: b2a2 transcript more common than b3a2. *Cancer Genet Cytogenet* 2006;**169**:76–7.
11. Kannan M, Ahmad F, Ahmad S, Kale S, Fareed J, Saxena R. HIT antibodies in heparin induced thrombocytopenia: Its relationship with FcγRIIIa polymorphism. *Am J Immunology* 2006;**1**:55–9.
12. Kumar R, Prem S, Mahapatra M, Seth T, Chowdhary DR, Mishra P, *et al.* Fludarabine, cyclophosphamide and horse antithymocyte globulin conditioning regimen for allogeneic

- peripheral blood stem cell transplantation performed in non-HEPA filter rooms for multiple transfused patients with severe aplastic anaemia. *Bone Marrow Transplant* 2006;**37**:745–9.
13. Mahapatra M, Bhattacharya M, Mishra P, Kumar R, Saxena R. Priapism: An unusual manifestation of warfarin-induced skin necrosis with protein C deficiency. *J Assoc Physicians India* 2006;**54**:963–4.
  14. Mahapatra M, Kumar R, Choudhry VP. Seizures as an adverse drug reaction after therapeutic dose of vincristine. *Ann Hematol* 2007;**86**:153.
  15. Mahapatra M, Mishra P, Kumar R. Imatinib-induced Stevens-Johnson syndrome: Recurrence after re-challenge with a lower dose. *Ann Hematol* 2007 Feb 8; [Epub ahead of print].
  16. Mahapatra M, Mishra P, Makharia G, Kumar R, Saxena R. Acquired von Willebrand's disease associated with gastrointestinal angiodysplasia and monoclonal gammopathy. *J Assoc Physicians India* 2006;**54**:963.
  17. Malik M, Pillai LS, Gogia N, Puri T, Mahapatra M, Sharma DN, *et al.* Paraplegia due to extramedullary hematopoiesis in thalassemia treated successfully with radiation therapy. *Haematologica* 2007;**92**:13.
  18. Mishra P, Kumar R, Mahapatra M, Sharma S, Dixit A, Chatterjee T, *et al.* Tuberculosis in acute leukaemia: A clinico-haematological profile. *Hematology* 2006;**11**:335–40.
  19. Naithani R, Agrawal N, Mahapatra M, Kumar R, Choudhry VP, Singh R, *et al.* Isolated anterior chamber relapse in acute lymphoblastic leukaemia. *Ann Hematol* 2006;**85**:889–91.
  20. Naithani R, Kumar R, Mahapatra M, Agrawal N, Saxena R, Sharma S. Pelvic alveolar rhabdomyosarcoma with bone marrow involvement misdiagnosed as acute myeloid leukaemia. *J Pediatr Hematol Oncol* 2007;**24**:153–5.
  21. Naithani R, Mahapatra M, Kumar R, Kumar A, Agrawal N. Arsenic trioxide induced acute flare-up of rheumatoid arthritis in a patient with APL. *Ann Hematol* 2007;**86**:151.
  22. Mishra P, Sazawal S, Hasan SK, Saxena R, Kumar R, Mahapatra M, *et al.* Addition of cytarabine does not improve upon molecular response achieved by imatinib alone in CML. *Br J Hematol* 2006;**133**:279.
  23. Panigrahi I, Agarwal S, Pradhan M, Choudhry DR, Choudhry VP, Saxena R. Molecular characterization of thalassemia intermedia in Indians. *Haematologica* 2006;**91**:1279–80.
  24. Panigrahi I, Ahmad F, Kapoor R, Sharma PK, Makharia G, Saxena R. Evidence for non-HFE linked hemochromatosis in Asian Indians. *Indian J Med Sci* 2006;**60**:491–5.
  25. Panigrahi I, Mahapatra M, Kumar R, Kumar G, Choudhry VP, Saxena R. Jaundice and alpha gene triplication in beta-thalassemia: Association or causation? *Hematology* 2006;**11**:109–12.
  26. Ranjan R, Biswas A, Kannan M, Meena A, Deka D, Saxena R. Prenatal diagnosis of haemophilia A by chorionic villus sampling and cordocentesis: AIIMS experience. *Vox Sang* 2006;**92**:79–84.
  27. Sharma S, Pati HP. Erythrocyte enzyme abnormalities in leukaemias. *J Assoc Physicians India* 2006;**54**:453–7.

28. Sinha M, Panigrahi I, Shukla J, Khanna A, Saxena R. Spectrum of anaemia in pregnant Indian women and importance of antenatal screening. *Indian J Pathol Microbiol* 2006;**49**:373–5.
29. Srinivas U, Kar R, Prem S, Mahapatra M, Pati HP. Visceral leishmaniasis with aplastic bonemarrow: Coincidental or causal. *Scand J Infect Dis* 2007;**39**:261–2.
30. Srinivas U, Mahapatra M, Pati HP. Hb J Meerut, a fast-moving haemoglobin: A study of seven cases from India and a review of literature. *Am J Hematol* 2006;**11** [Epub ahead of print].
31. Srinivas U, Pillai LS, Kumar R, Pati HP, Saxena R. Bone marrow aplasia: A rare complication of imatinib therapy in CML patients. *Am J Hematol* 2006;**29**.
32. Sazawal S, Hasan SK, Kumar B, Choubey R, Kumar R, Kumar L *et al*. Timing of allogeneic BMT in CML patients in India does it affect response. *Am J Hematol* 2006; 31.

### Abstracts

33. Hasan SK, Dutta P, Kumar B, Bhattacharya J, Pillai L, Mahapatra M, *et al*. Acute Promyelocytic leukaemia (APML) in India: Is it different from West? *Br J Haematol* 2006;**133**:64–5.
34. Mishra P, Sazwal S, Mahapatra M, Saxena R, Choudhary DR, Dixit A, *et al*. Addition of cytarabine does not improve upon molecular responses achieved by imatinib alone in chronic myeloid leukaemia *Haematologica* 2006;**91**:417.
35. Naithani R, Agarwal N, Mahapatra M, Pati HP, Kumar R, Choudhry VP, *et al*. Autoimmune hemolytic anaemia in India. *Br J Haematol* 2006;**133**:83.
36. Kumar R, Mahapatra M, Mishra P, Choudhary DR, Seth T, Prem S, *et al*. Early mortality outcome of allogeneic stem cell transplants performed in non HEPA-filter rooms in India. *Br J Haematol* 2006;**133**:69–70.

### Chapters in Books

1. Ahmad S, Saxena R. Advances in the diagnosis and treatment of heparin induced thrombocytopenia. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:1–17.
2. Chatterjee T, Banerjee M, Prem S, Kataria VK, Pati HP, Saxena R. Primary cutaneous lymphomas. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:239–50.
3. Chatterjee T, Pati HP, Choudhry VP, Saxena R. Primary myelodysplastic syndrome in children: Clinical, haematological and histomorphological profile from a tertiary care center in India. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:329–41.
4. Choudhry VP, Jain M, Saxena R. Disseminated intravascular coagulation: Current concepts of pathogenesis and management. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:73–88.
5. Choudhry VP, Naithani R, Mahapatra M. Iron therapy in children. In: Choudhry VP,

- Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:18–31.
6. Pati HP, Srinivas U. Laboratory aspect of hemolytic anemia: An overview. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:268–85.
  7. Pati HP, Dutta S. Wrong clinical information give wrong diagnosis. In: Agarwal MB (ed). *Haematology Today* 2007:545–50.
  8. Pati HP, Srinivas U. The reality of virtual microscopy. In: Agarwal MB (ed). *Haematology Today* 2007:585–90.
  9. Pati HP, Prem S, Srinivas U. Current concept in diagnosis and management of thrombotic thrombocytopenic purpura. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:363–80.
  10. Pati HP, Prem S. Eosinophilia and hypereosinophilic syndrome. Etiopathogenesis and management. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:205–15.
  11. Kumar R, Choudhry DR, Mahapatra M, Saxena R. Idiopathic thrombocytopenic purpura: An Indian perspective. In: Agarwal AK (ed). *Clinical Medicine Update IX*. New Delhi: Jaypee Publications; 2006:324–33.
  12. Kumar R, Mahapatra M, Naithani R. Immune thrombocytopenic purpura: Etiopathogenesis, clinical features and diagnosis. In: Munjal YP (ed). *Postgraduate Medicine (Recent Advances in Medicine)* XXI. Mumbai: Indian College of Physicians; 2007:3–110.
  13. Kumar R, Mahapatra M, Prem S. Disseminated intravascular coagulation. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2007:343–52.
  14. Kumar R, Prem S, Mahapatra M, Saxena R. Megaloblastic anemia. In: Agarwal AK (ed). *Clinical Medicine Update IX*. New Delhi: Jaypee Publications; 2006:311–23.
  15. Kumar R, Veniyoor A, Mahapatra M. Monoclonal gammopathy. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2007:203–16.
  16. Mahapatra M, Mishra P, Kumar R. Clinical approach to isolated splenomegaly. In: Singal RK (ed). *Medicine Update (Association of Physicians of India)* 17. New Delhi: Jaypee Publications; 2007:441–45.
  17. Mahapatra M, Varma T, Kumar R. Clinical approach to isolated splenomegaly. In: Agarwal AK (ed). *Clinical Medicine Update IX*. New Delhi: Jaypee Publications; 2006:41–8.
  18. Mishra P, Mohanty S, Pati HP, Kumar R. Stem cells: Current concepts and future directions. In: Munjal YP (ed). *Postgraduate Medicine (Recent Advances in Medicine)* XXI. Mumbai: Indian College of Physicians; 2007:30–37.
  19. Sanger M, Kannan M, Anand M, Saxena R, Kumar R. Flowcytometry in haematology. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology* (2). New Delhi: Jaypee Publications; 2006:297–312.
  20. Saxena R, Bajaj J. Interpretation of automated cell parameters. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:329–34.

21. Saxena R, Bhattacharyya J, Kannan M, Choudhry VP. Approach to thrombophilia: Clinical and laboratory. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology (2)*. New Delhi: Jaypee Publications; 2006:187–220.
22. Saxena R, Biswas A. Advances in pathogenesis of young ischaemic stroke. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:129–34.
23. Saxena R, Kannan M. Heparin induced thrombocytopenia in India. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:325–32.
24. Saxena R, Kumar R, Biswas A. Hyperhomocysteinemia: Laboratory and clinical aspects. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:123–28.
25. Saxena R, Ranjan R. Thromboelastography: Principle, application and future. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:359–66.
26. Saxena R, Sharma V. Monitoring of INR in the laboratory and at home. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:347–58.
27. Saxena R, Ghadiok G, Sood SK. Quality assessment of automated electronic cell counters. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology (2)*. New Delhi: Jaypee Publications; 2006:286–96.
28. Saxena R, Panigrahi I. Molecular basis of thalassemia. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology (2)*. New Delhi: Jaypee Publications; 2006:58–72.
29. Sazawal S, Saxena R, Choudhry VP. Minimal residual disease (MRD) detection in chronic myeloid leukaemia. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology (2)*. New Delhi: Jaypee Publications; 2006:313–28.
30. Seth Tulika. Histiocytosis. In: Gupta DK, Robert Carachi (eds). *Pediatric Oncology Surgical and Medical aspects*. New Delhi: Jaypee Publications; 2007:330–40.
31. Seth Tulika. Nutritional support for children with cancer. In: Gupta DK, Robert Carachi (eds). *Pediatric Oncology Surgical and Medical aspects*. New Delhi: Jaypee Publications; 2007:68–73.
32. Chatterjee T, Pati HP, Choudhry VP, Saxena R. Primary MDS in children. Clinical, Haematological and histo-morphological profile from tertiary hospital. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology (2)*. New Delhi: Jaypee Publications; 2006:329–41.
33. Chatterjee T, Banerjee M, Prem S, Kataria VK, Pati HP, Saxena R. Primary cutaneous lymphoma. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2006:239–50.
34. Tyagi S, Bhardwaj R. Cytogenetics of acute leukaemia and myelodysplastic syndromes: Diagnosis and clinical relevance. In: Agarwal MB (ed). *Haematology Today*. Mumbai: MB Agarwal; 2007:221–36.
35. Tyagi S, Sriniwas U. Diagnosis of hemoglobinopathies. In: Choudhry VP, Saxena R, Pati HP (eds). *Recent Advances in Haematology (2)*. New Delhi: Jaypee Publications; 2006:395–404.

## **Book/monographs/manuals edited**

1. Choudhry VP, Saxena R, Pati HP. *Recent Advances in Hematology 2*, New Delhi: Jaypee Publications; 2006:1–420.
2. Saxena R, Pati HP, Tyagi S. *Manual for wet workshop on quality control*, AIIMS 2007.
3. Saxena R, Pati HP, Tyagi S. *Manual for wet workshop on Leukaemia*, AIIMS 2007.
4. Chatterjee K, Seth T. *Manual for apheresis*, AIIMS 2007.

## **PATIENT CARE**

### **Laboratory Investigations**

#### **Departmental Tests**

##### **Hemostasis**

1. Screening coagulation test	4,590
2. Factor assay	560
3. Factor inhibitor screening	280
4. Factor inhibitor assay	8
5. INR	3,700
6. Lupus anticoagulant	1,900
7. Platelet function test	1,200
8. D-Dimer	900
9. Fibrinogen	800
10. Proglobal C	425
11. Protein C	68
12. Protein S	69
13. APCR	65
14. Beta 2 glycoprotein	178
15. Serum homocysteine	283
16. Carrier detection haemophilia	42
17. Prenatal diagnosis	11
18. Mutation detection FV Leidin	49
19. Mutation detection MTHFR	14
20. Mutation detection P20210	7
21. VWD workup	201
22. Molecular test for thalassaemia alpha and beta	25

##### **Leukaemia**

1. RT-PCR leukaemia CML AML ALL	424
2. Cytochemistry	422
3. LAP	169
4. Iron (Fe) stain	200

### **Anaemia**

1.	HPLC	1,167
2.	Sickling	55
3.	Hb electrophoresis	08
4.	G6PD	471
5.	Serum iron studies	1,197
6.	Coombs by gel card	424
7.	PNH gel card CD55/59	286
8.	Ham's acid serum	82
9.	Sucrose lysis test	82
10.	Plasma Hb	94
11.	Urine hemosiderin	116
12.	OF/Inc. Of	304
13.	Methemoglobin	05
14.	Heinz bodies	23
15.	Cold agglutinins	08
16.	Cryoglobulins	08
17.	Autohemolysis	02

### **Haemogram and Bone Marrow Biopsy**

1.	Haemogram	26,500
2.	Reticulocyte count	1,728
3.	Bone marrow aspirate	2,020
4.	Biopsy	1,386
5.	Reticulin	117

### **External Haematology Proficiency Testing Programme**

External Haematology Proficiency Testing programme has become an integral part of departmental activities. Under this programme, specimens for Hb, HCT, and RBC count, WBC count, Platelet count, MCV, MCH and MCHC retic count and peripheral smear are sent to the participants for analysis with frequency of about 11 weeks. The programme has got endorsement from National Accreditation Board for Testing and Calibration Laboratories (NABL) and Indian Society for Haematology and Transfusion Medicine. The programme is conducted as per norms laid down by NABL based on ISO Guide 43-1. There is overwhelming response and appreciation from all parts the country for the programme. There are more than 500 participating laboratories in this programme. Evaluation of the results of the participating laboratories help them to gauge their standard of performance. The outliers find an opportunity to improve their performance on the basis of evaluation reports.

### **Census of Haematology OPD—April 2006 to March 2007**

Old cases	Male	Female	Total	H	HO	HC	HS	HT	HL
	15,085	8,085	23,170	7,200	5,160	4,490	4,220	1,010	1,099



<b>New Cases</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>HS</b>	<b>HA</b>	<b>HT</b>	<b>HL</b>
	2,613	897	3,510	175	71	30	90

H-Haematology; HO-Haemato-oncology; HC-Haematology coagulopathy; HS-Hemostasis; HT-Haematology transplantation, HL-Leukaemia follow up

### **Census of Haematology Day Care Centre: April 2006 to March 2007**

<b>Month</b>	<b>Total admission</b>	<b>Total blood transfusions</b>	<b>Total procedures</b>	<b>Bone biopsy/ Bone marrow aspirates</b>	<b>Chemotherapy (intrathecal + others)</b>
April	514	343	173	100	73
May	536	346	190	110	80
June	376	181	195	95	100
July	669	460	209	121	88
August	729	477	252	110	142
September	592	374	218	148	70
October	507	344	163	85	78
November	592	360	232	105	127
December	585	333	252	146	106
January	494	306	188	72	116
February	482	288	194	102	92
March	564	394	170	82	88
<b>TOTAL</b>	<b>6,654</b>	<b>4,218</b>	<b>2,436</b>	<b>1,276</b>	<b>1,160</b>

### **Inpatient treatment**

In the past year, 13 allogeneic transplants (BMT) were performed successfully and all of them are doing well. An increasing number of patients of leukaemia, aplastic anaemia, idiopathic thrombocytopenic purpura, hemophilia and multiple myeloma have been treated by the haematology department as indoor patients.

The department of haematology provided consultative services to patients of thalassemia, in coordination with National Thalassaemia Welfare Society. Care to haemophilia was provided in coordination with Hemophilics Federation of Indian.

### **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr V.P. Choudhry** was awarded the Professor S.K. Sood Oration by Delhi Society of Haematology in 2006.

**Dr Renu Saxena** was awarded Malti Sathe oration by Indian Society of Haematology and Transfusion Medicine 2006; Awarded Fellowship of National Academy of Medical Sciences (FNAMS) 2006; elected as Executive Member, Indian society of Haematology and Transfusion Medicine 2006–2008; elected as President, Delhi Society of Haematology 2005–2007; Member,

Medical Advisory Board, HFI, 2005; Member, ICMR Project Review Committee for Genetics, Haematology, Anatomy 2005; Coordinator ISHTM-AIIMS EQAP Since 2003; continued as a Member, Subject Expert Committee for technical evaluation of proposals under women scientist scheme, Department of Science and Technology, Government of India. June 2005.

**Dr H.P. Pati** was elected as the Honorary Secretary, Indian Society of Haematology and Transfusion Medicine (2005–2008); Technical Assessor for NABL (National Accreditation Board Laboratories), New Delhi (for accreditation evaluation for medical laboratories).

**Rajat Kumar** was elected as Vice President, Indian Society of Haematology and Transfusion Medicine; Nominated as Joint Secretary (Dean's) Indian College of Physician, Association of Physicians of India (2006–2008); Member, Governing Body of Delhi Chapter, Association of Physicians of India.

**Dr M. Mahapatra** was awarded Young Investigator award (JN Berry award) from Associations of Physicians of India (API) during the 62nd APICON-2007; was awarded Fellowship of Indian Academy of Clinical Medicine (FIACM); was elected as an Executive Member, Indian Society of Haematology and Transfusion Medicine of Haematology (DSH).

**Dr P. Mishra** was awarded Young Investigator Award, Asian Pacific Congress of Thrombosis Hemostasis, September 2006.

## 9.15 Hospital Administration

### Professor and Head

P.C. Chaubey (till 28.2.2007)

Shakti Kumar Gupta (w.e.f. 1.3.2007)

(Medical Superintendent, Dr R.P. Centre for Ophthalmic Sciences, AIIMS)

### Professors

R.K. Sarma

(On deputation as Director, North-East Indira Gandhi Regional Institute of Health and Medical Sciences [NEIGRIHMS], Shillong)

D.K. Sharma

(Medical Superintendent, AIIMS, Main Hospital)

### Additional Professor

Sidhartha Satpathy (IRCH)

### Associate Professors

I.B. Singh

Sanjay Arya

Aarti Vij

(Main Hospital)

(Main Hospital)

(ORBO, CT and NS Centre)

and JPNA Trauma Centre)

## EDUCATION

The Department of Hospital Administration is running a 2-year postgraduate programme for Medical Graduates in Hospital Administration. The present MHA (Master in Hospital Administration) course entered its 42nd year of inception; it was officially started in February 1966, for the first time in India and has since been recognized as a distinct post-graduate discipline by Medical Council of India. The Residency Programme in Hospital Administration started by the department has shown excellent results. Resident Administrators man the control room of hospital, round the clock as Duty Officers, and coordinate all the hospital activities.

The control room played an important role in solving the problem and the functioning of AIIMS. The residents also assist the hospital activities and in turn gain experience of hospital management.

Faculty members conducted training programmes for the doctors working in various organizations including Central, State Governments, Paramilitary Forces and in various PSUs such as NTPC, IICM, Ranchi, etc. in Hospital Administration and Management and its various aspects.

### Training to students from different institutes has also been carried out throughout the year 2006–07:

- Eleven students of MD (Community Health Administration)/Diploma in Health Administration from National Institute of Health and Family Welfare, New Delhi for one month.
- One student of MHM (Master's in Hospital Management) from Nizam's Institute of Medical Sciences, Hyderabad is on training for six months w.e.f. December 2006.

- Two batches of Senior Medical Officers from Indo-Tibetan Border Police (ITBP) were given intense training in Hospital Administration for a period of two weeks.

### **Continuing Medical Education**

The department is actively involved in ongoing 'in-service programmes' in Hospital housekeeping, Hospital Support Services, Hospital Infection Control and Biomedical Waste Management to various categories of staff including Resident doctors, nursing, paramedical and sanitation personnel. Regular training and CMEs are being organized for staff of Medical Records department, Medical Social Services department and Nursing personnel. During the year 2007, department has included newer topics e.g. training in behavioural sciences and communication in hospitals to all categories of staff in hospital for which expert faculty from outside is also being invited.

### **Lecture delivered**

#### **Dr Shakti Kumar Gupta**

- 'Chemical and Industrial Disaster Management', India Habitat Centre, New Delhi; 25 April 2006.
- 'Hospital contingency plans: The Delhi experience in the hospital emergency planning', Delhi Secretariat; 16 March 2007.
- 'Hospital Disaster Management Plan', Conference on 'Medical preparedness and mass casualties management', New Delhi; 20–22 August 2006.
- Outsourcing and public private partnership—an essential requisite for effective patient care in the international conference on "Planning and Designing of Health Care Facilities", Goa; 15-17, September 2006.
- Participated in panel discussion on 'Challenges before hospital administrators vis-a-vis changing role hospitals', Department of Hospital Management, Deccan School of Management, Hyderabad; 18 March 2007.

#### **Dr Sidhartha Satpathy**

- 'Biomedical Waste Management in Hospital Infection Control', Inservice Training Programme for Resident Doctors, Nurses and Technical Staff, AIIMS.
- 'NABH Standards for Hospital Accreditation', NABH Assessor Training Course, organized by Quality Council of India, Mumbai; 10–11 June 2006.
- 'Quality Management in Health Care', Training course on Logistics and Supply Management System, NIHFW, Munirka; 13 October 2006.
- 'Hospital Infection Control and Waste Management', Training course on Hospital Administration for Medical Officers of Himachal Pradesh, NIHFW, Munirka; 8 November 2006.
- 'Organization Focused NABH Standards', Seminar on 'Hospital Accreditation', organized by Quality Council of India, Pune; 2–3 December 2006.
- 'ICD-10: An Overview', Workshop on 'Environmental Health—need for more organized health data', IIT Delhi; 18 December 2006.

- ‘Hospital Administration: An emerging specialty’, for Educational Commission, set up at UGC Consortium; 5 January 2007.
- Delivered lectures on various Hospital Administration topics and conducted Organizational behaviour Lab during special training programme on ‘Hospital Management and Administration’ for Medical Superintendents, GDMO’s and non-specialists of Coal India, IICM, Ranchi; 8–11 January 2007.
- ‘Hospital Infection Control and Waste Management’, Training course on ‘Hospital Administration’ for Medical Officers of Himachal Pradesh, NIHFV, Munirka; 17 January 2007.
- ‘Medical Audit, Hospital Accreditation, Consumer Protection Act, etc.’, Special training programme on ‘Hospital Management and Administration’ for Medical Superintendents, GDMO’s and non-specialists of Coal India, IICM, Ranchi; 22–24 January 2007.

#### **Dr Aarti Vij**

- ‘How to promote cadaver donation’, Conference on ‘Advances in the Management of Liver Disorders’, Indraprastha Apollo Hospital, New Delhi; 7 January 2007.
- ‘Changing medical futility to medical utility—need of the hour’, 8th Annual Conference of Indian Society of Neuro-anaesthesiology and Critical Care, India Habitat Centre, New Delhi; 11 February 2007.
- ‘Planning and designing of stem cell facility’, International Conference on ‘Planning and Designing of Health Care Facilities’, Goa; 17 September 2006.
- ‘Administrative and legal aspects in kidney transplantation’ XVII Annual Conference of Indian Society of Organ Transplantation (ISOT 2006), Ahmedabad; 7 October 2006.
- ‘Establishing a cadaver organ programme’, International Pediatric Transplant Symposium, jointly organized by Apollo Hospital, Delhi Chapter of Gastroenterology and IMA, New Delhi; 29 October 2006.
- Critical Care Nursing Update, College of Nursing, AIIMS; 30 November 2006.

#### **Dr Aarti Vij**

- Short-term Cryopreservation of Stem Cells: Search for Cost Effective Optimum Cryo Protectant Cocktail in the International Conference of Asia Pacific Association of Surgical Tissue Banks at Mumbai; 25 November 2006.
- Management of extensor mechanism deficient total knee arthroplasty: A Novel Method in the International Conference of Asia Pacific Association of Surgical Tissue Banks at Mumbai; 25 November 2006.

### **Conferences, Seminars, Workshops**

#### **Dr Shakti Kumar Gupta**

- Chief organizer - International Conference on ‘Planning and Designing of Health Care Facilities’, HEALTHARCHCON, Goa; 15–17 September 2006.
- Organized a public lecture on ‘RTI Act—implications on issues related to patient care and

Hospital Administration', delivered by Hon'ble Sri Wajahat Habibullah, Chief Information Commissioner, India at AIIMS; 24 March 2007.

**Dr Aarti Vij**

- Organized a training workshop in "Cadaver Donation Process" at AIIMS, February 2007.

**RESEARCH**

**Departmental Projects**

**Completed**

1. Study the ambulance services with reference to type of vehicles, equipment fitted, its utilization pattern, so as to suggest an optimal model with its equipment and accessories
2. Evaluate the hospital planning with particular reference to allocation of space for different hospital facilities and identify the prime considerations which should be the determining factor for requirement of space for various service areas of a hospital
3. A study of morbidity pattern in geriatric age group and identify resource inputs for a geriatric centre at AIIMS
4. A study to the manpower deployment and its utilization in a hospital so as to identify the factors responsible for calculating the need-based manpower planning
5. Study of the role and scope of telemedicine services at AIIMS for post discharge follow-up of patient referred to AIIMS
6. Study of radio-diagnostic services of AIIMS hospital and their utilization pattern so as to identify equipment, physical facilities and manpower for the diagnostic imaging services of hospitals of Coal India Ltd commensurating with their needs
7. Study the operation theatre services of Dr Rajindra Prasad Centre for Ophthalmic Sciences in relation to the current technological advances in the field, so as to develop optimal modules for different levels of ophthalmic centres in India
8. Study of profile of the patients referred to AIIMS and their ailments, identify the referring institutions, rationale for referral and assess the fulfillment of the expectation of the patient during the process

***Ongoing***

1. To study and evaluate universal precautions practices being followed in high-risk areas of main hospitals of AIIMS
2. To study the awareness of doctors and nurses on pharmacovigilance/ADR reporting and to study the impact of various interventions to find out a suitable method
3. Level of satisfaction amongst AIIMS employees
4. Cost analysis of urological robotic procedures in AIIMS
5. Cost of training of undergraduate medical student (MBBS) at AIIMS
6. Cost analysis of minimal invasive surgical procedures in the department of surgery at AIIMS

7. A study of cost analysis of inpatient care services at AIIMS hospital

## **PUBLICATIONS**

### **Journals**

1. Chattoraj A, Satpathy S. A study of sickness and admission pattern of patients attending on emergency department in a tertiary care hospital. *J Acad Hosp Adm* 2006;**18**.
2. Singh IB, Chaubey PC. Developing and organizing of trauma services with special reference to India. *Hosp Adm (Official Journal of Indian Hospital Association)* 2006;**XXXX**:20–34.
3. Singh S, Sinha US, Verma SK, Arya S, Kapoor AK, Sharma S. Chaplaincy Services: Role of Tertiary Care Hospitals. *Indian Internet J Forensic Med Toxicol* 2006;**4**:88–97 (IIJ FMT Vol: 4, Issue: 3, Year : 2006).
4. Singh S, Singh U, Arya S. Planning and designing modern physical medicine and rehabilitation department in a tertiary care hospital. *Int J Med Toxicol Legal Med* 2006;**9**:12–20.
5. Singh S, Arya S, Sarma RK, Bedi S. Cost analysis study of ophthalmic procedures in tertiary care hospital for development of user charges. *J Acad Hosp Adm* 2006;**18**.
6. Bedi S, Behra SD, Arya S, Singh S. Standard operating procedures in hospitals: A reality check. *J Acad Hosp Adm* 2006;**18**.

### **Books**

7. Gupta SK, Kant S, Chandrashekar R, Satpathy S. *Modern Trends in Planning and Designing of Hospitals—Principles and practice*. 1st ed. New Delhi: Jaypee Publishers; 2007:1–238.

## **PATIENT CARE**

The department of Hospital Administration is closely associated with the provision of administrative support to various departments for delivery of patient care and control of costs in the hospital services. The department has been responsible for bringing quality care standards in patient care services.

The department of Hospital Administration has been actively involved in improving the patient care services by revamping the support services to aid in provision of a quality clinical service. Extensive renovations and upgradation of support services has been done. An advanced, new laundry is being also installed.

The department is involved in Planning, establishing and commissioning of facilities and services in superspecialty centres of AIIMS e.g. Jai Prakash Narain Apex Trauma Centre (JPNTC); National Drug De-addiction Treatment Centre (NDDTC).

During the year, extensive renovation of patient care facilities was done in Dr R.P. Centre of Ophthalmic Sciences which included installation of television sets for public education in waiting

areas, outsourcing of housekeeping services, streamlining of traffic, appointment of part time social guides in patient care areas. Proposal for additional nursing manpower is also submitted to SFA.

During the February 2007, C.N. Tower Private Ward with 63 rooms was made operational along with re-organization of manpower in the C.N. Tower.

ORBO (Organ Retrieval Banking Organization) increased its activities for National Networking including correspondence with Secretary, health and Director, health of all states regarding information on registered transplant centres of the states. 2385 persons pledged for organ donation on motivation of ORBO which is substantially higher than the previous years. Awareness programmes with various NGOs, Schools, Religious bodies, Academic institutions were conducted. A documentary film on Organ Donation was developed.

### **AWARDS AND HONOURS<sup>3</sup>**

**Dr Sidhartha Satpathy** was selected as Editor, *Journal of Academy of Hospital Administration* (JAHA).

**Dr Shakti Kumar Gupta** was Member of the Project Management Committee constituted by Ministry of External Affairs, Government of India, for establishing 200 bedded Trauma Centre at Kathmandu Nepal; Member, Expert Committee for upgradation of National Referral Hospital at Thimpu and Regional Referral Hospital at Monger, Bhutan; Member, Expert Committee constituted by Ministry of Health and Family Welfare, Government of India regarding establishing Six AIIMS like Institutions and upgradation of 13 Medical colleges under Pradhan Mantri Swasthya Suraksha Yojna; Member, Working group on Clinical establishments Professionals services Regulations and Accreditation of Health Care Infrastructure by Planning Commission for the eleventh Five- Year Plan (2007– 2012).

**Dr D.K. Sharma** participated as Subject Expert in the selection committee for selection of Medical Superintendent and Faculty of Hospital Administration in Pt BDS Postgraduate Institute of Medical Sciences, Rohtak; participated as External Expert, Selection Committee for selection of Medical Officers at IIT, Delhi; nominated as Member, Advisory Council for the Post Graduate Diploma in Hospital Management (PGDHM) of Institute of Health Management Research (IHMR), Jaipur; invited as MCI expert for Inspection of facilities at KMC, Manipal for permitting intake in MD (Hospital Administration) course granted by MAHE, Manipal; nominated as Chairman, Hospital Equipment and Surgical Dressing Sectional Committee, MHR-12 of Bureau of Indian Standard (BIS), India; invited as Subject Expert, Selection Committee for selection of Deputy Medical Superintendent in Health and Medical Department at J&K Public Service Commission; invited as Subject Expert, Educational Consultants India Limited (Ed.Cil) to assist the committee for establishing Chhattisgarh Ayurvedic University at Raipur.



## **SIGNIFICANT EVENTS**

**Dr Sidhartha Satpathy** was selected as Member, Technical Committee, National Accreditation Board for Hospitals and Healthcare providers (NABH), under aegis of Quality Council of India (QCI); Member, Bureau of Indian Standards (MHR-14) involved in preparation/review of Indian Standards on Healthcare Facilities; Expert Member, National Accreditation Board for Certification Bodies (NABCB) under aegis of QCI.

**Dr I.B. Singh** enrolled as alumnus of Administrative Staff College of India, Hyderabad in February 2007.

**Dr Aarti Vij** trained 15 grief counsellors in organ donation and transplant coordination; coordinated an orientation training programme of nurses of 150 participants on 'organ donation and transplant coordination'.

## 9.16 Laboratory Medicine

### **Professor and Head**

A.K. Mukhopadhyay

### **Professor**

M. Irshad

### **Additional Professor**

Sarman Singh

### **Associate Professor**

Subhadra Sharma

### **Assistant Professors (Trauma Centre)**

Purva Mathur

S. Arulsevi

### **Scientists**

A.K. Srivastava (S-IV)

Vandita Vasudev (S-III)

## **EDUCATION**

### **Short-term training**

The department participates in undergraduate (MB,BS) teaching programmes. It runs a 3-year residency programme leading to MD degree. The department also offers PhD programme.

The department offers short-term training to postgraduates from the Department of Pathology and Biochemistry.

The department also offers short-term training to postgraduate MSc students, 26 trainees, 1 from University of Massachusetts Medical Schools, USA; 7 from University of Kashmir, Srinagar, 6 from CCS University, Meerut; 2 from Barktullah University, Bhopal; 1 from Bundelkhand University, Jhansi; 1 from Madhav Institute of Technology and Science, Gwalior; 1 from Allahabad Agricultural University; 1 from Jiwaji University, Gwalior; 1 from Guru Jambheshwar University, Hissar; 1 from Garhwal University, Srinagar; 2 from Rajasthan and 2 from Delhi, underwent short-term training in Clinical Microbiology and Molecular Biology, Clinical Haematology and Clinical Chemistry during the reporting period.

### **Continuing Medical Education**

#### **Workshops**

Nil

#### **Lectures delivered**

The faculty and scientists delivered 18 lectures on various aspects of the discipline.

## **National and International Conferences**

### **International conference**

#### **Dr Sarman Singh**

- 'Emergence of XDR tuberculosis in India', International Conference of Infectious Diseases,

Vienna, Austria; 22–25 February 2007.

### **National conference**

#### **Dr A.K. Mukhopadhyay**

- ‘Laboratory Medicine—Indian scenario’, Workshop on ‘Evidence-based laboratory medicine’, Lady Harding Medical College, New Delhi; 9 November 2006.
- ‘States, levels, planes and development lines of consciousness’, Pre-conference lecture at National Conference on ‘Yoga and science’, Department of Yogic Science, Dr Harisingh Gour University, Sagar (MP); 16 February 2007.
- ‘Three *Yoga* correspond to three developmental lines of brain function’, Keynote lecture at National Conference on ‘Yoga and Science’, Department of Yogic Science, Dr Harisingh Gour University, Sagar (MP); 17 February 2007.
- ‘The story of information, science or spirituality?’, Symposium on ‘Information as Science and Spirituality’, India Habitat Centre, New Delhi; 18–19 March 2007.

#### **Dr Sarman Singh**

- ‘Microarrays in the diagnosis of parasitic diseases’, Pre-conference CME, XXX National Conference of Medical Microbiologists, Nagpur; 26–27 October 2006.
- ‘Recent advances in the diagnosis of *Leishmaniasis*’, 18th National Congress of ‘Parasitology’, Kolkata; 22–24 November 2006.
- ‘Methods in HIV testing’, First hands-on workshop on training course on ‘HIV/AIDS’ for medical officers and laboratory technicians, National Institute of Biologicals, Noida; 16 January 2007.
- ‘Methods in HIV testing’, Second hands-on workshop on training course on ‘HIV/AIDS’ for medical officers and laboratory technicians, National Institute of Biologicals, Noida; 12 February 2007.
- ‘Methods in HIV testing’, Third hands-on workshop on training course on ‘HIV/AIDS’ for medical officers and laboratory technicians, National Institute of Biologicals, Noida; 19 February 2007.
- Provided hands-on training and delivered a lecture on ‘Recent advances in the diagnosis of leishmaniasis’, Andhra Pradesh Chapter of IAMM, Hyderabad; 9 February 2007.
- ‘Quality assurance in molecular diagnostics’, Microbiology Update, Maulana Azad Medical College, Delhi; 9 March 2007.

#### **Dr A.K. Srivastava**

- ‘Assessment of quality control of ABG analyzer maintained by emergency medicine department’, 33rd National Conference of Association of Clinical Biochemists of India, AFMC, Pune; 23–26 November 2006.

## RESEARCH

### Funded projects

#### Completed

1. Comparative evaluation of various methods for diagnosis of pulmonary and extra-pulmonary tuberculosis. Sarman Singh. Funded by BioMerieux India for 3 years (2004–2007). Funds: Rs 3.2 lakh.
2. Expression, characterization and purification of recombinant kinesin-like protein of VL and PKDL-causing Indian strains of *Leishmania donovani* and developing ELISA and other rapid test methods using the above antigen. Sarman Singh. Funded by DBT for 4 years (2003–2006). Funds: Rs 13 lakh.
3. Genetic heterogeneity amongst the *Leishmania donovani* isolated from eastern India. Sarman Singh. Funded by AIIMS for 3 years (2003–2006). Funds: Rs 1.35 lakh.
4. Evaluation of the toxicity and anti-leishmanial efficacy of liposomal amphotericin B (KALSOME) in mouse model. Sarman Singh. Funded by DST for 2 years (2005–2007). Funds: Rs 41.09 lakh.

#### Ongoing

1. Prevalence and significance of transfusion transmitted virus (TTV) and association of lipoprotein (a) with apoprotein A and B in various forms of liver diseases. M. Irshad, ICMR for 3 years (2005-08). Funds: Rs 24 lakh.
2. Optimization of carbohydrate protein conjugate as vaccine for prevention of enteric fever. (Chief Investigator : M. Irshad, DBT for 3 years (2004-07). Funds: Rs 28 lakh.
3. Development of rapid diagnostics test for detection of autoantibodies in Myasthenia Gravis by plate and Dot blot ELISA. M. Irshad, ICMR for 3 years (2004-07). Funds: Rs 15 lakh.
4. Rapid and accurate diagnosis of tuberculosis using a novel set of primers directly from clinical sample. Sarman Singh. Funded by ICMR for 3 years (2004–2007). Funds: Rs 13 lakh.
5. Isolation and purification of herbal compound(s) having anti-leishmanial activity. Sarman Singh. Funded by ICMR (Fellowship) for 3 years (2004–2007). Funds: Rs 4 lakh.
6. Genotypic characterization of *Mycobacterium tuberculosis* in clinical isolates from pulmonary tuberculosis by using spoligotyping and IS 6110 RFLP analysis. Sarman Singh. Funded by UGC (Fellowship) for 3 years (2004–2007). Funds: Rs 4.2 lakh.
7. Proteomic analysis of *M. tuberculosis* during the stage of acquisition of resistance to isoniazid and rifampicin. Sarman Singh. Funded by DBT for 1 year (2006–2007). Funds: Rs 11.31 lakh.
8. The role of TNF±SNP<sup>3</sup> and the success of anti-tubercular therapy in Immune Restoration Disease in HIV/MTB co-infected patients responding to ART. Sarman Singh. Funded by Australia-India Council for 1 year (2006–2007). Funds: Aus \$ 15000.
9. Transmission of drug resistant hepatitis B virus in close family contacts of HBV-related chronic liver disease patients. Sarman Singh. Funded by DST for 3 years (2006–2009). Funds: Rs 9.5 lakh.

10. Detection of hepatitis A, E, Salmonella, E. histolytica and Giardia lamblia from drinking water samples using novel multiplex PCR. Sarman Singh. Funded by DBT for 3 years (2007–2010). Funds: Rs 34.79 lakh.

### **Departmental projects**

1. A book project entitled, 'The New Science for Consciousness', 'The Mandate and Agenda'
2. Transmission rate of HBV and HCV in family members of dually infected patients (with Gastroenterology)
3. Hepatitis B viral load monitoring in patients undergoing anti-HBV therapy using quantitative real-time PCR (with Gastroenterology)
4. Comparative evaluation of various PCR primers for the rapid and sensitive diagnosis of tuberculosis
5. Standardization and evaluation of multiplex PCR for the species-specific diagnosis of various mycobacterial infections
6. Prevalence and treatment response of coccidian parasitic infections in HIV-positive patients at AIIMS (with Medicine)
7. To study reintroduction of anti-tuberculosis drugs and risk factors for anti-tuberculosis treatment induced hepatotoxicity (with Medicine)
8. Study of mycobacteremia in patients with miliary and extrapulmonary tuberculosis (with Medicine)
9. To study the prevalence of ESBL of urinary pathogens using disk diffusion method and e-test
10. To study the immune response in acute toxoplasmosis using western blot method
11. Comparative evaluation of smear, LJ culture, MGIT-960 bactec culture and bactericophage tests for the diagnosis of tuberculosis
12. Comparative evaluation of various TORCH test kits
13. Blood borne infections after needle prick injury in health care workers of AIIMS
14. *Toxoplasma gondii* IgG avidity assays in pregnant women attending AIIMS
15. To assess the impact of viral hepatitis on steatosis of liver.
16. Role of HCV core protein in the diagnosis of HCV infection.
17. TTV and HCV infection in renal failure patients.
18. Epidemiological studies on CRF in Indian Communities
19. Cloning, sequencing and expression of TTV related polypeptides.
20. Synergism of hepatitis viruses & TTV virus in liver diseases.
21. Effect of core expression on oxidative status.
22. Correlation between first trimester glucose screening & serum insulin levels with development of gestational diabetes mellitus in pregnancy.

### **PUBLICATIONS**

#### **Journals**

1. Mukhopadhyay AK. Some reflections on *Quo Vadis Quantum Mechanics?* Extending

- science further! Let us see where? *Frontier Perspectives* 2006;**15**:12–21.
2. Qurashi R, Lakshmy R, Prabhakaran D, Mukhopadhyay AK, Jailkhani B. Use of filter paper stored dried blood for measurement of triglycerides. *Lipids Health Dis* 2006;**5**:20.
  3. Eshrat H, Mukhopadhyay AK. Effect of *Ocimum Sanctum* (Tulsi) and Vitamin E on biochemical parameters and retinopathy in streptozotocin induced diabetic rats. *Indian J Clin Biochem* 2006;**21**:181–8.
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### Chapters in Books

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2. Mukhopadhyay AK. Supracortical consciousness. An opening to multiple new doors of Science. In: Balsubramanian R (ed). *The Enworlded Subjectivity. Its three worlds and beyond*. Project History of Indian Science, Philosophy and Culture (PHISPC). Vol. XI, Part 4. New Delhi: Center for Studies in Civilization; 2006:380–446. Cited and abstracted in Network Review UK 2006;**91**:39.

### PATIENT CARE

**Total tests performed 63,22,976**

**Centralized collection centres**

#### Blood collection

For department	No. of specimen
Laboratory medicine	1,49,737
Blood bank	2,454
Microbiology	10,822
Miscellaneous (Samples collected from other clinics)	20,829
Marker/HIV investigation	
<b>Total</b>	<b>1,83,842</b>
<b>GRAND TOTAL</b>	<b>3,03,399</b>

#### Fluid an secretions collections

Specimen	Number
Urine	65,800
Fecal samples	12,400
Sputum	12,176
Semen	12,500
Other fluids	140
Blood for viral	16,541
<b>Total</b>	<b>1,19,557</b>

### Emergency Laboratory Services (Round-the-clock)

#### *Clinical Biochemistry*

Test	Number
Blood Sugar	54,386
Blood Urea	87,679
Bilirubin	24,773
Sodium	94,436
Potassium	94,436
Amylase	7,963
CSF Sugar	8,004
CSF protein	8,004
SGOT	615
SGPT	615
Total protein	615
Albumin	615
Creatinine	302
Arterial blood gas	9,189

**Total** **3,91,632**

#### *Haemogram and Body Fluids*

Test	Number
Hb	1,05,030
TLC	1,05,030
Platelets	1,05,030
Prothrombin time	18,033
Malarial parasite	6,157
CSF	8,122
Urine	1,361
Microbiology blood culture	6,788
Microbiology CSF	3,055
Gram stain	1,750
Slide stain giemsa	9,810
Stool hanging drop	1,132
MCV	1,05,030
MCH	1,05,030
MCHC	1,05,030
PCV	1,05,030
RBC	1,05,030
Others	12,070

**Total** **9,08,518**

**Note:** Arterial blood gas includes, pH, pCO<sub>2</sub>, pO<sub>2</sub>, BE, BE<sub>ecf</sub>, BB, HCO<sub>3</sub><sup>-</sup>, st.HCO<sub>3</sub><sup>-</sup>, TCO<sub>2</sub>, st.pH, CH<sup>+</sup>, O<sub>2</sub> cont, O<sub>2</sub> saturation, A-aDO<sub>2</sub>, RQ, dBE/dTHb, all measured as a single test within the same time frame. Hb, TLC, MCV, MCHC, PCV, RBC are measured by single reagent, within the same time frame.

**GRAND TOTAL** **13,00,150**

#### **Clinical Biochemistry**

Test	Blood	Urine	Fluid
Sugar	1,23,441	1,304	2,940
Urea	1,71,843	513	—
Total protein	1,67,386	—	2,940
Albumin	1,67,386	—	2,940
24-hour albumin	—	5,472	—
Bilirubin			
—Total	1,71,508	—	—
—Conjugated	1,71,508	—	—



Alkaline phosphatase	1,75,402	—	—
Cholesterol	42,791	—	—
Na	1,45,496	5,138	—
K	1,45,496	5,138	—
Calcium	1,12,644	5,040	—
Phosphate	1,12,250	5,040	—
Uric acid	1,09,875	5,796	—
Amylase	19,295	—	300
Creatinine	1,72,962	5,352	—
SGOT	1,73,536	—	—
SGPT	1,73,536	—	—
ABG pCO <sub>2</sub>	7,391	—	—
pH	7,391	—	—
pO <sub>2</sub>	7,391	—	—
HCO <sub>3</sub>	7,391	—	—
CO <sub>2</sub>	7,391	—	—
A-aDO <sub>2</sub>	7,391	—	—
O <sub>2</sub> saturation	7,391	—	—
BE	7,391	—	—
<b>Total</b>	<b>24,15,483</b>	<b>38,793</b>	<b>9,120</b>

**Note:** Arterial blood gas includes, pCO<sub>2</sub>, pH, pO<sub>2</sub>, HCO<sub>3</sub>, CO<sub>2</sub>, A-aDO<sub>2</sub>, O<sub>2</sub> saturation, BE measured as a single test within the same time frame.

**Miscellaneous Investigations (on request, not as routine service)**

<b>Test</b>	<b>Number</b>
Superoxide dismutase	200
Total antioxidant	200
Apoprotein A	200
Apoprotein B	200
Lp(a)	200
CK	100
LDH	100
GGT	100
TG	200
LDLC	200
HDLC	200
HBsAg	600
Anti HBs	200
HBeAg	50
IgM anti HBc	200
Anti HCV	400
Anti HEV	300
IgM Anti HAV	100

HCV- RNA	100
TTV-DNA	300
<b>Total</b>	<b>4,150</b>

**GRAND TOTAL 24,67,546**

**Service from room no 18**

Adenosine deaminase assay	424
ELISA IgG-Ab neurocysticercosis	208
<b>TOTAL</b>	<b>632</b>

**Hematology Section**

<b>Test</b>	<b>OPD</b>	<b>Ward</b>
Hb	77,855	63,013
TLC	77,855	63,013
PCV	77,855	63,013
DLC	75,246	63,013
ESR	73,346	31,656
D/Morphology	72,253	16,006
Platelet	77,855	63,013
Reticulocyte count	11,261	8,690
Absolute eosinophil count	25,406	4,689
Malaria parasite	50,166	6,646
Thick smear	—	1,133
MCV	77,855	63,013
MCH	77,855	63,013
MCHC	77,855	63,013
RBC	77,855	63,013
BT	927	—
CT	927	—
PT	5,289	10,476
Blood clotted	1,337	1,040
Other	11,695	8,389
<b>Total</b>	<b>9,50,693</b>	<b>6,55,842</b>

**Grand Total 16,06,535**

**Note:** Hb, TLC, PCV, DLC, Platelet, MCV, MCHC, RBC are measured by single reagent, within the same time frame

**Microbiology Section**

**Patient care**

Pre- and post-test counselling (total)	280
TORCH patients	70
HIV/AIDS	210

The clinical microbiology section caters to two types of patient care services (A) Routine investigations and (B) Specialized investigations which are mostly on payment basis.

## A. Routine investigations

### 1. Urine investigation

Name of the tests	OPD	Ward	Total
Medical board			11,680
Routine	51,540	39,058	90,598
Microscopic	77,310	57,987	1,35,297
PH	25,770	19,429	45,199
Specific gravity	25,770	19,429	45,199
Acetone	25,770	19,429	45,199
Bile pigment/salt	25,770	19,429	45,199
Urobilinogen	25,770	19,429	45,199
Blood	25,770	19,429	45,199
Bence-Jones protein	195	272	467
Chyluria	108	184	292
Porphobilinogen	38	32	70
Myoglobinuria	3	6	9
Hemosiderin	2	4	6
Microalbumin	4	–	4
Urine cultures	11,800	–	11,800
Strain identifications tests	9,835	–	9,835
Antibiotic sensitivity	2,068	–	2,068
E-test for ESBL testing	100	–	100
<b>Subtotal</b>	<b>3,07,623</b>	<b>2,14,117</b>	<b>5,33,420</b>

**Note:** pH, Specific gravity, Acetone, Bile pigment, salt, Urobilinogen, blood are done by single reagent strip, in the same time frame

### 2. Stool investigations

Wet mount—saline	6,552	2,219	8,771
Wet iodine stain	6,552	2,219	8,771
Occult blood in stool	2,035	987	3,022
Fat globules	449	284	733
Special stains for HIV-positive patients	848	588	1,436
<b>Subtotal</b>	<b>16,436</b>	<b>6,297</b>	<b>22,733</b>

### 3. Semen analysis

Routine	11,295	–	11,295
Morphology	3,326	–	3,326
Fructose	394	–	394
<b>Subtotal</b>	<b>15,015</b>	<b>–</b>	<b>15,015</b>

#### 4. Sputum analysis

Z-N Staining for AFB	12,224	2,098	14,322
Concentration/decontamination	–	–	492
AR staining	–	–	589
LJ culture	–	–	412
BECTEC culture	–	–	181
BECTEC drug sensitivity	–	–	234
Mycobacterial strains maintained	–	–	1,637
LJ proportional method			
Ist Line	–	–	158
IInd Line	–	–	85
Non tubercular mycobacterium isolate maintained	–	–	30
Bactec MGIT 960	–	–	12
Biochemical tests for culture identification	–	–	382
Blood culture for TB	–	–	712
Clinical samples stored at ® -70°C/LN	–	–	876
<b>Subtotal</b>	–	–	<b>20,122</b>

#### 5. Miscellaneous investigations

Bone Marrow examination,			
• CSF latex agglutination for cryptococcosis,			
• CSF latex agglutination for pyogenic meningitis,			
• Blood for malaria parasite			
• Blood for microfilaria,			
• Malaria antigen detection,			
• Urine microalbumin,			
• Pus culture and sensitivity,			
• Water sample testing		158	
Total no. of mice, rabbit and hamster used		523	
<i>Leishmania</i> strains maintained		1,350	
Bacterial strains maintained		3,600	
<b>Subtotal</b>		<b>5,631</b>	
<b>Total of A</b>		<b>5,96,921</b>	

## B. Specialized investigations

### Serology and Molecular Biology

Name of the tests	Total
<b>TORCH</b>	
<i>Toxoplasma gondii</i> IgG	850

<i>Toxoplasma gondii</i> IgM	850
Rubella IgG	745
Rubella IgM	745
Cytomegalovirus IgG	1,352
Cytomegalovirus IgM	1,352
Herpes simplex virus IgG	682
Herpes simplex virus 2 IgG	682
Herpes simplex virus (1+2) IgM	682
<i>Toxoplasma gondii</i> IgG avidity	88
Rubella IgG avidity	185
Cytomegalovirus IgG avidity	192
Parvovirus B19 IgG	125
Parvovirus B19 IgM	125
<b>Viral Marker and HIV</b>	
Anti HAV IgM	1,145
HBsAg	13,056
Anti-HBcIgM	505
Anti-HBc total	192
HBeAg	1,395
Anti-HBe	300
Anti-HBs	1,305
Anti-HCV antibody	7,809
HEV IgM	1,644
HIV (1+2) ELISA	8,815
HIV Spot	445
HIV Westernblot	8
<b>Others serology</b>	
TB IgG	
200+208*	
*(R.No.18)	
TB IgA	200
TB IgM	1,013
Dengue IgG ELISA	700
Dengue IgM ELISA	700
Dengue rapid test (IgG /IgM)	600
Anti- <i>leishmania</i> antibodies	190
<b>PCR tests</b>	
<i>Toxoplasma gondii</i> PCR	37
Cytomegalovirus PCR	78
<i>Leishmania</i> PCR	144

TB PCR	416
CCR-5 PCR	3
<b>Sub Total of B</b>	<b>49,763</b>
<b>Grand Total (A + B)</b>	<b>6,46,684</b>

## AWARDS AND HONOURS

**Dr A.K. Mukhopadhyay** was awarded a Scroll and a Certificate of Honor by the Vice-Chancellor of Dr Hari Singh Gour University, Sagar (MP) at National Conference on Yoga and Science for outstanding performance and contribution to Yoga and Science; appointed as Member, *Upanishad* Society; Member, Project, Indian Perspectives on Science and Spirituality sponsored by John Templeton Foundation, USA.

**Dr. M. Irshad** was selected for the Board of Reviewers for Journal of Virological Methods (JVM), British Medical Journal (BMJ), International Medical Journal (IMJ), Journal of Viral Hepatitis (JVH), for the year of 2006-2007. Blackwell Scientific Publisher exclusively selected Prof. Irshad as a Reviewer for its publications.

**Dr Sarman Singh** has been conferred the Fellowship of the National Academy of Medical Sciences (FAMS) this year; was also awarded with the prestigious 'Biotech Product and Process Development and Commercialization Award-2006' by DBT for his work on developing the rapid diagnostic methods for Leishmaniasis and Professor B.P. Pande Memorial Oration Award for best teacher in Parasitology by Indian Society of Parasitology; continues to be Member, Task Force of the DST for young scientist and high power committee member on Kala-Azar elimination constitute by DGHS, Government of India; also continues to be the CPCSEA, Government of India nominee for the Institutional Animal Ethics Committee of JNU, New Delhi; Member, Technical Committee of Central Jalma Institute for Leprosy and Other Mycobacterial Diseases, Agra; Editor-in-Chief of *Journal of Laboratory Medicine* and President of the Association for Better Health and Society (Abhas); nominated Member, Joint Monitoring Mission formed by WHO and Government of India for framing the preventive strategies for Vector Borne Diseases; selected as a Scientific Abstract Reviewer, XVI World AIDS Conference, Vancouver, Canada and the third International AIDS Society Conference, Sydney, Australia, 2007; nominated Member, Board of Life Sciences, CSIM University, Kanpur and Member of the Expert Committee for QA/QC implementation, NIB, Ministry of Health Government of India.

## SIGNIFICANT EVENTS

During Dengue outbreak, Dr A.K. Mukhopadhyay was appointed as Member, (i) Steering Committee, (ii) Clinical Care Committee, and (iii) Media Briefing Committee. The department

managed the Dengue outbreak successfully in the month of September–October 2006 on war footing. It drew applause from AIIMS administrative and also from media (various news channels) and the public.

## **VISITING SCIENTIST**

Nil

## 9.17 Medicine

	<b>Professor and Head</b>	
	S.K. Sharma	
	<b>Professors</b>	
Rita Sood	Ashok Kumar	Randeep Guleria
A.B. Dey	Rohini Handa	G.C. Khilnani
	<b>Associate Professors</b>	
Naveet Wig Rajiva Gupta	Ashutosh Biswas	Uma Kumar
	<b>Assistant Professors</b>	
Sanjeev Sinha	Naval K. Vikram	Anant Mohan

### EDUCATION

#### Short- and long-term training

The department imparted training to 28 postgraduate and undergraduate students from Europe, USA, Canada, Australia, New Zealand and South Africa during the year 2006–07. Eleven senior as well as junior physicians from different parts of India were trained in the Respiratory Laboratory, Sleep Laboratory, Bronchoscopy Laboratory, and Clinical Immunology and Rheumatology.

#### Continuing Medical Educaiton

**Professor S.K. Sharma** organized the following CMEs:

- Training programme for management of HIV/AIDS, AIIMS, New Delhi; 19–20 April 2006.
- Training programme for prevention, control and management of HIV/AIDS for Nurses, with University of California Los Angeles (UCLA), USA and Delhi State AIDS Control Society, AIIMS, New Delhi; 8–9 October 2006.
- Workshop of National task force on the 'Involvement of medical colleges in the RNTCP of India', Central TB Division (Ministry of Health and Family Welfare), AIIMS, New Delhi; 9–11 November 2006.

**Dr Rita Sood** was organizing Chairperson/Course Faculty of the following:

- National DCI–AIIMS workshop on Postgraduate Dental Curriculum; April 2006
- Emerging trends in medical education; November 2006
- Regional GSMC–FAIMER Institute fellowship programme, Mumbai; June 2006
- International Medical Educator fellowship programme, CMCL–FAIMER Regional Institute, Ludhiana; January 2007.



**Dr A. Biswas organized the following:**

- International workshop on ‘Management of DF/DHF/DSS’, in collaboration with WHO, NVBDCP, AIIMS, New Delhi; 14–15 March 2007.
- Co-organizer, National workshop on ‘Japanese encephalitis: Case management’, India Habitat Centre, New Delhi; 21 March 2007.

**Dr Uma Kumar** organized monthly Delhi Rheumatology Association meeting in December 2006.

**Dr Rajiva Gupta** organized the second workshop on ‘Clinical methods in medicine for postgraduates’, AIIMS; March 2006.

**Dr S. Sinha organized the following:**

- Delhi State AIDS Control Society Training Programme for Management of HIV/AIDS for Physicians, AIIMS, New Delhi; 19–20 April 2006.
- Third Indo-US CME on ‘Antiretroviral therapy’, AIIMS; 7 October 2006.
- Delhi State AIDS Control Society Training Programme for Management of HIV/AIDS for Nurses, AIIMS; 8–9 October 2006.

## **National and International Conferences**

### **Lectures delivered**

#### **Professor S.K. Sharma**

- National Research Conference on ‘HIV and AIDS’, jointly organized by NACO and ICMR; 21–23 April 2006.
- ‘Tuberculosis and lung health’, jointly organized by International Union Against Tuberculosis and Lung Disease (The Union) and World Lung Foundation, South Asia; 29 April 2006.
- 21st Annual Update on Pulmonary and Critical Care Medicine Interstitial and Diffuse Parenchymal Lung Diseases, PGIMER, Chandigarh; 8 October 2006.
- ‘Sarcoidosis’, 21st Annual Update on Pulmonary and Critical Care Medicine Interstitial and Diffuse Parenchymal Lung Diseases, PGIMER, Chandigarh; 8 October 2006
- ‘Acute lung injury in tuberculosis’, National Conference (NAPCON) on Pulmonary Disease 2006, Nagpur; November 2006.
- ‘Internal medicine for rheumatologists—Interstitial lung disease’, 22nd Annual Conference of Indian Rheumatology Association, IRACON 2006, Lucknow; 24 November 2006.
- ‘Sleep medicine’, 62nd Annual Conference of the Association of Physicians of India (APICON 2007), Goa; 16 February 2007.
- ‘Diagnosis and treatment of obstructive sleep apnoea (OSA)’, 62nd APICON 2007, Goa; 16 February 2007.
- ‘Tropical medicine’, 62nd APICON 2007, Goa; 17 February 2007.
- ‘Clinico-pathological conference’, 62nd APICON 2007, Goa; 17 February 2007.

### **Professor Rita Sood**

- ‘Assessment in medical education: An overview’, DCI–AIIMS workshop; April 2006.
- Interactive sessions on ‘Good teaching practices’, ‘Student assessment’ and ‘Global educational standards and accreditation’, GSMC–FAIMER Institute Fellowship programme, Mumbai; June 2007.
- ‘Fever with haemorrhagic rash’, CME of API, Delhi State chapter; August 2006.
- Panel discussion on ‘Pre-pregnancy and periconceptional care’, National CME in Obstetrics and Gynecology; August 2006.
- ‘Teaching of professionalism and ethics’, National workshop on ‘Emerging trends in medical education’, AIIMS; November 2006.
- ‘Trends in assessment’, National workshop on ‘Emerging trends in medical education’, AIIMS; November 2006.
- ‘Role of question banking in standardization of assessments’, International Conference on ‘Medical education’, MJ Ramaiah Medical College, Bangalore; January 2007.
- ‘Integrated teaching at AIIMS’, Consultation workshop on ‘Medical education’, MJ Ramaiah Medical College, Bangalore; January 2007.
- ‘Emerging and re-emerging infectious diseases: The challenge to global health’, APICON, Goa; February 2007.
- Chaired a session on ‘Alcoholism: A growing international health issue’, by Professor Ian Gilmore President, Royal College of Physicians, UK, APICON 2007, Goa.
- Moderated a panel discussion on ‘Avenues for higher education in UK’, by President and Assistant Vice President, Royal College of Physicians, UK, APICON, Goa; February 2007.

### **Professor Randeep Guleria**

- ‘Management of community-acquired pneumonia’, LRS Institute of Tuberculosis and Respiratory Diseases; 4 August 2007.
- ‘Management of fungal infections’, Amby Valley City, Mumbai; 2 September 2006.
- ‘Pulmonary hypertension—which patient should I treat in ICU and how’, 5th Annual critical care symposium and workshop, New Delhi; 21–24 September 2006.
- Visited flood devastated areas of Surat, Gujarat on the request of the Ministry of Health, Government of Gujarat to offer AIIMS expertise for patients of leptospirosis and viral haemorrhagic fever; 30–31 August 2006.
- ‘Community-acquired pneumonia: Pathogenesis and treatment’, Chest Summit 2006, New Delhi; 15 October 2006.
- Attended the 72nd Annual International Scientific Assembly of the American College of Chest Physicians (ACCP), Salt Lake City, Utah, USA; 21–26 October 2006.
- ‘Methylxanthines’ place in asthma and COPD redefined’, NAPCON 2006, Nagpur; 1–4 November 2006.
- ‘Newer concepts in management of COPD’, GPCON, MAMC, New Delhi; 19 November 2006.

- ‘Recent advances in the management of bronchial asthma’, VIII National Conference (SIMON), Nepal; 10–11 November 2006.
- ‘Sarcoidosis: Indian perspective’, Pulmonary Update 2006, Department of Pulmonary Medicine, Army Hospital Research and Referral, Delhi Cantt; 3 December 2006.
- ‘Management of severe sepsis—Pathophysiology and diagnosis’, VII Annual CME of the East Delhi Physicians Association, New Delhi; 17 December 2007.
- ‘Management of respiratory emergencies and bronchial asthma’, Visiting doctors from Coal India Limited; 31 January 2007.
- ‘Infection Summit’, Mauritius; 18–21 January 2007.
- ‘Therapeutic drug monitoring for better therapeutic and drug development’, Scientific session at AIIMS, New Delhi; 2–3 February 2007.
- ‘Finding the correct inhaled corticosteroids dose in asthma’, APICON 2007, Goa; 16–18 February 2007.
- ‘Expert Group Meeting’, Training workshop of ICMR, Co-ordinated Project ‘Nutrition profile of Assam Manipur and Meghalaya’, ICMR; 23 February 2007.
- ‘Avian influenza: Preparedness and responses’, Regional workshop on ‘Avian influenza preparedness and response’, organized by NICD, DGHS, in collaboration with WHO and CDC, New Delhi; 5–9 March 2007.
- ‘Intra-abdominal infections’, PGI, Chandigarh; 10–11 March 2007.
- ‘Institutional experience in management of DF/DHF/DSS’, International workshop on ‘Management of DF/DHF/DSS’; 14–15 March 2007.
- ‘Clinical experience in management of DF/DHF’, International workshop on ‘Management of DF/DHF/DSS’; 14–15 March 2007.
- ‘IMPACT on infections in pulmonary medicine’, International Respiratory Update, Singapore; 30–31 March 2007.

### **Professor Rohini Handa**

- ‘Musculoskeletal tuberculosis’ and ‘Atherosclerosis in autoimmune rheumatic diseases’, 12th APLAR Congress of Rheumatology, Kuala Lumpur, Malaysia; 1–5 August 2006.
- ‘BJD India–National Action Network’, Bone and Joint Decade World Network Conference, Durban, South Africa; 2–4 November 2006.
- ‘Experience with biologics in India’, ‘Common pitfalls in Rheumatology’, and ‘Low backache: A rational approach’, 11th Annual Conference of Pakistani Society for Rheumatology, Karachi, Pakistan; 4–6 March 2007.
- ‘Lupus in pregnancy’, Bone and Joint Decade India, Indian Rheumatology Association, Coimbatore Chapter and Federation of Obstetrical and Gynecological Societies of India, Coimbatore Chapter, Coimbatore CME; 3 June 2006.
- ‘Bedside diagnosis of arthritis’, National Rheumatology Update, Army Hospital (Research and Referral), New Delhi; 19–20 August 2006.
- ‘Current trends in management of rheumatoid arthritis’, XVII Annual Conference of

- Rajasthan Chapter of Association of Physicians of India, RAJ APICON 2006, Mount Abu; 16–17 September 2006.
- ‘Laboratory investigations in rheumatology: What to order and how to interpret?’, Annual Conference of Maharashtra Chapter of the Association of Physicians of India, MAPICON 2006, Aurangabad; 6–8 October 2006.
  - ‘Rheumatoid arthritis: Why should internists look beyond joints?’, XIV Annual Conference of the Indian Association of Clinical Medicine, IACMCON-2006, Dehradun; 7–8 October 2006.
  - ‘Current concepts in osteoporosis’, Symposium and workshop on ‘Rheumatic and musculoskeletal disorders in India: Burden and profile’, Bone and Joint Decade India and Centre for Rheumatic Diseases, Pune; 14–15 October 2006.
  - ‘How to manage pain in rheumatic diseases?’, 17th Annual Conference of the Association of Physicians of India, Delhi State Chapter, New Delhi; 28–29 October 2006.
  - ‘Clinical recognition of spondylarthritides’, Bone and Joint Decade symposium on ‘Spondylarthritides’, 51st Annual Conference of Indian Orthopedic Association, New Delhi; 9–15 November 2006.
  - ‘Approach to arthritis and connective tissue diseases’, and ‘Management of rheumatoid arthritis’, Association of Physicians of India, Ujjain Branch CME on ‘Rheumatology and clinical immunology’, Ujjain; 12 November 2006.
  - ‘Atherosclerosis: The emerging challenge in SLE’, and ‘How I use corticosteroids?’, 22nd Annual Conference of Indian Rheumatology Association, IRACON-2006, Lucknow; 23–26 November 2006.
  - ‘Vasculitis: Current concepts’, and ‘RA: Recent trends in management’, 28th Annual Conference of the Association of Physicians of Gujarat, Vadodara; 6–7 January 2007.
  - ‘Autoantibodies in rheumatic diseases’, 33rd Indian Immunology Society Conference, New Delhi; 28–31 January 2007.
  - ‘How to initiate and monitor therapy in a case of newly diagnosed RA?’, Rheumatology Update, Delhi Rheumatology Association, Delhi; 11 February 2007.
  - ‘Cardinal concepts in management of SLE’, 62nd Annual Conference of the Association of Physicians of India, Goa; 16–18 February 2007.

**Professor G.C. Khilnani**

- ‘Graphics in mechanical ventilation’, Conference on Critical Care Medicine, Indian Society of Critical care Medicine, Jaipur; 6–9 April 2006.
- ‘Nosocomial pneumonia: Diagnosis and treatment’, NCCP (I) German Remedies Oration, National Conference on Pulmonary Diseases, NAPCON 2006, Nagpur; 1–5 November 2006.
- ‘Regulatory development and health effects from air pollution’, Asian Vehicle Emission Control Conference, jointly organized by Association for Emission Control, Catalyst Brussels Belgium, Emission Control Manufacturers Association, India and Manufactures

- of Emission Controls Association Washington DC, USA, Jaipur; 20–22 September 2006.
- ‘Invasive methods for diagnosis of Ventilator Associated Pneumonia (VAP)’, 2nd National Conference on Pulmonary and Critical Care and Sleep Medicine, Chest Summit 2006, Delhi; 12–15 October 2006.
- ‘Non-invasive ventilation’, Workshop on ‘Mechanical ventilation’, National Conference on Pulmonary Diseases, NAPCON 2006, Nagpur; 1–5 November 2006.
- ‘Modes of mechanical ventilation’, Workshop on ‘Mechanical ventilation’, National Conference on Pulmonary Diseases, NAPCON 2006, Nagpur; 1–5 November 2006.
- ‘Non-invasive positive pressure ventilation’, Guest faculty lecture for DNB course, LRS Institute for Tuberculosis and Chest Diseases, 15 December 2006.
- ‘How do I treat VAP’, First International Conference and 10th Annual workshop on ‘Mechanical ventilation’, Indian Society of Critical Care Medicine (Pune branch); 2–4 November 2006.
- ‘Non-invasive ventilation: How do I use it’, First International Conference and 10th Annual workshop on ‘Mechanical ventilation’, Indian Society of Critical Care Medicine (Pune branch); 2–4 November 2006.
- ‘Small cell lung cancer’, Panel discussion, 5th Conference on ‘Evidence-based management of Cancers in India’, Indian Society of Study of Lung Cancer, Tata Memorial Hospital, Mumbai; 26–28 February 2007.
- ‘Slow to wean COPD patients in ICU’, 13th Annual Conference of the Indian Society of Critical care Medicine, Criticare 2007, Cochin; 7–11 February 2007.
- ‘End of life support’, Panel discussion, Conference on ‘Critical care medicine’, Indian Society of Critical Care Medicine, Jaipur; 6–9 April 2006.
- ‘Setting of mechanical ventilation’, Pre-conference workshop, Conference on ‘Critical care medicine’, Indian Society of Critical Care Medicine, Jaipur; 6–9 April 2006.
- ‘ICU management in COPD’, National Conference on ‘Tuberculosis and chest diseases’, NATCON 2006, Udaipur; 23–25 February 2006.
- ‘Fibreoptic bronchoscopy in ICU’, Meet the Expert Session, First International Conference and 10th Annual workshop on ‘Mechanical ventilation’, Indian Society of Critical Care Medicine, Pune; 2–4 November 2006.
- ‘RDS Net. What is new?’, Conference on ‘Critical care medicine’, Indian Society of Critical Care Medicine, Jaipur; 6–9 April 2006.

#### **Dr Naveet Wig**

- ‘Operational and health services research needs in India’, University of California, Los Angeles; 1 March 2007.
- ‘Drug interactions and antiretroviral drugs’, Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS in paediatrics’, AIIMS; 7 October 2006.

**Dr Uma Kumar**

- ‘Systemic sclerosis’, National Rheumatology Update, Army Hospital (Research and Referral), New Delhi; 19–20 August 2006.
- ‘Acute/chronic monoarthritis’, 22nd Annual Conference of Indian Rheumatology Association, IRACON 2006, Lucknow; 23–26 November 2006.
- ‘RA and pregnancy’, Rheumatology Update, Delhi Rheumatology Association, Delhi; 11 February 2007.

**Dr Rajiva Gupta**

- ‘Soft tissue rheumatism’, National Rheumatology CME, Army Hospital (Research and Referral), Delhi; 19–20 August 2006.
- ‘Recent advances in management of RA’, MAMC Medicine Update; December 2007.
- ‘Current concept in osteoporosis’, IMA, Dehradun; 27 January 2007.
- ‘Management of rheumatoid arthritis’, IMA, Dehradun; 27 January 2007.
- ‘Drug management of osteoporosis’, DRA Annual Meeting, Apollo Hospital, Delhi; 11 February 2007.
- ‘Examination in rheumatology’, Workshop on ‘Clinical methods in medicine for postgraduates’, AIIMS; 17–18 March 2007.
- ‘Medicine poster quiz’, APICON 2007, Goa; 16–18 February 2007.
- ‘Scleroderma lung’, IRACON 2006, Lucknow; 24–26 November 2006.
- ‘Assessment of anxiety in India fibromyalgia patients and response to low dose amitriptyline’, BSR, Glasgow 2006.
- ‘Autonomic nervous system derangement in fibromyalgia: A non-invasive assessment’, BSR, Glasgow 2006.
- ‘Role of F18-FDG PET-CT scan in diagnosis and assessment of disease activity of Takayasu’s arteritis—Preliminary results’, IRACON 2006, Lucknow; 24–26 November 2006.
- ‘Prevalence and clinical significance of anti-cyclic citrullinated peptide antibodies in juvenile idiopathic arthritis’, IRACON 2006, Lucknow; 24–26 November 2006.

**Dr Sanjiv Sinha**

- ‘Study of prevalence and types of baseline HIV drug resistance in the antiretroviral treatment-naive and previously treated HIV-infected Northern Indian population’, UCLA School of Medicine, Los Angeles, USA; June 2006.
- ‘Study of the prevalence and risk factors for multi-drug resistant tuberculosis (MDR-TB) in HIV/AIDS patients with tuberculosis (TB) in North India’, UCLA School of Medicine, Los Angeles, USA; June 2006.
- ‘Risk factors and prevalence of drug resistant tuberculosis’, NAPCON 2006, Nagpur; November 2006.
- ‘AIDS wasting syndrome: Current concepts in management’, APICON, Goa; February 2007.

- ‘Voluntary counselling and testing centre (VCTC) in HIV patients at tertiary case hospital in north India’, APICON, Goa; February 2007.
- ‘Advanced HIV disease with disseminated TB, encephalopathy, deep venous thrombosis and HIV myelopathy’, APICON, Goa; February 2007.
- ‘Opportunistic infections in HIV/AIDS’, Delhi State AIDS Control Society training programme for ‘Management of HIV/AIDS for physicians’, AIIMS; 19–20 April 2006.
- ‘Management of HIV drug resistance’, 3rd Indo-US CME on ‘Antiretroviral therapy’, AIIMS; 7 October 2006.
- ‘Opportunistic infections in HIV/AIDS’, Delhi State AIDS Control Society training programme for ‘Management of HIV/AIDS for nurses’, AIIMS; 8–9 October 2006.

#### **Dr Naval K. Vikram**

- ‘Diabetes and liver disease’, CME organized by the Diabetes Prevention Task Force, Sri Lanka Medical Association, Colombo, Sri Lanka; 27 September 2006.
- ‘Metabolic syndrome in the next generation’, Symposium in Annual Sessions of Ceylon College of Physicians, Colombo, Sri Lanka; 29 September 2006.
- ‘Ethnic-specific definitions of obesity and the metabolic syndrome: Asian perspective’, CME of 10th International Congress on ‘Obesity’, Sydney, Australia; 7 September 2006.

#### **Dr Anant Mohan**

- ‘Predictive indicators for invasive mechanical ventilation in patients with acute exacerbation of chronic obstructive pulmonary disease’, APICON, Goa; 15–18 February 2007.

## **RESEARCH**

### **Funded Projects**

#### **Completed**

1. Spectrum of pulmonary infection in HIV-positive patient: Indian scenario. Randeep Guleria. Funded by NACO for 3 years. Funds: Rs 27.79 lakh.
2. Assessment of efficacy of hydroxychloroquine as an alternative to corticosteroids in the treatment of sarcoidosis: A randomized control trial. Randeep Guleria. Funded by DST for 3 years. Funds: Rs 19.78 lakh.
3. Diagnostic approaches for the rapid and early diagnosis of *Mycoplasma pneumoniae* in asthmatic. Randeep Guleria. Funded by DST for 3 years. Funds: Rs 16 lakh.
4. Double-blind randomized placebo-controlled trial of herbal compound MA-364 in patients with mild to moderate bronchial asthma. Randeep Guleria. Funded by Maharishi Ayurveda for 2 years. Funds: Rs 1.5 lakh.
5. Effect of feeding pectin on antioxidant status in patients with type 2 diabetes. Anant Mohan. Funded by AIIMS for 2 years (2005–07). Funds: Rs 1.65 lakh.

### **Ongoing**

1. Impact of HIV-infection on latent TB among patients with HIV–TB co-infection (Facility has been designated as National Facility). S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India for 3 years (2007–2010). Funds: Rs 2,19,96,000.
2. Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters (double-blind, randomized, placebo-controlled, clinical trial). S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India for 3 years (2006–2009). Funds: Rs 90,90,000.
3. Efficacy of oral zinc administration as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters (double-blind, randomized, placebo-controlled, multicentre clinical trial). S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India for 3 years (2006–2009). Funds: Rs 63,38,000.
4. Evaluation of the efficacy of thrice weekly DOTS regimen in TB pleural effusion at six months (multicentre project). S.K. Sharma. Funded by Revised National TB Control Programme NCT of Delhi for 3 years (2006–2009). Funds: Rs 14,36,615.
5. Efficacy and safety of immunomodulator *Mw* as an adjunct therapy in category I (new sputum smear positive) pulmonary tuberculosis, along with assessment of immunological parameters (double-blind, randomized, placebo-controlled, multicentre clinical trial). S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India for 3 years (2006–2009). Funds: Rs 76,81,000.
6. Programme support for immuno-proteomics based diagnosis of infectious diseases. S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India for 3 years (2006–2009). Funds: Rs 1,73,488.
7. A population-based study of prevalence and risk factors in sleep disordered breathing in south Delhi [Designated as South Delhi Sleep Study Cohort (SDSSC)]. S.K. Sharma. Funded by Pfizer India for 1 year (2006–2007). Funds: Rs 2,50,001.
8. Antiretroviral treatment (ART) centre for free treatment of HIV/AIDS patients (National AIDS Control Organization (NACO), Ministry of Health and Family Welfare, Government of India). S.K. Sharma. Funded by Delhi State AIDS Control Society for 2 years (2005–2007). Funds: Rs 4,50,000.
9. Efficacy of thrice weekly intermittent short course antituberculosis chemotherapy in tuberculosis patients with and without HIV-infection. S.K. Sharma. Funded by NACO, Ministry of Health and Family Welfare, Government of India for 3 years (2006–2009). Funds: Rs 45,42,000.
10. Nodal Centre for free treatment of TB. S.K. Sharma. Funded by Revised National TB Control Programme NCT of Delhi through the area District TB Centre, Ministry of Health and Family Welfare, Government of India for 2 years (2005–2007). Funds: Rs 4,32,000.



11. Treatment outcome and drug resistance among CAT II pulmonary tuberculosis under Revised National TB Control Programme (RNTCP). S.K. Sharma. Funded by RNTCP NCT of Delhi 2 years (2005–2007). Funds: Rs 4,99,220.
12. A double-blind, placebo-controlled, parallel, multicentre study on extended VTE prophylaxis in acutely ill medical patients with prolonged immobilization. S.K. Sharma. Funded by Aventis Pharmaceuticals Inc, USA 1 year (2006–2007). Funds: Rs 4,00,000.
13. Incidence of deep venous thrombosis (DVT) among patients admitted in medical wards and intensive care unit (ICU) of a tertiary care hospital (A study protocol). S.K. Sharma. Funded by Pfizer India 2 years. Funds: Rs 5,70,000.
14. Genomic and molecular studies in patients of bronchial asthma. Collaborative project, Department of Medicine, AIIMS and Institute of Genomics and Integrated Biology, New Delhi. S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India, for 3 years (2004–2007). Funds: Rs 41.74 lakh.
15. Efficacy and safety of immunomodulator (*Mycobacterium w*) as an adjunct therapy in Category II pulmonary tuberculosis long with assessment of Immunological parameters (double-blind, randomized, placebo-controlled, multicentre clinical trial). S.K. Sharma. Funded by Department of Biotechnology, Ministry of Science and Technology, Government of India and Cadila Pharmaceuticals 3 years (2004–2007). Funds: Rs 98.95 lakh.
16. Evaluation of management strategy for pulmonary embolism. S.K. Sharma. Funded by International Atomic Energy Agency (IAEA), Vienna, Austria, for 3 years (2004–2007). Funds: Rs 1.74 lakh.
17. Design and development of Personal use respiratory devices for patients with respiratory failure. Randeep Guleria. Funded by Ministry of Communication and Information Technology, till June 2007. Funds: Rs 22.85 lakh.
18. Assessment of nutritional and antioxidant enzyme status in mechanically ventilated critically ill patients. Effects on mortality and strategies for improving nutritional support. Randeep Guleria. Funded by Department of Science and Technology, till September 2009. Funds: Rs 22 lakh.
19. Effect of outdoor and indoor air pollution on children's health in Delhi. A controlled study. G.C. Khilnani. Funded by Ministry of Environment and Forest for two and half years (15 December 2005 to 15 June 2008). Funds: Rs 5,59,996 per year.
20. Evaluation of antibodies against cyclic citrullinated peptide (CCP) as diagnostic and prognostic marker of Rheumatoid Arthritis. R. Gupta. Funded by AIIMS for 2 years. Funds: Rs. 1 lakh.
21. Study the effect of statin on lipid profile and disease activity in rheumatoid arthritis. R.Gupta. Funded by AIIMS for 2 years. Funds: Rs 1 lakh.
22. Study of early versus delayed initiation of antiretroviral therapy for HIV-infected patients with tuberculosis on antituberculosis chemotherapy in Indian subjects. S. Sinha. Funded by NACO for 3 years (A collaborative UCLA, USA and AIIMS project). Funds: Rs 27 lakh.
23. Study of prevalence and types of baseline HIV drug resistance in the antiretroviral treatment-

- naive and previously treated HIV-infected Northern India population. S. Sinha. Funded by NACO for 3 years (A collaborative UCLA, USA and AIIMS project). Funds: Rs 36 lakh.
24. Study of the relationships between growth hormone-insulin like growth factor-1 axis and hypothalamo-pituitary-adrenal axis with body composition, insulin sensitivity, subclinical inflammation and cytokines in Asian Indians. N.K. Vikram. Funded by the Science and Engineering Research Council, Department of Science and Technology, Government of India for 3 years (2004–2007). Funds: Rs 7 lakh.
  24. Body fat and its relationship with metabolic syndrome indicators in overweight pre-adolescents and adolescents. N.K. Vikram. Funded by International Atomic Energy Agency, Vienna for 3 years (2006–2009). Funds: US \$ 27,000.
  25. Investigation of genetic basis, and gene-lifestyle interactions in generalized and regional obesity, insulin resistance and diabetes in Asian Indians. N.K. Vikram. Funded by Department of Biotechnology, Government of India for 3 years (2006–2009); Funds: Rs 45 lakh.
  26. Development of appropriate prevention and intervention strategies for non-communicable nutrition related disorders among women in post-reproductive period. N.K. Vikram. Funded by Department of Science and Technology, Government of India for 3 years (2004–2007). Funds: Rs 8 lakh.
  27. Double-blind randomized placebo-controlled clinical trial of herbal compound MA-579 in patients with non-alcoholic fatty liver diseases. N.K. Vikram. Funded by Maharishi Ayurveda Products for 2 years (2005–2007). Funds: Rs 2.5 lakh.
  28. Double-blind randomized placebo-controlled clinical trial of herbal compound MA-471 on metabolic profile of type 2 diabetic patients. N.K. Vikram. Funded by Maharishi Ayurveda Products for 2 years (2005–2007). Funds: Rs 2.5 lakh.
  29. Study of the prevalence of respiratory virus infections in hospitalized patients with acute exacerbation of chronic obstructive pulmonary disease and their impact on morbidity and mortality. Anant Mohan. Funded by Indian Council for Medical Research for 3 years (2007–2010). Funds: Rs 12.64 lakh.

## **Departmental Projects**

### **Completed**

1. Reintroduction of antituberculosis drugs in anti-TB drugs induced hepatitis
2. Bronchial hyperactivity, respiratory muscle strength and dyspnea in patient with mitral stenosis before after balloon valvulotomy
3. Colonization of upper and lower respiratory tract with pathogenic bacteria in patients receiving mechanical ventilation and risk of ventilator associated pneumonia
4. Carotid intimo-medial thickness in rheumatoid arthritis
5. Expression of major histocompatibility complex (MHC-I and II) and cell adhesion molecules in idiopathic inflammatory myopathies

6. Treatment outcome and drug resistance among category II pulmonary tuberculosis patients under RNTCP
7. Antimicrobial sensitivity pattern of common isolates in AIIMS Medicine wards and factors associated with the relative rates of antimicrobial resistance
8. To study the prevalence of osteoporosis in patients with ankylosing spondylitis: A hospital-based study
9. To study the occurrence of pulmonary arterial hypertension in scleroderma patients
10. To study the effect of oral pilocarpine in patients with sjogren syndrome
11. To study the subset of antiphospholipid syndrome defined by anti beta glycoprotein 1 antibodies
12. Screening for primary antiphospholipid syndrome at AIIMS
13. Clinical implication of anti CCP antibodies in JIA
14. Prevalence and clinical significance of antiphospholipid antibodies in systemic sclerosis

### ***Ongoing***

1. Prevalence of sleep disordered breathing in middle aged Indian adults: A population-based study
2. Treatment outcome and drug resistance among category II pulmonary tuberculosis patients under RNTCP
3. Neurocognitive impairment and atherogenesis in obstructive sleep apnea
4. Clinical and laboratory characteristics of HIV/AIDS patients and their outcome with antiretroviral treatment at ART clinic
5. Estimation of serum rifampicin levels in patients with anti tuberculosis drug induced hepatotoxicity and comparison of safety of different reintroduction regimens
6. Study of T cells subsets and dynamics of cytokines production in human tuberculosis
7. Comparison of various methods for detection of TB infection and diseases in HIV/AIDS
8. Study of prevalence and types of baseline HIV drug resistance in the antiretroviral treatment-naïve and previously treated HIV-infected Northern India population
9. Evaluation of 18-FDG PET-CT and comparison with CT findings in patients with mediastinal lymphadenopathy due to tuberculosis and sarcoidosis
10. Dynamics of commensal flora and development of nosocomial infections in the critically ill
11. Microbial patterns in severe exacerbations of COPD requiring mechanical ventilation
12. Neurocognitive functions in AIDS patients and response to antiretroviral therapy
13. Evaluation of efficacy and adverse effects of antiretroviral drugs in treatment naïve HIV patients at AIIMS
14. To study the prevalence of *Clostridium difficile* in nosocomial diarrhoea in patients admitted in Medicine ICU
15. Lactate dehydrogenase and alkaline phosphates levels in bronchoalveolar lavage fluid of patients with sarcoidosis
16. Assessment of quality of life in asthma patients

17. Smoking habits in urban slums of Delhi. Prevalence of smoking and impact of awareness programme in urban slums of Delhi
18. Hospitalization for systemic rheumatic diseases
19. Endothelial dysfunction in rheumatoid arthritis
20. Evaluation of side-effects of antiretroviral therapy in patients with HIV/AIDS
21. Efficacy of oral sildenafil in pulmonary artery hypertension in scleroderma: A hospital-based study
22. To study the therapeutic window in rheumatoid arthritis
23. Screening for catastrophic antiphospholipid antibody syndrome
24. Clinical profile of frail elderly patients in hospital setting
25. To study the pregnancy outcome in systemic lupus erythematosus with special reference to cyclophosphamide therapy
26. Role of 18-FDG CT-PET in diagnosis and assessment of systemic necrotizing vasculitis
27. Study the effect of DMARD on lipid profile in rheumatoid arthritis with special reference to lipoprotein A and oxidized LDL
28. Pregnancy outcome in Indian systemic sclerosis

## **Collaborative Projects**

### **Completed**

1. Critical appraisal of assessment in key clinical disciplines in undergraduate course at AIIMS (with CMET)
2. A comparative study of bone marrow histopathology, aspirate smear, culture and polymerase chain reaction (PCR) for the diagnosis of disseminated tuberculosis (with Microbiology)
3. Evaluation of various parameters in early detection of ethambutol-induced optic neuropathy (with Ophthalmology)
4. Clinicopathological study of sepsis in dermatology ward (with Dermatology)
5. Pulmonary tuberculosis: CT evaluation in active and post-treatment phases with limited MR correlation (with Radiodiagnosis)
6. Autonomic function in Indian fibromyalgia patients (with Physiology)
7. To study the role of synovectomy of wrist in case of inflammatory arthritis of wrist (with Orthopaedics)
8. A multicentric, open comparative, randomized study to optimize dose, duration, safety and efficacy and cost of two treatment regimens with liposomal amphotericin (Fungisome TM) in the treatment of systemic fungal infections in India. S.K.Sharma. (with GSMC and KEM Hospital, Mumbai).
9. Air pollution and mortality in Delhi. (with The Energy and Resource Institute, New Delhi).

### **Ongoing**

1. Toll-like receptor polymorphisms in *M. tuberculosis* infection
2. Immunology of regulatory T-cells subsets in human tuberculosis

3. Clinical and molecular evaluation of drug resistant patterns in North Indian mycobacterial isolates obtained from various HIV-positive and HIV-negative patients
4. Studies on T-cell mediated immunosuppression in visceral leishmaniasis patient
5. Influence of genetic variations in HLA, chemokines, cytokines and their receptors in HIV-1 infection
6. Immunoregulatory role of co-stimulatory molecules in tuberculosis
7. DNA amplification study by polymerase chain Reaction (PCR) to detect subclinical *pneumocystis carinii* pneumonia [PCP infection and colonization in 'at risk' patients with or without respiratory symptoms] (with Microbiology).
8. A comparative study between pre and postoperative pulmonary functions and diaphragmatic movements in congenital craniovertebral junction anomalies (with Neurosurgery)
9. Effect of yoga on pulmonary function, mast cell activation and quality of life in bronchial asthma: A randomized controlled trial (with Physiology)
10. Primary drug resistance studies by genotypic and phenotypic analysis in HIV Indian subtype C infected individual (with Microbiology)
11. Brachial plexus neurotization with phrenic and or intercostals nerves and its effect on pulmonary function (with Neurosurgery)
12. Effect of IFN- $\alpha$  and immune complex on neutrophil-CR1 transcript and its relationship with CR1 density polymorphism (with Biochemistry)
13. Phenotypic and genotypic characterization of clinical isolates of *Candida* species (with Microbiology)
14. Herbal treatment of osteoarthritis and rheumatoid arthritis. Interdisciplinary School of Health Sciences, Pune, NBRI; Lucknow, CRD Pune; IRSHA Pune; KEM Hospital Mumbai; NIMS Hyderabad; ICT Hyderabad. Funding agency: CSIR.
15. Prevalence and treatment response of coccidian parasite infection in HIV-positive patients at AIIMS (with Laboratory Medicine)
16. A study of haematological abnormalities in HIV/AIDS (with Haematology)
17. Study of mycobacteremia in disseminated tuberculosis (with Laboratory Medicine)
18. To study the immunogenic effect of kinesin motor domain gene against visceral leishmaniasis (with Laboratory Medicine)
19. Role of 18-FDG PET scan in the diagnosis and evaluation of pulmonary nodules (with Surgery)
20. Evaluation of the role of MDCT, CT angiography and bronchial artery embolization in the management of haemoptysis (with Radiodiagnosis)
21. Cutaneous vasculitis—etiological and clinico-pathological correlation (with Dermatology)

## **PUBLICATIONS**

### **Journals**

1. Aggarwal P, Sharad S, Handa R, Dwivedi SN, Irshad M. Comparison of nebulised magnesium sulphate and salbutamol combined with salbutamol alone in the treatment of

- acute bronchial asthma: A randomized study. *J Emerg Med* 2006;**23**:358–62.
2. Ahluwalia G, Sharma SK. Philanthropy and medical science: At last a new dawn for tuberculosis also! [editorial]. *Indian J Chest Dis Allied Sci* 2007;**49**:71–3.
  3. Arya S, Isharwal S, Misra A, Pandey RM, Rastogi K, Vikram NK, *et al.* C-reactive protein and dietary nutrients in urban Asian Indian adolescents and young adults. *Nutrition* 2006;**22**:865–71.
  4. Asher MI, Montefort S, Bjorksten B, Lai CKW, Strachan D, Weiland SK, Williams H and the ISAAC Phase Three Study Group. Worldwide time trends in the prevalence of symptoms of asthma, allergic rhinoconjunctivitis and eczema in childhood-ISAAC Phase Three. *Lancet* 2006;**368**:733–43. [Professor SK Sharma was the Principal Investigator for the study from India (name listed in the Appendix in online supplement)].
  5. Banga A, Khilnani GC. A comparative study of characteristics and outcome of patients with acute respiratory failure requiring mechanical ventilation. *Indian J Crit Care Med* 2006;**10**:80–7.
  6. Batra J, Sharma SK, Ghosh B. Arylamine N-acetyltransferase gene polymorphisms: Markers for atopic asthma, serum IgE and blood eosinophil counts. *Pharmacogenomics* 2006;**7**:673–82.
  7. Batra J, Rajpoot R, Ahluwalia J, Devarapu SK, Sharma SK, Dinda AK, *et al.* A hexanucleotide repeat upstream of eotaxin gene promoter is associated with asthma, serum total IgE and plasma eotaxin levels. *J Med Genet* 2007. [Epub ahead of print].
  8. Bhatnagar P, Guleria R, Kukreti R. Pharmaogenomics of beta-2 agonist: Key focus on signaling pathways. *Pharmacogenomics* 2006;**7**:919–33.
  9. Bhatt SP, Handa R, Gulati GS, Sharma S, Pandey RM, Aggarwal P, *et al.* Atherosclerosis in Asian Indians with systemic lupus erythematosus. *Scand J Rheumatol* 2006;**35**:128–32.
  10. Bhatt SP, Luqman-Arafat TK, Mohan A, Guleria R. Pulmonary alveolar microlithiasis: A rare cause of dyspnea. *Postgrad Med J* 2007;**83**:2.
  11. Chandra D, Guntupalli KK, Guleria R. Hypotension is a predictor of mortality in acute exacerbations of chronic obstructive pulmonary disease. *Indian J Chest Dis Allied Sci* 2007;**49**:13–18.
  12. Das CJ, Pangtey G, Sharma R, Hari S, Das AK, Guleria R. Hypereosinophilic syndrome presenting as a paravertebral mass. *AJR Am J Roentgenol* 2006;**186**:1470–2.
  13. Gandhi R, Hussain E, Das J, Handa R, Pal R. Anti-idiotypic-mediated epitope spreading and diminished phagocytosis by a human monoclonal antibody recognizing late-stage apoptotic cells. *Cell Death Differ* 2006; [Epub ahead of print].
  14. Gogia N, Marwaha V, Atri S, Gulati M, Gupta R. Polyostotic spinal fibrous dysplasia in a patient with rheumatoid arthritis. *Skeletal Radiol* 2006; [Epub ahead of print].
  15. Gopi A, Madhvan SM, Sharma SK, Sahn SA. Diagnosis and treatment of tuberculosis pleural effusion in 2006. *Chest* 2007;**131**:880–89.
  16. Grover R, Shankar S, Aneja R, Marwaha V, Gupta R, Kumar A. Treatment of ankylosing spondylitis with Pamidronate: An open label study. *Ann Rheum Dis* 2006;**65**:688–89

17. Grover R, Dhir V, Guruprasad K, Kumar A, Handa R. Tropical pyomyositis of the lower limbs. *Arthritis Rheum* 2006;**54**:2030.
18. Guleria R, Sharma R, Mohan A, Das C. Cardiac sarcoidosis: An uncommon presentation of sarcoidosis in India. *Indian J Chest Dis Allied Sci* 2006;**48**:133–7.
19. Gupta R, Kumar AN, Gupta V, Madhavan SM, Sharma SK. An unusual cause of paraparesis in a patient on chronic steroid therapy. *J Spinal Cord Med* 2007;**30**:67–9.
20. Gupta R, Bammigatti C, Dinda AK, Marwaha V, Gupta S. Renal involvement in Indian patients with systemic sclerosis. *Indian J Med Res* 2007;**61**:91–6.
21. Gupta R, Kulshresth P, Gupta S, Deepak KK, Yadav RK. Assessment of anxiety in India fibromyalgia patients and response to low dose amitriptyline. *Rheumatology (Oxford)* 2006;**45** (Suppl 1):S259.
22. Gupta R, Kulshresth P, Deepak KK, Yadav RK, Bijlani RL. Autonomic nervous system derangement in fibromyalgia: A non-invasive assessment. *Rheumatology (Oxford)* 2006;**45** (Suppl 1):S258.
23. Handa R, Misra R, Chaturvedi VP, Pispati PK, Rao URK, Joshi VR. Guidelines for Tuberculosis prophylaxis during anti-tumour necrosis factor- $\alpha$  treatment—Indian Rheumatology Association. *APLAR J Rheumatology* 2006;**9**:181–3.
24. Handa R, Shankar S, Bal CS. Reflex sympathetic dystrophy syndrome: A clinico-radiologic study. *APLAR J Rheumatology* 2006;**9**:79–82.
25. Handa R, Kumar U, Wali JP. Pregnancy and systemic lupus erythematosus. *J Assoc Physicians India* 2006;**54** (Suppl):19–21.
26. Handa R. ANCA associated vasculitides: A clinical perspective. *J Pak Med Assoc (JPMA)* 2007;**57** (Suppl 1):11s.
27. Handa R. Common pitfalls in rheumatology practice. *J Pak Med Assoc (JPMA)* 2007;**57** (Suppl 1):17–18s.
28. Kadiravan T, Sharma SK. Mortality of HIV-infected patients in low-income countries. *Lancet* 2006;**368**:2207–8.
29. Kaur G, Singh P, Rappaport CC, Kumar N, Vajpayee M, Sharma SK, *et al.* Polymorphism in the CCR5 gene promoter and HIV-1 infection in North Indians. *Hum Immunol* 2007;**68**:454–61.
30. Khilnani GC, Banga A, Sharma SK. Predictors of need of mechanical ventilation and reintubation in patients with acute respiratory failure secondary to chronic obstructive pulmonary disease. *Indian J Crit Care Med* 2006;**10**:88–94.
31. Kumar S, Mohan A, Guleria R. Biomarkers in cancer screening, research and detection; present and future: A review. *Biomarkers* 2006;**11**:385–405.
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## **PATIENT CARE**

### **Special clinics**

#### **Chest Clinic (Friday 2:00 pm)**

New cases	1,885
Old cases	4,101
<b>Total</b>	<b>5,986</b>

#### **Medicine Intensive Care Unit**

Number of arterial blood gas analyses done	1,000
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#### **Rheumatology Clinic (Wednesday 2:00 pm)**

New cases registered	351
Number of follow up visits	6,733
<b>Total</b>	<b>7,084</b>

Intravenous pulses of steroids and cyclophosphamide	412
Joint and soft tissue injections	1,852

**Adult Haematology Clinic (Thursday 2:00 pm)**

New cases	57
Old cases	505

**Geriatric Clinic (Thursday 2:00 pm)**

New cases	141
Old cases	530

**Laboratories****Respiratory laboratory**

Spirometry procedures	2,750
Diffusion capacity estimation	563

**Bronchoscopy Laboratory**

Fibreoptic bronchoscopy performed	564
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**Sleep Laboratory**

Sleep studies	231
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**ADA/ACE Laboratory**

Adenosine deaminase tests	940
ACE tests	101

**Clinical Immunology Laboratory**

Number of blood samples received	8,844
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**Test**

RF	4,615
ANA	5,658
Anti-dsDNA	1,245
C3	1,027
Serum IgG, IgA and IgM	1,133
Cryoglobulins	146
ANCA	1,615
aCL	3,195
Anti-LKM-1	904
Nailfold capillary microscopy	25
Synovial fluid examination (including polarizing light microscopy)	75
<b>CD4/CD8 counts (Flowcytometry)</b>	<b>88</b>

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor S.K. Sharma** received the prestigious Ranbaxy Award Clinical Research 2005 for his research work on Tuberculosis, HIV, Sarcoidosis and Interstitial lung disease; continues to be editor of *Indian Journal of Chest Diseases and Allied Sciences* and Section Editor of *Pulmonology*, Section of the *API Textbook of Medicine*, 8th edition; continues to be Associate Editor, *Indian Journal of Tuberculosis*; Member, International Advisory Board, *Davidson's Principles and Practice of Medicine*, 20th edition; Textbook and *Kumar and Clark Textbook of Clinical Medicine*, 6th edition; continues to be an Editorial Board Member, *Chest* (American College of Chest Physicians), *Lung India*, *Journal of the Association of Physicians of India (JAPI)*, *Journal of Indian Academy of Clinical Medicine* and *Indian Journal of Sleep Medicine*. He continues to be the reviewer for the following reputed International and National journals: *The Lancet*, *American Journal of Respiratory and Critical Care Medicine* (Blue Journal), *Journal of Applied Physiology*, *Chest*, *The Lancet Infectious Disease*, *Respiratory Medicine*, *Respirology*, *Journal of Molecular and Cellular Proteomics*, *World Journal of Surgical Oncology*, *Clinical Chimica Acta*, *Infection*, *Genetics and Evolution*, *Pharmacological Research*, *Indian Journal of Medical Research*, *Journal of Laboratory and Clinical Medicine*, *Cytokine* and *Journal of Pharmacy Practice and Research*.

He continues to be the Chairperson and member of several international and national committees; Member, Public Health Advisory Committee of Foundation for Innovative New Diagnostics (FIND) (Bill and Melinda Gates Foundation, Geneva, Switzerland); Chief Scientific Advisor, International Multicountry project sponsored by International Atomic Energy Agency (IAEA), Vienna, Austria on Evaluation of management strategy for acute pulmonary embolism; Member, World Lung Health (initiative of International Union Against Tuberculosis and Lung Diseases (IUATLD)); Member, Joint Monitoring Mission 2006 of the Revised National TB Control Programme (RNTCP) of India, WHO-Geneva, WHO-SEARO, IUATLD, Ministry of Health and Family Welfare, Government of India; Member, Scientific Advisory Committee (SAC), Infectious Diseases, Indian Council of Medical Research; Member, Technical advisory committee to review the progress of project 'Socio-economic impact of TB on patient and their families' organized by Tata Energy Research Institute (TERI), Delhi; Member, special task force to review the programme of Ghatampur Unit at Central JALMA Institute for Leprosy and other Mycobacterial Diseases; Member, Special Task Force of the Department of Biotechnology, Ministry of Science and Technology; Government of India, on Tuberculosis; Member, Scientific Committee of 62nd Annual Conference of the Association of Physicians of India (APICON) 2007; Chairperson, National Task Force on the involvement of medical colleges in TB Control Programme (RNTCP) of India; Member, Central Standing Committee for Operational Research on RNTCP related project, Ministry of Health and Family Welfare, Government of India; Member, Selection Committee, Governing Body of LRS Institute of TB and Respiratory Diseases for the post of Director at Lala Ram Swarup Hospital; Selection Committee Member for Professor of Medicine at PGI Rohtak and Professor at PGIMER, Chandigarh.

**Professor Rita Sood** is a Member of Association for the Study of Medical Education in Europe and Member of Credential Committee of Indian College of Physicians; Member, Editorial Board, *Journal of Indian Academy of Clinical Medicine*; Member of the Review Board, *International Journal of Medical Education*; invited Expert by Ministry of Health, Government of India for Revision of MB,BS Curriculum and invited as Advisor by UPSC.

**Professor Randeep Guleria** has been the External Examiner for MD (Pulmonary Medicine) for Vallabhbhai Patel Chest Institute, Delhi, MD (Medicine) PGIMER, Chandigarh and BP Koirala Institute of Health Sciences, Dharan, Nepal; Adviser in the Board for the interview of candidates, who have qualified in the Combined Medical Services, Examination 2006 by the UPSC; Adviser in the Board for the interview candidates for Assistant Professor (TB and Chest Disease), UPSC; Member, Project Review Committee on 'Leprosy, Tuberculosis and Other Chest Diseases' and 'Project advisory Committee on Nutritional profile of Assam, Manipur and Meghalaya' of the ICMR; delivered the Dr Mahendra Narain Foundation Oration on 30 April 2006 in Patna, Bihar; Member, Indian Association of Sarcoidosis and other Granulomatous Disorders, New Delhi; Member of the preliminary working group for preparing a training manual for General Practitioners to manage COPD and asthma based on standard guidelines; Member of the Institute Postgraduate Thesis Committee, i.e. MD/MS/MHA/MSc/MBiotechnology/DM/MCh and PhD to examine the protocols from ethical angle.

**Professor G.C. Khilnani** received 'NCCP (I) German Remedies Chest Oration' for the year 2006; delivered the oration at the National Conference on Pulmonary Diseases (NAPCON 2006) under the aegis of National College of Chest Physicians and Indian Chest Society, Nagpur, 1–5 November 2006; nominated Course Director for workshop on Mechanical ventilation, National Conference on Pulmonary Diseases (NAPCON-2006), Nagpur, 1–5 November 2007; invited as Member, Research Council at Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow and attended the two days meeting, Lucknow, 9–10 May 2006. The council reviewed the progress of academic and research activities and suggested appropriate measures to enhance its academic and research standards. He also served as advisor to Union Public Service Commission for selection of doctors for the post of Assistant Professor of Medicine and Assistant Medical Officers; served as examiner for Diplomate for National Board (Medicine) twice during the year; Appraiser for the course of DNB course in Respiratory Medicine as nominated by National Board of Examinations; Member of Expert-cum-Monitoring Group of a research project: On Efficacy of Mycobacterium W. vaccine in treatment of tuberculosis; Member, Data and Safety Monitoring Board titled 'Zinc as an immunomodulator in the treatment of possible serious bacterial infections in infants more than 7 days and up to 2 months of age'; Member, selection committee for Norwegian government scholarship; Member of committee for framing Guidelines for use of non-invasive ventilation (Indian Society of Critical Care Medicine); Chairman, Expert group for Multicentric Task Force Project on Epidemiology of Asthma and Atopy in Adults, funded by ICMR.

**Dr Rohini Handa** was elected Member, Governing Body of the Association of Physicians of India; Secretary General, Asia Pacific League of Associations for Rheumatology; adjudged Outstanding Referee for the Year 2005 by Journal of Association of Physicians of India; and delivered the Dr Sukumar Mukherjee Honor Lecture 2006 at Dehradun, India.

**Dr Ashutosh Biswas** was awarded fellowship for master training in 'Clinical Research' at Albert Einstein College of Medicine, New York, USA; Member of New York Academy of Sciences, International AIDS Society (IAS) and National Committee for Quality Assurance of anti TB drugs. He is reviewer of an international journal *Chest*.

**Dr Uma Kumar** was awarded Japanese college of Rheumatology 2006 International scholarship to participate in 50th Annual General Assembly and scientific meeting of Japan college of Rheumatology held in Nagasaki, Japan, and is Associate Editor of the *Indian Journal of Rheumatology* for 2007–2009.

**Dr Rajiva Gupta** is member of International Advisory Board of *Davidson's - Principles and Practice of Medicine*, 20th Edition, Member of International Advisory Board of *Kumar and Clark–Clinical Medicine*, 6th Edition, and Adjunct member, CMET, from department of Medicine.

**Dr Anant Mohan** is a member, American College of Chest Physicians, European Respiratory Society, and Influenza Foundation of India. His research abstract submitted to the CHEST conference at Seattle, USA in October 2006 received the Alfred Soffer Research Award for best abstract.

## VISITING SCIENTISTS

Following international faculty members visited the department during the current year. They delivered lectures, interacted with faculty members, residents and undergraduates (posted) of the department.

1. Dr KK Guntupalli, Professor and Acting Chief, Pulmonary Critical Care Section, Baylor College of Medicine, Houston, Texas and Jayarama Guntupalli, Associate Professor of Medicine, UT- Houston Medical School, Texas (USA) delivered lectures and participated in clinical discussion in the general wards and intensive care unit of the department.
2. Dr Peter M. Small, Senior Programme Officer, Global Health Programme, Bill and Melinda Gates Foundation, Seattle, WA (USA) delivered a lecture and joined the ward round for discussion of clinical cases
3. Dr Madhukar Pai, Assistant Professor, Department of Epidemiology, Biostatistics and Occupational Health, McGill University Canada
4. Dr Kenneth H. Mayer, Professor of Medicine School, Rhode Island, USA and Visiting Professor Clinton Foundation, New Delhi visited the department thrice and delivered lecture each time

5. Dr Naimish R Patel, MD, Division of Pulmonary Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, USA)
6. The editorial team of Davidson's Principles and Practice of Textbook of Medicine (Professors Nicholas A. Boon, Nicki R. Colledge, Brian R. Walker, John A. A. Hunter; Edinburgh, Scotland) visited the department and a CME was held in the department.
7. Dr Nicholas A. Boon and Dr John A. A. Hunter delivered lectures in the department, interacted with faculty and residents and undergraduates.
8. The editorial team of Kumar and Clark Textbook of Clinical Medicine also visited the department in January 2007 and interacted with the faculty members and undergraduates posted in the department.

#### ACADEMIC, ADMINISTRATION, FINANCE, ENGINEERING, LIBRARY, CENTRAL FACILITIES, ETC.

Professor S.K. Sharma is the Chairperson of the AIIMS Drug Purchase Selection Committee, The Institute Medical Board, Operational Research in TB (Ministry of Health and Family Welfare, Government of India), and the National Task Force on Involving Medical Schools in DOTS programme. He is also Member of the Drug Selection Committee of National AIDS Control Organization and of the Governing Body, LRS Hospital, New Delhi.



## 9.18 Microbiology

### Professor and Head

J.C. Samantaray

### Professors

S. Broor

R. Chaudhry

### Additional Professors

A. Kapil

B.R. Mirdha

B.K. Das

L. Dar

### Associate Professors

B. Dhawan

M. Vajpayee

I. Xess

### Assistant Professors

S. Sood

U. B. Singh

## EDUCATION

### Short- and long-term training

BSc (Nursing) curriculum was revised in July 2006. A 36-hour teaching schedule was expanded to 60-hour schedule to provide a more extensive coverage of Microbiology with special emphasis on Infection Control.

Short-term summer training was provided to 22 and long-term training was provided to 10 students (MSc) from various institutes/universities.

Postgraduate students from the Department of microbiology of all three medical colleges of the University of Delhi (MAMC, LHMC, UCMS) underwent short-term training in newer microbiological techniques and postgraduate students of the Centre of Community Medicine, AIIMS, were provided short-term training in Entomology.

### Continuing Medical Education

The department organized a CME in collaboration with Department of Medicine, AIIMS and CTD on “National Task Force for the Involvement of Medical Colleges in RNTCP”; 3–5 November 2006.

### National and International Conferences

The Department of Microbiology (Virology section) organized the 7th Asia Pacific Congress of Medical Virologists (APCMV) at the India Habitat Centre, New Delhi on 13–15 November 2006. The department of Microbiology (Virology section) organized an Indo-US symposium on Viral Diagnostics, Epidemiology and Pathogenesis at the Indian Council of Social Sciences Research, New Delhi on 11–12 November 2006.

## ***Lectures delivered***

### **Dr. J.C. Samantaray**

1. 23<sup>rd</sup> National training programme in electron microscopy for technicians, 'The uses of Electron Microscopy in the study of microbial pathogens', AIIMS, New Delhi. November, 2006.
2. 22<sup>nd</sup> National training programme in Electron Microscopy for Investigators, 'The uses of Electron Microscopy in the diagnosis of microbial infections', AIIMS, New Delhi February 2007.
3. Chemical Society of India. State chapter meeting, 'Recent advances in Microbiological Diagnosis', Orissa, October 2006.
4. Chemical Society of India. State chapter meeting, 'The Chemistry of Life', Orissa, October 2006.

### **Dr. S. Broor**

1. 8<sup>th</sup> Sir Dorabji Tata Symposium. 'Molecular epidemiology of dengue in Delhi', IISC, Bangalore, 10-11 March 2007.
2. National CME of IAP chapter on Pediatric Infectious Diseases. 'Pitfalls in diagnosis of TORCH infections', IHC New Delhi, 29-30 July 2006.
3. Clinical Immunology workshop for physicians. 'Recent advancement in laboratory diagnosis'. AIIMS, New Delhi. 3-6 February 2007.
4. Third Update CME Gastroenterology 2007. 'Viral gastroenteritis', PGIMER Chandigarh. 2-4 February 2007.
5. Symposium on "Is Influenza a serious illness in children, adults and elderly?" 'Influenza surveillance in India, New Delhi. 15 October 2006.
6. Training programme for management of HIV/AIDS. 'Opportunistic Viral infections in HIV patients' AIIMS, New Delhi. 19-20 April 2006.
7. Symposium on "Challenges for prevention and control of dengue. 'Laboratory diagnosis of dengue.' New Delhi. 17 October 2006.
8. CME on Dengue and Chikungunya : an emerging problem. 'Epidemiology of dengue in Delhi,' MAMC New Delhi. 17 October 2006.
9. Training programme for prevention, control and management of HIV/AIDS for nurses. 'Virology of HIV.' AIIMS, New Delhi. 8-9 October 2006.

### **Dr. Rama Chaudhry**

1. 1<sup>st</sup> National Symposium on Diagnosis and Treatment of Gastrointestinal Infection. 'Probiotics and prebiotics in gastrointestinal infections.' PGIMER, Chandigarh. 13-14 January 2007.

### **Dr. B.R. Mirdha**

1. 3<sup>rd</sup> UP Chapter of IAMM. 'Emerging parasitic infections.' Aligarh Muslim University (AMU), Aligarh, Uttar Pradesh. 24 February 2007.

## **Dr. Urvashi B. Singh**

1. Delhi Chapter Meeting of Indian Association of Medical Microbiologists. 'Tuberculosis Diagnostic Challenges'. LRS TB Hospital, New Delhi. 9 December 2006.

## **RESEARCH**

### **Funded Projects**

#### ***Completed***

1. Diagnostic and prognostic evaluation of leishmaniasis by PCR and a newly developed Buffy Coat Assay using patient's blood. J.C. Samantaray. Funded by CSIR for 2 years (2004–2006). Funds: Rs 7.5 lakh.
2. A multicentric study on detection and characterization of Human Caliciviruses (HuCVs) in acute gastroenteritis and food-borne diseases. S. Broor. Funded by ICMR for 3 years (2003–2006). Funds: Rs 30.9 lakh.
3. Prevention of infection in Indian neonates, Global Network Project. R. Chaudhry. Funded by NIH for 5 years (2001–2006). Funds: Rs 125 lakh
4. Optimization of laboratory diagnosis of pertussis. A. Kapil. Funded by DBT for 18 months (2005–2007). Funds: Rs 10 lakh.
5. Study of *Haemophilus influenzae* isolates from invasive and noninvasive disease. B.K. Das. Funded by DST for 3 years (2004–2007). Funds: Rs 18 lakh.
6. Role of *Ureaplasma urealyticum* in prematurity and disease in newborns. B. Dhawan. Funded by DST for 3 years (2003–2006). Funds: Rs 13.5 lakh.
7. Rapid detection technique in candidaemia in critically ill patients and its therapeutic outcome. I. Xess. Funded by AIIMS for 2 years (2005–2007). Funds: Rs 1.3 lakh.

#### ***Ongoing***

1. Upgradation of Influenza center for testing of avian influenza. S. Broor. Funded by Government of India for 1 year (2006–2007). Funds: Rs 55 lakh.
2. Development of a PCR test for the SARS virus. S. Broor. Funded by DBT for 2 years (2004–2006). Funds: Rs 45.16 lakh.
3. Metapneumovirus infections of children in India. S. Broor. Funded by the National Institute of Health, USA for 2 years (2005–2007). Funds: Rs 48.3 lakh.
4. Multisite monitoring of human influenza in India—phase I. S. Broor. Funded by the Department of Health Human Services USA (DHHS) and Indian Council of Medical Research for 3 years (2004–2007). Funds: Rs 87.30 lakh.
5. Multisite epidemiology of Influenza virus. S. Broor. Funded by Sanofi Pasteur for 1 year (2006–2007). Funds: Rs 1 lakh.
6. Cloning and expression of *Mycoplasma pneumoniae* P1 gene and its fragments to study their role in cytoadherence. R. Chaudhry. Funded by ICMR for 3 years (2005–2008). Funds: Rs 17 lakh.

7. Development of multiplex real time quantitative PCR assay to detect *Chlamydia pneumoniae*, *Legionella pneumophila* and *Mycoplasma pneumoniae* in community acquired pneumonia. R. Chaudhry. Funded by DBT for 3 years (2005–2008). Funds: Rs 34.65 lakh.
8. To study colonization and immunomodulatory effect of probiotic strain in Indian Children. R. Chaudhry. Funded by DBT for 3 years (2006–2009). Funds: Rs 97 lakh.
9. Study of carbapenemase production amongst nosocomial isolates of gram-negative bacteria in a tertiary care hospital. A. Kapil. Funded by Indian Council of Medical Research for 3 years (2005–2008). Funds: Rs 12 lakh.
10. Pneumococcal surface protein A (Psa A) DNA construct as a vaccine candidate against *Streptococcus pneumoniae*: An immune response study. B.K. Das. Funded by DBT for 3 years (2006–2009). Funds: Rs 22 lakh.
11. DNA amplification study by polymerase chain reaction (PCR) to detect sub-clinical *Pneumocystis carinii* infections and colonisation in ‘at risk’ patients with or without respiratory symptom. B.R. Mirdha. Funded by DST for 3 years (2004–2007). Funds: Rs 18 lakh.
12. Detection, identification and characterization of intestinal coccidia and microsporidia in patients with malabsorption syndrome. B.R. Mirdha. Funded by ICMR for 3 years (2005–2008). Funds: Rs 9 lakh.
13. Prevalence of intestinal coccidiosis and other parasitosis in ‘at risk’ individuals. B.R. Mirdha. Intramural Project for 1 year (2006–2007). Funds: Rs 0.35 lakh.
14. Congenital CMV infection in offspring of immune mothers. L. Dar. Funded by ICMR Indo-US project for 3 years (2004–2007). Funds: Rs 35 lakh.
15. HIV national reference laboratory (NRL) and EQAS programme. L. Dar (since November 2006). Funded by NACO 1993—continuous renewal. Funds: Rs 5 lakh per year.
16. HIV voluntary counselling and confidential testing centre programme (VCCTC). L. Dar (since November 2006). Funded by NACO/DSACS, 2006—continuous renewal. Funds: Rs 2.5 lakh per year.
17. CD4/CD3 in HIV infected individuals/ART Programme. L. Dar (since November 2006). Funded by NACO 2006—continuous renewal. Funds: Rs 0.70 lakh per year + reagent support.
18. Detection of *Ureaplasma urealyticum* and *Mycoplasma hominis* in patients with lower genitourinary tract infection by PCR assay: Association of *U. urealyticum* biovars with clinical outcome. B. Dhawan. Funded by ICMR for 3 years (2006–2009). Funds: Rs 10.88 lakh.
19. Phenotypic and genotypic characterization of methicillin and mupirocin resistant staphylococci. B. Dhawan. Funded by DBT for 3 years (2005–2008). Funds: Rs 28.18 lakh.
20. Development of a DNA biosensor for detection of *Neisseria gonorrhoeae* in clinical samples. S. Sood. Funded by DBT for 3 years (2007–2010). Funds: Rs 62.5 lakh.

## **Departmental Projects**

### ***Completed***

1. Variability in G protein of respiratory syncytial virus (RSV) strains isolated from a rural community near Delhi
2. Evaluation of cell-mediated immune response in HIV-1 infected individuals in North India.
3. Characterization of T helper cell immune response to HIV-1 subtype C in infected individuals from India
4. Primary drug resistance studies by genotypic analysis in HIV-1 Indian subtype C in infected individuals
5. Human tat gene of HIV-1 Indian Subtype C as a vaccine candidate for immunogenicity testing in BALB/C mice
6. Nef gene of Indian Subtype C as a vaccine construct: Immunogenicity testing in BALB/C mice
7. Development of real time PCR for qualitative and quantitative determination of HIV type 1 RNA in blood samples

### ***Ongoing***

1. Antigenic and molecular characterization of human influenza virus from the patients of acute respiratory infection
2. Cloning and expression of G gene of RSV in baculovirus and mammalian expression vectors
3. Detection and genotyping of human cytomegalovirus from neonates and renal transplant recipients
4. Detection, genotyping and immune response study to human metapneumovirus
5. Quantification of viral load and genotyping of human cytomegalovirus in renal transplant recipients
6. Characterization of T cell immune responses to HIV-1 subtypes B and C gag and nef proteins in HIV-1 infected individuals
7. Blood myeloid and plasmacytoid dendritic cells in HIV infected Indian individuals
8. Multiplex RT-PCR for detection of viruses causing lower respiratory tract infections viz. human respiratory syncytial viruses (RSV), human parainfluenza viruses, influenza viruses (FLU), and human metapneumovirus (hMPV) and real time RT-PCR for detection of RSV and hMPV
9. Genetic variability of human caliciviruses from sporadic cases of acute gastroenteritis
10. Sequencing and phylogenetic analysis of dengue virus strains from Delhi
11. Study of inhibition of respiratory syncytial virus and human metapneumovirus multiplication by RNA interference in tissue culture and animal model

## **Collaborative Projects**

### ***Completed***

1. Molecular, biological and serological detection of parameters of association of

- Campylobacter jejuni* infection in children with Guillain–Barre syndrome (with Paediatrics)
2. Diagnosis of visceral leishmaniasis by use of the polymerase chain reaction (PCR) on patient blood (with Medicine and Institute of Pathology)

### **Ongoing**

1. Analysis of expression and regulation of classical HLA-A, B, C, non-classical HLA-G and transforming growth factor beta-2 in glioblastoma and their relevance in immunotherapy (with Neurology)
2. Assessment of intestinal permeability in chronic liver disease and its complications (with Gastroenterology)
3. Diagnostic and prognostic evaluation of leishmaniasis by PCR and a newly developed buffy coat assay using patient's blood (with Paediatrics)
4. Drug resistance surveillance under Revised National Tuberculosis Control Programme (with Medicine)
5. Efficacy and safety of immunomodulator mycobacterium W, Mw as an adjunct therapy in pulmonary tuberculosis (with Medicine)
6. Genetic diversity of *Entamoeba histolytica* isolates and identification of genotype and clinical phenotype correlations (with Gastroenterology)
7. *In vitro* expression and establishment of human fetal liver haematopoietic stem cell line (with Rotary Cancer Hospital)
8. Microscopy center for directly observed therapy, short-course (DOTS) (with Medicine)
9. Prevalence of antiretroviral drug resistance in HIV patients in Northern India (with Medicine)
10. Spectrum of pulmonary infections in HIV-infected patients (with Medicine)
11. Study of prevalence and types of base line HIV drug resistance in the antiretroviral treatment-naïve and previously treated HIV-infected Northern Indian population (with Paediatrics)
12. Study of the prevalence of respiratory virus infections in hospitalized patients with acute exacerbation of chronic obstructive pulmonary disease and their impact on mortality and morbidity (with Medicine)
13. Treatment outcome and drug resistance among Category II pulmonary tuberculosis patients under RNTCP (with Medicine)

## **PUBLICATIONS**

### **Journals**

1. Agarwal G, Kapil A, Kabra SK, Das BK. Cross-infection with *Pseudomonas aeruginosa* among patients with cystic fibrosis. *Natl Med J India* 2006;19:236–7.
2. Banerjee S, Bharaj P, Sullender W, Kabra SK, Broor S. Human metapneumovirus infections among children with acute respiratory infections seen in a large referral hospital in India. *J Clin Virol* 2007;38:70–2.
3. Behera B, Mirdha BR, Makharia GK, Bhatnagar S, Dattagupta S, Samantaray JC. A

- study of intestinal coccidia and microsporidia and other parasitic infections with malabsorption syndrome. *Indian J Gastroenterol* 2006;25:A34–A35.
4. Bhatla N, Dar L, Patro AR, Kriplani A, Gulati A, Verma K, *et al.* Human papillomavirus type distribution in cervical cancer in Delhi, India. *Int J Gynecol Pathol* 2006;25:398–402.
  5. Brudey K, Driscoll JR, Rigouts L, Prodinger WM, Gori A, Singh UB *et al.* Mycobacterium tuberculosis complex genetic diversity: Mining the fourth international spoligotyping database (SpolDB4) for classification, population genetics and epidemiology. *BMC Microbiol* 2006;6:6–23.
  6. Chandel DS, Chaudhry R, Dey AB, Malhotra P. Molecular typing reveals a unique clone of *Salmonella enterica* serotype Typhi among Indian strains. *J Clin Microbiol* 2006;44:2673–5.
  7. Chaudhry R, Varshney AK, Malhotra P. Adhesion proteins of *Mycoplasma pneumoniae*. *Frontiers in Bio Science* 2007;1:690–9.
  8. Dar L, Gupta E, Narang P, Broor S. Cocirculation of dengue serotypes, Delhi, India, 2003. *Emerg Infect Dis* 2006;12:352–3.
  9. Dhawan B, Gupta V, Khanna N, Singh M, Chaudhry R. Evaluation of the diagnostic efficacy of PCR for *Ureaplasma urealyticum* infection in Indian adults with symptoms of genital discharge. *Jpn J Infect Dis* 2006;59:57–8.
  10. Gadepalli R, Dhawan B, Mohanty S, Kapil A, Das BK, Chaudhry R, *et al.* Mupirocin resistance in *Staphylococcus aureus* in an Indian hospital. *Diagn Microbiol Infect Dis* 2007;58:125–7.
  11. Gadepalli R, Dhawan B, Mohanty S, Kapil A, Das BK, Chaudhry R. Inducible clindamycin resistance in clinical isolates of *Staphylococcus aureus*. *Indian J Med Res* 2006;123:571–3.
  12. Gadepalli R, Dhawan B, Sreenivas V, Kapil A, Ammini AC, Chaudhry R. A clinico-microbiological study of diabetic foot ulcers in an Indian tertiary care hospital. *Diabetes Care* 2006;29:1727–32.
  13. Gadepalli RS, Dhawan B, Mohanty S, Kapil A, Das BK, Chaudhry R. Evaluation of different methods for detecting methicillin resistance in *Staphylococcus aureus*. *Natl Med J India* 2006;19:236.
  14. Gorthi SP, Kapoor L, Chaudhry R, Sharma N, Perez-Perez GI, Panigrahi P, *et al.* Guillain-barre syndrome: Association with *Campylobacter jejuni* and *Mycoplasma pneumoniae* infections in India. *Natl Med J India* 2006;19:137–9.
  15. Goyal P, Kalek SC, Chaudhry R, Chauhan S, Shah N. Association of common chronic infections with coronary artery disease in patients without any conventional risk factors. *Indian J Med Res* 2007;125:129–36.
  16. Gupta E, Dar L, Broor S. Sero prevalence of rubella in pregnant women in Delhi, India. *Indian J Med Res* 2006;123:833–5.
  17. Gupta E, Dar L, Kapoor G, Broor S. The changing epidemiology of dengue in Delhi, India. *Virology J* 2006;3:92.
  18. Gupta E, Dar L, Singh S, Behari M, Broor S. Role of CSF serology in follow-up of

- subacute sclerosing panencephalitis patients on treatment. *Indian J Med Microbiol* 2006;24:131–2.
19. Gupta E, Dhawan B, Thabab MM, Das BK, Sood S, Kapil A. Nocardia pyopneumothorax in an immunocompetent patient. *Indian J Med Res* 2006;124:363–4.
  20. Gupta E, Mohanty S, Sood S, Dhawan B, Das BK, Kapil A. Emerging resistance to carbapenems in a tertiary care hospital in north India. *Indian J Med Res* 2006;124:95–8.
  21. Gupta E, Vajpayee M, Xess I, Seth P. Oral candidosis in HIV-infected patients and its relation to CD4+ count: An adjunct clinical marker of HIV diseases progression. *Trop Doct* 2006;36:127.
  22. Joshy L, Chaudhry R, Dhawan B, Das BK, Kumar L, Broor S. Enterotoxigenic *Clostridium perfringens* and sporadic diarrhoea: A study from an Indian tertiary care hospital. *J Med Microbiol* 2006;55:1757–8.
  23. Joshy L, Chaudhry R, Dhawan B, Kumar L, Das BK. Incidence and characterization of *Clostridium perfringens* isolated from antibiotic-associated diarrhoeal patients: A prospective study in an Indian hospital. *J Hosp Infect* 2006;63:323–9.
  24. Lal P, Kapil A, Das BK, Sood S. Occurrence of TEM and SHV gene in extended spectrum <sup>2</sup>- lactamases (ESBLs) producing *Klebsiella* sp. isolated from a tertiary care hospital. *Indian J Med Res* 2007;125:173–78.
  25. Mathur P, Samantaray JC, Vajpayee M, Samant P. Visceral leishmaniasis/HIV coinfection in India: The focus of two epidemics. *J Med Microbiol* 2006;55:919–22.
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  28. Mohanty S, Singhal R, Sood S, Dhawan B, Kapil A, Das BK. Citrobacter infections in a tertiary care hospital in Northern India. *J Infect* 2007;54:58–64.
  29. Naga S, Singh UB, Arora J, Pande JN, Seth P, Samantaray JC. Rapid detection of rifampicin resistant *Mycobacterium tuberculosis* by in-house reverse line blot assay. *Diagn Microbiol Infect Dis* 2006;56:133–40.
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  31. Singh UB, Bhanu NV, Suresh VN, Arora J, Rana T, Seth P. Utility of polymerase chain reaction in the diagnosis of tuberculosis from samples of bone marrow aspirate. *Am J Trop Med Hyg* 2006;75:960–3.
  32. Singhal R, Chaudhry R, Dhawan B. Anaerobic bacteraemia in a tertiary care hospital of North India. *Indian J Med Microbiol* 2006;24:235–6.
  33. Singhal R, Dhawan S, Mohanty S, Sood S, Dhawan B, Das B, *et al.* Species distribution



- and antimicrobial susceptibility of coagulase negative staphylococci in a tertiary care hospital. *Indian J Med Res* 2006;**123**:569–70.
34. Sharma N, Chaudhry R. Rapid detection of enterotoxigenic *bacteroides fragilis* in diarrhoeal faecal samples. *Indian J Med Res* 2006;**124**:575–82.
  35. Sood S, Amatya R, Malhotra M, Das BK, Kapil A. Profile of bacterial isolates from suspected case of IE: A retrospective study in a North Indian tertiary care hospital. *J Comm Dis* 2006;**38**:363–8.
  36. Suresh N, Arora J, Pant H, Rana T, Seth P, Singh UB. Spoligotyping of *Mycobacterium tuberculosis* DNA from archival Ziehl-Neelsen stained sputum smears. *J Microbiol Methods* 2007;**68**:291–5.
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  40. Yusuf S, Piedimonte G, Auais A, Demmler G, Krishnan S, van Caesele P, *et al.* The relationship of meteorological conditions to the epidemic activity of respiratory syncytial virus. *Epidemiol Infect* 2007;**8**:1–14.

## Books

Seema Sood. *Microbiology for Nurses*. 2nd ed. New Delhi: Elsevier; September 2006:1–399.

## PATIENT CARE

### Bacteriology

#### Bacteriology laboratory

Clinical samples	97,731
Antimicrobial susceptibility tests	27,187
<b>Total</b>	<b>1,24,918</b>

### Sexually transmitted diseases

#### Clinical samples

High vaginal swabs (HVS)	259
Semen	114
Expressed prostatic secretions (EPS)	108
Urethral discharge	3
<b>Total</b>	<b>484</b>

**Antimicrobial susceptibility testing**

HVS	67
Semen	14
EPS	15
Urethral discharge	03
<b>Total</b>	<b>99</b>

**External Quality Assessment**

Participated in external quality assurance (EQA) programme of WHO GASP (Gonococcal Antimicrobial Susceptibility Programme)

**Hospital Infection Control**

Samples processed as a part of surveillance, disinfectant in-use test and autoclave control	14,695
Water bacteriology	2,013
<b>Total</b>	<b>16,708</b>

**Serology Laboratory**

VDRL	8581
WIDAL	6943
<b>Total</b>	<b>15,524</b>

**Quality Control**

Internal quality control	
Sterility testing of media and ability to support growth	2,420
Biochemical tests	450
Antibiotic discs	8,252
<b>Total</b>	<b>11,122</b>

**Anaerobic bacteriology**

Anaerobic culture	323
Antimicrobial sensitivity	32
Stool culture for <i>C. difficile</i>	156
ELISA for <i>C. difficile</i> toxin	150
Referred Anaerobic culture (for identification)	04
Anaerobic strains supplied to other hospitals	12
Leptospira	
Leptospira culture	108
Leptospira serology for IgM antibodies	
—By ELISA	108
—By Lepto dri-dot	108

<b>Mycoplasma</b>	
<i>Mycoplasma pneumoniae</i> IgM antibodies by ELISA/GPA	148
<i>Mycoplasma pneumoniae</i> culture	84
<i>Mycoplasma hominis</i> culture	221
<i>Ureaplasma urealyticum</i> culture	237
<i>Legionella pneumophilla</i>	24
Antibiotic susceptibility	
—for <i>Mycoplasma hominis</i>	19
—for <i>Ureaplasma urealyticum</i>	43
<b><i>Campylobacter jejuni</i></b>	
Culture	135
Serology	92
Chlamydia pneumoniae	
—By ELISA	39
Legionella pneumophilla	
—By ELISA	39
<b>Polymerase chain reaction</b>	
—for <i>Salmonella typhi</i>	64
—for <i>Mycoplasma pneumoniae</i>	84
—for <i>Leptospira</i>	117
—for <i>Legionella pneumophilla</i>	64
—for <i>Mycoplasma hominis</i>	42
—for <i>Ureaplasma urealyticum</i>	63
<b>Total</b>	<b>2, 516</b>
<b>Parasitology</b>	
Serological Investigations	
<i>Toxoplasma gondii</i> serology (for IgG antibodies by ELISA)	77
Hydatid disease serology by indirect haemagglutination test	124
Amoebic serology (for IgG antibodies by ELISA)	131
<b>Investigation for malaria</b>	
Fluorescent staining (Acridine Orange)	2914
Giemsa staining	2914
Quantitative Buffy Coat (QBC) Assay	742
HRP-II antigen detection	154
<b>Investigation for kala-azar</b>	
Fluorescent staining (Acridine Orange)	464
Giemsa staining	464
Quantitative Buffy Coat (QBC) Assay	29

Kala-azar serology	247
Aldehyde test	247
<b>Examination of faecal samples for intestinal parasitosis</b>	
Direct and concentration	1,259
Modified acid-fast and special staining for intestinal coccidian	1,259
Culture (for entamoeba histolytica)	23
Tissue specimens (homogenates)	22
<b>Examination of aspirates</b>	
Sputum, pus and others	41
<b>Investigation for filariasis</b>	
Direct and concentration	32
Acridine Orange	32
Quantitative buffy coat assay	32
Hexazan provocative test	17
<i>Investigations for pneumocystis jiroveci infection</i>	170
(Broncho-alveolar lavage (BAL), induced sputum, tracheal aspirate, nasopharyngeal aspirates )	
<b>Cerebrospinal fluid examination for</b>	
<i>Free Living Amoebae (FLA)</i>	67
<b>Total</b>	<b>11,421</b>
<b>Tuberculosis laboratory</b>	
Smear microscopy and LJ culture	12,662
PCR	2,242
Drug susceptibility testing (Bactec 460)	150
Rapid culture (Bactec 460)	1,660
<b>Total</b>	<b>16,714</b>
<b>Virology Laboratory including HIV Laboratory</b>	
Viral culture and identification (HSV, dengue, etc.)	42
Viral serology	
HIV (through VCCTC)	4,832
Rubella	42
CMV IgM	75
HSV (serum and CSF)	160
Measles (serum and CSF)	182
Dengue	1,230
Chikungunya	30

PCR	
HIV	48
CMV	185
HSV	90
Dengue	60
<b>CMV antigen detection (pp65)</b>	<b>37</b>
HIV viral load	42
Miscellaneous	49
<b>Total</b>	<b>7,104</b>
<b>Immunology laboratory</b>	
CD4 count	3,329
<b>Total</b>	<b>3,329</b>
<b>Mycology and ICP Laboratory</b>	
Total number of samples processed for direct	5,785
Demonstration and isolation of pathogenic fungi Bactec	1
<b>Fungal serology</b>	
Cryptococcus	250
Aspergillus	27
Histoplasma	6
<b>Total</b>	<b>6,069</b>

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr Shobha Broor** was the organizing chairperson of the 7th Asia Pacific Congress of Medical Virology and Indo-US symposium on 'Viral Diagnostics, Epidemiology and Pathogenesis'; member of the following national committees: Scientific Advisory Committee, ICMR, project review committees of ICMR, Member, Task force on infectious diseases and Avian Influenza of DBT, Avian influenza monitoring committee of Government of India, Project advisory committees of DST, Selection committee of ICMR, executive council of Indian Association of Medical Microbiology, Scientific Advisory Committee of National Institute of Virology, Task force on Influenza of Indian Council of Medical Research, National task force on Polio Containment, Associate Editor, *Indian Journal of Medical Microbiology*, Advisor to National AIDS Control Organization (NACO) on procurement of kits and equipment, Technical advisor Influenza foundation of India, Subject expert committee on Life Sciences of Department of Science and Technology in FIST Programme, Women Scientist Programme and BOYSCAST Programme, selection committee of Union Public Service Commission of Government of India, Selection committee of Punjab University, Selection committee of Delhi University, Subject expert of Indian Medical Council, Fellow International Medical Sciences Academy (IMSA).

**Professor Rama Chaudhry** received the Speaker Award to present 'Paucity of protective flora in Indian breastfed neonates', International Conference on 'Women and Infectious Diseases (ICWID)', The Atlanta Marriott Marquis, USA, 16–18 March 2006; Best Poster Award for the paper 'Infection potpourri are we watching' at International Conference on 'Leptospirosis: A diagnostic enigma' and 6th Scientific Meeting of The Indian Leptospirosis Society; University of Hyderabad, 20–22 June 2006; received International Indo-US-Professorship Award by American Society for Microbiology, USA to teach a short course on '*Atypical pneumonia* in elderly with special reference to *Mycoplasma pneumoniae*', University of Maryland, USA, September–October 2006; President, Indian Association of Mycoplasmologists (IAM), 2006; selected as a Member, International Research Programme on Comparative Mycoplasmaology Committee (IRPCM) on clinical infection at IOM Conference, Cambridge, UK, 2006.

**Dr B.R. Mirdha** received Meghna Krishna Baweja Award 2006, for the best paper in paediatric infectious diseases for 'Emerging Parasitic Agents, coccidia and microsporidia, in childhood malabsorption syndrome', in Indian Association of Medical Microbiologist, Delhi Chapter.

**Dr Lalit Dar** was elected the Joint Secretary of the Indian Association of Medical Microbiologists in 2006 for a period of 3 years. He is the Secretary General of the Influenza Foundation of India; and was Scientific Secretary for the 7th Asia Pacific Congress of Medical Virologists (APCMV); Joint Organizing Secretary, National Workshop on 'Emerging Trends in Medical Education', CMET, AIIMS, New Delhi.

## VISITING SCIENTISTS

1. Dr Catharina Boehme, Medical Officer, Foundation for New Innovative Diagnostics and Department of Infectious Diseases and Tropical Medicine, University of Munich
2. Dr C.N. Paramasivan, Project Manager, TB Laboratory Aspects, Foundation for New Innovative Diagnostics and Head of the Bacteriology Division of the Tuberculosis Research Centre, ICMR, Chennai, India
3. Dr John Wain from Wellcome Trust, Sanger Institute, UK
4. Dr Madhukar Pai, Assistant Professor of Epidemiology, Department of Epidemiology, Biostatistics, and Occupational Health, McGill University.
5. Dr Nancy Cox from CDC, USA
6. Dr Peter Small, Senior programme Officer, Institute for Systems Biology, Bill and Melinda Gates Foundation
7. Dr Salvatore Rubino from University of Sassari, Italy
8. Dr Suresh Boppana (UAB, USA)
9. Dr Uma Malhotra (UW, Seattle, USA)
10. Dr Wayne Sullender (UAB, USA)

## 9.19 Nephrology

### **Professor and Head**

S.C. Tiwari

### **Additional Professor**

S.K. Agarwal

### **Associate Professors**

S. Gupta

D. Bhowmik

S. Mahajan

## **EDUCATION**

### **Long-term training**

The department mainly runs a 3-year DM Nephrology course for post-MD (Medicine) candidates, who get selected by AIIMS on the basis of merit. Three candidates were admitted to DM course and 3 passed out. Postgraduates in Internal Medicine are posted on rotational basis for a short period of 1–2 months. At present the department has 11 DM students.

### **Short-term training**

Two doctors from SAARC countries received training in nephrology, besides doctors from hospitals within the country. The department also provided training to nurses and technicians from Bhutan and other hospitals in Delhi.

## **Continuing Medical Education**

### **Conferences, Seminars, Workshops**

- Second Annual Conference of Indian Academy of Nephrology and Delhi Nephrology Society Update; 16–18 March 2007.
- Symposium on 'Yesterday's wisdom for tomorrow's health', AIIMS in collaboration with the Integral Health Centre, Sri Aurobindo Ashram, Delhi Branch; 16 October 2006.

## **Lectures delivered**

### **Professor S.C. Tiwari**

- Guest speaker, Bombay Hospital, Indore on the eve of World Kidney Day; 6 March 2007.
- Guest speaker, Daily Haemodialysis at North Zone, Jaipur.
- Invited as Guest Speaker Winnipeg, Canada on 'Cardiovascular complications in chronic kidney disease, Health, Heart and Disease'.

### **Dr S.K. Agarwal**

- 'Prevention and management of HCV in haemodialysis', 2nd Annual Conference of Indian Society of Haemodialysis, Bangalore; 7–8 April 2006.

- 'Is diabetic nephropathy preventable?', Annual Conference of Indian Society of Organ transplant, Ahmedabad; 4–8 October 2006.
- 'CKD and its prevention', 8th SIMON (Society of Internal Medicine of Nepal) Conference, Dharan, Nepal; 10–11 November 2006.
- Controversy in rheumatology, 'Whether all patients with lupus nephritis should be biopsied', 22nd Annual Conference of Indian Rheumatological Association, Lucknow; 23–26 November 2006.
- 'Renal biopsy in lupus nephritis' and 'Management of difficult lupus nephritis', Annual Conference of Northern Chapter of Indian Society of Nephrology, Jaipur; 3–4 February 2007.
- 'Glomerular filtration rate estimations in chronic kidney disease', Department of Medicine, BJ Medical College, Pune; June 2006.
- 'Stem cell therapy in renal disease', Pune Nephrology Society, Pune; June 2006.
- 'Chronic kidney disease', Integral Health Centre, Sri Aurobindo Ashram, Delhi; September 2006.
- 'Clinical relevance of stem cell research', Integral Health Centre, Sri Aurobindo Ashram, Delhi; November 2006.

#### **Dr S. Mahajan**

- 'Recent advances in Hepatorenal Syndrome', Annual Hepatology Update Apollo Hospital, Delhi; January 2007.
- Clinopathological Conference (CPC), Annual conference of Delhi Chapter of API; November 2006.

## **RESEARCH**

### **Funded projects**

#### **Completed**

1. Impact of isolation on incidence of Hepatitis C virus infection in patients on maintenance haemodialysis. SK Agarwal. Funded by ICMR for 3 years. Funds: Rs 12 lakh.
2. An open label prospective multicentric trial to evaluate the efficacy and safety of Lanthanum Carbonate in patients of Hyperphosphatemia of CKD. SK Agarwal. Funded by Panacea Biotec for one and half years. Funds: Rs 2 lakh.
3. An open label prospective multicentric study for efficacy and safety of Pangraf (FK506) in patients for renal transplantation. SK Agarwal. Funded by Panacea Biotec for 2 years. Funds: Rs 3 lakh

#### **Ongoing**

1. Linezolid vs vancomycin/cefazolin in treatment of haemodialysis patients with catheter related gram-positive blood borne infection. SK Agarwal. Funded by Pfizer for 1 year. Funds: Rs 5 lakh



2. A randomized double-blind placebo-controlled four arm parallel group multicentric multinational trial comparing weekly intravenous administration of Abetimus to weekly intravenous administration of placebo in patients with a history of SLE related renal disease. SK Agawal. Funded by Lajolla Pharma Company, California, USA for 3 years. Funds: Rs 11 lakh
3. Validation and development of predicting formula for estimation of glomerular filtration rate in Indian adults with various degree of renal function. SK Agarwal. Funded by ICMR for 3 years. Funds: Rs 15 lakh.
4. Detection of HCV core antigen (HCVc-Ag) for diagnostic screening of HCV infection in patients on maintenance haemodialysis. SK Agarwal. Funded by ICMR, New Delhi for 3 years. Funds: Rs 28 lakh

## **Departmental Projects**

### **Completed**

1. Study of hepatitis B and hepatitis C infection in primary glomerular diseases
2. Impact of isolation of HCV-positive patients on incidence of HCV-infection during haemodialysis
3. Post renal transplant tuberculosis: Comparison between double and triple immunosuppression
4. Estimation of anti-oxidant in blood in renal and liver diseases
5. Effect of n-acetyl cysteine on serum creatinine and glomerular filtration rate in healthy subjects with normal renal function with or without contrast exposure
6. To study the clinicopathological correlations and assess the clinical, laboratory and renal histology predictors for long-term outcome in lupus nephritis
7. Tacrolimus therapy in steroid resistant/dependent nephrotic syndrome
8. Spectrum and outcome of acute renal failure in the elderly
9. Therapeutic drug monitoring of anti-tubercular drugs in normal renal function and chronic renal failure
10. Spectrum and outcome predictors of acute renal failure in the intensive care unit

### **Ongoing**

1. Tuberculosis prophylaxis in patients on maintenance haemodialysis
2. Open label study of effect of lamivudine in hepatitis B renal transplant recipient
3. Clinicopathological correlation of HBV and HCV-infection in patients on renal replacement therapy
4. Open label study of Peg-interferon monotherapy for treatment of HCV-infection in patients on maintenance haemodialysis
5. Oxidative stress in progressive renal failure and dialysis therapy

## Collaborative Projects

1. Clinicopathological correlation of HBV and HCV-infection in patients on renal replacement therapy (with Pathology)
2. Estimation of anti-oxidant in blood in renal and liver diseases (with Lab Medicine)
3. A study of psychiatric morbidity and quality of life in patients before and after renal transplantation (with Psychiatry)
4. Diagnosis of cytomegalovirus pneumonitis in immunocompromised patients at AIIMS (with Microbiology)
5. Detection and genotyping of human cytomegalovirus from neonates and renal transplant recipients (with Microbiology)
6. Prevalence of CKD in high-risk population (with Lab Medicine)
7. Molecular detection and characterization of *Pneumocystic jiroveci* in respiratory samples from the patients both immunocompromised as well immunocompetent with suspected interstitial pneumonia and other chronic lung diseases (with Microbiology)
8. To study the pregnancy outcomes in systemic lupus erythromatosus with special reference to cyclophosphamide therapy (with Medicine)
9. Evaluation of protective effect of garlic extract on cyclosporin induced nephrotoxicity in rats (with Pharmacology)
10. Role of urinary cytology and immunocytochemistry in diagnosis and management of acute renal allograft dysfunction (with Pathology)
11. Quality of life of live related renal donors (with Surgery)
12. Studies on cytokines profile of alloeffector T-cells in renal biopsy and their selective recruitment in acute rejection (with HLA)

## PUBLICATIONS

### Journals

1. Guleria S, Kamboj M, Singh P, Sharma M, Pandey S, Chatterjee A, *et al.* Tacrolimus (Pan Graf) as de novo therapy in renal transplant recipients in India. *Transplant Proc* 2006;**38**:2029–31.
2. Varma M, Guleria S, Gupta S, Dinda AK, Agarwal SK, Mahajan S, *et al.* Significance of protocol biopsies in living related renal transplant recipients. *Transplant Proc* 2006;**38**:2016–17.
3. Mahajan S, Tiwari S, Bharani R, Bhowmik D, Ravi S, Agarwal SK, *et al.* Spectrum of acute renal failure and factors predicting its outcome in an intensive care unit in India. *Ren Fail* 2006;**28**:119–24.
4. Mahajan S, Tiwari S, Bhowmik D, Agarwal SK, Tiwari SC, Dash SC. Factors affecting the outcome of acute renal failure among the elderly population in India: A hospital-based study. *Int Urol Nephrol* 2006;**38**:391–6.
5. Agarwal SK, Saxena S, Nandy M, Gupta S. Recombinant erythropoietin in the management of anaemia in chronic kidney disease patients: An Indian multicentric experience. *J Indian Acad Clin Med* 2006;**7**:193–8.

6. Gupta S, Sunder S, Agarwal SK, Bhowmik D, Tiwari SC, Dash SC. Initial experience of tacrolimus in steroid dependent or resistant adult nephritic syndrome. *Nephrol Dial Transplant* 2006;**21** (Suppl 4): iv 70.
7. Bhowmik D, Mahapatra HS, Mahajan S, Tiwari S. Isoniazid induced acute bilateral cerebellar syndrome in chronic kidney disease. *Clin Nephrol* 2007;**67**:63–4.
8. Mahajan S, Tiwari SC, Kalra V, Agarwal SK, Bhowmik D. Analysis of depression and its effect on outcome among adult Indian peritoneal dialysis patients. *Perit Dial Int* 2007; **27**:94–7.

### Chapter in books

1. Agarwal SK. Nephrotic syndrome. In: Agarwal AK, Jain DC (eds). *Clinical Medicine Update 2006*. New Delhi: Jaypee Publication; 2006:473–81.
2. Gupta S: Electrolyte disorders. In: S Arul Rhaj (ed). *Textbook of Family Medicine*. New Delhi: Pushpanjali Publication; 2005;183-91.
3. Gupta S, Agarwal SK. Urinary tract infection In: Agarwal AK (ed). *Clinical Medicine Update 2006*. New Delhi: Jaypee Publication; 2007:463–72.

## PATIENT CARE

### Facilities available in the department

1. Haemodialysis
2. Acute peritoneal dialysis
3. Continuous ambulatory peritoneal dialysis
4. Vascular access (minor surgery)
5. Plasmapheresis/plasma exchange
6. CRRT (C II ICU, AB8 and CTVS)
7. Renal transplants
8. Renal laboratory tests

### Specialized treatment procedures

The department provides specialty care for seriously ill acute and chronic kidney failure patients. It conducts the following specialized treatment methods:

• Haemodialysis	5,110
• Intermittent peritoneal dialysis	490
• Continuous ambulatory peritoneal dialysis	96
• Plasmapheresis/plasma exchange	15
• Continuous renal replacement therapy (venovenous/arteriovenous haemofiltration and haemodialysis)	12
• Femoral vein catheterization	639
• Preparation for kidney transplantation	
Patients of end stage kidney failure are treated,	305

dialyzed and selected for kidney transplantation on the basis of suitable tests. Similarly patients and their donor work-up are done by a variety of tests for selection or rejection

### **Other therapeutic methods (Day-care treatment)**

• Intravenous pulse therapy for immunosuppressants and iron therapy	657
• Jugular and subclavian catheter insertion	330
• AV fistula	110
• AV shunt	16
• Kidney biopsy	331
• Laboratory facilities for early and late diagnosis of renal diseases	
—Number of patients	11,574
—Number of investigations	1,14,346

### **Clinics**

• Renal clinic (6 days per week)	23,378
• Renal transplant counselling clinic (3 days per week)	1,214
• Renal transplant clinic	4,810
• Indoor admissions (long and short)	3,321
• Nephrology consultations	2,664

### **Community services**

#### **Doordarshan**

- ‘Kidney disease and diagnostics’, May 2006
- Lok Sabha TV, ‘Kidney transplantation’, February 2007
- All India Radio, ‘Gurde ko Bachaiye’, June 2006

The faculty members participated in telemedicine and public lectures to spread the message of Chronic Kidney Disease in the lay public.

*World Kidney Day*: Public lecture by Dr S.K. Agarwal, Additional Professor, chaired by Professor S.C. Tiwari and all the faculty members participated in the question and answer session at JN Auditorium, AIIMS, New Delhi on 7 March 2007.

### **AWARDS AND HONOURS**

**Dr S.C. Tiwari** was elected as Chairman, Transplant Inspection at Fortis Hospital Noida, April 2006; Transplant inspector at Noida Medical Centre, April, 2006; Transplant Inspection at Sai Hospital, Bombay; Chairman, Scientific Committee, Haemodialysis Society of India; Chairman,

Antarctica Expedition programme; Adviser, UPSC for selection of faculty; Honorary Medical Advisor, Ramakrishna Mission; Adviser Member, American Society of Nephrology; Vice President, Haemodialysis Society of India; Executive member, Credential Committee of Indian Society of Nephrology; Governing Body Member, RIMS, Jharkhand; Member, State Health Society, Bihar; Chairman, Organizing Committee, 2nd IAN and Delhi Nephrology Update; Member, Rajbhasha Vibhag, Ministry of Home; Editor, *The Journal of Renal Sciences* (2006–2007); selected Expert Member, Selection committee, KGMC, Lucknow; appointed on Board of Directors of Mahavir International Centre Delhi Branch; Setting of paper for Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh (2007); Awarded Fellowship of Indian Society of Nephrology; Fellowship National Academy of Medical Sciences; appointed Referee of Clinical Nephrology, Nephron, Nephrology Dialysis Transplantation journals.

**Dr S.K. Agarwal** was appointed member, editorial board, Journal of Delhi Medical Association, to be MCI inspector for inspection regarding DM Nephrology course in India in various university and medical colleges; selected to attend workshop as Subject expert as well as CDSCO Inspector, organized by The Drug Controller General (India), Directorate General of Health Services, Nirman Bhawan, New Delhi, India; to represent India during KDIGO (Kidney Disease: Improving Global Outcome) controversy conference on ‘Chronic kidney disease as global health problem: Approaches and initiative’, Amsterdam, 12–14 October 2006; as speaker for a workshop on ‘Identifying strategies for data collection in diabetes’, Indian Council of Medical Research, New Delhi with an aim to ascertain methods of data registration in different part of country at India International Centre, New Delhi, on 28–29 November 2006; Convener for starting Delhi Renal Transplant Registry; awarded Khullar Oration 2006, by Indian Society of Nephrology on the contribution on Tuberculosis in renal replacement therapy; organized multidisciplinary symposium on therapeutic drug monitoring conference, New Delhi; 2–3 February 2007 as co-chairman.

**Dr S. Mahajan** was selected member of the Guidelines Committee, Peritoneal Dialysis Society of India, first meeting held in Chennai, August 2006; awarded best paper at the Post World-Congress Satellite Meeting, Singapore, July 2005; Young Investigator Travel Grant award for the Congress of the International Society of Peritoneal Dialysis, Hong Kong, August 2006.

## **VISITING SCIENTISTS**

Dr S.C. Tyagi, Professor of Biophysics, University of Louisville, Dr Sanjiv Sethi, Mayo Clinic, USA, Dr Sohail Ahmed, University of Washington DC, USA; Dr Jinmin Goan, Seoul, South Korea and Dr Min Park, Singapore visited the Department of Nephrology.

## 9.20 Nuclear Medicine

### Professor and Head

A. Malhotra

### Professors

G.P. Bandopadhyaya

G.S. Pant

C.S. Bal

### Associate Professor

Rakesh Kumar

### Assistant Professor (CNC)

Chetan D. Patel

### Scientist IV

Snehlata

## EDUCATION

The faculty participated in and delivered 25 lectures in various continuing medical education programmes, workshops, symposia and annual conferences during the year.

## Participation

Dr Snehlata, participated as a faculty in international symposium on 'Advances in diagnostic medical physics' and workshop on 'Cyclotron-PET/CT', AIIMS, New Delhi; 13–16 July 2006.

## RESEARCH

### Completed

1. Irradiation induced chromosome aberrations and their use in biodosimetry. Dr. GS Pant. Funded by AERB, Mumbai for 3 years. Funds: Rs 10 lakh.
2. <sup>188</sup>Rhenium-tin colloid synovectomy in refractory arthritic knee joints. Dr.Rakesh Kumar funded by AIIMS for 1 year. Funds: Rs 50,000.

### Ongoing

1. To evaluate radiolabelling and efficacy of radiolabelled <sup>2</sup>-cyclodextrin for infection imaging. Dr G.P. Bandopadhyaya. Funded by ICMR, New Delhi for 3 years. Funds: 45 lakh.
2. Synthesis and chemical characterization of different formulations of alginate-tamoxifen beads. Dr G.P. Bandopadhyaya. Funded by DST, New Delhi for 3 years. Funds: Rs 60 lakh.
3. Detection of silent ischemia in asymptomatic diabetes using myocardial perfusion imaging. Dr.Rakesh Kumar. Funded by IAEA, Vienna, Austria for 3 years. Funds Rs 4.05 lakh.

## Departmental

### Completed

1. Evaluation of cardiac function in patients receiving anthracycline therapy by 1st passes study and equilibrium radionuclide ventriculography

2. Usefulness of  $^{99m}\text{Tc}$  MAA lung perfusion imaging in patients post-BD Glenn and TCPC
3. Standardization of the preparation and quality control of  $^{188}\text{Re}$ -Tin-colloid for radiosynovectomy
4. Studies on development and analytical pharmacokinetics of polymeric radiopharmaceuticals under varied experimental conditions

### **Ongoing**

1. Comparative analysis of  $^{99m}\text{Tc}$  MDP vs  $^{18}\text{F}$ FDG and  $^{18}\text{F}$ Fluoride PET-CT for detection of bone metastasis in Ca-breast/Ca-lung/Ca-prostate
2. Role of F-18 FDG in acute rheumatic heart disease
3. Correlation between cardiovascular autonomic function and indicators of myocardial ischemia in patients presenting anginal symptoms
4. Prevalence of symptomatic and asymptomatic coronary artery disease in stroke patients
5. Role of PET-CT in initial staging and post therapy assessment in patients of carcinoma ovary
6. Evaluation of  $^{68}\text{Ga}$  labelled peptides in evaluation of neuro-endocrine tumours

## **PUBLICATIONS**

### **Journals**

1. Shukla J, Bandopadhyaya GP, Varma IK, Kumar R, Maulik SK. Morphology and release kinetics of technetium-99m (V) dimercaptosuccinic acid loaded, poly (lactic-co-glycolic) acid microspheric delivery system. An experimental approach that may be used for targeted radiation treatment. *Hell J Nucl Med* 2007;**10**:9–18.
2. Pant GS, Sharma SK, Rath GK. Finger doses of staff handling radiopharmaceuticals in nuclear medicine. *J Nucl Med Technol* 2006;**34**:169–73.
3. Pant GS, Senthamizhchelvan S. Radiation exposure to staff in a PET/CT facility. *Ind J Nucl Med* 2006;**21**:100–3.
4. Senthamizhchelvan S, Pant GS, Rath GK, Julka PK, Nair O, Joshi RC, *et al.* Biodosimetry using chromosome aberrations in human lymphocytes. *Radiat Prot Dosimetry* 2006; doi:10.1093/rpd/nc1109.
5. Gowda NK, Agrawal D, Bal C, Chandrashekar N, Tripathi M, Bandopadhyaya GP, *et al.* Technetium Tc-99m ethyl cysteinat dimer brain single-photon emission CT in mild traumatic brain injury: A prospective study. *JNR Am J Neuroradiol* 2006;**27**:447–51.
6. Bal CS, Kumar A, Chandra P, Dwivedi SN, Pant GS. A prospective clinical trial to assess the efficacy of radioiodine ablation as an alternative to completion thyroidectomy in patients with differentiated thyroid cancer undergoing sub-total thyroidectomy. *Acta Oncol* 2006;**45**:1067–72.
7. Pankaj A, Kotwal PP, Mittal R, Deepak KK, Bal CS. Diagnosis of post-traumatic complex regional pain syndrome of the hand: Current role of sympathetic skin response and three-phase bone scintigraphy. *J Orthop Surg (Hong Kong)*. 2006;**14**:284–90.
8. Gupta N, Kabra M, Ramesh K, Garg G, Kaur D, Gupta A, *et al.* A female with

- hemihypertrophy and chylous ascites-Klippel-Trenaunay syndrome or proteus syndrome: A diagnostic dilemma. *Clin Dysmorphol* 2006;**15**:229–31.
9. Sarkar C, Sharma MC, Deb P, Singh VP, Chandra PS, *et al.* Neuropathological spectrum of lesions associated with intractable epilepsies: A 10-year experience with a series of 153 resections. *Neurol India* 2006;**54**:144–50; discussion 150–1.
  10. Tripathi M, Singhal T, Chandrasekhar N, Kumar P, Bal C, *et al.* Samarium-153 ethylenediamine tetramethylene phosphonate therapy for bone pain palliation in skeletal metastases. *Indian J Cancer* 2006;**43**:86–92.
  11. Agrawal D, Gowda NK, Bal CS, Kale SS, Mahapatra AK. Have cranio-vertebral junction anomalies been overlooked as a cause of vertebro-basilar insufficiency? *Spine* 2006;**31**:846–50.
  12. Kumar R. Editorial Commentary: Targeted functional imaging in breast cancer. *Eur J Nucl Med Mol Imaging* 2007;**34**:346–53.
  13. Kumar R, Xiu Y, Zhuang H, Alavi A. F18-fluorodeoxyglucose positron emission tomography in primary cutaneous lymphoma. *Br J Dermatol* 2006;**155**:357–63.
  14. Kumar R, Chauhan A. Positron emission tomography: Clinical applications in oncology. Part 2. *Expert Rev Anticancer Ther* 2006;**6**:625–40.
  15. Kumar R, Chauhan A, Zhuang H, Chandra P, Alavi A. Clinicopathologic factors associated with false negative FDG-PET in primary breast cancer. *Breast Cancer Res Treat* 2006;**98**:267–74.
  16. Kumar R, Chauhan A, Jana S, Dadparvar S. Positron emission tomography in gynaecological malignancies. *Expert Rev Anticancer Ther* 2006;**6**:1033–44.
  17. Kumar R, Chauhan A, Zhuang H, Chandra P, Alavi A. Assessment of therapy response by FDG-PET in infection and inflammation. *PET Clinics* 2006;**2**:191–8.
  18. Kumar R, Chauhan A, Zhuang H, Chandra P, Alavi A. Standardized uptake value in normal breast: Effect of age, density and menopausal status. *Mol Imaging Biol* 2006;**8**:355–62.
  19. Kumar R, Chauhan A, Vellimana AK, Chawla M. Role of PET/PET-CT in the management of sarcomas. *Expert Rev Anticancer Ther* 2006;**6**:1241–50.
  20. Kumar R, Nadig MR, Babu B, Bal CS, Malhotra A. FDG-PET imaging in infection and inflammation. *Ind J Nucl Med* 2006;**21**:104–13.
  21. Sethuraman G, Malhotra AK, Khaitan BK, Kumar R, Sharma VK, Kabra M, *et al.* Familial pachydermoperiostosis in association with protein losing enteropathy. *Clin Exp Dermatol* 2006;**31**:531–4.
  22. El-Haddad G, Kumar R, Pamplona R, Alavi A. PET/MRI depicts the exact location of meniscal tear associated with synovitis. *Eur J Nucl Med Mol Imaging* 2006;**33**:507–8.
  23. Gowda N, Mohapatra T, Sharma S, Kumar R. ‘Rim sign’ in liver abscesses. *Clin Nucl Med* 2006;**31**:349–51.
  24. Chawla M, Kumar R, Malhotra A. Dual ectopic thyroid: Case series and review of the literature. *Clin Nucl Med* 2007;**32**:1–5.
  25. Tripathi M, Kumar R, Nadig M, Mohapatra T, Bal CS, Malhotra A. Intense F-18 FDG



- uptake noted in a benign bone cyst. *Clin Nucl Med* 2007;**32**:255–7.
26. Xiu Y, Bhutani C, Zhuang H, Dhurairaj T, Yu JQ, Dadparvar S, *et al.* Dual-time point FDG-PET imaging in the evaluation of pulmonary nodules with borderline-levels of increased metabolic activity. *Clin Nucl Med* 2007;**32**:101–5.
  27. Bassi KK, Seenu V, Ballehaninna UK, Parshad R, Chumber S, Dhar A, *et al.* Second echelon node predicts metastatic involvement of additional axillary nodes following sentinel node biopsy in early breast cancer. *Indian J Cancer* 2006;**43**:103–9.
  28. Chawla M, Kumar R, Malhotra A. Tc99m-pyrophosphate scanning for traumatic myocardial infarction. *Ind J Nucl Med* 2006;**21**:23–4.
  29. Patel CD, Nadig M, Sumodh K, Barai S, Babu V, Narang R, *et al.* Left ventricular ejection fraction and volumes on rest gated 201Tl perfusion SPECT: Comparison with two-dimensional echocardiography. *Nucl Med Commun* 2006;**27**:425–9.
  30. Patel CD, Kumar R. Role of PET and PET-CT in management of bone sarcoma. *Ortho Today* 2007;**2**:20–4.
  31. Patel CD, Kumar R. PET in gynaecological malignancies. *Gynae Today* 2007;**3**:20–4.
  32. Chowdhury UK, Pradeep KK, Patel CD, Singh R, Kumar AS, Airan B, Gulati GS, Kothari SS, Saxena A, Venugopal P. Non-invasive assessment of repaired tetralogy of Fallot by MRI and dynamic radionuclide studies. *Ann Thorac Surg* 2006;**81**:1436–42.
  33. Chowdhury UK, Venkataiya JK, Patel CD, Seth S, Yadav R, Singh R, *et al.* Serial radionuclide angiographic assessment of left ventricular ejection fraction and regional wall motion after mitral valve replacement in patients with rheumatic disease. *Am Heart J* 2006;**152**:1201–7.
  34. Snehlata, Pant GS, Sarita, Praveen, Damle NK, Bal CS, *et al.* Preparation of [<sup>18</sup>F<sup>-</sup>] fluoride ion and its quality control. *Ind JNM* 2006;**21**:93 (abstract).
  35. Das S, Snehlata, Das N, Srivastava LM. Role of ascorbic acid on *in vitro* oxidation of low-density lipoproteins derived from hypercholesteremic patients. *Clinica Chemica Acta* 2006;**372**:202–5.
  36. Das S, Ray R, Snehlata, Das N, Srivastava LM. Effect of ascorbic acid on prevention of hypercholesterolemia induced atherosclerosis. *Mol and Cell Biochemistry* 2006;**295**:143–7.

### **Books/proceedings**

*Advances in diagnostic medical physics*. GS Pant (ed). Himalaya Publishing House, Mumbai.

### **Chapters in Books**

1. Pant GS, Senthamizchelvan S. Medical cyclotron: Basic principles. In: GS Pant (ed). *Advances in diagnostic medical physics*. Mumbai: Himalaya Publishing; 2006:359–65.
2. Kumar R, Chawla M. Clinical application of PET-CT. In: GS Pant (ed). *Advances in diagnostic medical physics*. Mumbai: Himalaya Publishing; 2006:480–527.
3. Kumar R, Malhotra A. PET and PET-CT in paediatric oncology. In: Gupta DK, Robert Carachi (eds). *Paediatric oncology: surgical and medical aspects*. New Delhi: Jaypee Publications; 2006:74–84.

## **PATIENT CARE**

### **Radionuclide investigations**

#### **Number**

1.	Radioactive Iodine Uptake (RAIU)	1,288
2.	Perchlorate discharge test	15
3.	<sup>131</sup> I- Whole body scans	7,013
4.	Dimercaptosuccinic Acid Scans (DMSA)	750
5.	<sup>32</sup> P-treatment	12
6.	Ca-thyroid <sup>131</sup> I- whole body scan	100
7.	Thyrotoxicosis	320
8.	DTPA/LLEC <sup>99m</sup> Tc renal dynamic scan	3,850
9.	Direct Radionuclide Cystourethrography (DRCG)	336
10.	GER	750
11.	GFR	1,470
12.	Bone	3,000
13.	<sup>99m</sup> Tc HIDA	500
14.	Thyroid scan	600
15.	Liver scan	48
16.	Meckel's study	90
17.	GI bleed	80
18.	RBC mass survival	11
19.	Lymphoscintigraphy	120
20.	Pleuro peritoneal shunt scintigraphy	4
21.	MIBG (diagnostic and therapeutic)	500
22.	Venography	10
23.	<sup>153</sup> Samarium bone palliation	20
24.	<sup>90</sup> Yttrium synovectomy	20
25.	<sup>67</sup> Gallium	40
26.	<sup>99m</sup> TcDMSA-V	750
27.	Radionuclide ventriculography (RNV)	1,272
28.	Thallium scan	979
29.	Tetrofosmin myocardial perfusion	141
30.	Misc. (V/Q Ca Lung, PTH)	10
31.	Brain SPECT	800
32.	PET whole body	2,848
33.	Brain glucoheptonate (GHA)	700

## **AWARDS AND HONOURS**

1. Professor A. Malhotra was invited by the South African Medical Research Council for participation in CME and delivered lectures at University of Pretoria, Medunsa and University of Witwatersrand South Africa.
2. Professor G.P. Bandopadhyaya has been nominated as member of Jury for Young Scientist Award by Madhya Pradesh Council of Science and Technology.

3. Prof. G.P. Bandopadhyaya has been nominated as Govt. of India's representative on the committee for appointment of Vice-Chancellor of Manipal Academy of Higher Education.
4. Professor G.S. Pant has been awarded with Professor Cyril Jayachandran Oration by AMPI (TN-Pondicherry Chapter); September 2006.
5. Dr Rakesh Kumar 'Alavi-Mandell Award' by Society of Nuclear Medicine for best publication in *Journal of Nuclear Medicine*, USA, November 2006.
6. Dr Snehlata was invited by IAEA as an Expert for 'Consultants' meeting on 'Establishing Safe Clinical Practice Using Long-Lived Generators', IAEA HQtrs, Vienna, Austria; 4-7 September 2006,

### **VISITING SCIENTISTS**

Professor Dr Roesch Frank, Institute of Nuclear Chemistry, Johannes Gutenberg-Universitat, Fritz Strassmann, Mainz, Germany October 2006 for 2 weeks.

## 9.21 Nuclear Magnetic Resonance

### **Professor and Head**

N.R. Jagannathan

### **Associate Professor**

Rama Jayasundar (on leave)

### **Assistant Professor**

S. Senthil Kumaran

### **Scientist II**

Uma Sharma

### **Scientist I**

Sujit Kumar Mewar

## **EDUCATION**

### **Postgraduate**

The faculty of the department participated in and delivered lectures for the course entitled 'Structural biology and NMR technology' of M.Biotech programme of the Department of Biotechnology.

### **Short- and long-term training**

Eleven persons from medical and science disciplines from various institutes and universities from all over India and abroad underwent training in MRI and MRS techniques.

### **Continuing Medical Education**

The faculty of the department participated in and delivered several lectures in CME programmes, symposia and conferences during the year.

## **Lectures delivered**

### **Professor N.R. Jagannathan**

- 'MRI applications', Summer School on 'NMR methods', Manipal; 28 May 2006.
- 'Cognitive science in India: Role of MRI and MRS', National Institute of Advanced Studies, Bangalore; September 2006.
- 'Role of MR imaging and spectroscopy in bio-medicine', 'Biomaterials and biomedical devices', CGCRI and Jadavpur University, Kolkata; 12–13 December 2006.
- 'NMR beyond structure determination and dynamics: Role of imaging and *in vivo* MR spectroscopy in the study of physiology and metabolism', 36th National seminar on 'Crystallography', University of Madras, Guindy campus, Chennai; 22–24 January 2007.
- 'Role of MRI and MRS in medicine', 'Recent developments in chemical sciences', IIT, Delhi; 13 January 2007.
- 'Understanding the physiology and metabolism of living systems by magnetic

- resonance imaging (MRI) and in vivo MR spectroscopy (MRS)', National symposium on '21st Century research in biochemistry and biophysics' University of Kalyani, Kalyani; 1–3 February 2007.
- 'Towards developing education, curriculum and capacity building in biophysics', 5th East Asian Biophysics symposium, Okinawa, Japan; 12–16 November 2006.
  - 'MRI and MR spectroscopy of breast cancer', 5th East Asian Biophysics symposium, Okinawa, Japan; 12–16 November 2006.
  - 'Over view of imaging techniques in life sciences', CEP programme on 'Imaging technologies in life sciences', INMAS, Delhi; 5 March 2007.

#### **Dr S. Senthil Kumaran**

- 'Application of NMR Spectroscopy for analysis of biopharmaceuticals', CEP course on 'Challenges in new drug development', INMAS, Delhi; 9–13 October 2006.
- 'Medical imaging', National Symposium on 'Instrumentation', Institute of Technology and Management, Gwalior; 10–11 October 2006.
- 'Study of brain activation pattern in patients with achalasia cardia using functional MRI', 'National magnetic resonance symposium', NCL, Pune; 5–8 February 2007.
- 'Neural mapping of lingual processing in bi- and trilingual subjects', Indo–US workshop on 'Developmental neuroscience and imaging', NBRC, New Delhi; 19–21 February 2007.
- 'MRI basics and instrumentation', CEP course on 'Imaging techniques in life sciences', INMAS, Delhi; 5 March 2007.

#### **Dr Uma Sharma**

- 'NMR imaging and spectroscopy: Basics and clinical applications', Workshop on 'NMR spectroscopy and its applications', Jamia Hamdard, New Delhi; 18–19 August 2006.

## **RESEARCH**

### **Funded Projects**

#### *Ongoing*

1. Upgradation of the existing animal MR scanner for biomedical research. N.R. Jagannathan. Funded by DST for 5 years (2004–2009). Funds: Rs 360 lakh.
2. Evaluation of the role of proton MR spectroscopy in the noninvasive detection, assessment of treatment response and tumor metabolism in breast cancer. N.R. Jagannathan. Funded by DST for 3 years (2003–2006). Funds: Rs 18.8 lakh.

### **Departmental Projects**

#### **Ongoing**

1. Development of novel pulse sequences for in vivo MR spectroscopy

## Collaborative Projects

### Ongoing

1. *In-vivo* MRI/MRS study of prostate cancer (with Urology and Pathology)
2. *In-vivo* and *in-vitro* study of breast cancer (with Surgery, Radiology and Pathology)
3. High-resolution <sup>1</sup>H MR Spectroscopy of lymph nodes (with Surgery and Urology)
4. *In-vitro* MR spectroscopy studies of tissue extracts of breast cancer and prostate tumors (with Urology)
5. *In-vivo* and *in-vitro* NMR spectroscopy of soft tissue sarcoma (with IRCH)
6. *In-vitro* MR spectroscopy of colon tissue in patients of Crohn's disease (with Gastroenterology)
7. Neuro-cognitive changes associated with perception, spatial orientation and coordinates in visually handicapped subjects, using functional magnetic resonance imaging (with RPC unit)
8. Functional MRI study in achalasia cardia patients (with Gastroenterology)
9. Neural mapping during stoop task of familiar faces (with Physiology)

### Completed

1. High-resolution NMR spectroscopy of blood plasma in patients with cardiovascular disease (with Cardiology)
2. MRI/MRS studies to evaluate brain metabolism in sleep apnea patients (with Medicine)
3. *In-vivo* MRS of muscle in NIDDM patients (with Medicine)
4. MRI/MRS studies of brain metabolism in malnutrition (with Paediatrics)
5. <sup>31</sup>P MRS study of skeletal muscle in patients of Duchenne muscular dystrophy (with Paediatrics)
6. Evaluation of neuroprotective agents in animal model of stroke using diffusion MRI (with Pharmacology)

## PUBLICATIONS

### Review Articles

1. Sharma U, Sharma R, Jagannathan NR. Characterization of breast lesions by magnetic resonance imaging (MRI) and spectroscopy (MRS). *Curr Med Imaging Rev* 2006;**2**:329–40.
2. Sharma U, Handa R, Jagannathan NR. *In vivo* magnetic resonance spectroscopy in systemic lupus erythematosus. *Neuroscience Imaging* 2006;**1**:117–41.

### Journals

1. Chaplot S, Patnaik LM, Jagannathan NR. Classification of magnetic resonance brain images using wavelet as input to support vector machine and neural network. *Biomed Sig Process Control* 2006;**1**:86–92.
2. Khushu S, Kumaran S, Sekhri T, Tripathi RP, Jain PC, Jain V. Cortical activation during finger tapping in thyroid dysfunction: An fMRI study. *J Biosciences* 2006;**31**:543–50.

3. Kumar M, Jagannathan NR, Seenu V, Dwivedi SN, Julka PK, Rath GK. Monitoring the therapeutic response of locally advanced breast cancer patients: sequential in vivo proton MR spectroscopy study. *J Magn Reson Imaging* 2006;**24**:325–32.
4. Kumar R, Nayyar R, Kumar V, Gupta NP, Jagannathan NR, Hemal AK. MRSI can improve prostate cancer detection rates of TRUS guided biopsy in men with serum PSA less than 10ng/ml. *J Urology* 2006;**175**:484–5.
5. Kumar V, Jagannathan NR, Kumar R, Das SC, Jindal L, Thulkar S, *et al.* Correlation between metabolite ratios and ADC values in men with increased PSA level. *Magn Reson Imaging* 2006;**24**:541–8.
6. Kumar V, Jagannathan NR, Kumar R, Thulkar S, Gupta SD, Hemal AK, *et al.* Transrectal ultrasound guided biopsy of prostate voxels identified as suspicious of malignancy on 3D <sup>1</sup>HMR spectroscopic imaging in patients with abnormal digital rectal examination or raised prostate specific antigen level of 4–10 ng/mL. *NMR Biomed* 2007;**20**:1–20.
7. Mathur P, Ramagopal UA, Ramkumar S, Jagannathan NR, Chauhan VS. Stabilization of unusual structures in peptides using α, β-dehydrophenylalanine: Crystal and solution structures of Boc-Pro-DPhe-Val-DPhe-Ala-OMe and Boc-Pro-DPhe-Gly-DPhe-Ala-OMe. *Biopolymers* 2006;**84**:298–309.
8. Sharma U, Kumar V, Wadhwa S, Jagannathan NR. *In vivo* <sup>31</sup>P MRS study of skeletal muscle metabolism in patients with postpolio residual paraparesis. *Magn Reson Imaging* 2007;**25**:244–9.
9. Sharma U, Pal K, Pratap A, Gupta DK, Jagannathan NR. Potential of proton (<sup>1</sup>H) magnetic resonance spectroscopy (MRS) in the evaluation of patients of tethered cord syndrome following surgery. *J Neurosurg (Pediatrics)* 2006;**105**:396–402.

### **Abstracts (Proceedings of International and National Conferences)**

1. Balasubramanian K, Kumar S, Sharma U, Makharia G, Jagannathan NR. Role of *in-vitro* proton NMR spectroscopy in inflammatory bowel disorders. *Proc Intl Soc Magn Reson Med* 2006;**14**:3242.
2. Bhattacharya M, Kumaran SS, Modi Shilpi, Khushu S, Neurocognitive mapping of visuospatial judgment in healthy subjects and chronic alcoholics—an fMRI study. *Proc Intl Soc Magn Reson Med* 2006;**14**:315.
3. Danishad KA, Seenu V, Jagannathan NR. Predicting the response of neo-adjuvant chemotherapy in locally advanced breast cancer patients by diffusion weighted imaging. *Proc Intl Soc Magn Reson Med* 2006;**14**:300.
4. Danishad KA, Seenu V, Roell S, Vorbuchner M, Jagannathan NR. Sequential MRSI and DWI study for early assessment of response of breast cancer to neo-adjuvant chemotherapy: A pilot study. *Proc Intl Soc Magn Reson Med* 2006;**14**:1784.
5. Jagannathan NR, Sharma U, Kumar MNP, Seenu V. Evaluation of *in-vitro* NMR spectroscopy in detecting metastasis in axillary nodes in breast cancer in a clinical setting. *Proc Intl Soc Magn Reson Med* 2006;**14**:1997.

6. Kumar V, Jagannathan NR, Kumar R, Das SC, Jindal L, Thulkar S, *et al.* Potential of 3D <sup>1</sup>H MRSI and DWI in men with increased PSA. *Proc Intl Soc Magn Reson Med* 2006;**14**:114.
7. Kumar V, Jagannathan NR, Kumar R, Das SC, Jindal L, Thulkar S, *et al.* Potential of 3D <sup>1</sup>H MRSI localization of prostate cancer to direct TRUS guided biopsy in patients with PSA 4 – 10 Ng/mL. *Proc Intl Soc Magn Reson Med* 2006;**14**:1788.
8. Kumar V, Jagannathan NR, Kumar R, Jindal L, Das SC, Nayyar R, *et al.* 3D <sup>1</sup>H MRSI based TRUS guided biopsies in men with suspected prostate cancer. *Proc Intl Soc Magn Reson Med* 2006;**14**:1791.
9. Kumar V, Kar M, Danishad KA, Deo SVS, Shukla NK, Sharma U, *et al.* Single voxel and chemical shift imaging (CSI) of soft tissue sarcomas. *Proc Intl Soc Magn Reson Med* 2006;**14**:1792.
10. Kumar V, Kumar R, Jindal L, Nayyar R, Thulkar S, Gupta SD, *et al.* Potential of <sup>1</sup>H MR spectroscopic imaging to predict negative biopsy in men with PSA <10 Ng/mL. *Proc Intl Soc Magn Reson Med* 2006;**14**:1790.
11. Kumar V, Rathi M, Sinha S, Kumar M, Mishra A, Randey RM, *et al.* Relationship of soleus muscle intramyocellular lipid (IMCL) and c-reactive protein (CRP) levels in healthy Asian Indian males. *Proc Intl Soc Magn Reson Med* 2006;**14**:478.
12. Kumaran S, Khushu S, Tripathi RP. Sensory perception and spatial judgment imagery patterns in healthy and visually handicapped subjects—an fMRI study. *Proc Intl Soc Magn Reson Med* 2006;**14**:1104.
13. Kumaran SS, Makharia G, Jagannathan NR. Brain activation pattern in patients with achalasia cardia using functional MRI. *8th World Congress of the World Organization for Specialized Studies on Diseases of the Esophagus*, Avignon, France; 3–6 September 2006.
14. Modi S, Kumaran SS, Bhattacharya M, Khushu S. Assessment of the metabolic changes in type 2 diabetes mellitus using magnetic resonance spectroscopy. *Proc Intl Soc Magn Reson Med* 2006;**14**:1585.

### Chapters in Books

1. Jagannathan NR. MR spectroscopy in oncology. In: Chaughule RS, Ranade SS (eds). *Looking into living things...through MRI*. Mumbai, India: Prism Publications; 2006:261–79.
2. Sharma U, Jagannathan NR. *In vivo* magnetic resonance spectroscopy in breast cancer. In: Webb GA (ed). *Modern Magnetic Resonance. Part 2*. Netherlands: Springer; 2006.

### PATIENT CARE

The department has two 1.5 Tesla whole body MR scanners for patient care and research. The department provides twelve hours per day of patient care MRI services. The details of the number of patients scanned during this period.

Clinical diagnostic MRI scan	:	4,630 patients
Research	:	248 patients



## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor N.R. Jagannathan** is the Deputy Editor of *Neuroscience Imaging*; Member Editorial Board *NMR Biomedicine*; elected President of the Indian Biophysical Society (IBS); Member, Swarnajayanthi Fellowship Award Committee, Department of Science and Technology (DST), Government of India; Member, Steering Committee of the Sophisticated Instruments Facilities (SAIFs) of Department of Science and Technology (DST), Government of India; Council Member, International Conference on Magnetic Resonance in Biological Systems (ICMRBS); Coordinator, Expert panel on 'Biomedical devices and Bioengineering', Life Sciences Research Board (LSRB), DRDO; Member, INSA combined committee for International Union of Pure and Applied Biophysics (IUPAB) and International Union of Crystallography (IUCr); Member, Facility Management Committee (FMC), Sophisticated Instruments Facility, Indian Institute of Science (IISc), Bangalore; Member, Program Advisory Committee (PAC), National Facility for High Field NMR, Tata Institute of Fundamental Research (TIFR), Bombay; Expert member for MRI of Government Medical Colleges, Assam; Expert member for MRI for Sher-i-Kashmir Institute, Srinagar, J&K.

### **The department organized the following events:**

- A three-day Annual Meeting of the Indian Biophysical Society (IBS), National Symposium on 'Biophysics: Recent trends in biomedical research'; 13–15 February 2007.
- A symposium on 'Recent advances in MRI' conducted on the occasion of the inauguration day of the department; 22 March 2007.

## 9.22 Obstetrics and Gynaecology

	<b>Professor and Head</b>	
	Suneeta Mittal	
	<b>Professors</b>	
Alka Kriplani	Sunesh Kumar	Deepika Deka
	<b>Additional Professors</b>	
Neerja Bhatla		K.K. Roy
	<b>Associate Professors</b>	
Neena Malhotra	Vatsla Dadhwal	Nutan Agarwal
	<b>Assistant Professors</b>	
J.B. Sharma	Neeta Singh	Pradeep Garg (ad hoc)
	<b>Scientist I</b>	
	Rohini Sehgal	

### EDUCATION

#### **Undergraduate, Postgraduate, Paramedical (only innovations, changes, new courses)**

The Delhi Postgraduate Medical Education Forum (Department of Obstetrics and Gynaecology) is organizing monthly meetings for postgraduate training since 2001. These are to supplement training of postgraduates in clinical and surgical skills, a problem-oriented approach to Obstetrics and Gynaecology, protocols and guidelines, case presentations and discussions. Invited faculty from various academic and teaching institutions of Delhi as well as international faculty contribute towards the training of postgraduates.

#### **Short- and long-term training**

The department offers short- and long-term training in various subspecialty subjects such as Gynaecology Endoscopy Surgery, High Risk Pregnancy, Gynaecology Oncology, and Gynaecology and Obstetrics Ultrasonography and Infertility.

### TRAINEES AND FELLOWS

#### **Long and Short term Fellowship and Elective training**

The department provided long term (6 months) fellowship training to 10 candidates and short term (10 days) training to 52 candidates from various states of India. The department also provided elective (1-5 weeks) training to 8 candidates from abroad (Germany-1, Canada-1, United Kingdom-6).

#### **Continuing Medical Education**

The department organizes a National Continuing Medical Education (CME) in Obstetrics and Gynaecology in collaboration with National Board of Examination and National Academy of Medical

Sciences every 6 months. It is a unique, innovative modular teaching programme in which the MD syllabus is covered in 6 modules over 3 years. Series 2, Module 2 was held on 12–13 August 2006. The CME modules are attended by more than 200 students as well as senior gynecologists and is accredited by the Delhi Medical Council.

### **Conferences, Seminars, Workshops**

- National CME in Obstetrics and Gynaecology (Module 2, Series 2), AIIMS; 12–13 August 2006.

### **Lectures delivered**

#### **Dr Suneeta Mittal**

- ‘Laparoscopic surgeries—complications and management’ and ‘Current status of endoscopic surgery in Gynaecology practice’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- ‘Practice on evidence-based medicine and interpretation of research evidence’ (12 August 2006), during the AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.
- ‘Introduction of emergency contraception in India’, 3rd Orientation Training in Emergency Contraception in Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, and National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10-13 August 2006.
- Moderator for panel discussion on ‘Assisted reproductive technique—make it more cost-effective and patient-friendly’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, and National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

#### **Dr Alka Kriplani**

- ‘Current concepts in management of endometriosis’, CME, Association of Obstetrician and Gynaecologists of Ghaziabad, Ghaziabad; 20 May 2006.
- ‘Managing endometriosis’, CME, Delhi Gynaecologists Forum (East), Delhi; 6 July 2006.
- ‘Management of fibroid in infertile’, CME, NOIDA Obstetrics and Gynaecology Society, Noida, UP; 20 July 2006.
- ‘Evidence-based management of endometriosis’, CME, Dehradun Obstetrics and Gynaecology Society, Dehradun, Uttaranchal; 21 July 2006.
- ‘Dysfunctional uterine bleeding’, Case presentation, 9th practical course and CME, Department of Obstetrics and Gynaecology, MAMC, Delhi; 4 August 2006.
- ‘Non-contraceptive uses and benefits of LNG-Intra Uterine Device (IUD)’, CME, Jaipur Obstetrics and Gynaecology Society, Jaipur; 26 August 2006.

- ‘Challenges in managing hirsutism’, CME, AICC-RCOG, North Zone and Apollo Hospitals, Delhi; 3 September 2006.
- ‘Endoscopy and hysterectomy’, CME XVI, Sant Parmanand Hospital, Delhi; 10 September 2006.
- ‘Hirsutism—cosmetic concerns’, CME, Federation of Obstetrics and Gynaecological Societies of India Youth Express, Obstetrics and Gynaecology Society of Northern India, Chandigarh; 24 September 2006.
- ‘Non-contraceptive uses of levonorgestrel IUD’, CME, Alwar Obstetrics and Gynaecology Society, Alwar, Rajasthan; 28 September 2006.
- ‘Perimenopause—the roller coaster’ (Panel Moderator), CME, Indian Menopause Society and Fortis La Femme, Delhi; 15 October 2006.
- ‘Prevention and management of rhesus isoimmunization’, CME on Safe Motherhood, Government of MP and Indore Obstetrics and Gynaecology Society, Indore; 26 October 2006.
- ‘Polycystic ovarian syndrome (PCOS) in gynae practice’, CME, Coimbatore Obstetrics and Gynaecology Society, Coimbatore, Tamil Nadu; 27 October 2006.
- ‘Isoflavones in management of menopausal problems’, CME on Isoflavones, New Delhi; 11 November 2006.
- ‘Endoscopy and fertility enhancing surgery’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.
- ‘Endoscopy in fertility’ and ‘Endoscopy and hysterectomy’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.

#### **Dr Sunesh Kumar**

- ‘Laparoscopy — patient positioning, pneumoperitoneum — safe first entry, selection of accessory ports — indications, contraindications’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- Moderator for panel discussion on ‘Protocol of management of ovarian malignancy—recent advances’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

#### **Dr D. Deka**

- ‘Quality of semen—declining’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and

- Gynaecology, AIIMS (Module 2); 10–13 August 2006.
- ‘Peri-conceptual care’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.
- ‘EC: Follow up and initiation of regular contraception’, 3rd Orientation Training in Emergency Contraception in Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS; 10–13 August 2006.
- ‘Recurrent pregnancy loss and recent advances in prenatal diagnosis’, CME organized by FOGSI (Kashipur Branch), Kashipur; 15 October 2006.
- ‘Endoscopy in fetal therapy and in pregnancy’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.

#### **Dr Neerja Bhatla**

- ‘Laparoscopy in gynaecology oncology’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- ‘Protocol of management of ovarian malignancy—recent advances’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive healthcare’, National CME in Obstetrics and Gynaecology, AIIMS; 11–13 August 2006.
- Demonstration of LEEP in Colposcopy Course, AOGIN (Asia–Oceania Research Organization for Genital Infection and Neoplasia), Cebu, Philippines; 7–10 September 2006.
- ‘Clinical immunology workshop for physicians’, AIIMS, Department of Paediatrics; 3–6 February 2007.

#### **Dr K.K. Roy**

- ‘Laparoscopic management of ectopic pregnancy’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- ‘Peri-conceptual care’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

#### **Dr Neena Malhotra**

- ‘Endoscopic tubal sterilization procedure’, Women’s Health Initiative training course in

‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.

- ‘Hirsutism’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

#### **Dr Vatsla Dadhwal**

- ‘Office hysteroscopy’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- ‘Preventing unintended pregnancy’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.
- ‘Abortion complications’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

#### **Dr Nutan Agarwal**

- ‘Complications of hysteroscopy and their management’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- ‘Ovarian malignancy with pregnancy: Expert for case discussion’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2), 10–13 August 2006.
- ‘Management of fetal hydronephrosis due to obstructive uropathy’, Pre-congress CME on ‘Congenital malformation—maternal fetal management’, AIIMS; 19 November 2006.

#### **Dr Neeta Singh**

- ‘Energy sources’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.
- ‘Advances in management of ectopic gestation’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

#### **Dr J.B. Sharma**

- ‘Laparoscopy in uro-gynaecology’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.

- ‘PIH—case discussion by experts’, AIIMS Golden Jubilee Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS (Module 2); 10–13 August 2006.

### **Dr Pradeep Garg**

- ‘HRT—different modalities’, National CME in Obstetrics and Gynaecology (Module 2 series-2), AIIMS; 12–13 August 2006.
- ‘Endo suturing and knotting’, Women’s Health Initiative training course in ‘Minimally invasive gynaecology’, Department of Obstetrics and Gynaecology, AIIMS; 1–11 May 2006; 31 July – 10 August 2006; 21 November – 7 December 2006; 12-22 March 2007.

## **National and International Conferences**

### **Organized by the department**

1. Symposium on ‘Improving perinatal outcome’, New Delhi; 17 April 2006.
2. 1st training course in ‘Minimally invasive gynaecology programme’, AIIMS; 1–11 May 2006.
3. ‘Perinatal update, Series 2’, New Delhi; 10 June 2006.
4. Delhi Postgraduate Medical Forum meetings (every month), AIIMS.
5. MRCOG Part II Course, AIIMS; 19–24 June 2006.
6. 2nd training course in ‘Minimally invasive gynaecology programme’, AIIMS; 31 July–10 August 2006.
7. ‘Cutting edge technology in reproductive health’, AIIMS; 10 August 2006.
8. 3rd orientation training in ‘Emergency contraception’, AIIMS; 11 August 2006.
9. 3<sup>rd</sup> training course in ‘Minimally invasive gynaecology programme, AIIMS; 21 November–7 December 2006.
10. 4th training course in ‘Minimally invasive gynaecology programme’, AIIMS; 12–22 March 2007.

## **Lectures delivered**

### **Dr Suneeta Mittal**

- ‘Emergency contraception’, Training of Trainers (TOT) course for ‘No scalpel vasectomy (NSV)’ for candidates from Himachal Pradesh, Haryana and Uttaranchal at Maulana Azad Medical College (MAMC), New Delhi, 18–21 April 2006; 15 September 2006; 19 January 2007; 7 – 23 March 2007.
- ‘Occipitoposterior and breech presentation’, MRCOG Part 2 Course, AIIMS; 24 June 2006.
- ‘Endoscopic management of benign adnexal mass’, CME, Noida Obstetric and Gynaecological Society, Noida; 27 August 2006.
- ‘Post-MMA contraception’, International Conference on ‘Controversies in reproductive medicine’, Mumbai; 15–19 September 2006.

- ‘Medical abortion—A step towards women empowerment’, Brig. Khanna Oration, Annual Conference of Association of Obstetrics and Gynaecology of Delhi (AOGD), New Delhi; 18 November 2006.
- ‘Post-MMA contraception’, Medical Methods of Abortion Experts Meet, Mumbai; 9 December 2006.
- ‘Subspeciality training—When and how?’, 50th All India Congress of Obstetrics and Gynaecology, Kolkata; 5–9 January 2007.
- ‘Cord blood banking’, International Conference on ‘Advances in IVF and reproductive medicine’, Jaipur; 20 January 2007.
- ‘Medical abortion: Global and Indian experience’, Workshop on ‘Integrating medication abortion in public sector for increasing access to safe abortion care’, Ranchi; 9 January 2007.
- ‘Why should we do clinical research?’, Workshop on ‘Fundamentals of clinical research methodology’, AIIMS; 15–18 February 2007.
- ‘Kamla Achari oration’, XXIII All India Congress of Perinatology and Reproductive Biology, Chennai, 17–18 February 2007.
- ‘Polycystic ovarian syndrome (PCOS) in adolescents—the gynaecologist’s dilemma’, Conference on ‘Recent advances and challenges in reproductive health research’, 17th Annual Meeting of Indian Society for Study of Reproduction and Fertility (ISSRF)-2007, New Delhi; 19–21 February 2007.
- ‘Evolving concepts in pathogenesis of pre-eclampsia’, 2nd Annual Congress of Indian Academy of Nephrology and Delhi Nephrology Society Annual Update, AIIMS; 17 March 2007.

### **Dr Alka Kriplani**

- ‘Diagnosis and management of intrauterine infections’, Clinical genetics course organized by the Departments of Genetics and Anatomy, AIIMS; 20 April 2006.
- ‘Hysteroscopic myomectomy’ video presentation, IAGE–2006, Indian Association of Gynaecological Endoscopists, Delhi; 29–30 April 2006.
- ‘Leiomyoma—case presentation’, Postgraduate Forum, Department of Obstetrics and Gynaecology, AIIMS; 6 May 2006.
- ‘Operative endoscopy in infertility’, FOGSI certified Advanced training programme on ‘Gynae endoscopy and endosuturing’, Jeevan Mala Hospital, Delhi; 11 May 2006.
- ‘Abnormal uterine bleeding’, MRCOG Part-2 Course, Department of Obstetrics and Gynaecology, AIIMS and RCOG North Zone, Delhi; 19–24 June 2006.
- ‘Fibroid with infertility’, Gynae Update 2006, IMA, Delhi; 22 June 2006.
- ‘Current concepts in management of endometriosis’, Ludhiana Obstetrics Gynaecology Society (LOGS), Ludhiana; 21 December 2006.
- ‘Rh isoimmunization—Current concepts in management’, Surat Obstetrics and Gynaecology Society, Surat; 21 January 2007.



- ‘Management of Rh-negative pregnancy’, PG Forum for DNB training—Holy Family Hospital, Delhi; 3 February 2007.
- ‘Controversies in management of endometriosis’, Recent advances in OBGYN, FOGSI Infertility Committee and Mother and Child Hospital, Delhi; 18–20 August 2006.
- ‘Complications of endoscopic procedures’, Panelist, Recent advances in OBGYN, FOGSI Infertility Committee and Mother and Child Hospital, Delhi; 18–20 August 2006.
- ‘Prophylaxis and management of rhesus isoimmunization’, Trissur Obs Gyn Society and Jubilee Mission Charitable Institution, Trissur, Kerala; 28 August–1 September 2006.
- ‘Primary and secondary amenorrhoea’, Postgraduate Training programme, Focus 2006, Trissur Obstetrics Gynaecology Society and Jubilee Mission Charitable Institution, Trissur, Kerala; 28 August–1 September 2006.
- ‘How to approach theory/practical exam’, Panelist, Trissur Obstetrics and Gynaecology Society and Jubilee Mission Charitable Institution, Trichur, Kerala; 28 August–1 September 2006.
- ‘Dysfunctional Uterine Bleeding (DUB)’ case discussion, PG training programme, Focus 2006, Trissur Obstetrics and Gynaecology Society and Jubilee Mission Charitable Institution, Trichur, Kerala; 28 August– 1 September 2006.
- ‘Prevention and management of RH Isoimmunization’, XVI Annual National Association of Reproduction and Child Health of India (NARCHI) Conference, NARCHI, Vardhman Mahavir Medical College (VMMC), Safdarjung, Delhi; 17 September 2006.
- ‘Rhesus isoimmunization—current concepts in management’, 4th World Congress of Perinatal Medicine for Developing Countries, WAPM and Agra Obstetrics and Gynaecology Society, Agra; 30 September 2006.
- ‘Recent advances in managing Poly cystic ovarian syndrome (PCOS)’, North Zone—Yuva FOGSI, Meerut Obstetrics and Gynaecology Society, Meerut; 14 August 2006.
- ‘What is new in PCOS’, VIII World Congress and XVI Indian Conference on Reproductive and Child Health, NARCHI, Lucknow, 29 September 2006.
- ‘Situation-based analysis in recurrent pregnancy loss’, Panelist 4th State Annual Conference of Association of Obstetrics Gynaecologists of Chhattisgarh (AOGC), AOGC, Raipur; 18 November 2006.
- ‘Laparoscopic sacrocolpopexy’ (video lecture), Association of Gynaecologist of Delhi (AOGD), Delhi; 18–19 November 2006.
- ‘What is new in fertility enhancing surgery’, 4th State Annual Conference of AOGC (Association of Obstetricians and Gynaecologists of Chhattisgarh), AOGC, Raipur; 18 November 2006.
- ‘Endoscopic surgery in infertility’, workshop on ‘Minimally invasive gynaecology’, Nepal Obstetrics and Gynaecology Society and Karl Stroz, Nepal, Kathmandu; 23 November 2006.
- ‘Role of endoscopy in Gynaecology malignancies—current evidence’, 15 Annual Conference of Gynaecological Oncologists of India, Association of Gynaecology of India Conference

- (AGOICON) and AIIMS; 25–26 November 2006.
- ‘Fertility enhancing endoscopic surgeries’ Federation of Obstetrics and Gynaecological Societies of India (FOGSI) certified advanced training programme in Gynae Endoscopy and Endosuturing, Jeevan Mala Hospital, Delhi; 14 December 2006.
  - ‘Gynae endocrine problems in Adolescents’; 17 Annual conference MOGS, Madurai Obstetrics and Gynaecology Society, Madurai, Tamil Nadu; 17 December 2006.
  - ‘Endometriosis—the eternal enigma’, Panelist, 50th All India Congress of Obstetrics and Gynaecology (AICOG) 2007, Federation of Obstetrics and Gynaecological Societies of India (FOGSI), Kolkata; 6 January 2007.
  - ‘Thinking beyond antimicrobials’, 50th AICOG 2007, FOGSI, Kolkata; 7 January 2007.
  - ‘Levonorgestrel IUD—non-contraceptive uses’, 50th AICOG 2007, FOGSI, Kolkata; 6 January 2007.
  - ‘Endometriosis—case presentation’, PG Forum, Department of Obstetrics and Gynaecology, AIIMS; 13 January 2007.
  - ‘Evidence-based management of endometriosis’, XVIII North East Regional Conference of Obstetrics and Gynaecology Societies, Agartala Obstetrics and Gynaecology Society, Agartala; 9–11 February 2007.
  - ‘Levonorgestrel intrauterine system—newer uses’, Delhi Gynaecologists Forum, West Delhi; 22 February 2007.
  - ‘Role of endoscopy in hysterectomy’, Nodus 2007, USV Pharma, Gurgaon; 24 February 2006.
  - ‘Thinking beyond antimicrobials’, Jaipur Obstetrics and Gynaecology Society, Jaipur, Rajasthan; 1 March 2007.
  - ‘Recent trends in management of Post Partum Haemorrhage (PPH)’, Sri Aurobindo Institute of Medical Sciences (SAIMS) and Indore Obstetrics and Gynaecology Society, Indore; 10 March 2007.
  - ‘Ectopic pregnancy: Current advances in management, SAIMS and Indore Obstetrics and Gynaecology Society, Indore; 10 March 2007.

**Dr Sunesh Kumar**

- ‘Role of Doppler in Gynaecology’, in 12<sup>th</sup> National Congress of Assisted Reproductive Technology and Advances in Infertility Management at Chandigarh on 11 February 2007.
- ‘Vulval Disorders’, MRCOG Part II course, AIIMS; 23 June 2006.

**Dr D. Deka**

- ‘Ultrasound in genetic practice’, Workshop on ‘Human genetic for students’, GR Medical College, Gwalior and Moving Academy of Medicine and Biomedicine, Pune; 1–2 August 2006.
- ‘Advances in fetal medicine’ and ‘Sudden intrauterine foetal demise’, Recent Advances in OBGYN, New Delhi; 18–19 August 2006.

- ‘Cervicovaginoplasty for vaginal agenesis while uterus is present’, First Conference of Association of Female Genital Reconstructive, Aesthetic and Microsurgeons of India, New Delhi; 10 September 2006.
- ‘Viral infection in pregnancy’, 4th World Congress of Perinatal Medicine for Developing Countries, Agra; 29 September–1 October 2006.
- ‘Peri-conceptual care’, monthly meeting of Noida Obstetrics and Gynaecological Society, Kailash Hospital, Noida; 28 October 2006.
- ‘Fertility and thalassaemia’, 5th National Thalassaemia Conference, Lady Harding Medical College (LHMC), New Delhi; 11 November 2006.
- ‘Workshop on prenatal diagnostic procedures’, Maulana Azad Medical College (MAMC), New Delhi; 20 November 2006.
- ‘First trimester screening chromosomal anomalies’, Societies of Obstetricians and Gynaecologists of Gujarat (SOGOG) 2006, Bharuch; 3 December 2006.
- ‘Cordocentesis’ and ‘Fetal endoscopy’, Precongress Workshop on USG and Foetal Medicine, AICOG, Kolkata; 5 January 2007.
- ‘Place of routine growth scan around 32 weeks’, 50th All India Congress of Obstetrics and Gynaecology (Golden Jubilee) (AICOG) 2007, Federation of Obstetrics and Gynaecological Societies of India (FOGSI), Kolkata; 8 January 2007.
- ‘Relationship of fetal nuchal cord at various periods of gestation to perinatal outcome: A prospective study’, 50th All India Congress of Obstetrics and Gynaecology (Golden Jubilee) (AICOG) 2007, Federation of Obstetrics and Gynaecological Societies of India (FOGSI), Kolkata; 8 January 2007.
- ‘Unexplained intra uterine death’, Societies of Obstetricians and Gynaecologists of Gujarat (SOGOG) Conference organized by Surat Obstetric and Gynaecological Society, Surat; 21 January 2007.
- ‘Sudden intra uterine death’, Annual Conference, Ranchi Obstetric and Gynaecological Society, Ranchi; 3–4 February 2007.

#### **Dr Neerja Bhatla**

- ‘Prevention of unintended pregnancy’, 3rd Orientation Training in Emergency Contraception in Symposium cum Workshop on ‘Cutting edge technology in reproductive health’, National CME in Obstetrics and Gynaecology, AIIMS; 10–13 August 2006.
- ‘Phone-in karyakaram—*Mahilaon mein Banjhpan*’, All India Radio, New Delhi; 24 August 2006.
- ‘Pregnancy-related problems’, All India Radio, New Delhi; 25 January 2007.

#### **Dr K.K. Roy**

- ‘Stress-induced abortion and its management’, Sunder Lal Jain Charitable Hospital, New Delhi; 13 April 2006.
- ‘Immunomodulation in recurrent pregnancy loss’, Monthly academic meet, Ghaziabad Obstetric and Gynaecology Society; 25 August 2006.

- ‘Record keeping in obstetrics and gynaecology’, AICOG conference, Kolkata; 6–8 January 2007.

#### **Dr Vatsla Dadhwal**

- ‘Eclampsia’, INDO–US Emergency Medicine Summit September 2006, AIIMS.
- ‘Prevention of parent to child transmission of HIV infection: Recent developments’, Recent advances in the management of HIV/AIDS, AIIMS UCLA collaborative project, AIIMS; 7 October 2006.
- ‘Prevention of mother-to-child transmission and management of pregnant ladies with HIV infection’, Training programme for nurses on ‘Prevention, control and management of HIV/AIDS’, Department of Medicine AIIMS and Delhi Society of AIDS Control (DSACS), AIIMS; 9 October 2006.
- ‘Impact of reproductive tract infections, sexually transmitted infection and HIV on maternal and child health’, Masters training course for nurse supervisors on safe motherhood, Delhi, The Trained Nurses Association of India; 4 April 2006.
- ‘Hypertensive crisis’, 6th Annual CME of Noida Obstetric and Gynecological Society; 27 August 2006.

#### **Dr Nutan Agarwal**

- ‘Spontaneous vesicovaginal fistula due to genitourinary aspergillosis : extremely rare case’, Clinical Scientific Meeting of Association of Obstetrician and Gynaecologist of Delhi; 25 August 2006.
- ‘Advances in management of ectopic gestation’, Clinical scientific meeting of Obstetrics and Gynaecologists of Jhansi, Jhansi; 4 September 2006.
- ‘Interpretation of TORCH tires and management of TORCH infection during pregnancy’, Clinical scientific meeting of Obstetrician and Gynaecologists of Jhansi, Jhansi; 4 September 2006.
- ‘Recent advances in management of ectopic gestation’, VIth Yuva Federation of Obstetrics and Gynaecological Societies of India (FOGSI) North Zone, Meerut; 14 October 2006.
- ‘Parenteral iron therapy with iron sucrose’, Clinical Meetings of Obstetrics Gynaecology Society of Karnal, Karnal; 14 November 2006.
- ‘Management of hysteroscopy complications’, IIIrd Training Course of Endoscopic Surgery, AIIMS; 27 November–6 December 2006.
- ‘Non-surgical management of ectopic gestation’, 50<sup>th</sup> All India Congress of Obstetricians and Gynaecologists, Kolkatta; 5–9 January 2007.
- ‘Calcium—a critical nutrient in pregnancy in ‘Current trends in obstetrics and gynaecology practice’, Gurgaon; 24–25 February 2007.
- ‘Bacterial vaginosis’, Jaipur Obstetrics and Gynaecological Society, Scientific symposia on ‘Female urogenital infection’, Jaipur; 1 March 2007.
- ‘Recent advances in management of ectopic gestation’, Monthly meeting of Ghaziabad Obstetrics and Gynaecology Society, Ghaziabad; 20 March 2007.

### **Dr J.B. Sharma**

- ‘Stress Urinary Incontinence (SUI)’, MRCOG Part II Course, AIIMS; 19–24 June 2006.
- ‘Current management of SUI’, North Zone RCOG, New Delhi; 3 September 2006.
- ‘Role of Tension-free Vaginal Tape (TVT) in SUI’, Female Genital Reconstructive Aesthetic and Microsurgery Workshop, New Delhi; 10 September 2006.
- ‘Management of ectopic pregnancy’, XVIII FIGO World Congress of Gynaecology and Obstetrics, Kuala Lumpur, Malaysia; 5–10 November 2006.
- ‘Use of ofloxacin and ornidazole along with probiotic for the out patient treatment of pelvic inflammatory disease’, XVIII FIGO World Congress of Gynaecology and Obstetrics, Kuala Lumpur, Malaysia; 5–10 November 2006.
- ‘HIV Test of spouse before marriage should be done: Against the motion’, 28 Association of Obstetricians and Gynaecologists of Delhi (AOGD) Annual Conference, New Delhi; 19 November 2006.
- ‘Syndromic management of pelvic inflammatory disease (PID)’, West Delhi Gynaecology Forum, New Delhi; 30 November 2006.
- ‘Genital prolapse’, 50th All India Congress of Obstetrics and Gynaecology (AICOG), Kolkata; 6–9 January 2007.
- ‘Parenteral iron for anaemia’, 50th AICOG, Kolkata; 6–9 January 2007.

### **Dr Neeta Singh**

- Chaired and moderated session on ‘Hysteroscopic surgery’, Sita Ram Bharti Hospital; 22 February 2007.

## **RESEARCH**

### **Funded Projects**

#### **Completed**

1. Clinical trial of pipplayadi yoga. Suneeta Mittal. Funded by Ministry of Health and Family Welfare from December 1999 to December 2006. Funds: Rs 10 lakh.
2. Efficacy and safety of administration of evanova capsules in the management of menopausal symptoms. Alka Kriplani. Funded by Charak Pharma Ltd. From 26 December 2003 to 31 December 2006. Funds: Rs 4.5 lakh.
3. Screening with cytology, visual inspection with acetic acid and with Lugol’s iodine for early detection of cervical neoplasia, and comparative evaluation of single- versus double-freeze cryotherapy technique in the treatment of cervical intraepithelial neoplasia. Neerja Bhatla. Funded by International Agency of Research on Cancer (IARC), WHO from November 2003 to December 2006. Funds: Rs 27 lakh.
4. A comparative study of VIA, cytodiagnosis, HPV testing and colposcopy as tools for cervical cancer screening (Indo-US Collaborative Project with Johns Hopkins University, Baltimore, USA). Neerja Bhatla. Funded by Department of Biotechnology (DBT) from November 2002 to September 2006. Funds: Rs 43 lakh.

5. Clinical effects of human placental extract (placentrex) in pelvic inflammatory Disease (PID). Nutan Agarwal. Funded by Albert David Limited from November 2005 to November 2006. Funds: Rs 1,03,185.
6. Levels of interleukin (IL-8) and leptin in peritoneal fluid of Indian women with endometriosis. Neena Malhotra. Funded by AIIMS Research Grant for one year. Funds: Rs 40,000.

### ***Ongoing***

1. Prevention of parents to child transmission of HIV. Suneeta Mittal. Funded by Delhi State AIDS Control Society (ongoing long project). Funds: Rs 50,000.
2. Phase I Clinical trial of once weekly administration of 50 mg mifepristone as oral contraceptive. Suneeta Mittal. Funded by Indian Council of Medical Research (ICMR) (long project). Funds: HRRC funds.
3. Phase III multicentre clinical trial with subdermal single rod contraceptive implant—implanon. Suneeta Mittal. Funded by ICMR for two years. Funds: HRRC funds.
4. Monthly statistics on eclampsia. Suneeta Mittal. Funded by ICMR from 1 February 2006 to 31 January 2007. Funds: HRRC funds.
5. Diagnosis of genital tuberculosis in infertile women and the effect of antitubercular therapy. Alka Kriplani. Funded by ICMR from January 2006 to December 2008. Funds: Rs 4,79,465.
6. Role of intravenous immunoglobulins in recurrent abortions. D. Deka. Funded by Bharat Serum and Vaccines Limited from 2005 to 2007. Funds: Rs 2,88,000.
7. Development of HPV candidate vaccine/s: Preparation of clinical trial site/cohort for vaccine testing. Neerja Bhatla. Funded by DBT from March 2005 to March 2008. Funds: Rs 84,98,000.
8. Association of Chlamydia infection with cervical intraepithelial neoplasia. Neerja Bhatla. Funded by ICMR from October 2005 to September 2007. Funds: Rs 7 lakh.
9. A phase III, double-blind, randomized, controlled study to evaluate the immunogenicity and safety of Glaxo Smith Kline Biologicals' HPV-16/18 VLP/AS04 vaccine administered intramuscularly according to a 0, 1, 6 months schedule in healthy Indian female subjects aged 18–35 years. Neerja Bhatla. Funded by GSK from June 2006 to September 2007. Funds: Rs 6,88,930.
10. Parallel performance trial of fast HPV versus HC2 for cervical cancer screening. Neerja Bhatla. Funded by Digene from March 2007 to February 2008. Funds: Rs 13.5 lakh.
11. Weekly 70 mg oral alendronate therapy in post-menopausal osteopenic women. Nutan Agarwal. Funded by Troikaa Pharmaceuticals from September 2005 to August 2007. Funds: Rs 3 lakh.
12. Role of bile acids in diagnosis and therapeutic effects of ursodeoxycholic acids in intrahepatic cholestasis of pregnancy. Nutan Agarwal. Funded by AIIMS from March 2006 to February 2008. Funds: 92,000.
13. Evaluation of curcumin in the management of advanced cancer cervix. Sunesh Kumar. Funded by DBT from 2006 to March 2008. Funds Rs 51 lakh (approx).

## Departmental Projects

### Completed

1. Evaluation of single session management of cervical intraepithelial neoplasia in VIA VILI-positive colposcopically abnormal patients by LEEP
2. A RCT of prophylactic sublingual misoprostol, I/M methergin and I/M PGF<sub>2</sub>a for active management of 3rd stage of labour
3. Perinatal outcome in fetuses with sonographic diagnosis of nuchal cord
4. Comparison of single vs. double IUI in unexplained and mild male factor infertility
5. A comparative evaluation of sperm morphology in epididymal and testicular aspirates in men with obstructive azoospermia
6. Doppler velocitometry in middle cerebral artery, thoracic aorta, umbilical artery and ductus venosus in IUGR patients and fetal estimation of birth weight using two dimensional in comparison to three dimensional ultrasonography
7. Evaluation of laparoscopic occlusion of uterine artery with uterine artery embolisation in management of symptomatic fibroids
8. Comparisons of unilateral versus bilateral ovarian drilling in patients of clomiphene resistant Poly cystic ovarian syndrome (PCOS).

### Ongoing

1. Detection and quantification of fetomaternal hemorrhage (FMH) following deliveries in Rh-ve non immunized pregnancy by KBT, flow cytometry
2. Comparison of harmonic scalpel with bipolar cautery in laparoscopic assisted vaginal hysterectomy
3. A comparative study of VIA, cyto diagnosis, HPC testing and colposcopy as tools for cervical cancer screening
4. Screening with cytology, visual inspection, acetic acid and Lugol's iodine for early detection of cervical neoplasia and comparative evaluation of single- versus double-freeze cryotherapy technique in the treatment of cervical intraepithelial neoplasia
5. Conscious pain mapping: A new technique of laparoscopy for evaluation of chronic pelvic pain
6. The effect of warmed and humidified carbondioxide pneumoinsufflation on intraoperative and postoperative pain in laparoscopy
7. Doppler assessment in various fetal vessels and fetal weight estimation using antenatal soft tissue thickness in intra uterine growth restriction with normal pregnancies
8. Prevention of uterine atony during cesarean section: Randomized comparison of sublingual misoprostol versus syntocinon
9. To study the efficacy of uterine biophysical profile, antral follicle count and ovarian diameter in predicting outcome in infertile women on ovulation induction
10. Value of routine antenatal screening ultrasonography at 24–28 weeks of gestation
11. Effect of intraperitoneal bupivacaine in reducing postoperative pain after laparoscopic gynaecological surgery

12. Endometrial changes and ovarian function in women with early breast cancer
13. Evaluation of MRI in diagnosis of fetal congenital anomalies
14. A randomized study to compare two surgical technique of laparoscopic stripping of ovarian endometrioma
15. Feasibility of virtopsy: minimally invasive autopsy using ultrasonographic imaging and percutaneous organ biopsies as an alterantive to open body autopsy in fetal abnormality
16. Role of middle cerebral artery—Peak systolic velocity in predicting fetal anemia in Rh isoimmunisation after previous intrauterine transfusions
17. Use of letrozole versus clomiphene citrate combined with gonadotrophin in superovulation and IUI cycles.
18. Hyperhomocystenemia: In unexplained recurrent pregnancy loss and therapeutic response to vitamin B<sub>6</sub>, B<sub>12</sub> and folic acid
19. Prophylactic administration of micronized progesterone in prevention of preterm labour in women at increased risk
20. Prospective randomized comparative study of total laparoscopic hysterectomy, laparoscopically assisted vaginal hysterectomy and non descent vaginal hysterectomy for treatment of benign diseases of the uterus
21. Evaluation of benefit of FDG-PET in staging and management of ovarian malignancies
22. Correlation of stage and imaging of endometriosis with fertility outcome
23. Role of messenger RNA PCR in the diagnosis of genital tuberculosis in infertile women
24. Comparison of uterine and radial artery flow changes detected by pulse doppler in women undergoing stimulated intrauterine insemination for unexplained infertility
25. To compare 3 different time regimen of vaginal misoprostol after oral mifepristone for medical abortion

## **Collaborative Research**

### **Ongoing**

1. Development of human papillomavirus vaccine prototype/s—molecular epidemiology of HPV types prevalent in India and Identification of HPV-16 L1 and E6 variants (with Biochemistry)
2. Apoptosis in placental membranes in pre-eclampsia: An immunohistochemical study (with Anatomy)
3. PEARL study (post menopausal evaluation and risk reduction with lasofoxifene) (with Endocrinology)
4. The Generations trial. Effects of arzoxifene on vertebral fracture incidence and on invasive breast cancer incidence in postmenopausal women with osteoporosis or with low bone density (with Endocrinology)
5. Chromosome aneuploidy and mosaicism in preimplantation embryo (with Anatomy)
6. Sequence-based identification of *mycobacterium* species isolated from extra-pulmonary tuberculosis cases (with Laboratory Medicine)



7. Establishment and characterization of human fetal liver hematopoietic stem cell line. (with Medical Oncology, IRCH)
8. To study the subset of antiphospholipid syndrome defined by anti-beta-2 glycoprotein 1 antibody (with Laboratory Medicine)
9. Role of centchroman in benign breast disease (with Surgery)
10. Epidural analgesia in labour (with Anaesthesiology)
11. Chromosome aneuploidy and mosaicism in preimplantation embryo (with Reproductive Biology)
12. Prenatal development and maturation of the human inferior colliculus (with Anatomy)
13. Evaluation of ovarian function in female patients with multi-bacillary leprosy (with Dermatology and Venereology)
14. Biostatistical aspects in case control studies on unintended pregnancies (with Biostatistics)
15. A study of molecular basis of endometrial receptivity for blastocyst implantation in primates (with Physiology)
16. Prevention of parent to child transmission of HIV (with Paediatrics and Microbiology)
17. Diabetes mellitus and vulvo vaginal candidiasis: Prevalence and its rational management (with Endocrinology)
18. Prevalence of bacterial vaginosis and other reproductive tract infections among symptomatic women (study in tertiary centre) (with Microbiology)
19. To study the effect of human chorionic gonadotrophin (hCG) on vascular endothelial growth factor (VEGF) expression by human mid-secretary endometrial cells grown on rat-tail collagen matrix (with Physiology)
20. Effect of progesterone on hsp 27 expression in human, mid-secretary stage endometrial cells grown on collagen matrix *in vitro* (with Physiology)

## PUBLICATIONS

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3. Arora S, Kabra M, Gulati S, Deka D, Kriplani A, Kalra V, *et al.* Prenatal diagnosis of spinal muscular atrophy. *Int J Hum Genet* 2006;**2** (Suppl.):72.
4. Bahadur A, Talwar D, Deka D, Dadhwal V. Management of early onset foetal hydrops by serial blood transfusions. *Int J Hum Genet* 2006;**2** (Suppl.):66.
5. Bandhu S, Gunabushanam G, Kriplani A, Kuriakose KM. Congenital vesico vaginal fistula with partial vaginal agenesis. *Clin Radiol* 2006;**61**:630–3.
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- type distribution in cervical cancer in Delhi, India. *Int J Gynaecol Pathol* 2006;**25**:398–402.
8. Chhabra A, Malhotra N. Anaesthetic management of a pregnant patient with dengue hemorrhagic fever in emergency cesarean section. *Int J Obstet Anaesth* 2006;**15**:306–10.
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  12. Dalmia S, Ghosh M, Dadhwal V, Deka D, Kabra M, Deka RC, *et al.* Foetal outcome in congenitally deaf couple. *Int J Hum Genet* 2006;**2** (Suppl.):63.
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  14. Dadhwal V, Deka D, Gupta B, Gupta N, Kabra M, Mittal S. Cordocentesis for prenatal diagnosis: Experience at AIIMS. *Int J Hum Genet* 2006;**2** (Suppl.):65
  15. Gupta N, Dadhwal V, Deka D, Gupta B, Kabra M, Mittal S. Chorionic villus sampling: Experience at AIIMS. *Int J Hum Genet* 2006;**2** (Suppl.):63–4.
  16. Gupta N, Dadhwal V, Vimala N, Mittal S, Kumar S. Symptomatic postoperative rectus sheath hematomas. *JK Science* 2006;**8** (Suppl.):111–3.
  17. Gupta N, Mittal S, Misra R, Vimala N, Das AK. Placental site trophoblastic tumor originating in a tubal ectopic pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2006;**129**:92–4.
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6. Bhatla N, Mukhopadhyay A. Anaemia. In: Misra R (eds). *Ian Donald's practical obstetric problems*. 6th ed. New Delhi: BI Publications; 2007:148–68.
7. Bhatla N, Kochar S. Intrauterine growth restriction. In: Misra R (ed). *Ian Donald's practical obstetric problems*. 6th ed. New Delhi: BI Publications; 2007:333–44.
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9. Dadhwal V, Deka D. Hypertensive disorders in pregnancy. In: Konar H, Kushtagi P (eds). *Medical disorders in pregnancy—an update*. Delhi: Jaypee Brothers; 2006:217–26.
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11. Kriplani A, Meena S, Tubal reconstruction—open versus laparoscopic. In: Sood M, Charulata (Eds). *Demystifying obstetrics and gynaecology*. 1st ed. Delhi: AITBS Publishers; 2006:46–53.
12. Kriplani A, Sumana G. Classification of ovarian tumors. In: Purandare CN, Patel MA (eds). *Gynaecological cancer*. 1st ed. Delhi: Jaypee Brothers; 2006:67–73.
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15. Kriplani A, Sumana G, Garg PK. Laparoscopic and vaginal adnexectomy. In: Goel N, Rajaram S (Eds). *State-of-the-art vaginal surgery*. 1st ed. Delhi: Jaypee Brothers; 2007:392–7.
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17. Sharma JB, Salhan S, Monga J, Anand HP. Anaemia in obstetrics. In: Salhan S (eds). *Textbook of obstetrics*. 1st ed. Delhi: Jaypee Brothers; 2007:374–90.
18. Sharma JB. Vesicovaginal fistulae. In: Goel N, Rajaram S (eds). *State-of-the-art vaginal surgery*. 1st ed. Delhi: Jaypee Brothers; 2007:401–5.
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## PATIENT CARE

Hospital care: Facilities available with department includes special clinic and special laboratory facilities besides the regular Gynaecology OPD which is held every day. The following special clinics are held.

Clinics		Number of patients			
1.	General OPD	6/week	New: 26,511	Old:	36,831
2.	High-risk pregnancy clinic	3/week	New: 2,372	Old:	11,982
3.	Gynae endocrine clinic	3/week	New: 110	Old:	350
4.	Gynaecological cancer clinic	2/week	New: 250	Old:	450
5.	Post-natal clinic	3/week	New: 184	Old:	72
6.	Medical termination of pregnancy clinic	6/week	New: 1,120	Old:	230
7.	Family welfare clinic	6/week	New: 2,400	Old:	3,500

## **Operations performed**

### **Gynaecological**

#### **Major**

Surgery for benign diseases	1,227
Oncology surgery	198
Infertility	580
Endoscopic surgeries: Laparoscopy	1,519
Hysteroscopy	106
Plastic surgery	65

#### **Minor**

Dand C/EA	2,080
Colposcopy/cryo/LEEP	265
Diagnostic hysteroscopy	980
MTP	1,003
Pap smear	3,092
Cervical biopsies	392

### **Obstetrics**

#### **Major**

LSCS	707
Emergency laparotomies	58

#### **Minor**

Operative vaginal deliveries	138
Vaginal deliveries	1,786

### **Fetal medicine**

Cordocentesis	90
Chorionic villus sampling	102
Amniocentesis	121
Intra utero infusion	60
High-risk obstetrics	
—Obstetric ultrasound	—
—NST	3,800
—BPP	2,500
Gynae ultrasound	3,500
Ovarian cyst aspirations	55

### **Laboratory investigations**

Urine pregnancy test	2,500
Haemoglobin	3,480
Blood groups	3,200
Urine albumin/sugar	47,000

## POST PARTUM PROGRAMME

The Post-partum programme (PPP) is a maternity-centred, hospital-based approach to family welfare programme by providing a package of RCH and family welfare services within vicinity of the hospital as well as in the field practice areas. It is run as an integrated multidisciplinary exercise where the Department of Obstetrics and Gynaecology coordinates with departments of Paediatrics, Community Medicine, Surgery and Anaesthesiology.

### Achievement of different family planning methods, Postpartum Programme (2006–2007)

<b>Methods</b>	
<b>Performance</b>	
Copper T	622
Oral pills (13 cycles=1 user)	287
Conventional contraceptives (72 pieces=1 user)	65,414
Sterilisation	
(a) Tubectomy	697
(b) Vasectomy	31

Note: Family Planning Methods are free of target.

### Maternal and Child Health (MCH) Performances (2006–2007), Postpartum Programme

<b>Services</b>	
<b>Performance</b>	
<b>Pregnant Women</b>	
TT (Mothers) (2nd or booster) (1,181)	1,387
<b>Children (0–1) year</b>	
DPT (3rd dose)	1,169
Polio (3rd dose)	1,190
BCG	2,265
Measles	1,289
<b>Children (under 5 years)</b>	
DT	650

## COMMUNITY SERVICES/CAMPS

The faculty of the department participated in community awareness programmes through public education talks in radio, phone-in programmes and panel discussions on AIR and allied TV channels.



Cancer detection camp at Janak Puri, New Delhi, in collaboration with Rotary Club; 3 December 2006.

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr Suneeta Mittal** is the Editor, *Reproductive Health Library*, WHO; Chairperson, North Zone, ISOPARB; Fellow of Royal College of Obstetrics and Gynaecology, London; Vice-President, Federation of Obstetricians and Gynaecologists of India; Vice-President, Indian Society for Study of Reproduction and Fertility; Short-term Consultant for Technical assistance to WHO on Safe abortion in DPR Korea.

**Dr Alka Kriplani** is the Editor, *Asian Journal Obs and Gynae Practice*; Vice President, North Zone, IMAGES (Indian Society of Minimal Access and Gynaecological Endoscopic Surgery) 2003–continuing; Member, Governing Council, ICOG (2006–2008).

**Dr Sunesh Kumar** is the Member of the Project Advisory Committee on Screening for common cancers in three districts of Himachal Pradesh being conducted by Indian Council of Medical Research (ICMR).

**Dr Deepika Deka** is elected Chairman of Genetic and Foetal Medicine Committee, FOGSI, September 2006 for 2007–2010; Joint Secretary, Indian Society for Prenatal Diagnosis and Therapy (ISPAT) since February 2006; Honorary Secretary, Delhi Society for Prenatal Diagnosis and Therapy (DESPAT).

**Dr Neerja Bhatla** is elected Member, Advisory Group, Strategic Assessment of Cervical Cancer Prevention and Treatment programme in 3 districts in U.P.

### **Dr Nutan Agarwal**

- First prize in poster presentation on ‘Clinical significance of TORCH titres in high risk pregnancies’, Annual Conference of National Association of Reproduction and Child Health of India (NARCHI); September 2006 (as coauthor).
- Second prize in poster presentation on ‘Role of doppler indices in foetal-vessels umbilical artery, middle cerebral artery, thoracic aorta and ductus venosus in IUGR’. 28 Annual Conference of Association of Obstetrics and Gynaecologists of Delhi, New Delhi; 18–19 November 2006 (as chief author).
- First prize in paper presentation on ‘Single visit approach using VIA/VILI and LEEP at 15 Annual Conference of AGOICON, New Delhi; 25–26 November 2006 (as co-author).
- Awarded ‘Rhogam Research Grant’ for year 2006 from FOGSI for best project on Rh isoimmunized pregnancies: Intra-amniotic immunoglobulin therapy in Rh isoimmunized pregnancies.
- Awarded Dr Jagadiswari Misra first prize for poster on Official theme ‘Treatment of proximal tubal block by laparoscopy guided hysteroscopic tubal cannulation’ as chief author at 50th

- All India Congress on Obstetricians and Gynaecologists, Kolkata; 5–9 January 2007.
- Awarded Fellowship of Geriatric Society of India (FGSI); October 2006.
- Awarded Academic Fellowship for Indian College of Obstetrics and Gynaecology–FICOG; January 2007.

**Dr J.B.Sharma** won Overseas Fund of RCOG, London of 1000 Pounds to visit the Department of Gynaecology and Urogynaecology at Mayday University Hospital, Croydon, UK (18–23 September 2006); Fellowship of Royal College of Obstetricians and Gynaecologists, London, UK (29 September 2006); Editor, *Obstetrics and Gynaecological Today*, A speciality national journal, published from Delhi; Associate Editor, *International Journal of Gynaecology and Obstetrics*, India, New Delhi; Associate Editor, *Indian Journal of Gynaecologica Endoscopy*, New Delhi; Associate Editor, *Asian Journal of Obstetrics and Gynaecology*; Associate Editor, *Indian Medical Journal*.

#### **The department has**

1. established Endoscopy Centre for Training Course on Minimally Invasive Gynaecology under Women's Health Initiative
2. constructed Assisted Reproductive Technology (ART) Centre at the Department of Obstetrics and Gynaecology.

#### **VISITING SCIENTISTS**

1. Dr T.C. Cameron, The Princess Anne Hospital, Southampton, SO16 5YA
2. Mr Anthony Hollingworth, Whipps Cross University Hospital, UK.
3. Dr Stephen Kennedy, University of Oxford, UK
4. Dr Katherine Ba-Thike, Department of Reproductive Health and Research (RHR), WHO, Switzerland
5. Dr Rohit Sharma, Ipswich Hospital, UK.

## 9.23 Orthopaedics

	<b>Professor and Head</b> Surya Bhan	
	<b>Professors</b>	
Prakash P. Kotwal	Shishir Rastogi	Arvind Jayaswal
	Rajesh Malhotra	
	<b>Additional Professor</b>	
	Hira Lal Nag	
	<b>Associate Professors</b>	
Ravi Mittal		Chandrashekhar Yadav
	<b>Assistant Professors</b>	
Shah Alam Khan		Vijay Kumar

### EDUCATION

#### Undergraduate and Postgraduate

The department had several doctors from various parts of the country and Afro–Asian region for short-term training in various aspects of Orthopaedics.

The department holds regular undergraduate and postgraduate teaching in the form of lectures, bedside teaching, assessment and clinicopathology seminars.

#### Continuing Medical Education

##### Lectures delivered by

##### Dr P.P. Kotwal

- ‘Proximal humerus fractures and shoulder replacement’, Knee and Shoulder Symposium, G.M. Modi Hospital, New Delhi; April 2006.
- ‘Carpal tunnel syndrome’, Instructional Course in Hand Surgery, Mahabaleshwar, Maharashtra; April 2006.
- ‘Tendon reconstruction in the no man’s land’, Instructional Course in Hand Surgery, Mahabaleshwar, Maharashtra; April 2006.
- ‘Radial club hand’, Instructional Course in Hand Surgery, Mahabaleshwar, Maharashtra; April 2006.
- ‘Fracture of the scaphoid’, Instructional Course in Hand Surgery, Mahabaleshwar, Maharashtra; April 2006.
- ‘Fractures of the scaphoid—when to fix’, Trauma up-date, Amritsar; October 2006.

- ‘Basic principles in the management of flexor tendon injuries’, National Postgraduate Instructional Course, Bhopal; December 2006.
- ‘Principles in the management of paralysed hand, including leprosy’, National Postgraduate Instructional Course, Bhopal, December 2006.
- ‘Flexor tendon injuries’, Postgraduate Instructional Course, Maulana Azad Medical College, New Delhi; November 2006.
- ‘Kienbock’s disease’, National Hand Course, CMC Vellore; February 2007.
- ‘Osteoporosis: Surgical management’, International CME on ‘Bone pathology’, New Delhi; February 2007.
- ‘Carpal tunnel syndrome’, National Hand Course, CMC Vellore; February 2007.
- ‘Role of research section in the implementation of research projects’, AIIMS, Workshop on ‘Fundamentals of clinical research methodology’, February 2007.
- ‘Flexer tendon injuries’, Pune Orthopaedic Instructional Course, Pune; March 2007.
- ‘Management of the paralytic hand (including leprosy)’, Pune Orthopaedic Instructional Course, Pune; March 2007.

#### **Dr A. Jayaswal**

- ‘Surgical management of scoliosis’, Spine CME 2006, Madurai; 10–11 June 2006.
- ‘Sagittal plane deformity’, Spine CME 2006, Madurai; 10–11 June 2006.
- ‘Anterior correction of scoliosis’, Spine CME 2006, Madurai; 10–11 June 2006.
- ‘Biomechanics of spine—its importance in spine surgery’, Spine Symposium 2006, Maharaja Agarsain Hospital, Delhi; 24–25 June 2006.
- ‘Minimally invasive spine surgery—Indian perspective’, Spine Symposium 2006, Maharaja Agarsain Hospital, Delhi; 24–25 June 2006.
- ‘Rigid scoliosis—How I manage it’, Association of Spine Surgeons of India (ASSI) and European Spine Society (ESS), Combined Instructional Course in Spine, Hyderabad; 4–6 August 2006.
- ‘Failed back syndrome—surgeons failure?’, Association of Spine Surgeons of India (ASSI) and European Spine Society (ESS), Combined Instructional Course in Spine, Hyderabad; 4–6 August 2006.
- ‘Minimally invasive surgery for lumbar disc herniation’, Workshop on ‘Minimally invasive surgery’, Association of Spine Surgeons of India (ASSI) and European Spine Society (ESS), Combined Instructional Course in Spine, Hyderabad; 5 August 2006.
- ‘MAST—lumbar instrumentation and interbody fixation’, Workshop on ‘Minimally invasive surgery’, Association of Spine Surgeons of India (ASSI) and European Spine Society (ESS), Combined Instructional Course in Spine, Hyderabad; 5 August 2006.
- ‘360° fusion for T.L. trauma’, 15th Annual Conference of Neurotrauma Society of India (Neurotrauma Con 2006), NASC Congress, New Delhi; 12 August 2006.
- ‘Role of fixation in spinal tuberculosis’, First Musculoskeletal Infection Conference of Asia, Pacific Orthopaedics Association, Khajuraho; 25–27 August 2006.

- ‘Adolescent idiopathic scoliosis—management strategies’, Ethicon Institute of Surgical Education, New Delhi; 9–11 September 2006.
- ‘Congenital scoliosis’, Ethicon Institute of Surgical Education, New Delhi; 9–11 September 2006.
- ‘Neuromuscular scoliosis’, Ethicon Institute of Surgical Education, New Delhi; 9–11 September 2006.
- ‘Sagittal plane deformities—an overview’, Ethicon Institute of Surgical Education, New Delhi; 9–11 September 2006.
- ‘Short arm and angular kyphosis’, Ethicon Institute of Surgical Education, New Delhi; 9–11 September 2006.
- ‘Microendodisectomy (MED)’, AO Spine Course, Guwahati; 22 September 2006.
- ‘Lumbar disc herniation in adolescents’, AO Spine Course, Guwahati; 22 September 2006.
- ‘Minimally invasive spine surgery’, Elevating Best Practice in Spine, Ahmedabad; 8 October 2006.
- ‘Percutaneous paedicular screw technique’, Elevating Best Practice in Spine, Ahmedabad; 8 October 2006.
- ‘Minimally invasive interbody fusion’, Faculty at Elevating Best Practice in Spine, Ahmedabad; 8 October 2006.
- ‘Minimally invasive spine surgery—an overview’, Workshop on ‘Minimally invasive and motion preservation techniques’, 51st Annual Conference of Indian Orthopaedic Association IOCON 2006, New Delhi; 14 November 2006.
- ‘Anterior column reconstruction in thoraco-lumbar trauma’, Spine Trauma Laboratory, Leipzig, Germany; 7–9 December 2006.
- ‘Neglected rigid scoliosis’, Musculoskeletal Education and Research Center (USA) organized ‘Current concepts in spine surgery’, Chennai; 6 January 2007.
- ‘Minimally invasive lumbar fixation and fusion’, ‘Current concepts in spine surgery’, Chennai; 6 January 2007.
- ‘Minimally invasive spine surgery—an overview’, Musculoskeletal Education and Research Center (USA) organized ‘Emerging techniques in spine surgery’, Mumbai; 13–14 January 2007.
- ‘Minimally invasive surgery—lumbar instrumentation’, Musculoskeletal Education and Research Center (USA) organized ‘Emerging Techniques in Spine Surgery’, Mumbai; 13–14 January 2007.
- ‘Spinal fixation systems—an overview’, Annual Conference of Uttaranchal Chapter, Indian Orthopaedic Association (UA—IOACON 2007), Jim Corbett Park, Uttaranchal; 19–21 January 2007.
- ‘Spinal trauma—role of fixation’, Annual Conference of Uttaranchal Chapter, Indian Orthopaedic Association (UA—IOACON 2007), Jim Corbett Park (Uttaranchal); 19–21 January 2007.

- ‘Surgery in degenerative lumbar canal stenosis’, Annual Conference of Association of Spine Surgeons of India (ASSICON 2007), Ahmedabad; 26–28 January 2007.
- ‘Minimally invasive spine surgery’, ‘Current concepts in spine surgery’, Musculoskeletal education and Research Centre, USA, MERC and Karnataka Orthopaedic Association, Bangalore; 18 February 2007.
- ‘Principles of scoliosis corrections and instrumentation’, International Spine and Spinal Injuries Conference (ISSICON 2007), Indore; 23–25 February 2007.
- ‘Minimally invasive surgery’, International Spine and Spinal Injuries Conference (ISSICON 2007), Indore; 23–25 February 2007.
- ‘Micro endoscopic discectomy’, Operative Spine Course of Asia Pacific Orthopaedic Association (APOA), Coimbatore; 8–11 March 2007.
- ‘MISS—posterior instrumentation and interbody fusion’, ‘Current concepts in spine surgery’, Musculoskeletal Education and Research Centre, USA and Chandigarh Spine Club, Chandigarh; 17–18 March 2007.

#### **Dr R. Malhotra**

- ‘Surgical treatment of osteoarthritis knee’, Shoulder and Knee Symposium of Delhi Orthopaedic Association, GM Modi Hospital, New Delhi; 22 April 2006.
- ‘Medical management of osteoarthritis—the way ahead’, New Delhi; 5 August 2006.
- ‘Dexibuprofen’, New Delhi; 18 August 2006.
- ‘Templating’, Delhi Arthroplasty Course (Basic), Ethicon Institute of Surgical Education New Delhi; 19 August 2006.
- ‘Valgus knee—tips for correction’, Delhi Arthroplasty Course (Basic), Ethicon Institute of Surgical Education New Delhi; 19 August 2006.
- ‘Advances in the management of degenerative joint disorder’, New Delhi; 12 August 2006.
- ‘Role of bisphosphonate in the management of osteoporosis’, Symposium on ‘Osteoporosis’, Hotel Nikko Metropolitan, New Delhi; 18 August 2006.
- ‘The current status of NSAIDs in Orthopaedic practice’, New Delhi; 20 August 2006.
- ‘SYSADOA’, The management of osteoarthritis, 30 August 2006.
- ‘Physeal injuries’, North East Region Orthopedic Surgeons Association (NEROSA), 10th CME of NEROSA (National Science Association), Guwahati; 3 September 2006.
- ‘Nonunion and malunion of paediatric fractures’, North East Region Orthopedic Surgeons Association (NEROSA), 10th CME of NEROSA (National Science Association), Guwahati; 3 September 2006.
- ‘Osteoporosis’, Indian Medical Association, College for General Practitioners, Silver Jubilee Refresher Course, Kanpur; 5 November 2006.
- ‘TKR in stiff knees’, The Arthroplasty: A millennium challenge, Mumbai; 10–11 March 2007.
- ‘THR in protrusio’, ‘Arthroplasty: A millennium challenge’, Mumbai; 10–11 March 2007.

## **NATIONAL AND INTERNATIONAL CONFERENCES**

### **Organized by the department**

The department organized the 15<sup>th</sup> Annual National Conference of Indian Orthopaedic Association, New Delhi; 9–15 November 2006.

### **Lectures delivered**

#### **Dr P.P. Kotwal**

- ‘Radial club hand—long-term experience’, Annual Meeting of the American Society for Surgery of the Hand, Washington DC, USA; September 2006.
- ‘Fracture of the scaphoid’, South Delhi Orthopaedic Forum; April 2006.
- ‘Hand injuries’, Meeting of the Dehradun Orthopaedic Club; July 2006.
- ‘Radial club hand—possibilities’, CME programme of the 25<sup>th</sup> (Silver Jubilee) Annual Conference of the M.P. Chapter of Indian Orthopaedic Association, Gwalior; October 2006.
- ‘Management of peri-articular fractures and spine’, Symposium on ‘Osteoporotic fractures’, 25<sup>th</sup> (Silver Jubilee) Annual Conference of the M.P. Chapter of Indian Orthopaedic Association, Gwalior; October 2006.
- ‘Flexor acute tendon injuries: Zone I–V’, 51<sup>st</sup> Annual Conference of the Indian Orthopaedic Association, New Delhi; November 2006.
- ‘Hand infections’, 51<sup>st</sup> Annual Conference of the Indian Orthopaedic Association, New Delhi; November 2006.
- ‘How do I do it’, 51<sup>st</sup> Annual Conference of the Indian Orthopaedic Association, New Delhi; November 2006.
- ‘Latissimus dorsi flap’, Workshop on ‘flaps’, 51<sup>st</sup> Annual Conference of the Indian Orthopaedic Association, New Delhi; November 2006.
- Surgical demonstration of ‘Tendon suture techniques’, Experimental model in the ‘Workshop on hand surgery’, 51<sup>st</sup> Annual Conference of Indian Orthopaedic Association, New Delhi; November 2006.
- ‘Trend of injuries and prevention’, Symposium organized on the occasion of the World Day of Remembrance for Road Crash Victims, Institute of Road Traffic Education, New Delhi; 19 November 2006.

#### **Dr A. Jayaswal**

- ‘Fracture dislocation of spine following THR in ankylosing spondylitis’, Combined Instructional Course in Spine, Hyderabad; 4–6 August 2006.
- ‘Complications of scoliosis surgery’, CME on ‘Spinal deformities’, Ethicon Institute of Surgical Education (EISE), Delhi; 9–11 September 2006.
- ‘Sagittal balance and deformities, spondylolysis and spondylolisthesis’, CME on ‘Spinal deformities’, EISE, Delhi; 9–11 September 2006.

- ‘Spondylolisthesis reduction techniques’, CME on ‘Spinal deformities’, EISE, Delhi; 9–11 September 2006.
- ‘Post-instrumentation—pedicular screws, hooks, derotation technique’, CME on ‘Spinal deformities’, EISE, Delhi; 9-11 September 2006.
- ‘Outcome of anterior instrumentation versus posterior instrumentation in the surgical correction of scoliosis’, Ahmedabad; 26–27 January 2007.
- ‘Assessment of pedicle screw placement—a CT scan-based study of 741 screws’, International Spine and Spinal Injuries Conference (ISSICON), Indore; 23–25 February 2007.
- ‘Pedicle morphometry in a sample of north Indian population’, ISSICON, 23–25 February 2007, Indore.
- ‘How safe are thoracic pedicle screws?’, CME on ‘Current concepts in spine surgery’, Musculoskeletal Education and Research Centre, USA and Chandigarh Spine Society, Chandigarh; 16–17 March 2007.

#### **Dr R. Malhotra**

- ‘Charcot foot’, International Federation of Foot and Ankle Society, Agra; 13 October 2006.
- ‘Fragility fractures’, Symposium and Workshop on ‘Rheumatic-Musculoskeletal disorders in India’, Pune; 13 October 2006.
- ‘Brittle bones (Osteoporosis)’, AIIMS, New Delhi; 21 April 2006.

#### **Dr Ravi Mittal**

- ‘Imaging of knee’, Delhi Orthopaedic Association (DOA) meeting, AIIMS, New Delhi; 1 April 2006.
- ‘Imaging of knee’, Live demonstration and workshop on ‘Arthroscopy of knee and shoulder’, Base Hospital, Delhi Cantt; 13–14 May 2006.
- ‘Open Bankart repair’, Live demonstration and workshop on ‘Arthroscopy of knee and shoulder’ Base Hospital, Delhi Cantt; 13–14 May 2006.
- ‘Postero-lateral corner injuries’, Knee Symposium 2006, Sant Parmanand Hospital, Delhi; 6 August 2006.
- ‘Meniscal tears in chronic ACL injury’, 51<sup>st</sup> Annual Conference of Indian Orthopaedic Association (IOACON) 2006, New Delhi; 9–15 November 2006.

#### **Dr Shah Alam Khan**

- Podium (Oral) paper on ‘Ponseti’s manipulation in neglected clubfeet—Are we joking?’ and Poster presented on ‘Musculoskeletal tuberculosis presenting as bone tumors’, 71st Annual Conference of the American Academy of Orthopaedic Surgeons, Chicago; 21–26 March 2006.



- ‘Diaphyseal osteosarcomas—A clinical study’, Annual Conference of the Orthopaedic Association of SAARC Countries, Kathmandu, Nepal; 7–11 December 2006.
- ‘Cerebral palsy as a masquerading syndrome in the clubfoot clinic’, First Annual Conference of the Indian Academy of Cerebral Palsy, Hyderabad; 24–27 November 2006.
- ‘Attended the MRCS examiners course’, organized by the Royal College of Physicians and Surgeons of Glasgow, New Delhi, India; 20–21 May 2006.
- ‘Ponseti’s manipulation in neglected clubfoot’, Annual Conference of the Indian Foot and Ankle Society, Agra; 15–17 October 2006.

#### **Dr C.S. Yadav**

- ‘Aggressive management of infected THR (Total Hip Replacement)’, Asia Pacific Orthopaedic Association Conference; 25–27 August 2006.
- ‘Management of infected TKR’, Workshop on Primary TKR, Hospital 51<sup>st</sup> Annual Conference of Indian Orthopaedic Association (IOACON 2006), 13 November 2006.

#### **Dr Vijay Kumar**

- ‘Total hip replacement in acetabular fractures’, 51<sup>st</sup> Annual Conference of Indian Orthopaedic Association (IOACON), New Delhi; 9–15 November 2006.
- ‘Femoral revision using IOTA interlocking stem: A short-term follow up study’, Poster presentation at IOACON, New Delhi; 9–15 November 2006.
- ‘Femoral periprosthetic stress shielding following cementless total hip replacement’, Annual Conference of the Orthopaedic Association of SAARC Countries (OASAC) Conference, Kathmandu, Nepal; 7–11 December 2006.

## **RESEARCH**

### **Funded Projects**

1. Role of free radical scavengers and the effect of antioxidants on their levels in patients with ankylosing spondylitis—to investigate the possible role of antioxidants as therapeutic agents in ankylosing spondylitis’. A. Jayaswal. Funded by Indian Council of Medical Research (ICMR) for 3 years (23 December 2004 to 22 December 2007). Funds: Rs 9.47 lakh
2. Clinical and electrophysiological recovery following endoscopic versus open carpal tunnel release for carpal tunnel syndrome. R. Malhotra. Funded by Indian Council of Medical Research (ICMR) for 3 years (June 2003 onwards). Funds: Rs 21 lakh.
3. A new hip hemiarthroplasty option-based on femoral stem design suitable for the morphology of proximal femur of elderly Indian population. R. Malhotra. Funded by Council for Scientific and Industrial Research (CSIR) for 3 years (2005–2008). Funds: Rs 23.33 lakh
4. Some medico-technical—(i) Determining mechanical properties of ligaments; and (ii) Development of stereo-cameras for operative/anatomic video-sequences. R. Malhotra. Funded by ICMR.

5. Biodegradable polymer composite bone scaffolds by microcellular injection mould technique. Shah Alam Khan. Funded by Department of Science and Technology, Government of India (with IIT, Delhi) for 5 years (2006-2011) Funds: Rs 25 lakh per year.

## Departmental Projects

### Completed

1. Giant cell tumors of bone—A clinicopathological study
2. Outcome of results in minimally invasive spinal fusion in various disorders of thoracic and lumbar spine
3. Evaluation of results of cementless and hybrid tibial hip arthroplasty in young adults
4. Fixed bearing vs. mobile bearing total knee arthroplasty. A comparative analysis of PFC rotating platform and PFC sigma (fixed bearing) at minimum follow up of one year
5. Arthroscopic and MRI correlation of meniscus lesions occurring in ACL deficient?

### Ongoing

1. Comparative study between vascularized and non-vascularized bone grafting in non-union of fracture scaphoid. Arthroscopic assessment of the extent of Bankart lesion in acute traumatic anterior shoulder dislocation and radiological correlation.
2. Short and midterm results following total knee arthroplasty with posterior stabilized mobile bearing prosthesis: A retrospective and prospective study
3. Femoral head vascularity after surface arthroplasty of the hip
4. Effects of intra-articular pressure, posterior communication and Gardens' alignment index on the management of intracapsular femoral neck fracture
5. Assessment of functional outcome after arthroscopically assisted mini open rotator cuff repair
6. Comparative study between Interlock nailing and MIPPO using locking compression plate in fracture shaft of tibia

## PUBLICATIONS

### Journals

1. Pankaj A, Kotwal PP, Mittal R, Deepak KK, Bal CS. Diagnosis of post-traumatic complex regional pain syndrome of the hand: Current role of sympathetic skin response and three phase bone scintigraphy. *J Orthop Surg* 2006;**14**:284–90.
2. Garg B, Gupta V, Kotwal PP. Additional technical errors causing LCP failure (Letter). *J Bone Joint Surg Am* (online); 2006.
3. Garg B, Gupta V, Malhotra R, Kotwal PP. Volar locking plate: Is it really responsible for delayed rupture of extensor tendon? *J Bone Joint Surg* 2007;**88-B**:1610–2.
4. Pankaj A, Malhotra R, Bhan S. Penetration of the distal femoral anterior cortex during intramedullary nailing for subtrochanteric fractures. *J Orthop Trauma* 2006;**20**:299.

5. Garg B, Sharma V, Krishnakiran E, Malhotra R, Bhan S. An unusual presentation of eosinophilic granuloma in an adult: A case report. *J Orthop Surg (Hong Kong)* 2006;**14**:81–3.
6. Malhotra R, Krishna KE, Dua A, Mallinath SG, Bhan S. Endoscopic versus open carpal tunnel release: A short-term comparative study. *Indian J Orthop* 2007;**41**:57–61.
7. Karthikeyan B, Mukherjee S, Chawla A, Malhotra R. Inverse finite element characterization of soft tissues using impact experiments and Taguchi methods, transactions. *J Passenger Cars—Mechanical Systems*, SAE 2006, SAE paper No 2006-01-252.
8. Jangid S, Mittal R, Sharma V, Das AK. Progressive massive osteolysis of humerus. *J Shoulder Elbow Surg* 2006;**15**:386–90.
9. Khan SA, Hasan AS, Capoor M, Varshney MK, Trikha V. Calcaneal osteomyelitis caused by *Exophiala jeanselmei* in an immunocompetent child: A case report. *J Bone Joint Surg Am* 2007;**89**:859–62.
10. Varshney M, Rastogi S, Trikha V, Khan SA, Choudhry B, Safaya R. Treatment of aneurysmal bone cysts with percutaneous sclerotherapy using polidocanol: A review of 72 cases with long-term follow-up. *J Bone Joint Surg Br* 2006;**88-B**: 1212–6.
11. Kumar A, Trikha V, Varshney M, Khan SA. Isolated tuberculosis of the coccyx. *J Bone Joint Surg Br* 2006;**88B**:1388–9.
12. Kumar J, Bandhu S, Kumar A, Khan SA. Extra-osseous fat fluid level: A specific sign for osteomyelitis. *Skeletal Radiol* 2006.
13. Khan SA, Kumar A. Pseudomalignant myositis ossificans mimicking osteosarcoma: A case report. *Orthop Surg (Hong Kong)* 2006;**14**:66:8(1).
14. Gogi N, Khan SA, Varshney M. Limb length discrepancy following titanium elastic nailing in paediatric femoral shaft fractures. *Acta Orthop Belgica* 2006;**72**:154–8.
15. Khattry N, Thulkar S, Das A, Khan SA, Bakhshi S. Spinal tuberculosis mimicking malignancy: Atypical imaging features. *Indian J Pediatr* 2007;**74**:297–8.
16. Kumar A, Khan SA, Yadav CS, Nag HL. Locking Compression plate in treatment of forearm fractures: A prospective study (Letter to Editor). *J Orthop Surg (Hong Kong)* 2007;**15**:121.
17. Khan SA. The way I see it: New visa regulations for IMGs are a blessing in disguise. *BMJ (Career focus)* 2006;333.
18. Varshney MK, Trikha V, Khan SA. Actinomycosis or tuberculosis? A diagnostic dilemma. *Scand J Infect Dis* 2006;**38**:378–81.
19. Khan SA, Gogi N, Anwar R, Khan N. Neglected telangiectatic osteosarcoma of the clavicle in a child. *Internet J Third World Med* 2006;**3**:2.
20. Sharma L, Kumar V, Malhotra R. Does open reduction increase the chance of infection during intramedullary nailing of closed tibial shaft fractures? *J Ortho Trauma* 2006;**20**:745.

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Dr P.P. Kotwal** Member, Technical Specification Committee for procurement of equipment for JDWNR Hospital, Thimpu and Regional Referral Hospital, Mongar, Bhutan; Chairman, Selection Committee, set up by the National Centre for Antarctic and Ocean Research, Goa to select medical officers for the Indian Expedition team to Antarctica;

He delivered Medical Briefings to the members of the Indian Expedition Team to Antarctica; delivered a talk on 'Medical problems in Antarctica', National Scientific Hindi Symposium organized by the Ministry of Earth Sciences, India, on completion of 25 years of Indian Antarctica Expedition, New Delhi (November 2006); felicitated at the Silver Jubilee Conference of the MP Chapter of Indian Orthopaedic Association held at Gwalior for contribution to the field of Orthopaedics (October 2006); He was nomination as Faculty Expert for Freezing of Equipment Specifications for setting up of 6 new AIIMS like Institutions and upgradation of 13 existing Government Medical Institutions under PMSSY (February 2007); Presided over the Inaugural function of the Indo-US Emergency Medicine Summit 2006, with Smt. Shiela Dikshit, Chief Minister of Delhi as Chief Guest (September 2006); Chaired a session 'Meet the Medical Superintendent of Delhi Hospitals' during the Indo-US Emergency Medicine Summit 2006, at New Delhi (September 2006); nominated by the Principal Scientific Advisor to the Govt. of India as Chairman of a Project Review and Monitoring Committee for a Project on the setting up of an 'ORTHO-CAD Network Centre for Endo-prosthetic Skeletal Reconstruction System' for three years (from February 2007); nominated as Faculty member for the 1st Regional A.O. Advanced Course, organized by the A.O. International, held at Chiang Mei, Thailand (25–30 April 2006); President, Delhi Orthopaedic Association November 2005–December 2006; nominated as an Expert by the Federation of Indian Chambers of Commerce and Industry (FICCI) to evaluate FICCI Awards in the field of 'empowerment of the physically handicapped' (2005-2006); Member, Selection Committee at UCMS and GTB Hospital, Delhi to select Senior Resident in Orthopaedics (June 2006); Member, Selection Committee of Union Public Service Commission to select Orthopedic Surgery Specialists Grade II (June 2006); Member, Selection Committee of the North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong to select Professor, Associate Professor and Assistant Professors in Orthopaedics; Chairman, Critical Care Committee for prevention and management of Dengue, AIIMS (October 2006); Chairman, Death Review Committee (Casualty) at AIIMS, New Delhi (November 2006); Member, Committee to streamline the research work in HIV positive patients undergoing treatment at the ART clinic at AIIMS (May 2006); Member, Committee for evaluation of Expression of Interest in developing new Heart Valve design (July 2006); Member, Patent Committee (July 2006–07); Member, Committee to discuss the issue of Patent at AIIMS, New Delhi, (September 2006); Appointed an Inspector by the Medical Council of India to inspect the Department of Orthopaedics at Shri Guru Ram Das Institute of Medical Sciences, Amritsar (July 2006); Professor-in-Charge, Research Section (continued).He was elected Chairman—Selection Committee for Technical Staff (Research)—continued; Selection Committee to select Junior Physiotherapist/Occupational Therapists (May 2005); Departmental Promotion Committee

(DPC) to consider the candidates to the posts of Technical Officer (Laboratory), January 2006; Vice-Chairman, Research Committee (continued); Member—Dean's Committee (continued), Staff Council (continued), Institutional Ethics Committee (continued), Institutional Ethics Committee for Experimental Research (continued), special Invitee to the Academic Committee; Officiating Dean (18 January 2007). Nominated as a Resource Person by the Department of Social Welfare and Health, Govt. of Sikkim, to participate in a Corrective Surgery Camp for the Orthopaedically disabled persons; held at Gangtok, Sikkim, (April 2006); Chairman, Workshop Committee, during the 51st Annual Conference of the Indian Orthopaedic Association held, New Delhi (November 2006).

**Dr A. Jayaswal** selected Member of Board of Directors of World Spine Society (WSS); Executive Committee Member, Pacific Asia Society for Minimally Invasive Spine Surgery (PASMIS); Asian Academy of Minimally Invasive Spine Surgery (AAMISS); Spine Section of Asia Pacific Orthopaedic Association (APOA); World Society for Endoscopic, Navigated and Minimally Invasive Surgery (WENMISS); President of Association of Spine Surgeons of India (ASSI); President of Delhi Spine Society; Vice President Spinal Cord Society; International Spinal Cord Society (ISCOS), Elected President of Association of Spine Surgeons of India (ASSI); Invited Faculty to 'Spine Trauma Laboratory 2006', Leipzig, Germany (7–9 December 2006); International Spine Conference, India–Asia Pacific Orthopaedic Association (APOA), Khajuraho and Coimbatore; nominated Course Coordinator for Conducting 6 Spine Courses and Spine CMEs in India by Musculoskeletal Education and Research Centre, USA, Chennai, Bangalore, Mumbai and Chandigarh; nominated Course Coordinator for Conducting Spine CMEs and Workshops under aegis of the 'Elevating best practice in spine', at Ahmedabad, Delhi, Pune; Examinership, Nagpur University, Punjab University, Karachi University (Pakistan); Editorial Article reviewer—*Current Orthopaedics and Related Research (CORR)*, *Indian Journal of Orthopaedics*.

**Dr R. Malhotra** was Internal Examiner for MS (Orthopaedics) in All India Institute of Medical Sciences, New Delhi (9–15 December 2006); Member of working group for 'ICMR–WHO Workshop on Development of a feasibility Modules on Road Traffic Injury Surveillance', New Delhi (11–12 July 2006); Member of 'Advisory Group for Research in Accidents and Injuries (AGRAI) by ICMR', New Delhi (2007); Member of 'Staff Council', All India Institute of Medical Sciences, New Delhi (9 January 2007); Member of Constitution of the Committee on Tele Medicine, AIIMS for the year 2006–07; Member of Reconstitution Hospital Infection Control Committee for year 2005–2006 (2006–07); Moderator for Change paradigms in the management of osteoporosis Conference (IOACON) symposium on 'Type of bone grafts', New Delhi (12 November 2006).; Chairman Scientific Session for the 'Total knee replacement', during IOACON 2006, Safdarjung Hospital, New Delhi (13 November 2006); Convener Orthopaedic Initiative for the Executive Body of ISBMR (Indian Society of Bone Mineral Research) New Delhi (26 February 2007); Chairman Scientific Session on the 'Metabolic bone diseases' in India International Centre, Max Muller Marg, New Delhi (26 February 2007); Chairman Scientific Session on the

Arthroplasty 'A millennium challenge', Mumbai (10–11 March 2007); Chairman Scientific Session on the 'Different approaches and exposures, acetabular fractures', AO Alumni Association India Symposium, 9th Annual Meeting, Kolkata (4–5 January 2006); Adjunct Faculty CMET, AIIMS; Editor, *Orthopaedics Today*; Review referee for the *Indian Journal of Orthopedics*; Review referee for the *Indian Journal of Pediatrics*; Review referee for the *National Medical Journal of India*.

**Ravi Mittal** Live demonstration and workshop on 'Arthroscopy of knee and shoulder', Base Hospital, Delhi Cantt (13–14 May 2006); Faculty at Shoulder and Advanced Arthroscopy workshop IOACON 2006, New Delhi (14 November 2006); Examiner at Final MBBS, Patiala Medical College (December 2006); Organization of IOACON 2006, New Delhi; Reviewer for the *Indian Journal of Orthopaedics*.

**Dr Shah Alam Khan** awarded the Honorary Fellowship of the Royal College of Surgeons and Physicians of Glasgow; selected provisionally to the elite panel of examiners for the Intercollegiate Membership Examination of the Royal Colleges of Surgeons of UK.

**Dr C.S. Yadav** elected Executive Member of Indian Orthopaedic Association; Joint Replacement fellowship at Brisbane and Sydney, Australia; 20 September to 3 November 2006; Project Review Committee, ICMR (12 December 2006).

## 9.24 Otorhinolaryngology (ENT)

<b>Professor and Head</b>		
Ramesh C. Deka		
<b>Professors</b>		
Sudhir Bahadur		Suresh C. Sharma
<b>Associate Professors</b>		
Kumud K. Handa		Alok Thakar
<b>Assistant Professors</b>		
Rakesh Kumar		Venkatarathikeyan C.

### EDUCATION

The departmental faculty has actively participated in the academic activities of undergraduate, postgraduate and paramedical teaching.

The department has developed an undergraduate (MB,BS) teaching manual. It provides short and long term training to national and international doctors and audiologists every year.

### Continuing Medical Education

#### Organized by the department

- The department organized and hosted the monthly meeting of the Delhi Chapter of Associations of Otolaryngologists of India, AIIMS; July 2006.
- The department in collaboration with Ministry of Social Welfare, organized a 'Surgical workshop on ear diseases', Sir Thadop Namgyol Memorial Hospital (STNM) Hospital, Gangtok (Sikkim); 28–30 November 2006. Dr Rakesh Kumar participated in the CME and conducted 19 otologic surgeries.

### Lectures delivered

#### Professor R.C. Deka

- 'Cochlear implantation in children', CME and temporal bone workshop in Shankar Madhab Hospital and Medical College, Guwahati, Assam; 4–5 November 2006.
- 'Health education and developing human resources' in the session 'Medical education and training', Global Healthcare Conference, Federation of Indian Chambers of Commerce and Industry (FICCI), New Delhi; 15 January 2007.
- 'Current concepts in sudden sensorineural hearing loss and its therapy', Guahati Medical College, Guwahati, Assam; 17 March 2007.
- 'Cochlear implantation—AIIMS experience', Guahati Medical College, Guwahati, Assam; 17 March 2007.

- ‘Management of middle ear cholesteatoma’, Guahati Medical College, Guwahati, Assam; 17 March 2007.
- ‘Combination therapy of intratympanic dexamethasone and acyclovir in sudden sensorineural hearing loss’, ENT Update, Armed Forces Medical College, Pune; 24–25 March 2007.

#### **Professor Sudhir Bahadur**

- ‘Surgical management for malignant neoplasms of the parotid gland’, Regional Workshop, Srinagar, Jammu and Kashmir; June 2006.
- ‘Changing concepts in the head and neck cancer management’, Live workshop on ‘Endoscopic nasal and sinus surgery’, Dr Susheela Tiwari Memorial Forest Hospital, Haldwani, Uttaranchal; 25–26 November 2006.
- ‘Surgical treatment of carcinoma of tongue’, Postgraduate teaching workshop, Cochin; March 2007.

#### **Dr K.K. Handa**

- ‘Medical and surgical indications of Phonosurgery’, Phonosurgery and laser course, Lucknow; 8–9 April 2006.
- ‘Videostroboscopy; principles and application’, Phonosurgery workshop, Latur Maharashtra; 1–2 July 2006.
- ‘Phonosurgery’ in the course ‘New trends in phonosurgery’, Hyderabad; 19 November 2007.
- ‘Muscle tension dysphonia diagnosis and management’, Phonosurgery, Pune; 24–26 November 2006.
- ‘Laryngeal framework surgery’, Workshop on ‘New trends in phonosurgery’, Bangalore; 17 December 2007.
- ‘Phonosurgery: Past, present and future’, in the course on ‘New frontiers in phonosurgery’, Chennai; 10 December 2007.

#### **Dr Alok Thakar**

- ‘Management of vertigo—moving beyond labyrinthine suppressants’, Medical College, Kota; 23 April 2006.
- ‘The particle repositioning maneuvers for Benign Paroxysmal Positional Vertigo (BPPV)’, Course on ‘Audiology and neuro-otology’, Calcutta; August 2006.
- ‘Intratympanic gentamicin’, Course on ‘Audiology and neuro-otology’, Calcutta; August 2006.
- ‘Perilymph fistula’, Course on ‘Audiology and neuro-otology’, Calcutta; August 2006.
- ‘Advanced laryngeal cancers’, Head and Neck Oncosurgery 2007, KEM Hospital, Mumbai; March 2007.
- ‘Approach to diagnosis and management of vertigo’, Jullundur Branch of Association of Otolaryngologists of India; March 2007.



- ‘Endoscopic skull base surgery’, Jullundur Branch of Association of Otolaryngologists of India; March 2007.
- ‘Basic stapedotomy’, Recent Advances in Otology (Theme-stapes surgery), Guru Tegh Bahadur Hospital, New Delhi; March 2007.

**Dr Rakesh Kumar**

- ‘Non-Hodgkin’s lymphoma of neck’, Association of Otolaryngologists of India, Delhi Chapter, AIIMS; July 2006.

**Dr C. Venkatarthikeyan**

- ‘Radicular cyst of right maxilla—residual cyst arising from infection of temporary right upper lateral incisor in childhood’, Association of Otolaryngologists of India, Delhi Chapter, AIIMS; July 2006.
- ‘Cochlear implantation—an overview’, Guwahati Medical College, Guwahati, Assam; 17 March 2007.
- ‘Cochlear implantation in cochleovestibular abnormalities’, Guwahati Medical College, Guwahati, Assam; 17 March 2007.

**NATIONAL AND INTERNATIONAL CONFERENCES**

**Lectures delivered**

**Professor R.C. Deka**

- ‘A study to evaluate the effect of prednisolone and acyclovir compared with prednisolone alone in the treatment of Bell’s palsy’ in the Advanced Temporal Bone/Live surgery meeting/workshop, Department of Otorhinolaryngology and Temporal Bone Laboratory, King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia; 21–26 April 2006.
- ‘Role of intratympanic dexamethasone and acyclovir in sudden sensorineural hearing loss’, Advanced Temporal Bone/Live surgery meeting/workshop, Department of Otorhinolaryngology and Temporal Bone Laboratory, King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia; 21–26 April 2006.
- ‘Cochlear implantation in India’, Advanced Temporal Bone/Live surgery meeting/workshop, Department of Otorhinolaryngology and Temporal Bone Laboratory at King Faisal Specialist Hospital and Research Centre Riyadh, Saudi Arabia; 21–26 April 2006.
- ‘Management of mastoid cavity problem’, Advanced Temporal Bone/Live surgery meeting/workshop, Department of Otorhinolaryngology and Temporal Bone Laboratory, King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia; 21–26 April 2006.
- ‘Basic concepts of pathogenesis of cholesteatoma’, Advanced Temporal Bone/Live surgery meeting/workshop, Department of Otorhinolaryngology and Temporal Bone Laboratory, King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia; 21–26 April 2006.

- ‘Surgical management of large juvenile nasopharyngeal angiofibroma’, 11th Asian Research Symposium in Rhinology (ARSR), Seoul, Korea; 30 November–2 December 2006.
- ‘Cochlear implant—a revolution in medical electronics’, International conference on ‘Medical electronics: Advancement in products and embedded solutions’, Federation of Indian Chambers of Commerce and industry (FICCI), New Delhi; 8–9 December 2006.
- ‘Topical amphotericin B and corticosteroid spray in controlling allergic fungal sinusitis’, 26th ISIAN (International Symposium on Infection and Allergy of the Nose) organized by ISIAN office and MSO-HNS (Malaysian Society of Otolaryngologists–Head and Neck Surgeons), Kuala Lumpur Malaysia; 1–4 February 2007.

### **Professor S. Bahadur**

- ‘Craniofacial resection for carcinoma of nose and paranasal sinuses’, 8<sup>th</sup> Annual Conference of Skull Base Surgery Society of India, Chandigarh; October 2006.
- ‘Laryngeal preservation in advanced carcinoma of larynx’ Annual meeting of Foundation for Head and Neck Oncology, Udaipur; October 2006.
- ‘Treatment protocols in advanced carcinoma of the larynx’, 7<sup>th</sup> Gulf Countries ENT Surgeons meeting, Muscat, Oman; January 2007.
- ‘Surgical management of carcinoma of gingivobuccal sulcus’, 7<sup>th</sup> Gulf Countries ENT Surgeons meeting, Muscat, Oman; January 2007.

### **Dr K.K. Handa**

- ‘Management of laryngotracheal stenosis’, SAARC ENT Conference, New Delhi; 20–22 September 2006.
- ‘Medialisation laryngoplasty versus injection laryngoplasty’, 3rd Annual Conference of the Association of Phonosurgeons, Bhuwaneshwar; 3 January 2007.
- ‘Video editing’, 59<sup>th</sup> Annual Conference of Association of Otorhinolaryngologists of India (AOICON 2007), Bhuwaneshwar; 4 January 2007.
- ‘Management of spasmodic dysphonia’, 59<sup>th</sup> Annual Conference of Association of Otorhinolaryngologists of India, (AOICON 2007), Bhuwaneshwar; 5 January 2007.

### **Dr Alok Thakar**

- ‘Surgical speech restoration and speech preservation in advanced laryngeal cancers’, 4th Annual Conference of the Society of Otolaryngologists of Nepal, Khatmandu; December 2006.
- ‘The particle repositioning maneuver for Benign Paroxysmal Positional Vertigo (BPPV)’, UP State Conference, Gorakhpur; October 2006.
- ‘Endonasal endoscopic skull base surgery’, Rajasthan State Conference, Jaipur; November 2006.
- ‘Voice preservation/rehabilitation in laryngeal and hypopharyngeal cancers’, 59<sup>th</sup> Annual Conference of the Association of Otolaryngologists of India, Bhuwaneshwar; 4–7 January 2007.

### **Dr C.V. Karthikeyan**

- ‘Cochlear implantation in anomalous cochleovestibular anatomy’, CIGICON 2006- Annual conference of Cochlear implant group of India (CIGI), Calicut, Kerala; 28 October 2006.
- ‘ENT problems in the elderly—issues, challenges and management’, National Seminar on ‘Ageing sponsored by University Grants Commission’, Tiruchirappalli, Tamil Nadu; 29–30 March 2007.

## **RESEARCH**

### **Funded Projects**

#### *Completed*

1. Role of intratympanic dexamethasone therapy in sudden SN loss. R.C. Deka. Funded by Indian Council of Medical Research for 2 ½ years. Funds: Rs 4.99 lakh.
2. Development of educational and training material for rehabilitating cochlear implantees. R.C. Deka. Funded by Ministry of Social Justice and Empowerment for 1 ½ years. Funds: Rs 2.93 lakh.
3. Assessment of etiological factors for conductive hearing impairment in rural/urban population. R.C. Deka. Funded by World Health Organization for 1 ½ years. Funds: Rs 3.6 lakh.
4. Role of acyclovir—prednisolone therapy in treatment of bells palsy. R.C. Deka. Funded by Indian Council of Medical Research for 2 ½ years. Funds: Rs 4.74 lakh.

#### **Ongoing**

1. Role of amphotericin lavage and corticosteroid nasal spray combination therapy in allergic fungal sinusitis. R.C. Deka. Funded by Indian Council of Medical Research for 3 years (2004-2007). Funds: Rs 6.32 lakh.
2. Effect of electromagnetic field of mobile phones on the hearing and vestibular system in human beings. R.C. Deka, R. Subhalaxmi. Funded by Council for Scientific and Industrial Research for 3 years. Funds: Rs 7.8 lakh.
3. Role of bacterial and fungal colonization in patients with chronic rhinosinusitis and nasal polyposis with special emphasis on their superantigenicity and biofilm property. R.C. Deka, R. Anurag. Funded by Council for Scientific and Industrial Research for 3 years. Funds: Rs 7.8 lakh.
4. Quality of life in head and neck cancer following multi-modality treatment. S. Bahadur, T. Pradhan. Funded by Council for Scientific and Industrial Research for 3 years (2004-2007). Funds: Rs 7.8 lakh.
5. Phase II/III randomized placebo controlled clinical trial of curcumin in resectable stage III and IV squamous head and neck cancers. S. Bahadur. Funded by Indian Council of Medical Research for 3 years. Funds: Rs 35.75 lakh.
6. Study of clinico-pathological and immune profile of patients of chronic invasive fungal sinusitis. S.C. Sharma. Funded by Indian Council of Medical Research for 3 years. Funds: Rs 5.49 lakh.

7. Voice changes in presbylarynges and disorders of central origin. S.C. Sharma, K.K. Handa, Rajiv. Funded by Council for Scientific and Industrial Research for 3 years. Funds: Rs 7.8 lakh.

## **Departmental Projects**

### ***Completed***

1. Comparative study of results of cochlear implantation in children (age groups <5 years and >5 years)
2. Prevalence of mitochondrial DNA mutations among non-syndromic sensorineural hearing impaired population in India
3. Significance of tumor thickness and molecular margins in cancer of tongue

### ***Ongoing***

1. Clinical profile of patients with laryngotracheal stenosis
2. To determine the efficacy of flutamide as a tumour volume reducing agent in nasopharyngeal angiofibroma
3. Role of proton pump inhibitors in laryngopharyngeal reflux
4. Otolaryngologic and head and neck manifestations in HIV/AIDS patients
5. Ki-67 expression in retraction pocket of tympanic membrane and to evaluate its effect on healing of tympanic membrane
6. Study of indications, outcome and limitations of endoscopic management of cerebrospinal fluid rhinorrhea

## **Collaborative Research**

### ***Ongoing***

1. Prenatal development and maturation of human inferior colliculus (with Anatomy)
2. Neuro-developmental disabilities in children - an International Clinical Epidemiology Network Study (with Pediatrics)

## **PUBLICATIONS**

### **Journals**

1. Deka RC, Kumar S, Venkatarthikeyan C. Neonatal hearing screening. *Indian J Otol* 2006;**12**:3–5.
2. Deka RC, Venkatarthikeyan C, Kumar R. Cochlear implantation in children: AIIMS experience. *Indian J Otol* 2007;13:3-9.
3. Venkatarthikeyan C, Kapil S, Deka RC, Mohnish G, Shyam S, Shivani A. Etiology of sensorineural hearing loss in children undergoing cochlear implantation. *Indian J Otol* 2007;13:10-3.
4. Sikka K, Venkatarthikeyan C, Deka RC. Z plasty for acquired external auditory canal stenosis. *Indian J Otol* 2006;**12**:17–20.

5. Sikka K, Venkatarthikeyan C, Kumar R, Bishnoi R, Seith A, Deka RC. Anomalous vestibule in Treacher Collins syndrome. *Indian J Otol* 2006;**12**:27–9.
6. Mohanti BK, Nachiappan P, Pandey RM, Sharma A, Bahadur S, Thakar A. Analysis of 2167 head and neck cancer patients—management, treatment compliance and outcomes. *J Laryngol Otol* 2007;**121**:49–56.
7. Gupta RP, Bahadur S, Thakar A, Handa KK, Sarkar C. Management protocols in allergic fungal sinusitis. *Indian J Otolaryngol Head Neck Surg* 2007;**59**:35–40.
8. Manchanda P, Sharma SC, Das SN. Differential regulation of IL-2 and IL-4 in patients with tobacco related oral squamous cell carcinoma. *Oral Dis* 2006;**12**:455–62.
9. Devarupa SK, Sharma SC, Das SN. Triggering of T cell—mediated immune response by allogenic tumour cell vaccine in patients with oral cancer. *Immunopharmacol Immunotoxicol* 2006;**28**:1–9.
10. Kumar A, Sharma SC. Treatment of paediatric acquired subglottic stenosis with anterior cricoid split. *Asian J Ear Nose Throat* 2006;**4**:23–7.
11. Sharma SC, Sikka K, Thakar A, Gupta SD. Evaluation of epithelial proliferation in paediatric and adult cholesteatoma: A comparative study. *Skull Base* 2006;**16** (Suppl.):15–6.
12. Handa KK. [Book review] *Taste and smell—an update*. *Natl Med J India* 2006;**19**:290.
13. Chawla JM, Handa KK, Tripathi BM. Unilateral pseudohypacusis in children. *Indian J Pediatr* 2007;**74**:312–3.
14. Sharma SK, Vasudev C, Sinha S, Banga A, Pandey RM, Handa KK. Validation of the modified Berlin questionnaire to identify patients at risk for the obstructive sleep apnea syndrome. *Indian J Med Res* 2006;**124**:281–90.
15. Murray CE, Cooper L, Handa KK, MacLeod T, Mackenzie K. How we do it: A technique for the orientation of endoscopically resected laryngeal specimens. *Clin Otolaryngol* 2007;**32**:201–3.
16. Sharma SK, Malik V, Vasudev C, Banga A, Mohan A, Handa KK, *et al*. Prediction of obstructive sleep apnea in patients presenting to a tertiary care center. *Sleep Breath* 2006;**10**:147–54.
17. Handa A, Handa KK. Migranous vertigo. *Vertigo Viewpoint* 2006;**4**:8.
18. Mathur SR, Ruma Ray, Handa KK. Isolated laryngeal leishmaniasis in an immunocompetent patient in India. *Trop Doct* 2006;**36**:55–6.
19. Handa K, Shunyu NB. Paediatric vertigo. *Vertigo Viewpoint* 2007;**2**:11–5.
20. Ghose S, Chhabra MS, Thakar A, Roy B, Bajaj MS, Pushker N, *et al*. Nasal endoscopy in congenital dacryocystitis. *J Pediatr Ophthalmol Strabismus* 2006;**43**:341–5.

### Chapters in Books

1. Thakar A, Venkatarthikeyan C, Deka RC. Current trends towards assessment and treatment of congenital stridor. In: Mathur GP, Math S (eds). *Current trends in paediatrics*, Vol.3. 1st ed. New Delhi: Academia Publishers; 2007:20–7.

2. Bahadur S. ENT Emergencies In: Singh M (ed). *Medical emergencies in children*. New Delhi: Sagar Publishers; 2006:

## **PATIENT CARE**

### **Facilities available in the department**

The department provides a state-of-the-art ENT service and is equipped with the entire range of diagnostic and therapeutic facilities including a cochlear implant laboratory, audiological facilities, electronystagmographic facilities, electro diagnostic audiometry, hearing aid analyzer, ear mould laboratory, speech therapy facilities, stroboscopy and computer aided speech analysis. The rehabilitation unit of Audiology and Speech Therapy provides supportive, diagnostic and rehabilitative services. The department runs its in the the Head and Neck cancer clinic of B.R. Ambedkar Institute Rotary Cancer Hospital, The department has provided support in starting cochlear implant surgery programme in R.R. Hospital, Central Railway Hospital and also Postgraduate Institute of Medical Education and Research , Chandigarh.

### **OPD and specialty clinics**

#### **ENT OPD**

New cases	37,819
Old cases	33,775

#### **Specialty clinics**

Head and neck	5,281
Voice	1,389
Speech	2,355
Hearing	1,656
Vertigo	192
Audiology	148
Skull base	110
Rhinology	148

#### **In-patients**

Long admission	1,061
Short admission	291

#### **Surgical procedures**

Major	1,977
Minor	1,449
Minor OT	22,981

#### **Community Services/Camps**

The department provides comprehensive ENT services at Primary Health Centre at Ballabgarh, Haryana. In addition, Dr Rakesh Kumar runs once a week OPD services at Deaf Centre Gurgaon, under Government of Haryana.

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor R.C. Deka** was appointed as the Dean of AIIMS, 4 May 2006; Professor He is the Founder Chairman of Indian Academy of Otolaryngology—Head Neck Surgery. He is an Inspector for Medical Council of India (MCI) and National Board of Examinations (NBE); Chairman of the Technical Advisory Group for the speech and hearing handicapped to the Ministry of Social Welfare. Chairman of Sectional Committee of ENT surgical instruments (MHR04) of Bureau of Indian standards; International Editorial Board Member of—*Acta-otolaryngologica* (Stockholm), *Otolaryngology–Head and Neck Surgery* (USA), *Otology–Neurotology* (USA), *Pakistan Journal of Otology*; He is Editorial Chief of the *Indian Journal of Otology*, *Vertigo Viewpoint*. He was an invited international distinguished faculty at the Advanced Temporal Bone/Live surgery meeting/workshop 22–26 April, 2006 in the Department of Otolaryngology and Temporal Bone Laboratory at King Faisal specialist Hospital and Research Centre, Riyadh, Saudi Arabia. He was one of the chief instructors supervising the delegates in Advanced Temporal Bone workshop along with Prof. Khalid Taibah of King Faisal Hospital and a faculty from Iran. He also chaired a scientific session. He was an invited distinguished international guest faculty at the 11<sup>th</sup> Asian Research Symposium in Rhinology (ARSR) on 30 November to 2 December 2006 at Seoul, Korea. He also chaired a scientific session. He has been an International Advisory/Governing Council Member of the ARSR since 2002 and was elected again for next one year at Seoul Council Meeting. He was an invited international guest faculty at the 26th International Symposium on Infection and Allergy of the Nose (ISIAN) organized by the MSO-HNS (Malaysian Society of Otolaryngologists—Head and Neck Surgeons) and ISIAN office at Kuala Lumpur Malaysia (1–4 February 2007). He chaired a scientific sessions. He was an invited national faculty in the SAARC ENT conference, New Delhi, 20–22 September 2006, and he moderated a panel discussion on cochlear implant. He was an invited national faculty for the CME and temporal bone workshop in Shankar Madhab hospital and Medical College, Guwahati, 4–5 November 2006. He was an invited guest faculty for the CME on Cochlear implant and sudden sensorineural hearing loss organized by the Department of ENT, Guahati Medical College, Guwahati, Assam, 17 March 2007. He was an invited guest faculty in ENT Update conference at Armed force Medical College, Pune, 24–25 March 2007. He was an invited guest faculty at the International conference on medical electronics: Advancement in products and embedded solutions organized by Federation of Indian Chambers of Commerce and industry (FICCI) and New Delhi, 8–9 December 2006. He was an invited guest faculty at the Global Healthcare conference organized by Federation of Indian Chambers of Commerce and industry (FICCI), New Delhi, 15 January 2007

**Professor S. Bahadur** was elected President of Skull Base Surgery Society of India (2006-07). He was invited as national faculty and moderated a panel discussion on ‘Carcinoma of nose and paranasal sinuses’ in the 3rd SAARC conference of otolaryngologists, New Delhi, September 2006.

**Professor S.C. Sharma** was awarded Dr K.K. Agarwal Oration at Annual Association of

Otolaryngologists (Rajasthan) Conference, Jaipur, November 2006.

**Dr KK Handa** was awarded RD Kumar Oration in the 30th Annual conference of Association of Otorhinolaryngologists of India (Bihar Branch) on 2–3 December 2006; was awarded the Jaiswal Gold Medal for best video presentation ‘Type 1 Thyroplasty and arytenoids adduction’ in 3rd Annual Conference of the Association of Phonosurgeons held in Bhuwaneshwar on 3 January 2007. He is the Vice President of Association of Phonosurgeons of India from January 2006; Treasurer of Neuro-otological and Equilibriometric Society of India from October 2005. Reviewer of journals, *Indian Journal of Pediatrics* and *Indian Journal of Otorhinolaryngology*. He was a speaker in Cross fire on ‘Management of Bell’s palsy’ in the XVIII Annual Conference of NES held in Jaipur, 13–15 November 2006; Chairperson in the ‘Symposium on Phonosurgery’ held on 21 September 2006 in SAARC–ENT conference held at New Delhi, 20–22 September 2006 and also for Joe V. Desa oration XVIII annual conference of NES held in Jaipur, 13 October 2006; Guest faculty in the Phonosurgery course in Pune (24–26 November 2006) and participated in Video session, Live surgery, Cadaveric dissection; Panelist for the panel discussion on ‘Management of professional voice’ in 3rd Annual Conference of the Association of Phonosurgeons held in Bhuwaneshwar, 3 January 2007. He was the moderator for panel discussion ‘Frontal recess and its challenges’ in Endorhine 2007 held in Sir Ganga Ram Hospital New Delhi, 3–4 February 2007.

**Dr Alok Thakar** was awarded UICC International Cancer Technology Transfer Fellowship by the UICC (International Union against Cancer) for training to be undertaken at Kiel, Germany; was awarded AOI Guest Oration—Endonasal Endoscopic Skull Base Surgery in the AOI Annual Conference, Rajasthan Branch November 2006; was an invited Guest Faculty 4th Annual Conference of the Society of Otolaryngologists of Nepal, Katmandu, December 2006. He is the Member, ICMR Task Force on Review of Cancer Management Guidelines; Working Committee Member, Foundation of Head and Neck Oncology 2003 to date; Editorial Board Member, *Otology India* and *Indian Journal of Otology*. He was the Panelist in panel discussion on

- ‘Selection of hearing Aids’, XXVIII Annual Conference of the Association of Otolaryngologists of India, Delhi Branch; May 2006
- ‘Traumatic facial nerve paralysis’, SAARC ENT Conference, New Delhi; September 2006.
- ‘Voice preservation/rehabilitation in laryngeal and hypopharyngeal cancers and oto-endoscopy’, 59th Annual Conference of the Association of Otolaryngologists of India, Bhuwaneshwar; 4–7 January 2007
- ‘Treatment modalities in head–neck cancer’, IRCH Foundation Day, AIIMS; November 2006.
- ‘Endoscopic approach to the frontal sinus’ 5th Endoscopic Sinus and Skull Base Surgery Course, Sir Ganga Ram Hospital, Delhi; February 2007.



- Open House Discussion, Micro Ear Surgery Course, Sir Ganga Ram Hospital, Delhi; March–April 2007  
He also presented surgical videos of glomus jugular tumour, subtotal temporal bone resection, and stapedotomy in the Micro Ear Surgery Course, Sir Ganga Ram Hospital, Delhi, March–April 2007.

**Dr Rakesh Kumar** is a co-member of Sectional Committee of ENT surgical instruments (MHR04) of Bureau of Indian Standards. He was invited guest faculty for Live Workshop on ‘Endoscopic nasal and sinus surgery’, Dr Susheela Tiwari Memorial Forest Hospital, Haldwani (Uttaranchal) (25–26 November 2006); and Surgical Workshop on ‘Ear diseases’ organized by Ministry of Social Welfare and ENT department, Sir Thudop Namgyal Memorial Hospital Gangtok (Sikkim), 28–30 November 2006.

**Dr C. Venkata Karthikeyan** was the invited guest faculty for the CME on Cochlear implant and sudden sensorineural hearing loss organized by the Department of ENT, Guahati Medical College, Guwahati, Assam, 17 March 2007; was an invited guest faculty for National Seminar on ‘Ageing’ sponsored by UGC and organized by Bhartidasan University which was held at Tiruchirappalli, Tamil Nadu, 29–30 March 2007. He is the Assistant Editor of *Indian Journal of Otology*.

The following Residents and Research Associates won awards at national conferences

#### **Dr Harpreet Kocher**

- ‘Diced fat in endoscopic repair CSF rhinorrhea’, 8th Annual Conference of Skull Base Surgery Society of India, PGI Chandigarh; October 2006. (awarded 1st prize)

#### **Dr Parul**

- ‘Significance of tumor thickness and molecular margins in cancer of the tongue’, 6th National Conference of Head and Neck Oncology, Udaipur, Rajasthan; 27–29 October 2006. (awarded 1st prize)

#### **Dr Tapaswini**

- ‘Functional and oncologic results of near total laryngectomy’, SAARC, ENT Conference, New Delhi; 20–22 September 2006. (awarded Best Junior Consultant).
- ‘Clinicopathological correlation of nodal status in gingivobuccal cancers’, 59th Annual Conference of the Association of Otolaryngologists of India, Bhubaneswar, Orissa; 4–7 January 2007 (awarded 3rd prize).

## **VISITING SCIENTISTS**

6 scientists visited the department for observerships and short-term training.

## 9.25 Paediatrics

	Veena Kalra	
M.K. Bhan (on deputation) A.K. Deorari	V.K. Paul Arvind Bagga	N.K Arora (on leave)
S.K. Kabra		Madhulika Kabra
Pankaj Hari		Sheffali Gulati
Rakesh Lodha Ramesh Aggarwal	Rachna Seth	Vandana Jain
Shinjini Bhatnagar Madhumita Roy Choudhary	Pratima Ray Suman Vashisht	Manju Ghosh

The department organized the College round of Undergraduate Paediatric Quiz under the aegis of Indian Academy of Pediatrics. The departmental faculty regularly participated in organization of Hospital Infection Control Training Programme for resident doctors, nurses and technicians during 2006–07. The DM programmes in Child Neurology and Neonatology and MSc Paediatric Nursing are ongoing.

A team of faculty, residents and nurses of the Division of Neonatology has developed a high quality training tool on Essential Newborn Nursing based on participatory learning methods for nurses working in district hospital. State of Gujarat is undertaking systematic scaling of this programme with introduction of ENBC in pre-service education. Division of Neonatology has launched a website [www.newbornwhocc.org](http://www.newbornwhocc.org). The website highlights the activities of this Division and provides free access to learning resource materials developed by the Division. Division of Neonatology continues to update and service a website on Kangaroo Mother Care ([www.kmcindia.org](http://www.kmcindia.org)) for dissemination of technical materials for the health professionals, as also a portal for education of parents and lay public.

**Total PhD students:** Paediatric Gastroenterology 3, Genetics 4, Pediatric Oncology 1

A total of 58 short-term trainees were trained in different superspecialties in the department: Paediatric Neurology: 20; Neonatology: 28; Nephrology: 5; Paediatric Pulmonology: 2; Genetics: 3.

- AIIMS Golden Jubilee Celebrations: a two-day meeting on ‘Health and beyond: Putting children first’; 2–3 September 2006 (V. Kalra, V.K. Paul).
- IPOKRATES Seminar of Respiratory Critical Care for neonates for ‘Teaching of teachers’; 7–9 February 2007 (V.K. Paul, A.K. Deorari, R. Agarwal).
- National movement for disseminating knowledge of rational neonatal ventilation practices by conducting countrywide workshops at Raipur, April 2006; Ahmedabad, September 2006; Bangalore, February 2006 (V.K. Paul, A.K. Deorari, R. Agarwal).
- Vth National CME Programme in Neonatology, AIIMS, New Delhi; 10–11 February 2007 (V.K. Paul, A.K. Deorari, R. Agrawal).
- Neonatal Resuscitation Workshop, AIIMS, New Delhi; April 2006 (V.K. Paul, A.K. Deorari, R. Agarwal).
- 2nd Indo–US CME on ‘Antiretroviral treatment in HIV/AIDS’, AIIMS–UCLA collaborative project, CMET, AIIMS, New Delhi; 6–7 March 2006 (S.K. Kabra).
- 3rd Indo–US CME on ‘Advances in antiretroviral treatment in HIV/AIDS’, AIIMS–UCLA collaborative project, CMET, AIIMS, New Delhi; 7 October 2006 (S.K. Kabra).
- ‘Management of respiratory tract infections in children’; March 2007 (S.K. Kabra, R. Lodha).
- ‘Paediatric intensive care nursing for nurses’. As part of PEDICON 2006 (R. Lodha, S.K. Kabra).
- ‘Cystic fibrosis’, as part of RESPICON 2006; November 2006 (S.K. Kabra).
- Workshop on procedures in Paediatric Pulmonology, as part of RESPICON 2006; November 2006 (S.K. Kabra).
- Workshop on childhood tuberculosis as part of RESPICON 2006; November 2006 (R. Lodha, S.K. Kabra).
- Second International Paediatric Nephrology Training Course, in collaboration with the Commission of the Global Advancement of Nephrology (COMGAN), International Society of Nephrology, AIIMS; 9–11 March 2007 (A. Bagga, P. Hari).
- ‘Clinical immunology for physicians’, 3–6 February 2007 (P. Ray, S. Bhatnagar).
- ‘National consultation for accelerating pre-service. Integrated Management of Neonatal and Childhood Illness (IMNCI)’; February 2007 (V.K. Paul, S. Bhatnagar).

- ‘Prenatal and postnatal diagnosis of genetic disorders using molecular methods’; September 2006 (M. Kabra, K. Kucheria, R. Saxena).
- DBT Clinical genetics Course; 17–26 April 2006 (M. Kabra, K. Kucheria, R. Saxena).
- National Consultation Meeting to develop strategy to ‘Initiate newborn screening programme in India; 6– 7 September 2006 (M. Kabra, V. Kalra).

**Faculty members delivered 180 lectures in various national and international conferences.**

1. Molecular, biological and serological detection of parameters of association of *Campylobacter jejuni* infection in children with Guillain–Barre syndrome. Veena Kalra. Funded by the Department of Biotechnology for three years (2003 onwards). Funds: Rs 22.68 lakh.
2. Lead pollution and health in Delhi—a follow-up study. Veena Kalra. Funded by Ministry of Environment and Forests for 1 year (2005–2006). Funds: Rs 4,23,790.
3. A multicentric randomized single blind trial to compare the immunogenicity and safety of indigenously developed DTPw-Hib tetravalent combination vaccine (liq) with easyfour<sup>tm</sup> in Indian subjects. Veena Kalra. Funded by Shantha Biotechnic Limited from 2006 to 2007. Funds: Rs 25 lakh.
4. Effect of short-term phenytoin monotherapy on bone mineral density in ambulatory epileptic children. Sheffali Gulati. Funded by Institute Research Grant from 2005 to 2006. Funds: Rs 78,000.
5. Correlation of cord and maternal serum retinol and retinol binding protein in preterm appropriate and small for date babies. Ramesh K. Agarwal. Funded by AIIMS from April 2006 to March 2007. Funds: Rs 1 lakh.
6. Development and testing of low cost diapers for low birth weight babies. Vinod Paul. Funded by DBT from January 2007 to December 2009. Funds: Rs 2.2 lakh.
7. South East Asia neonatal–perinatal database network. Vinod Paul. Funded by WHO/ SEARO from 2005 to 2007. Funds: Rs 5 lakh.
8. Effectiveness of zinc supplementation in reducing relapse rates in patients with steroid sensitive nephrotic syndrome. Arvind Bagga. Funded by AIIMS from 2005 to 2006. Funds: Rs 70,000.
9. An open-label, long-term study to evaluate the safety of eplerenone in the treatment of hypertension. Arvind Bagga. Funded by: Pfizer from 2004 to 2005. Funds: Rs 14,58,362.
10. A double-blind, randomized, multicentric study followed by 12 months open-label treatment to evaluate the dose-response and safety of valsartan in paediatric hypertensive patients 1–5 years of age. Arvind Bagga. Funded by Novartis from 2005 to 2006. Funds: Rs 7 lakh.

11. Randomized double-blind controlled trial in the treatment of non-severe pneumonia with wheeze in children aged 2–59 months of age: A multi-centric double-blind trial. S.K. Kabra. Funded by: International Clinical Epidemiology Network (INCLEN) from 2003 to 2006. Funds: Rs 7,60,950.
12. Indian Council of Medical Research - India Clinical Epidemiology Network (ICMR-INDIACLEN) collaborative trial: Effectiveness of 3-day amoxicillin versus 5-day co-trimoxazole in the treatment of non-severe pneumonia in children aged 2–59 months—a multi-centric open labelled trial. S.K. Kabra. Funded by ICMR from 2004 to 2006. Funds: Rs 4,60,264.
13. A randomized, 2 period, multicentre, double-blind, parallel-group study comparing the effects of 2 doses of montelukast granules in the treatment of respiratory symptoms associated with respiratory syncytial virus associated bronchiolitis in children aged 3–24 months. S.K. Kabra. Funded by SIRO Clin Pharma from 2005 to 2006. Funds: Rs 3,67,267.
14. Childhood Hodgkin's disease: Role of Epstein–Barr virus association, cellular proliferation and apoptosis parameters in relation with the treatment outcome. S.K. Kabra. Funded by ICMR from 2004 to 2006. Funds: Rs 6,8,843.

1. To understand the deviation in cell signaling pathway of autism through neurotrophic factors (insulin-like growth factor-1) and undertake a randomized blinded trial with olanzapine to evaluate its effect on insulin-like growth factor-1 (IGF-1), clinical symptoms of autism and autism rating scales. Rachna Seth. Funded by Department of Science and Technology for three years (2006–2009). Funds: Rs 4,08,000.
2. Task force—IMD newborn screening for congenital hypothyroidism and congenital adrenal hyperplasia: A multicentric study. Veena Kalra. Funded by ICMR for three years (2007 onwards). Funds: Rs 15,48,088 per year.
3. An international phase 3 study on ' Randomized, open-label, multicentre study with open-label extension of the pharmacokinetics and safety of topiramate administered as the oral liquid and sprinkle formulations as an adjunct to concurrent anticonvulsant therapy in infants (aged 1–23 months, inclusive) with refractory partial-onset seizures' (Protocol TOPMAT-PEP-1002 Phase I). Veena Kalra. Funded by PPD Pharmaceutical Development India (PPD) for two years (2006–2007). Funds: Rs 3,47,635.
4. Young infant sepsis study: A multi-centric project with AIIMS–Safdarjung as one of the participating centres. Ashok K. Deorari. Funded by SEARO office, WHO from January 2004 to August 2007. Funds: US\$ 70,000.

5. Enhancing networking capacity for advancing newborn health in South East Asia. V.K. Paul. Funded by Save the Children (US) from 2005 to 2008. Funds: Rs 2 lakh.
6. National Committee for Certification of Polio Eradication. Narendra Kumar Arora. Funded by Ministry of Health and Family Welfare, Government of India for ten years. Funds: Rs 48 lakh.
7. India Clinical Epidemiology Network program for Health Intervention Development and Evaluation. Narendra Kumar Arora. Funded by INCLEN for 8 years. Funds: Rs 24 lakh.
8. Model injection centres (MICs): A programme to improve injection practices in the country—an IndiaCLEN study. Narendra Kumar Arora. Funded by USAID from 2005 to 2008. Funds: Rs 1.34 crore.
9. Integrated management of neonatal and childhood illnesses. Baseline assessment of childhood morbidity, mortality in selected districts in India. Narendra Kumar Arora. Funded by United Nations Childrens Emotions Fund (UNICEF) for 5 years. Funds: Rs 2,47,31,179.
10. Rachna care evaluation. Narendra Kumar Arora. Funded by United States Agency for International Development (USAID) for 1 year (2006). Funds: Rs 40 lakh.
11. Neurodevelopmental disabilities among children in India: An INCLEN study. M.K.C. Nair. Autism speaks, National Trust have partially funded; in process at National Institute of Health (NIH) from 2006–2008. Funds: US\$ 562,000.
12. Aetiological significance of microscopic colitis in chronic diarrhoea in children and its pathogenesis. Shinjini Bhatnagar, S. Datta Gupta. Funded by ICMR from 2003 to 2007. Funds: Rs 2,350,580.
13. Extended studies on safety and efficacy of zinc–ORS compared to ORS alone in hospitalized children with severe and complicated acute diarrhoea. M.K. Bhan, Shinjini Bhatnagar. Funded by Norwegian Agency for Development Corporation (NORAD) from 2003 to 2007. Funds: Rs 8,192,000.
14. Specific targeted research or innovation project. Shinjini Bhatnagar. Funded by European Union and University of Bergan, Norway from 2005 to 2008. Funds: Rs 7,215,299.
15. Effects of administering 10 mg of zinc orally to young infants aged 7 days and up to 4 months with possible serious bacterial infection on survival and function of peripheral blood mononuclear cells. Shinjini Bhatnagar. Funded by DBT from 2007 to 2009. Funds: Rs 40.34 lakh.
16. Serum cystatin C assay for the detection of early renal insufficiency in malnourished children with chronic kidney disease. Arvind Bagga. Funded by AIIMS from 2005 to 2007. Funds: Rs 70,000.
17. Antibiotic prophylaxis in the management of vesicoureteric reflux: A randomized double

- blind placebo controlled trial. Arvind Bagga. Funded by ICMR from 2006 to 2009. Funds: Rs 11,41,815.
18. Daily corticosteroids to prevent infection associated relapses in patients with frequently relapsing nephritic syndrome. Arvind Bagga. Funded by ICMR from 2006 to 2009. Funds: Rs 9,22,020.
  19. Dose-ranging study to evaluate the safety and efficacy of olmesartan medoxomil in children and adolescents with hypertension. Arvind Bagga. Funded by Sankyo Pharma from 2006 to 2008. Funds: Rs 7,60,734.
  
  20. High dose and low dose azithromycin in cystic fibrosis and interventional study to evaluate effect on disease parameter. S.K. Kabra. Funded by ICMR from 1-7-2005 to 30-6-2007. Funds: Rs 6,72,461.
  21. Development of CME on use of antiretroviral in HIV/AIDS. Collaborative project with UCLA. S.K. Kabra. Funded by NIH, USA for two years (2005–2007). Funds: US\$ 500,000.
  22. Capacity building for sweat chloride estimation test by indigenously developed method. S.K. Kabra. Funded by Solvay Pharma from 2005 to 2007. Funds: Rs 1.26 lakh.
  23. Strengthening of cystic fibrosis (CF) services at AIIMS. S.K. Kabra. Funded by Cystic Fibrosis Worldwide (CFW) from 2006 to 2007. Funds: Rs 4 lakh.
  24. Zinc as an immunomodulator in the treatment of possible serious bacterial infections in infants more than 7 days and up to 2 months of age. Shinjini Bhatnagar, S.K. Kabra. Funded by DBT from 2005 to 2008. Funds: Rs 87.64 lakh.
  25. Efficacy of zinc in the treatment of severe and very severe pneumonia in hospitalized children 2–24 months of age. Shinjini Bhatnagar. Funded by Johns Hopkins Hospital and Health System from 2006 to 2009. Funds: Rs 5,384,284.
  26. Efficacy of zinc in the treatment of severe and very severe pneumonia in hospitalized children 2–24 months of age. Shinjini Bhatnagar, S.K. Kabra. Funded by DBT from 2006 to 2009. Funds: Rs 7,553,367.
  
  27. Assessment of psychosocial and neurocognitive outcomes in childhood leukemia. Rachna Seth. Funded by AIIMS for one year (2006). Funds: Rs 67,000.
  28. Retinoblastoma registry. Rachna Seth. Funded by ICMR Task Force for three years (2005-2008). Funds: Rs 26,97,724.
  
  29. Safety and immunogenicity of 116E rotavirus vaccine candidate. Madhulika Kabra. Funded by DBT from 2000 to 2008. Funds: Rs 27.54 lakh.

30. Cloning and expression of NSP4 enterotoxin of rotavirus in *E. coli* and evaluation of NSP4 specific immune responses during natural rotavirus infection in children. Madhulika Kabra. Funded by DST from 2004 to 2007. Funds: Rs 19.90 lakh.
31. Characterization of rotavirus strains from a multicentric rotavirus study at AIIMS. Madhulika Kabra. Funded by DBT from 2005 to 2008. Funds: Rs 26.07 lakh.
32. The Indo–US collaboration to develop rotavirus vaccine. Madhulika Kabra. Funded by NIH from 2003 to 2008. Funds: Rs 26.07 lakh.
33. Survey of prenatal diagnostic practices in India as a part of multi-country survey—developing methods to facilitate informed choice taking into account concordance between the principles that govern the undergoing of prenatal tests and practice across Europe and beyond. Madhulika Kabra. Funded by SAFE for 18 months (2006 onwards). Funds: Euro 9,000.
34. Economic modelling study: Non-invasive (NI) RhD testing in Europe and Asia. Madhulika Kabra. Funded by SAFE from 12-4-2006 to 10-10-2007. Funds: Euro 10,000.
  
35. Vitamin D status of exclusively breastfed term healthy infants at a median age of 3 months during winter season and its correlation with maternal vitamin D status. Vandana Jain. Funded by AIIMS from 2006 to 2007. Funds: Rs 1 lakh.
36. KIGS multinational growth survey. Vandana Jain. Funded by Pfizer Research Division from 2006 ongoing. Funds: Rs 90,000 per year.
  
1. A double blind placebo controlled trial to study the efficacy of Baclofen in reducing tone in children with spastic cerebral palsy 2–5 years of age
2. A randomized control trial of i.v. valproate versus i.v. phenytoin in status epilepticus after initial midazolam bolus
3. A randomized controlled trial of mosapride versus metoclopramide for treatment of gastroesophageal reflux in developmentally delayed children
4. A randomized open-label placebo-controlled study of the effect of creatine supplementation on muscle P<sup>31</sup> MRS spectra in Duchenne muscular dystrophy
5. Blood ammonia levels in epileptic children on two dose ranges of valproic acid monotherapy
6. Clinical profile of autistic children in India
7. Comparison of efficacy and safety of divalproex extended release preparation with effect of short term phenytoin monotherapy on bone mineral density in ambulatory epileptic children
8. Evaluation of ketogenic diet in infants and young children with refractory epilepsy
9. Prevalence of spina bifida occulta in patients with enuresis and its relation to urodynamic and neurophysiological measurements



10. Prospective randomized double blind controlled trial of dexamethasone versus albendazole on calcification as an outcome in 1–2 ring enhancing lesions in neurocysticercosis in children
11. Randomized trial of 28 days albendazole v. 1 day praziquantel in children with neurocysticercosis
12. Study of antinuclear antibody and antiphospholipid antibody in intractable epilepsy
13. Study of aetiological risk factor profile in paediatric strokes
14. To study the cognitive and behavioral profile of children with celiac disease before and after the introduction of a gluten free diet and the various neuropsychiatric manifestations of celiac disease
15. To study the role of creatine in Duchenne muscular dystrophy using magnetic resonance spectroscopy
16. Role of olanzapine in modifying some of the core features of autism
  
17. Periventricular leucomalacia among the very low birth weight neonates
18. A randomized controlled trial of efficacy of joint immobilization using splint versus no immobilization on functional life span of peripheral intravenous cannula in neonates
19. Analgesic effects of breastfeeding prior to venepuncture in term neonates: A double-blind randomized controlled trial—placental pathology in intrauterine growth restrictions in term neonates.
20. Correlation of cord serum retinol levels in preterm VLBW infants with maternal serum retinol levels at delivery
21. Effect of coconut oil application on transepidermal insensible water loss in preterm very low birth weight babies: A randomized trial
22. Effect of early versus late iron on iron stores at 2 months of age in preterm very low birth weight babies
23. Effect of Kangaroo Mother Case (KMC) on pain perception among preterm neonates
24. Efficacy of a ‘relaxation programme’ during early postpartum period on volume of expressed breast milk in mothers of very preterm babies: A randomized controlled trial
25. Efficacy of sling application in reducing duration of phototherapy
26. Efficacy of two regimens of intravenous immunoglobulins (IVIg) in reducing duration of phototherapy in Rh haemolytic disease of neonates
27. Efficacy of zinc supplementation in preventing hyperbilirubinemia among high-risk neonates
28. Impact of routine transcutaneous bilirubinometry by multi-wave length reflectance method (Bilicheck) compared to routine visual inspection for assessment of jaundice analgesic effects of breastfeeding prior to venepuncture in term neonates: A double-blind randomized controlled trial—placental pathology in intrauterine growth restrictions in term neonates
29. Renal function and their maturation, and renal volume in normal and growth restricted babies

30. Safety study of chlorhexidine application in preterm Very Low Birth Weight (VLBW) babies
31. Vascular endothelial growth factor (VEGF) gene in retinopathy of prematurity (ROP)
  
33. Celiac disease in Down syndrome
34. Characterization of non-typeable rotavirus strains associated with acute diarrhoea in children in New Delhi
35. Cytogenetics and molecular studies in chromosomal breakage syndromes
36. Diagnosis and counselling of genetic disorders testing cytogenetics and molecular methods
37. Evaluation of genetic polymorphism in MTHFR gene (C677T) as a risk factor for neural tube defects in offsprings
38. IVS8-5T allele polymorphism in asthma
39. Molecular genetic studies in Indian children with Rett syndrome.
40. Molecular genetic studies in Indian children with steroid-resistant nephrotic syndrome
41. Molecular genetic studies in leukodystrophy
42. Molecular genetic studies in osteogenesis imperfecta
43. Molecular genetic studies in patients with leukodystrophy
44. Molecular genetic studies in Rett syndrome
45. Molecular genetic studies in steroid resistant nephrotic syndrome
46. Molecular studies for Wilsons' disease
47. Molecular studies in Indian patients with Wilson's disease
  
48. Sensitivity and specificity of the biocard celiac disease kit in identifying patients of celiac disease
49. Mutant hepatitis B virus infection in pediatric patients with chronic liver disease.
  
50. Clinicopathological study on lupus nephritis
51. Comparison of antiproteinuric effect of enalapril and a combination of enalapril with irbesartan in patients with steroid-resistant nephrotic syndrome
52. Effect of vitamin D3 supplementation on bone disorder in children with chronic kidney disease
53. Efficacy of rituximab in inducing remission in subjects with steroid-resistant nephrotic syndrome
54. Efficacy of sevelamer versus calcium acetate in patients with chronic kidney disease stage 3 and 4: An open label, randomized study (medication provided free)
55. Glomerular filtration rate estimation in children using prediction equation from plasma creatinine and height

56. Randomized controlled crossover trial to compare the diuretic and natriuretic effects of intravenous frusemide infusion with co-administration of furosemide and human albumin infusions in children with nephrotic syndrome and refractory edema
57. Randomized controlled trial of effect of enalapril on glomerular filtration rate in children with chronic renal failure
58. Randomized controlled trial on efficacy and safety of cyclosporine versus tacrolimus in children with steroid-resistant nephrotic syndrome
  
59. Double-blind placebo-controlled randomized trial of montelukast as monotherapy v. low dose inhaled steroids for management of mild persistent asthma
60. Determination of the factors affecting the outcome of children under 5 years of age hospitalized with severe community-acquired pneumonia
61. Gastrointestinal manifestations of cystic fibrosis
62. Montelukast in acute asthma: A randomized double-blind controlled trial
63. Optimal maintenance intravenous fluids in hospitalized children
  
64. Myocardial dysfunction in childhood cancers and survivors of acute leukaemia
65. Neurocognitive and psychosocial issues in children with acute leukemia and survivors of acute leukaemia
66. Role of paclitaxel in the management of retinoblastoma
  
67. Study of factors associated with precipitation of diabetic ketoacidosis in previously diagnosed patients with type 1 diabetes mellitus
  
1. Cardiac dysfunction in Duchenne muscular dystrophy carriers (with Paediatric Cardiology)
2. Autistic spectrum disorders network established—screening tests, autism rating scales and drug trials with risperidone, olanzepine under Indo–US Science and Technology Collaboration, training resource material developed, awareness generation, networking with NGOs and parents, Registry for Autism initiated in Delhi
3. Analysis of muscle response to flexible and rigid fixed functional appliance—an electromyography (EMG) study of masseter and anterior temporalis muscle (with Dental Surgery)
4. Evaluation of the adaptive changes associated with twin block therapy on the masseter and temporalis muscle with and without prior muscle deprogramming: An electromyography (EMG) study (with Dental Surgery)

5. Real time PCR for enteroviruses in cerebrospinal fluid of aseptic meningitis patients (with Microbiology)
6. To evaluate the feasibility and efficacy of stem cell transplantation in various acquired disorders: Cerebral palsy and stroke (with ORBO, Cardiac Radiology)
7. Molecular detection of *Campylobacter jejuni* by PCR and its subtyping using PCR-RFLP and PFGE (with Microbiology)
8. Development and validation of high throughput assays for the rapid diagnosis of tuberculosis
9. Comparative evaluation of expression of dystrophin, utrophin and n-NOS in muscle and skin biopsy of patients with dystrophinopathies (with Pathology)
10. Molecular basis of adrenoleukodystrophy: A peroxisomal severe neurodegenerative disorder (with Department of Biochemistry, V.P. Chest Institute, Delhi University)
11. Screening for CMV infection by PCR (with Microbiology)
12. Low cost and rapid molecular assay for community diagnosis of diagnosis of neonatal sepsis by LAMP (with Microbiology)
13. Role of human meta pneumo virus in acute respiratory infection, funded by NIH, USA (with Microbiology)
14. Multiplex-RT PCR for detection of viruses causing lower respiratory tract infections viz. human respiratory syncytial viruses (hRSV), human para-influenza viruses (hPIV), influenza virus (FLU) and human metapneumovirus (hMPV) and real-time RT-PCR for the detection and quantification of hRSV (with Microbiology)
15. Prospective evaluation of <sup>99m</sup>Tc ciprofloxacin in pyrexia of unknown origin (with Nuclear Medicine)
16. Antigenic and molecular characterization of influenza virus strains from acute respiratory infection (with Microbiology)
17. Noninvasive prenatal diagnosis of foetal Rh status and beta-thalassemia using cell-free foetal DNA in maternal circulation (with Anatomy and Haematology)
18. An integrated approach for mutation analysis and identification of new gene(s) for X-linked mental retardation (with Department of Genetics, Delhi University)
19. Role of genetic factors in chronic pancreatitis (with Gastroenterology)
20. Prevalence of mitochondrial DNA mutations among non-syndromic sensorineural hearing impaired population in India (with ENT)
21. Mapping genes for non-syndromic hereditary hearing impairment (with the National Institute of Deafness and Other Communication Disorders (NIDCD), NIH, Rockville, Maryland, USA)
22. Body fat and its relationship with metabolic syndrome indicators in overweight pre-adolescents and adolescents (with Clinical Pharmacology Division, Department of Medicine)
23. Efficacy of flutamide in reducing tumor size and vascularity in nasopharyngeal carcinoma. (with ENT)
24. A study of chronic pancreatitis and other risk factors for the development of cancer of the pancreas (with Gastroenterology)

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Department of Paediatrics provides general OPD services daily from 9 a.m. in Pediatrics OPD. There are 15 superspecialty services provided by department, which are as follows:

Name of service	New cases	Old cases	Total attendance
General OPD	28,219	34,837	63,056
Paediatric Neurology	1,849	3,845	5,694
Myopathy Clinic	312	506	818
Pediatric Gastroenterology Hepatology and Nutrition	1,006	4,059	5,065
Well Baby Clinic	439	145	584
High Risk Neonatology Clinic	269	817	1,086
Paediatric Nephrology	491	3,563	4,054
Paediatric Chest	518	3,435	3,953
Paediatric Tuberculosis	212	1,654	1,866
Paediatric Rheumatology	112	988	1,100
Genetics and birth defects	1,296	1,067	2,363
Paediatric Oncology Clinic	123	2,677	2,800
Paediatric Cancer Survivor Clinic	72	200	272
Paediatric Endocrine and metabolism Clinic	750	1,250	2,000
Development Clinic	1,274	–	1,274
<b>Grand total</b>			<b>95,981</b>

In addition, Cystic fibrosis and Paediatric HIV services were provided in Paediatric Chest clinic.

Indoor services include admission facilities in general wards, day care facility, oral rehydration unit and Paediatric intensive care facility.

Children requiring short procedures or interventions are admitted for a day in day care facility situated in C5 ward.

Children suffering from acute diarrhoeal diseases are admitted and provided with oral rehydration therapy in Oral Rehydration Unit (ORU) situated in C5 ward.

Children requiring intensive care are admitted in Paediatric Intensive Care Unit which is well equipped to provide care to critically ill children.

Patients admitted in ORU	2,500
Pediatric wards (long admissions)	1,626

Admitted in day care facility (short admission)	2,161
Patients admitted in Paediatric Intensive Care Unit (PICU)	282

Electroencephalography	1,426
Electrophysiological studies—EMG, NCV, BERA, VER	225
Blood lead estimations	320
Arterial lactate	300
CSF lactate	125
Muscle biopsies	245
Nerve biopsies	10
Skin biopsies	20

Upper gastrointestinal endoscopy	536
Endoscopic sclerotherapy (EST)	246
Colonoscopy	72
Intestinal biopsies	129
Polypectomy	19
Stricture dilation	73

HBsAg	825
HBeAg	644
antiHBe	639
HBV DNA	277
Tyrosinemia	333
D-Xylose	48
24-hours faecal fat estimation	48
Immunofluorescence assay (IFA) to detect anti-endomysial antibodies (AEA) and tissue transglutaminase ELISA for diagnosis of celiac disease	300

<b><i>C-reactive protein</i></b>	
Semi-quantitative	5,000
Quantitative	900
Pro-calcitonin (only standardized no sample process)	900
Nitro-blue tetrazolium test for CGD	50
Serum Zn estimation	2,000
Serum Cu estimation	3,000
Haemodialysis	422
Peritoneal dialysis	66
CAPD	6
Automated PD	15
Renal biopsy	108
Renal transplantation	5
Sweat chloride estimation	800
Fibre-optic bronchoscopy	150
Spirometry	500
Mechanical ventilation	200
Arterial blood gas analysis	10,000
Electrolyte estimation	7,000
Developmental assessment early stimulation and behavioral intervention	1,274
Peripheral blood cultures	500
Cord cultures for karyotyping	39
Chromosomal breakage studies	28
Urine and plasma for disorders of aminoacid metabolism	426
Disorders of mucopolysaccharidosis (spot test)	50
Galactosemia enzyme assay	11

Prenatal diagnosis for high-risk pregnancies by triple test	1,300
Homocystenuria test	50
MPS spot test	50
Plasma ammonia	358
Enzyme assays for lipid storage diseases	138
Thalassaemia family studies	109
Thalassaemia prenatal diagnosis	60
Duchenne muscular dystrophy family studies	56
Duchenne muscular dystrophy prenatal diagnosis	15
Cystic fibrosis family studies	45
Cystic fibrosis prenatal diagnosis	1
Spinal muscular atrophy family studies	64
Spinal muscular atrophy prenatal diagnosis	11
Haemophilia A family studies	6
Haemophilia A prenatal diagnosis	6
Haemophilia B family studies	1
Haemophilia B prenatal diagnosis	2
Fragile X screening	98
Fragile X prenatal diagnosis	4
Xmn polymorphism studies	10
Amniotic fluid Rh genotyping	20
Intersex cases for genotyping	44
Skeletal dysplasia mutations	16
Skeletal dysplasia prenatal	1
Bone marrow aspiration/biopsy	2,000
CSF for CNS involvement	1,750
IQ and behavioural assessment of cancer survivors	72
Water deprivation test	10
Vasopressin challenge test	10
ACTH stimulation test	20
HCG stimulation test	40
GnRH stimulation test	20
Dexamethasone suppression test	10

- Professional services through Pulse Polio Initiative, Spastic Society of North India, Inner Wheel (Rotary), Prayas and other NGOs (Veena Kalra).

- Communicator on All India Radio; Doordarshan and other TV channels on 'Diseases of children including neurological ailments.' Some of the programmes include 'Common childhood illnesses'; 'Seizures in children'; '*Uthiye achhe swasthyay ke saath*'; '*Bachon ke dore padane ki samasya aur uska upchar*'; Epilepsy; Cerebral palsy, Neurocysticercosis, Obesity, Pulse polio programme, etc. (Veena Kalra).
- Public education media on lead poisoning, convulsions and learning disabilities through workshops, school visits and in health *Melas*. Information brochures produced and circulated (Veena Kalra).
- Renovation of recreation room in Pediatric ward and celebration of *Diwali* and Christmas with support from Cancer Patients Aid Association and Inner Wheel Club.
- Arrangement of poor patients help (drug, disposable) in collaboration with Inner Wheel Club.
- All India Radio (AIR) Overseas Services: Interview, 'Opportunities for medical tourism in India'; 6 April 2006 (N.K. Arora).
- AIR: *Uthiye achhe swasthya ke saath: Bachaon mein pet sambandi bimariyan*; 19 April 2006 (N.K. Arora).
- AIR: *Uthiye achhe swasthya ke saath: Bachaon mein kuposhan se hone wali swasthya samasyaen*; 20 November 2006; (N.K. Arora).
- AIR: *Uthiye ache swasthya ke saath: Bachaon mein pet ke kiron ki bimariyan*; 5 February 2007 (N.K. Arora).
- 'Childhood cancers' in Delhi Doordarshan (Prasar Bharti Doordarshan News) in the programme entitled 'Total health'; 10 February 2007 (Rachna Seth).

**Professor Veena Kalra** served as Executive Member of Education Committee of International Child Neurology Association (Belgium); was nominated long-term Adviser for Asian Child Neurology Association (Japan); WHO Panel Expert for the Acute flaccid paralysed surveillance programme; served as expert for Science and Society Division of DST for review of health projects; was nominated as non-official member of the Armed Forces Medical Research Committee (AFMRC) for three years w.e.f. 04 Jan 2007 under the Defence Research and Development Organization, Ministry of Defence; served as expert Committee Member for Selection of Senior Research Associates (Pool Scientists) in Medical Sciences; External Examiner for FCPS Part-II Examination (Pediatrics) at Bangladesh College of Physicians and Surgeons, Dhaka, Bangladesh; External Expert for Standing Selection Committee of Postgraduate Institute of Medical Education and Research, Chandigarh; Member of the Project Evaluation Committee (PEC), Technology Development Board, Department of Science and Technology, Ministry of Science and Technology, New Delhi. PEC, 2006.

**Professor V.K. Paul** delivered the M.N. Rao Oration instituted by the AP Chapter of the National Neonatology Forum and the First KGMU Oration at the King George Medical University, Lucknow.

**Dr N.K. Arora** served as Member Coordinator, National Certification Committee for Polio Eradication (1998 – till certification process is completed); Represent NCCPE on the India Expert Group on Polio Eradication, WHO-GOI, New Delhi (2000 – till date); Team Leader, IndiaCLEN Program Evaluation Network: since 1997; was nominated Member for Micronutrient Malnutrition Control Constitution of Inter Ministerial Coordination Committee in the Ministry of Women and Child Development since 18/04/06, Government of India Ministry of Women and Child Development New Delhi, 29 April 2006; Member of the Polio Communication Technical Advisory Group (26 March 2007); Fellow of The National Academy of Medical Sciences (India) (since 30 April 2005); Executive Director International Clinical Epidemiology Network (since 25 May 2005); Editor, *Indian Journal of Pediatrics*; Referee—*Indian Pediatrics*, *Indian Journal of Pediatrics*.

- IBCON—2006, Indo-British Conference on Gastroenterology, Hepatology Nutrition best oral paper presentation award ‘Alpha-1 antitrypsin in chronic liver disease in India: How common?’ Shivali Arora (PhD student) New Delhi; 26–28 October 2006.
- IBCON—2006, Indo-British Conference on Gastroenterology, Hepatology and Nutrition 2nd best oral poster presentation award, ‘Potassium loss in children with acute liver failure and acute viral haepatitis’, Dr Vidyut Bhatia (Research Officer) New Delhi; 26–28 October 2006.
- IBCON—2006, Indo-British Conference on Gastroenterology, Hepatology and Nutrition 3rd best poster presentation award, ‘Role of liver biopsy in evaluation of children with chronic liver disease’, Dr Rajni Sharma (Pool Officer) New Delhi; 26–28 October 2006.

Dr Arora was elected Member of WHO–ICMR–GOI Tribal Health Project Scientific Advisory Group Meeting Collaborative Project on ‘Development of capacity building for health care among primitive tribes’, 2000–till date; Member, National Advisory Group on Immunization (NTAGI), Ministry of Health and Family Welfare, Government of India; 2003–till date; Core Group Member, India Injection Safety Coalition; 2002–till date; Member, working group for Review of National Nutrition Policy and National Plan of Action on Nutrition, Department of Women and Child Development, Food and Nutrition Board, Ministry of Human Resource Development, Government of India; January 2004–till date; Member, Planning Group for ‘Centre for Public Health and Biotechnology’, DBT, New Delhi, December 2004–till date; Attended the RACHNA care Evaluation—Technical Advisory Group Meeting, New Delhi, 6 April 2006; Organized BOT—INCLLEN Meeting, Manesar, Gurgaon, 7–8 April 2006; Member, Core Committee ICMR—School of Public Health to develop MPA Course, organized by National Institute of Epidemiology, Chennai, 15 April 2006; attended NTAGI meeting ICMR regarding, ‘Introduction of new vaccines’, New Delhi, 27 April 2006; Attended 4th USAID Health Partners Meeting, New Delhi, 3 May 2006; Meeting with Mrs S. Jalaja (Additional Secretary, Ministry of Health and Family Welfare, Government of India) regarding, ‘Evaluation of training for new born care undertaken by National Neonatology Forum’, Nirman Bhawan, New Delhi, 3 May 2006; attended 15th IEAG Meeting,



New Delhi, 4–5 May 2006; attended Apollo Research Task Force Meeting, New Delhi, 4 May 2006; expert consultation on Vitamin A, Government of India, Ministry of Human Resources and Development, Woman and Child Development, Nirman Bhawan, New Delhi, 10 May 2006; Attended Annual INCLEN Africa meeting and delivered lecture regarding INCLEN: Future and past in plenary session on 14 May 2006, Johannesburg, 14–17 May 2006; presented a key note address, ‘INCLEN collaborative research’ Johannesburg, 14 May 2006; presentation, ‘INCLEN: A network with and for opportunities’, Philadelphia, 20 May 2006; attended PEPFAR—New Partners Initiative Meeting, Pennsylvania, Washington, 23 May 2006; attended meeting with ‘Childhood obesity group of McMaster’, Salim Yusuf/Arya Sharma/Janice Merchant/Katharine Morrison/Shofique Islam/Anwar Merchant/Sumathy Rangrajan/Sania Nawaz, Toronto, 29 May 2006; meeting with Arya Sharma on ‘Canadian obesity and alox’, Toronto, 29 May 2006; meeting with Dr Dipti Chirmulay PATH, regarding Evaluation of Essential Newborn Care Program, New Delhi, 10 June 2006; meeting with Mr P. Hota (Ministry of Health and Family Welfare/Government of India) ‘Safe injection policy for clinical services’ How to proceed? New Delhi, 10 June 2006; attended the Meeting with AIIMS: SEAR—Health Minister and Secretaries facilitated by WHO, New Delhi, 13 June 2006; Chairperson during the debate regarding, ‘Modernization of Chinese tradition medicine’, Shanghai, 17 June 2006; meeting with Additional Secretary Mrs Jalaja (Ministry of Health and Family Welfare and Government of India) regarding—evaluation of essential new born care; provision of legal framework for ANW/AWW to give Injection gentamycin antibiotics, New Delhi, 26 June 2006; attended the Selection Committee Meeting (National Institute of Health and Family Welfare), New Delhi, 27 June 2006; attended the Research Council Meeting in Sir Ganga Ram Hospital, New Delhi, 29 June 2006; meeting with Dipti Churmali (PATH) on ‘Evaluation of essential new born care/need assessment for new born services, New Delhi, 30 June 2006; meeting with Dr Salhan to discuss the possibility of allowing ANMs/AWW/ASHA to give injection and antibiotics, New Delhi, 3 July 2006; attended the Ist Meeting of Nutrition, Food for Special Dietary uses and Infant Foods, Nirman Bhawan, New Delhi, 14 July 2006; meeting with Dr V. K. Shrivastava regarding the ‘Essential newborn care’, New Delhi, 4 August 2006; attended the meeting with IMNCI—National Program Managers at Nirman Bhawan, Ministry of Health and Family Welfare, New Delhi, 7 August 2006; discussed with Professor Kenneth Brown regarding Zinc for Child Health, Department of Nutrition, UCLA Davis, USA, 17 August 2006; meeting with USAID regarding response to IEE, New Delhi, 28 August 2006; attended the Expert Group Meeting to examine the standards for Baby Foods prescribed under PFA rules 1995, Shastri Bhawan, New Delhi, 6 September 2006; attended IndiaCLEN IPHIDE Discussion Meeting, IndiaCLEN and USAID, New Delhi, 8 September 2006; attended Global Alliance Meeting for the Prevention of obesity and related chronic disease, New Delhi, 18 September 2006; attended meeting regarding empowering AWW and ANMW, Safdarjung Hospital, New Delhi, 27 September 2006; attended IAP—Polio Eradication Committee Meeting, New Delhi, 1 October 2006; attended IJP—KC Chaudhary Foundation XIV Annual Meeting, New Delhi, 7 October 2006; attended Advisory Board Meeting for Pneumovax, New Delhi, 8 October 2006; attended Expert Group Meeting in Childhood Obesity at ICMR, New Delhi, 9 October 2006; attended Brainstorming

Meeting on Childhood Obesity organized by Division of Non-communicable Disease at ICMR, New Delhi, 9 October 2006; attended Brainstorming on Polio Eradication Program WHO—SEARO office, New Delhi, 19 October 2006; attended TDR Stakeholder Consultation Meeting—WHO, Geneva, 24 October 2006; attended meeting for IMNCI project, New Delhi, 3–4 November 2006; attended International Meeting on Dengue, NIV, Pune, 10 November 2006; attended Global Youth Meeting, Agra, 11 November 2006; attended inauguration of IndiaCLEN Annual Meeting 2006, followed by keynote address ‘Collaborative research opportunities and challenges’, BPKIHS Dharan, Nepal, 15 November 2006; attended Global Youth Meeting and served as—Facilitator: How can we reduce the threat of nutritional deficiencies? Small group session, Participated in: Skill Building Workshop ‘How to promote healthy nutrition in school settings’, Panelist: Discussed on ‘Nutrition and health: A life course approach’, Agra, 16 November 2006; attended 24 Annual Meeting of Indian Society of Medical Statistics, Coimbatore; 1–3 December 2006; attended meeting with Ministry of Health and Family Welfare—National Polio Surveillance Project and VAPP regarding case classification data from Uttar Pradesh, Lucknow, 6 December 2006; attended ICMR—Steering Committee Meeting regarding Hib initiative (meningitis and pneumonia), New Delhi; 8 December 2006; organized IEAG—Polio Meeting, New Delhi, 11–12 December 2006; attended 6th Professional Development Course for District Level Medical Officer SIHFW and participate in talk, ‘Health Research and Policy making: challenges and options, Bhubaneshwar, 21 December 2006; attended meeting on ‘Recommendations of IEAG polio strategy’ under Chairmanship of Union Secretary Ministry of Health and Family Welfare, New Delhi, 6 January 2007.

He organized XIIIth National Coordination Committee for Polio Eradication Meeting, New Delhi, 12–13 January 2007; attended 51st Annual Meeting of Indian Public Health Association (IPHA) and present IMNCI: Relevance for Evidence, Kolkata, 20–21 January 2007; attended meeting regarding Finalization of Revision for Ethical Guidelines 2006, ICMR HQR, New Delhi, 24 January 2007; attended meeting for Traditional Medicine, New Delhi, 27 January 2007; attended the meeting with Ministry of Health and Family Welfare and National Polio Surveillance Project regarding Modelities to Introduce IPV pilot in two endemic block in 2nd Quarter of 2007, New Delhi, 6 February 2007; attended ICMR—Ethics meeting, New Delhi, 8 February 2007; attended Western Perinatal Society Canadian Neonatal Networks and International Collaboration of Neonatal Networks, Banff, Canada, 18–19 February 2007; attended ENC—PATH Meeting (Ministry of Health and Family Welfares), Presented IPEN – PATH study results, Nirman Bhawan, New Delhi, 28 February 2007; attended 13th Pakistan Pediatric Association Annual Meeting, Karachi, Pakistan, 2nd March 2007; organized INCLEN Trust BOT Meeting, Manesar Gurgaon, 18–19 March 2007; attended NIHFW Selection Committee for Carer Advancement of Reader as Professor, Nirman Bhawan, New Delhi, 20 March 2007; attended PHFI—Polio re-emergence study research expert group meet, New Delhi, 21 March 2007; attended Polio—Communication, Technical Advisory Group Meeting Patna, 26–27 March 2007 and New Delhi, 28–29 March 2007.

- Division of Neonatology was re-designated as the WHO Collaborating Centre for Training and Research in Newborn Care for another four years w.e.f. 2006. This is third time this honour is bestowed as the sole collaborating center of WHO on newborn health in the SE Asia Region.
- Neonatal Division continues to be the nodal center for South East Asia Neonatal–Perinatal database for six countries namely Nepal, Bangladesh, Sri Lanka, Thailand, Indonesia and India.

**Dr Vinod Paul and Dr Ramesh Agarwal** were resource persons for introducing Kangaroo Mother Care, a low-cost care modality for LBW babies in Nepal. Dr Agarwal participated as a faculty in Pediatric Advanced Life Support at Critical Care Society State Chapter Meeting Jaipur in March 2007.

Dr Vinod Paul was a member of the following expert groups/committees of the Ministry of Health and Family Welfare: (i) IMNCI Pre-service education, (ii) Training and enabling ASHAs for home-based newborn and child care, (iii) Permitting ANMs and ASHAs to administer gentamicin, (iv) XI Plan approach for women and child health, (v) Essential newborn care, (vi) Norway India Partnership Initiative for MDG4. He was member of the committees on Girl Child, and on Integrating Health, and Nutrition for the XI Plan formed by the Department of Women and Child Development. He was invited to develop a paper on Child Health in XI Plan by the Planning Commission. He is a member of the Indo-US Joint Working Group on research in maternal and child health (ICMR). He is Co-Chair of the Technical Advisory Panel of the Sure Start project of PATH India funded by the Bill and Melinda Gates Foundation; a member of the Technical Advisory Committee of the 'Community-led initiatives for child health' project of MGIMS Wardha; a member of the Steering Committee of the Society for Nutrition, Education and Health Activity (SNEHA), Mumbai; and a member of the Academic Council of the International Institute of Population Sciences, Mumbai. He continued to be a member of the Technical Advisory Group of Saving Newborn Lives initiative of Save the Children, a member of the Technical advisory Group of maternal-neonatal health project PAIMAN; and a member of the interim Steering Committee of the global Partnership for maternal, newborn and child health (PMNCH). He was invited as the temporary advisor by the WHO on building capacity for strengthening newborn health in MCH programs in South East Asia. He is a resource person for WHO on developing research priorities in neonatal health and for BASICS on e-training in newborn health. He continued as a member of the international editorial board of the Journal of Neonatology.

**Professor Arvind Bagga** served as Councillor, International Paediatric Nephrology Association; Member, Expert Group on Classification of Childhood Vasculitides; Member Expert Group, Acute Kidney Injury Network; Associate Editor, *Indian Pediatrics*; Editor, *Bulletin Indian Pediatric Nephrology Group*; represented the International Pediatric Nephrology Association at the Second Consensus Conference of Acute Kidney Injury Network, Vancouver (Canada), 14–16 September

2006; Council Meeting of the International Pediatric Nephrology Association, Palermo (Italy), 4–6 October 2006; selected to attend (representing ISN Renal Sister Center Program) Annual Conference of the American Society of Nephrology, San Diego (USA), November 2006.

**Dr Pankaj Hari** was elected Secretary, Indian Pediatric Nephrology Group, Indian Academy of Pediatrics; Member, Disease Outbreak Response Cell (DORC); Reviewer for *Pediatrics*. The Division of Pediatric Nephrology, AIIMS has established Sister-Center relationship with Cedars Sinai Medical Center, UCLA, Los Angeles (USA), for promoting collaboration in clinical care, education and research, under the aegis of the International Society of Nephrology.

**Dr Sheffali Gulati** served as Expert for Neurology projects for Indian Council of Medical Research and National Trust; Editorial Consultant of *Indian Journal of Paediatrics* and Executive board member of Editorial Board of *Indian Pediatrics*.

**Dr Vandana Jain** selected as fellow of Asia Pacific Pediatric Endocrine Society (2007–10); was inducted as adjunct faculty to the Center for Medical Education and Technology (CMET), AIIMS.

**Dr A.K. Deorari** delivered NNF Oration during ‘Newborn 2007’ Kerala State Chapter meeting at Trivandrum on 18 February 2007 on ‘Newborn nursing – Need for national movement’.

Dr Deorari served as WHO consultant to DPR Korea for promoting Essential Newborn Care, November–December 2006; served as WHO-SEARO short-term consultant to Timor Leste for promoting Essential Newborn Care at small hospitals in the country.

**Dr Rachna Seth** was initiated by the division of Pediatric Oncology on ‘Parent support group—doctor meet’, which aided by an NGO ‘CANKIDS’.

**Dr Rakesh Lodha** attended WHO meeting Technical Experts Meeting to peer review Regional paediatric ART guidelines, WHO, SEARO, 3–5 May 2006, New Delhi; chaired Focus Group Meeting—Pediatric ARV Dosing Guide. WHO India, 19 June 2006; attended WHO meeting on IMAI, Geneva, 17–19 October 2006; appointed member of the Technical Reference Group on Pediatric HIV by the Government of India–NACO.

**Dr Madhulika Kabra** Genetic subdivision was re-designated as a WHO collaborating center.

**Dr Shinjini Bhatnagar** nominated National Convener and Co-convener respectively by IAP for developing consensus guidelines for management of diarrhoea and severe malnutrition, 2006; nominated National Convener for implementation of pre-service IMNCI, 2007; awarded fellowship for ‘Intermediate epidemiology course’ at Johns Hopkins Graduate Summer Institute held in June, 2006; Scientific Convener for Indo-British Conference on Pediatric Gastroenterology, Hepatology and Nutrition held in October, 2006; Developed the manual on ‘Management of severe malnutrition for WHO’.

## **VISITING SCIENTISTS**

Dr C.D. Padilla, NIH Philippines, Manila; 5 September 2006.

## **ACADEMIC, ADMINISTRATION, FINANCE, ENGINEERING, LIBRARY, CENTRAL FACILITIES, ETC.**

### **Professor Veena Kalra**

- Curriculum Committee—Chairperson
- AIIMS Research Grant—Chairperson for Clinical Research

### **Professor N.K. Arora**

- Nominated for AIIMS Staff Council Member (2006–07).
- Member of Medical Teaching Board (F/Academy/Pathyakram/2006/325), 2006.

## 9.26 Paediatric Surgery

### Professor and Head

D.K. Gupta

### Professors

V. Bhatnagar

M. Bajpai

### Associate Professors

S. Agarwala

M. Srinivas

## EDUCATION

### Undergraduate, Postgraduate and Paramedical

- Teaching of undergraduate medical and nursing students
- Postgraduate teaching and training of MCh Paediatric Surgery trainees; this includes of seminars, journal clubs, case discussions, thesis presentations
- Trainees on rotation—MCh trainee in Neurosurgery, DM trainees in Neonatology, MS trainees in General Surgery
- Training in the ward of BSc and MSc Nursing students

### Short- and long-term training

Seven trainees from various countries (Austria-2, Bangladesh-2, Romania-2, United Kingdom-1) underwent short-term training/observership at the department.

## Continuing Medical Education

### Organized by the department

#### Professor D.K. Gupta organized the

- Live Operative Workshop on 'Anorectal malformations', AIIMS, New Delhi; 10–12 November 2006.
- Pediatric Intensive Care Workshop, AIIMS, New Delhi; 12 November 2006.
- Live Operative Workshop on 'Paediatric Urology' (VUR, Hypospadias and Intersex) under the auspices of International Society of Intersex and Hypospadias, AIIMS, New Delhi; 16–18 November 2006.

## Lectures delivered

### Professor D.K. Gupta

- 'Stem cell therapy in pediatric surgery', CME Programme on 'Organ transplantation and stem cell research', Kidney Centre, Ahmedabad; 4–5 October 2006.
- 'Female genitoplasty in intersex disorders', Conference cum Workshop on 'Andrology and intersex disorders', Hyderabad; 1–3 December 2006.

- ‘Current management of Wilms’ tumour’, 2nd Master Class Update in Urology, India Habitat Centre, New Delhi; 23–24 December 2006.
- ‘Telemedicine’, ‘Cultural differences in approach and management of intersex’ and ‘Advances in cryptorchidism and hormonal therapy’, 2nd workshop on ‘Paediatric Andrology’, Gstaad, Switzerland; 14–16 January 2007.

### **Professor M. Bajpai**

- ‘Perspectives in antenatal hydronephrosis’, National CME ‘Congenital hydronephrosis’, St Johns Medical College, Bangalore; 2 February 2007.
- Delivered a talk during the International training course conducted by the Indian Society for Paediatric Nephrology under the aegis of COMGAN of the International Society for Nephrology, AIIMS; 9 March 2007.

## **National and International Conferences**

### **Organized by the Department**

#### **Professor D.K. Gupta**

- 20th Congress of Asian Association of Paediatric Surgeons and the World Federation of Associations of Pediatric Surgeons Executive Meet, New Delhi; 12–15 November 2006.

### **Lectures delivered**

#### **Professor D.K. Gupta**

- International Congress of Paediatric Surgery, Cairo, Egypt; April 2006. Delivered the following guest lectures:
  - Gastric pull-up for emergency indications
  - Post urethral valves: Management strategies including diversion
  - Intersexuality—dilemma of sex assignment: An Indian perspective
  - Vesico ureteric reflux—from surgery to STING
  - Biliary atresia in absence of liver transplantation : Newer insights, (including stem cell therapy)
- ‘Spectrum of intersex malformations’ and ‘Management of intersex with reference to sex assignment’, International symposium on ‘Intersex-ethics and management’, Jeddah; 6–8 March 2007.
- ‘Therapeutic use of stem cell in congenital anomalies’ and ‘Choice of the esophageal replacement in children’, 3rd FAPSS Congress of Paediatric Surgeons from SAARC countries, Lahore, Pakistan; 23–24 March 2007.

### **Dr V. Bhatnagar**

- ‘Surgical management of liver abscess’, Indo-British Conference on ‘Paediatric Gastroenterology, Haepatology and Nutrition’, New Delhi; 26–28 October 2006.

- 'Management of liver tumours in children', 27th Annual Conference, West Bengal State Chapter of Indian Association of Paediatric Surgeons, Kolkata; 16–17 December 2006.
- 'Approach to portal hypertension in children', 9th Annual Conference, Andhra Pradesh State Chapter of Indian Association of Paediatric Surgeons, Hyderabad; 24–25 February 2007.
- 'Antenatal diagnosis and post-natal management of hydronephrosis', Training Course in Pediatric Nephrology, Paediatric Nephrology Chapter of Indian Academy of Paediatrics and Division of Paediatrics, AIIMS; 9–11 March 2007.

### **Dr Sandeep Agarwala**

- 'Intensive care nursing: Paediatric surgical aspects', Intensive care nurses training workshop, New Delhi; 2006.
- 'Hepatoblastoma: The Indian perspective and formation of the Indian liver tumor group', Annual Meeting of International Society of Pediatric Oncology – Epithelial Liver Tumor Group, Gdansk, Poland; 22–24 March 2007.

## **RESEARCH**

### **Funded projects**

1. N-myc gene amplification by polymerase chain reaction in neuroblastoma and tumor surveillance by detecting tyrosine hydroxylase protein using RT PCR. D.K. Gupta. Funded by DBT from 2005 to 2007. Funds: Rs 19.5 lakh.
2. ACE I/D gene polymorphism in posterior urethral valves and its correlation with transforming growth factor-b1, Tumour Necrosis Factor (TNF)-a, soluble TNF receptor-1, interleukin-6 (IL-6), microalbuminuria, angiotensin II, and plasma renin activity in the early diagnosis of renal damage. M. Bajpai. Funded by DST for 3 years. Funds: Rs 20 lakh.
3. ACE I/D gene polymorphism in vesico ureteric reflux and its correlation with transforming growth factor-b1, Tumour Necrosis Factor (TNF)-a, soluble TNF receptor-1, interleukin-6 (IL-6), microalbuminuria, a ngiotensin II and plasma renin activity in the early diagnosis of renal damage. M. Bajpai. Funded by DST for 3 years. Funds: Rs 23 lakh.

### **Departmental projects**

#### **Completed**

1. Assessment of results of surgery in anorectal malformations by anorectal manometry
2. Assessment of results of surgery in Hirschsprung's disease by anorectal manometry
3. Assessment of postoperative bladder dysfunction in anorectal malformations by cystometry
4. Assessment of postoperative bladder dysfunction in Hirschsprung's disease by cystometry
5. Prognostic correlation of molecular markers in urine with severity of vesico-ureteric reflux

#### **Ongoing**

1. Effect of intralesional injection sclerotherapy using sodium tetradecyl sulphate in vascular malformations



2. Mucous production in the neobladder after augmentation colocolostomy
3. Results of the outcome of treatment of neuroblastoma in children by using moderately intense chemotherapy consisting of cyclophosphamide, doxorubicin, etoposide and cisplatin in combination with surgery and radiotherapy
4. Results with the use of platinum based regimes in the treatment of pediatric malignant germ cell tumors
5. Prospective study of treatment of children with Wilms' tumour on treatment with National Wilms Tumor Study Group-5 regimen
6. Prospective study of treatment of children with rhabdomyosarcoma on treatment with International Rhabdomyosarcoma Study Group-5 regimen
7. Prospective study of treatment of children with hepatoblastoma on treatment with Cisplatin and Doxorubicin regimen
8. Outcome of patients with antenatally diagnosed unilateral pelviureteric junction obstruction managed conservatively and surgically
9. Prospective study on five drug regimen for the management of clear cell sarcoma of the kidney
10. Clinical and urodynamic changes after ablation of posterior urethral valves and correlation with radiological anatomy before and after pharmacotherapy
11. Long term systemic and metabolic consequences of gastrocystoplasty
12. Urodynamic observations after repair in bladder exstrophy with and without osteotomy and their correlation with pelvic anatomy on MRI
13. Long term results from Kasai's procedure for biliary atresia.

## **Collaborative research**

### *Completed*

1. Renal function reserve in hydronephrotic children (with Nuclear Medicine)
2. Assessment of latent manganese toxicity in follow-up cases of biliary atresia (with Radiology)
3. Development of intrapulmonary arteriovenous shunting in follow-up cases of biliary atresia (with Paediatric Cardiology)
4. Hepatoblastoma: Role of DNA ploidy, cell proliferation and cytokeratin-19 expression in subtyping and prognosis (with Pathology)
5. Wilms' tumor: Relation of apoptotic gene expression with subtype, chemoresponse and prognosis (with Pathology)
6. Role of PET scan in paediatric tumours (with Nuclear Medicine)

### *Ongoing*

1. Antibiotic prophylaxis in the management of vesicoureteric reflux: A multicentric randomized double-blind placebo-controlled trial (with Paediatrics)
2. Long term follow-up of patients after augmentation cystoplasty (with Endocrinology and Metabolism)

3. Comparison of imaging modalities in the evaluation of neonatal cholestasis (with Radiodiagnosis)
4. Comparison of imaging modalities in the evaluation of portal hypertension (with Radiodiagnosis)
5. Volumetric analysis of the spleen in portal hypertension (with Radiology)
6. Conservation of circulating blood volume in portal hypertension (with Nuclear Medicine)
7. The role of nitric oxide in portal hypertension (with Biochemistry)
8. Long-term results of esophageal replacement by reverse gastric tube (with Radiology & Nuclear Medicine)
9. An evaluation of cardiotoxicity related to adriamycin in children with solid tumours (with Nuclear Medicine)
10. Evaluation of hearing deficiencies in children who have received cis-platinum for treatment of solid tumours (with ENT)
11. Evaluation of restrictive lung disease in long-term survivors of malignant germ cell tumours who have received bleomycin as a part of treatment (with Paediatrics)
12. Gain of chromosome 17q and its effect on outcome in patients with neuroblastoma (with Anatomy)
13. Whole body MR imaging for detection of skeletal metastases in pediatric patients of small cell neoplasms: Comparison with skeletal scintigraphy and FDG-PET CT scan (with Medical Oncology, Radiodiagnosis and Nuclear Medicine)
14. Comparison of efficacy and safety of oral antibiotics (amoxicillin-clavulanic acid and ofloxacin) with intravenous combination (ceftriaxone and amikacin) in outpatient setting in pediatric patients of low risk febrile neutropenia (with Medical Oncology)
15. Telomerase estimation in patients with Wilms' tumour and hepatoblastoma as a marker for prognosis (with Pathology)
16. Evaluation of lymphocytic infiltration in Wilms' tumour and adjoining normal renal parenchyma and its relation to recurrence and outcome (with Pathology)
17. Evaluation of role of adjunctive therapy with <sup>131</sup>I MIBG therapy for advanced non-responsive, relapsed and metastatic neuroblastoma (with Nuclear Medicine)
18. Posterior urethral valves: Persistent renin angiotensin system activation and role of angiotensin-converting enzyme inhibition on renal recovery (with Radiodiagnosis)

## PUBLICATIONS

### *Journals*

1. Sharma U, Pal K, Pratap A, Gupta DK, Jagannathan NR. Potential of proton magnetic resonance spectroscopy in the evaluation of patients with tethered cord syndrome following surgery. *J Neurosurg* 2006;**105** (Suppl. 5):396–402.
2. Gupta DK. Research in Pediatric Surgery: Who should light the flame [Editorial]. *J Indian Assoc Pediatr Surgeons* 2006;**11**:127.

3. Gupta DK. Make pediatric laparoscopy a surgeons's armamentarium [Editorial]. *J Indian Assoc Pediatr Surgeons* 2006;**11**:198–200.
4. Gupta DK, Sharma S, Amini AC, Gupta M, Aggarwal G, Deepika G, *et al.* Congenital adrenal hyperplasia: Long-term evaluation of feminizing genitoplasty and psychosocial aspects. *Pediatr Surg Int* 2006;**22**:905–9.
5. Gupta DK, Sharma S. Cushingoid features due to ectopic ACTH secreting pancreatoblastoma—a per-operative diagnosis. *Asian J Pediatr Pract* 2006;**9**:12–4.
6. Singhal AK, Agarwal GS, Sharma S, Gupta AK, Gupta DK. Parapagus conjoined twins: Complicated anatomy precludes separation. *J Indian Assoc Pediatr Surgeons* 2006;**11**:145–7.
7. Sharma S, Gupta DK, Venugopal P, Kumar L, Dattagupta S, Arora MK. Therapeutic use of stem cells in congenital anomalies—a pilot study. *J Indian Assoc Pediatr Surgeons* 2006;**11**:211–7.
8. Pratap A, Gupta DK, Agrawal CS, Pandit RK, Adhikary S, Kumar A, *et al.* Complex urethral disruptions: In pursuit of a successful reconstruction. *Int J Urol* 2007;**14**:198–202.
9. Pratap A, Gupta DK, Tiwari A, Sinha AK, Bhatta N, Singh SN, *et al.* Application of a plain abdominal radiograph transition zone (PARTZ) in Hirschsprung's disease. *BMC Pediatr* 2007;**7**:5.
10. Gupta DK, Sharma S, Gupta M. Outcome of antenatally referred congenital surgical anomalies—a Pediatric surgeon's perspective. *J Surg Specialties* 2007;**1**:6–11.
11. Gupta DK. Congenital pouch colon present lacunae [Editorial]. *J Indian Assoc Pediatr Surgeons* 2007;**12**:1–2.
12. Gupta DK, Sharma S. Congenital pouch colon—then and now. *J Indian Assoc Pediatr Surgeons* 2007;**12**:5–12.
13. Singal AK, Bhatnagar V. Colostomy prolapse and hernia following window colostomy in congenital pouch colon. *Pediatr Surg Int* 2006;**22**:459–61.
14. Singal AK, Bhatnagar V, Agarwala S, Mitra DK. Urethral duplication in association with anorectal malformation. *Eur J Pediatr Surg* 2006;**16**:214–6.
15. Agarwala S, Srinivas M, Bajpai M, Bhatnagar V, Gupta AK, Mohanty BK, *et al.* Effect of tumor resection on survival in neuroblastoma patients: Outcomes from AIIMS-Neuroblastoma-96 trial. [Abstract] *J Indian Assoc Pediatr Surgeons* 2006;**11**:176
16. Agarwala S, Srinivas M, Bajpai M, Bhatnagar V, Gupta AK, Mohanty BK, *et al.* AIIMS-WT-99 trial for Wilms tumor: Indian perspective [Abstract]. *J Indian Assoc Pediatr Surgeons* 2006;**11**:177.
17. Singal AK, Srinivas M, Bhatnagar V. Bronchopulmonary foregut malformation in association with diaphragmatic eventration. *J Pediatr Surg* 2006;**41**:1329–31.
18. Singal AK, Balamourougane P, Bhatnagar V. Primary closure of thoraco-abdominal ectopia cordis. *J Indian Assoc Pediatr Surgeons* 2006;**11**:250–2.

19. Agarwala S. Pediatric rhabdomyosarcoma and nonrhabdomyosarcoma soft tissue sarcoma. *J Indian Assoc Pediatr Surgeons* 2006;**11**:15–23.
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2. Gupta DK, Carachi R. Management of Wilms' tumor with intracaval thrombus. In: Gupta DK, Carachi R (eds). *Pediatric oncology—Surgical and medical aspects*. New Delhi: Jaypee Brothers 2007:137–42.
3. Gupta DK, Pratap A. Tumors in intersex disorders. In: Gupta DK, Carachi R (eds). *Pediatric oncology—Surgical and medical aspects*. New Delhi: Jaypee Brothers; 2007:364–7.

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1. Gupta DK, Carachi R. *Pediatric oncology*. New Delhi: Jaypee Brothers; 2007.
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3. Swati B, Gupta DK. *Bhave's textbook of adolescent medicine*. Delhi: Jaypee Brothers; 2006.

## PATIENT CARE

### Attendance in OPD and specialty clinics

	New cases	Old cases	Total
General OPD	6,316	11,386	17,702
<b>Specialty clinics</b>			
Hydrocephalus	22	198	220
Intersex	22	130	152
Craniosynostosis	2	20	22
Pediatric urology	315	2,695	3,010
Pediatric solid tumor	96	2,540	2,634
CRHSP, Ballabgarh	544	–	–
Minor procedures	2,974	–	–
<b>Admissions</b>			
AB-5 ward	1,217		
AB5-ICU	102		
<b>Surgical procedures</b>			
Major	981		
Minor	680		
At CRHS, Ballabgarh	98		
<b>Special investigations</b>			
Urodynamic evaluation	357		
Uroflometry	624		
Ano-rectal manometry	64		
Oesophageal manometry	18		
24-hour pH monitoring	25		

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Professor D.K. Gupta** was elected as the President of the Asian Association of Pediatric Surgeons; led the International delegation to meet the Hon'ble Prime Minister of India, 13 November 2006 during the 20th congress of the Asian Congress of Paediatric Surgeons to promote Pediatric Surgery in India, Asia and globally; organized the Round Table Meet on Global Child Health, 14 November 2006 during the 20th Congress of the Indian Association of Paediatric Surgeons, New Delhi, nominated for the MS Ramakrishnan Oration of the Indian Association of Pediatric Surgeons; re-elected as the President, Federation of SAARC Association of Pediatric Surgeons; continues to be the Editor in Chief, *Journal of Indian Association of Pediatric Surgeons*; Executive Member, World Federation of Association of Pediatric Surgeons; Honorary Secretary cum treasurer of the International society of the Intersex and hypospadias; nominated as a International Scientific Committee Member of the World Congress, Buenos Aires, September 2007 and International Scientific Committee Member of the 8th Congress of the European Association of Pediatric surgeons, Torino, May 2007; invited as an International Guest Speaker to the Live Operative Workshop and as a visiting Professor at the Cincinnati Children Hospital, USA, 7–9 June 2006; nominated for the prestigious Imre Pilszanovich visiting Professorship to University of PECS, Hungary; International Congress of Paediatric Surgery, Egypt, to chair the scientific session on 'Abnormal genital development', April 2006; invited to the International Congress of Pediatric Surgery, Egypt, April 2006, to serve as a Panelist during the Panel Discussion on 'Intersex', April 2006; 3rd European Congress of Paediatric Surgery (EUPSA), Maastricht, Netherlands, 10–13 May 2006 and chaired the scientific session; invited as Guest faculty to the India Conclave on MICE, New Delhi, 2–3 August 2006 and as the International guest and panelist during the international symposium on 'Intersex-ethics and management', Jeddah, 6–8 March 2007; hosted the Executive Council Meeting of the World Congress of Pediatric Surgery in New Delhi, 13 November 2006; participated as the Council Member of the World Federation of Association of Pediatric Surgeons, Executive Council Meet, New Delhi, November 2006; delivered the Presidential Address of SAARC Countries during the 3rd International conference of the FAPSS (SAARC Association of Paediatric Surgeons), Lahore, 23–25 March 2007; invited as Chief Guest for the Inaugural function of the International Conference of Plastic Surgeons (with the Symposium and Live Operative Workshop on cleft lip and palate), Mayo Medical College and Hospital, Lahore, Pakistan, 26 March 2007; invited as an expert for the Council for Scientific and Industrial Research (CSIR) selection of pool officers, August 2006 and as an M.Ch examiner at the University of Rajasthan, 30–31 December 2006; invited as Inspector for the MCI Inspection, Gandhi Medical College, Bhopal, 14 February 2007; invited as Inspector for the MCI Inspection, KGMU, Lucknow, 15 February 2007 and as Visiting Professor to the University of Annamalai University September 2006; invited as the guest faculty to the first National Conference of the Pediatric Endoscopic Surgery of India and chaired the scientific session, Agra, 4–5 August 2006; organized Teleconference with the Royal Children Hospital, University of Glasgow, Scotland, April and May 2006 and Multi Centre Teleconference with the Department of Paediatric Surgery at AIIMS and the University of Basel, Switzerland, on 16 January 2007. This was attended by experts and postgraduates from Pediatric Surgery

Departments from Cairo, Doha, Abu Dhabi, Switzerland and India; participated as Panelist during the Panel discussion on Comprehensive Neonatal Services in Pakistan—Possibilities, Policies and Provisions during the 3rd FAPSS Congress of pediatric Surgeons from SAARC countries. Lahore, Pakistan, 23–24 March 2007; invited to chair the scientific session during the 3rd FAPSS Congress of Pediatric Surgeons from SAARC countries. Lahore, Pakistan, 23–24 March 2007.

**Professor V. Bhatnagar** gave a live demonstration of Kasai's portoenterostomy for biliary atresia. 9th Annual Conference, Andhra Pradesh State Chapter of Indian Association of Pediatric Surgeons, Hyderabad, 24–25 February 2007. Invited as an expert for the following: Management strategies in vesico-ureteral reflux in children. Consensus Meeting on Management of VUR, Indian Association of Pediatric Surgeons and Pediatric Nephrology Chapter of Indian Academy of Pediatrics, New Delhi; 11 March 2007; Rationalization of preservation of congenital pouch colon and coloplasty as part of staged reconstruction of congenital pouch colon. Consensus Meeting on management of congenital pouch colon, Indian Association of Pediatric Surgeons, New Delhi; 12 March 2007; 20th Congress of Asian Association of Pediatric Surgeons and the World Federation of Association of Pediatric Surgeons (WOFAPS) Executive Meet, New Delhi; 12–15 November 2006.

## VISITING SCIENTISTS

Professor Klass Bax, (Netherlands); Gordon Mackinlay, (United Kingdom); Anette Jacobsen (Singapore); Takeshi Miyano (Japan); Soottiporn Chittmittrapap (Thailand); Richard Azizkhan, (USA); Juan Tovar, (Spain); J. Boix-Ochoa, (Spain); Arnold Coran, (USA); J. Grosfeld, (USA); Michael Hollwarth, (Austria); John Hutson, Australia; Alberto Pena, (USA); Andrew Pinter, (Hungary); Prem Puri, (Dublin); Agostino Pierro, (UK); Heinz Rode, (South Africa); Alistair Millar, (UK); Vincenzo Jasonni, (Italy); Bhaskar Rao, (USA); Zhang Jinzhe, (China); Seref Etker, (Turkey); W.Snodgrass, (USA); JL Pippe Salle, (Canada); A. Bracka, (UK); Faruk Hadziselimovich; G. Marrocco, (Italy); Amin Gohari, Abu Dhabi; Talal Al-Malki, (Saudi Arabia); Antonio Dessanti, (Italy); Nabil Dessouky, (Egypt); Saleh Al-Nasaar, (saudi Arabia); Mahmood Shaukat, (Pakistan); Iftikhar Jan, (Pakistan); Tahmina Banu, (Bangladesh); Staffan Meurling, (Sweden); Ranjan Dias, (Sri Lanka); Sameh Abdel Hay, (Egypt); Giamba Parigi, (Italy); Fabio Bartoli, (Italy).



## 9.27 PATHOLOGY

### Professor and Head

Subrat K. Panda

### Professors

Chitra Sarkar  
S. Datta Gupta  
V.K. Arora

M. Vijayaraghavan  
Rajni Safaya  
A.K. Karak

Manoj K. Singh  
Ruma Ray

### Additional Professor

A.K. Dinda

### Associate

### Professors

M.C. Sharma  
(on deputation)

K. Venkateswar Iyer

Manju Aron

### Assistant Professors

Sandeep Mathur

Vaishali Suri

Kabita Chatterjee  
(Blood Bank)

## EDUCATION

### Undergraduate

No change from previous year.

### Postgraduate

MD students: 15  
PhD students: 6

Senior Residents: 11  
Pool Officers: 2

### Short- and long-term training

Eight trainees including 2 each from Nepal and Myanmar underwent short-term training (2-3 weeks).

Two trainees from India underwent long-term training (9 months – 2 years).

### Continuing Medical Education

#### *Organized by the department*

- Indian Association of Pathologists and Microbiologists—Delhi Chapter Meeting; April 2006.

- National Symposium on 'Nanotechnology in medicine', Department of Pathology and Society of Young Scientists, AIIMS; 13 January 2007.
- CME on Bone Pathology, AIIMS, New Delhi; February 2007.

***Lectures delivered***

**DR. A.K. Dinda**

- 'Gastrointestinal malignancies', in a CPC by Annual Conference of Association of Surgeons in India, Surgical Education & Research Foundation and Department of Surgery, AIIMS; 25 February 2007.
- 'Renal biopsy in nephrotic syndrome: Need and controversies', CME, Indian Academy of Nephrology, AIIMS; 16 March 2007.
- CME and Clinical Immunology Workshop for Physicians, Department of Paediatrics, AIIMS; 3–6 February 2007.
  - Immunofluorescence technique revisited
  - Collection, transport and storage of clinical specimen

**National and International Conferences**

***Lectures delivered***

**Professor S.K. Panda**

- 'Molecular basis of hepatitis E', Orissa Chapter Oration, Indian Association of Pathologists and Microbiologists, State Conference, Orissa; 9 September 2006.
- 'Biotechnology innovation in health', National Seminar on Biotechnology, Kumayun University, Nainital; 6–7 October 2006.
- 'Positive strand RNA replications: Methods to analyze', Annual Conference of Indian Association of Pathologists and Microbiologists, Bangalore; December 2006.
- Invited as a Guest Faculty in International Pathology Update, Indraprastha Apollo Hospital, New Delhi; 3 February 2007.

**Professor C. Sarkar**

- Slide seminar: 'Some interesting cases of myopathy', 9th Summer School of Myology, Institut de Myologie, Hopital de la Salpetriere, Paris, France; 14–23 June 2006.
- 'Histopathologic spectrum of lesions in intractable epilepsy', An International Symposium on 'Current trends in epilepsy', New Delhi; 3-5 November 2006.
- 'Glioneuronal tumours of the CNS', invited lecture at Sri Ramchandra Medical College and Research Institute, Chennai; 19 December 2006.
- Guest faculty in CME on 'Update on pathology of CNS and neuromuscular diseases', Faculty of Laboratory Medicine, Ministry of Health, Kuwait. Delivered the following lectures, February 2007:
  - Embryonal tumours: Recent perspectives

- Muscular dystrophies: Classification and approach to diagnosis
- Meningeal tumours: Approach to diagnosis
- Pathology of viral encephalitis
- Case presentations/slide seminars on CNS and muscle pathology

**Professor S. Gupta Datta**

- ‘Histological distinction between Crohn’s disease and tuberculosis of the colon’, paper presented at the 21st Annual Conference of the Delhi Chapter of Indian Association of Pathologists and Microbiologists, Delhi; April 2006.
- ‘Steatosis does not correlate with the degree of insulin resistance in nonalcoholic fatty liver disease’, paper presented at the 21st Annual Conference of the Delhi Chapter of Indian Association of Pathologists and Microbiologists, Delhi; April 2006.
- ‘Promoter hypermethylation of p15INK4A, p14ARF and Cyclin D2 in serum and tumour DNA of invasive ductal breast carcinoma patients’, paper presented at the All India Cell Biology Conference, Delhi; 9–11 January 2007.
- ‘Epigenetic alterations of CDH1 and APC genes: Relationship with activation of Wnt/B-Catenin pathway in invasive ductal carcinoma of breast’, paper presented at the 26 Annual Convention of Indian Association for Cancer Research and International Symposium in Translational Research in Cancer, Bhubaneswar; 17–19 January 2007.
- ‘Promoter hypermethylation of TMS1, BRCA1, ER± and PRB in serum and tumour DNA of invasive ductal breast carcinoma patients’, paper presented at the 26th Annual Convention of Indian Association for Cancer Research and International Symposium in Translational Research in Cancer, Bhubaneswar; 17–19 January 2007.
- ‘Expression of transglutaminase 2 in esophageal squamous cell carcinoma (ESCC)’, paper presented at the 26th Annual Convention of Indian Association for Cancer Research and International Symposium in Translational Research in Cancer, Bhubaneswar; 17–19 January 2007.
- ‘Altered expression of cell adhesion molecule in oral cancer’, paper presented at the 26th Annual Convention of Indian Association for Cancer Research and International Symposium in Translational Research in Cancer, Bhubaneswar; 17–19 January 2007.
- ‘14-3-3 Å over expression is an early event in oral carcinogenesis’, paper presented at the 26th Annual Convention of Indian Association for Cancer Research and International Symposium in Translational Research in Cancer, Bhubaneswar; 17–19 January 2007.
- ‘14-3-3 zeta in oral cancer’, paper presented at the 26th Annual Convention of Indian Association for Cancer Research and International Symposium in Translational Research in Cancer, Bhubaneswar; 17–19 January 2007.
- ‘Clinical profile and therapy, in haepatocellular carcinoma: Experience from a tertiary care center in India’, paper presented at the 17th Conference of the Asia Pacific Association for the Study of the Liver, Kyoto; 27–30 March 2007

**Professor V.K. Arora**

Invited as faculty for scientific programme at the 62nd Annual Conference of Association of Physicians, Goa; 16–19 February 2007.

**Dr A.K. Dinda**

‘Nanoparticle and cell interaction’, invited lecture in DBT sponsored National Symposium on ‘Emerging trend in biotechnology’, Deshbandu College, Delhi; 17 November 2006.

‘Urine examination of cellular elements’, invited talk in postgraduate lecture series at the 55th Annual Conference of Indian Association of Pathologists and Microbiologists, Bangalore; 4–9 December 2006.

‘Evaluation of macrophage injury and activation by nanoparticles: An essential parameter of nano-biocompatibility’, 39th Annual Conference of the Indian Pharmacological Society, Jaipur; 21–23 December 2006.

‘Urine microscopy’, Third Training Course in Paediatric Nephrology, International Society of Nephrology and COMGAN, Department of Pediatrics, AIIMS, New Delhi; 2–4 February 2007.

‘Nanomedicine’, SHRISTHI CHETNA, The annual festival of Zoological Society of India, Hans Raj College, University of Delhi, Delhi; 8 February 2007.

‘Issue of biocompatibility in development of biomaterials for medical devices and drug delivery’, DBT Workshop ‘Biomaterials for medical devices and drug delivery’, Indian Institute of Technology, Delhi; 17 February 2007.

‘Exploring nanoparticle toxicity: A challenge for nanobiotechnology’, Indian National Academy of Engineering and Jawharlal Nehru University sponsored symposium on ‘Biology inspired nanotechnology’; 26 March 2007.

**Dr S. Mathur**

‘Scope and limitations of fine needle aspiration cytology of thyroid tumours’, National Symposium on ‘Thyroid cancer’, Department of Nuclear Medicine, AIIMS, New Delhi; October 2006.

**RESEARCH****Funded Projects****Completed**

1. Utility of immunocytochemistry using antibodies to calretinin and Ber-EP4 in distinguishing reactive mesothelial cell proliferation from metastatic adenocarcinoma. Sandeep Mathur. Funded by AIIMS, Institute research grant scheme for 2 years. Funds: Rs 1.16 lakh.

2. Evaluation of VEGF and p53 expression as prognostic markers in giant cell tumour of bone. R. Safaya. Funded by ICMR for 2 years. Funds: Rs 89,000.

### ***Ongoing***

1. Study the site of replication of hepatitis-E virus (HEV) by localizing the viral replicase (RdRp) into the subcellular compartments by transfection studies using HepG2/Huh7 cells and a fusion reporter construct. S.K. Panda. Funded by DST for 3 years (1 September 2004 to 31 August 2007). Funds: Rs 21.47 lakh.
2. Development of non-radioactive antigen specific reporter release cytotoxicity assay and analysis of cytotoxicity against HEV proteins. S.K. Panda. Funded by DBT for 3 years (29 September 2004 to 28 September 2007). Funds: Rs 45.95 lakh.
3. Development of small interfering RNAs (siRNAs) for inhibition of hepatitis-E virus (HEV) replication and transcription. SK Panda. Funded by DBT for 3 years (31 December 2004 to 30 December 2007). Funds: Rs 42.05 lakh.
4. Fund for improvement of Science and Technology infrastructure in universities and higher educational institutions (FIST). Funded by DST for 5 years (2004-2009). Funds: Rs 2.7 crore.
5. Myopathic disorders: A comparative clinico-pathological and *in vitro* proton magnetic resonance spectroscopy (MRS) study on muscle biopsies. Chitra Sarkar. Funded by ICMR for 3 years (2004–2007). Rs 6 lakh.
6. Evaluation of chromosome 1p and 11p deletions in hepatoblastoma and hepatocellular carcinoma. V.K. Iyer. Funded by AIIMS for 3 years (2006-2009). Funds: Rs 3.25 lakh.
7. Genomics and molecular studies on the immunopathogenesis of bronchial asthma: A multicentric study. A.K. Dinda. Funded by DBT for 2 years (2005–2007) Funds: 70 lakh.
8. Development of nanoparticulate system for selective receptor specific macrophage targeting. A.K. Dinda. Funded by DBT for 2 years (2007–2009). Funds: Rs 30.9 lakh
9. Diagnostic utility of Hep Par1, pCEA and CD-34 in differentiating non-neoplastic and metastatic liver lesions from primary hepatocellular carcinoma in fine needle aspiration samples. Manju Aron. Funded by AIIMS for 3 years (2005-2008). Funds: Rs 1.5 lakh.

### **Departmental Projects**

#### ***Completed***

1. Paediatric astrocytic tumours—study of cyclin dependent kinases and their inhibitors
2. Comparative study of diagnostic efficacy of stereotactic, ultrasound-guided and image guided biopsies in lesions of CNS
3. Protein aggregating myopathy—a clinicopathological and immunohistochemical study
4. Mitochondrial myopathy—a clinicopathological and ultrastructural study
5. Congenital myopathies—clinicopathological and ultrastructural evaluation
6. Expression of major histocompatibility complex (MHC-I and II) and cell adhesion molecules in idiopathic inflammatory myopathies

7. Role of urine sediment examination in early diagnosis of recurrence of lupus nephritis
8. Fine-needle aspiration cytology of hepatoblastoma
9. Fine-needle aspiration cytology of clear cell sarcoma of the kidney
10. Role of cytologic scoring and image morphometry in fine needle aspiration cytology of proliferative breast disease
11. Wilms' tumor: Relation of apoptotic gene expression with subtype, chemoresponse and prognosis
12. Hepatoblastoma: Role of DNA ploidy, cell proliferation and cytokeratin 19 expression in subtyping and prognosis
13. Application of image analysis in evaluation of immunofluorescence of renal biopsies. Role of urine sediment examination in early diagnosis of recurrence of lupus nephritis
  - Hormone receptors in breast cancer
  - Human papillomavirus in anal cancer
  - Photosensitive lichenoid eruption; a clinicopathological study

### ***Ongoing***

1. Primary and secondary glioblastomas: A study of epidermal growth factor receptor (EGFR) amplification, EGFR VIII mutants and p53 expression
2. GBMs with long-term survival—role of cell cycle regulatory genes. study of gliomagenesis: Possible involvement of central nervous system (CNS) developmental pathway
3. Comparative evaluation of expression of dystrophin, utrophin and n-NOS in muscle and skin biopsy of patients with dystrophinopathies
4. p53, EGFR and HER2 receptor in osteogenic sarcomas
5. Study of alteration of microvasculature in renal biopsy in chronic renal transplant rejection
6. Study of C4d deposition in peritubular capillaries of renal transplant biopsy and its correlation with morphological features of severity of rejection
7. Role of macrophage in modulation of renal fibrosis
8. Ultrastructural study of podocyte changes in immune and non-immune mediated glomerular diseases
9. Study of endocytosis and fate of calcium phosphate based and gold nanoparticle
10. Modulation of macrophage functions with nanoparticle
11. Transplant glomerulopathy: An ultrastructural, immunohistochemical and morphometric study
12. A correlative study of morphological subtype of focal segmental glomerulosclerosis (FSGS) and tubulo-interstitial changes in renal biopsy
13. Cytologic diagnosis of carcinomatous meningitis on cerebrospinal fluid samples
14. CT guided fine needle aspiration cytology of mediastinal masses: analysis of cases at AIIMS
15. Cytomorphologic evaluation of germ cell tumours on fine-needle aspiration cytology
16. Morphological and morphometric evaluation of follicular lesions of the thyroid on fine-needle aspiration cytology

17. Role of fine-needle aspiration in the evaluation of pseudosarcamatus lesions of the soft tissue
18. Role of urinary cytology and immunocytochemistry in the diagnosis and management of acute renal allograft dysfunction

## **Collaborative Projects**

### ***Completed***

1. Expression of tumour suppressor gene HIC-1 in human glial tumors and cell lines (with Biochemistry)
2. Mismatch repair genes (Hmlh1 and Hmlh2) in glial tumors (with Biochemistry)
3. Clinicopathological study of Bcl-2 and Bcl-6 expression in non-Hodgkin lymphoma (with Institute Rotary Cancer Hospital)
4. Histopathology of the right ventricular outflow tract in patient with tetralogy of Fallot (with Cardiothoracic Surgery)
5. Histological study of remnant long saphenous veins before aorto coronary bypass grafting (with Cardiothoracic Surgery)
6. Expression and modulation of complement regulatory proteins in immune complex and autoimmune diseases and their diagnostic significance (with Biochemistry)
7. Study of potassium channel binding protein in carcinoma prostate (with Urology)
8. Genetic polymorphism of complement receptor 1 and its correlation with the pathophysiology of glomerulopathies (with Biochemistry)
9. Prospective randomized study of radical cystectomy and post-operative adjuvant chemotherapy versus concurrent chemoradiotherapy in muscle invasive cancer of urinary bladder -(with Institute Rotary Cancer Hospital)
10. Keratocyte apoptosis following corneal trauma: Implications on corneal wound healing (with Rajendra Prasad Centre)
11. Prevalence of *Helicobacter pylori* infection in gastric malignancies at IRCH, AIIMS (with Medical Oncology, Surgical Oncology, Microbiology)
12. Significance of tumour thickness and molecular margins in carcinoma tongue (with ENT, Biochemistry)
13. Evaluation of neoadjuvant chemotherapy in locally advanced breast cancer (with Surgery, Radiation Oncology)
14. Study of emerging parasitic agents (intestinal coccidian and microsporidia) in aetiologies of malabsorption syndrome (with Microbiology, Gastroenterology, Paediatrics)
15. Evaluation of the comparative efficacy of single- and double-freeze technique of cryotherapy in controlling CIN lesions: Multi-centre randomized clinical trial (with Obstetrics and Gynaecology)

### ***Ongoing***

1. Advanced centre for liver diseases - ICMR Project [I-441] comprising of five projects (with Gastroenterology)
2. Study of HIC-1 in tumorigenesis and cell response (with Biochemistry)
3. Effects of administration of human umbilical cord blood cells (HUCBG) in combination with melatonin versus HUCBG alone in rat with stroke (with Neurology)
4. Altered DNA sequences in gliomas: Characterization of changes and context sequences with reference to tumour type (with Biochemistry)
5. Characterization of the properties of an amplified region of DNA in primary meningeal tumours (with Biochemistry)
6. Prevalence of alteration at microsatellite loci in 1p and 19q in primary human gliomas (with Biochemistry)
7. Invasive versus non-invasive meningiomas: Comparative study of proliferation index, and expression of vascular endothelial growth factor (VEGF), p53 and cathepsin (with Neurosurgery)
8. Ligand based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofoetal) isoenzymes of alkaline phosphatase: Characterization and validation in clinical cancer (with Biochemistry)
9. Clinical correlation of quantitative analysis and immunohistochemical localization of VEGF and HCG in the serum and placenta at different gestational ages in normal and pregnancy induced hypertension (PIH) cases (with Anatomy, Vardhman Medical College, New Delhi)
10. Acute thalamic involvement in severe head injury—An autopsy study with histopathological correlation (with Neurosurgery)
11. Histopathological study of aorta and pulmonary artery in congenital heart disease (with Cardiothoracic Surgery)
12. Pharmacological and molecular studies on cardioprotective potential of cox-2 inhibitor and indigenous antioxidant drugs in experimentally induced myocardial infarction (with Pharmacology)
13. A study of T cell homing pattern and cytokine profile in tubercular pleural effusion (with HLA and Immunogenetics)
14. A correlative study of Th1 and Th2 upregulation with lepromin challenge in clinically 'anergic' cases of leprosy (with JALMA, Agra)
15. Development of tumour targeting with nanogel system (with Centre for Biomedical Engineering, Indian Institute of Technology, Delhi)
16. Role of macrophage and oxidative stress in airway remodelling (with IGIB, Delhi)
17. Effect of blocking of HIF1± gene expression on macrophage endocytosis and generation of reactive oxygen species (ROS) (with Jawaharlal Nehru University, Delhi)
18. Parallel performance trail of fast human papilloma vilus (HPV) versus hybrid capture 2 (HC2) for cervical screening (with Obstetrics and Gynecology)
19. Advanced sentinel lymph node evaluation in carcinoma breast (with Department of Surgery, Nuclear Medicine and Microbiology)



20. Multicentric study of interferon-glycyrrhizin combination therapy and interferon-ribavirin combination therapy in management of chronic hepatitis-C (with Gastroenterology and Human Nutrition)
21. Etiological significance of microscopic colitis in chronic diarrhea in children and its pathogenesis (with Paediatrics)
22. Multicenter phase III randomized trial comparing doxorubicin and cyclophosphamide followed by docetaxel with doxorubicin and cyclophosphamide followed by docetaxel and trastuzumab (Herceptin®) and with docetaxel, carboplatin and trastuzumab in the adjuvant treatment of node positive and high-risk node negative patients with operable breast cancer containing the Her2 alteration (with Radiation Oncology)
23. Relationship between genetic polymorphism in drug metabolizing enzymes, CYP1A1 and GSTM1, and risk of developing oral precancer and cancer among consumers of tobacco and chewing products (with Biochemistry, Surgery, Radiation Oncology and Surgical Oncology)
24. Histological diagnosis of celiac disease and its correlation with other markers (with Pediatrics)
25. Clinicopathological study of reflux oesophagitis (with Gastroenterology)
26. Distinction between Crohn's disease and tuberculosis in Indian patients (with Gastroenterology, Biotechnology)
27. Histopathology of acute and subacute liver failure (with Gastroenterology)
28. Evaluation of molecular markers and anticancer agents in non-small cell lung cancer (with Biochemistry)
29. A comparison of urease-based tests and conventional histology with immunohistochemistry for detection of *H. pylori* in gastric biopsies (with Gastroenterology, Microbiology and Nuclear Medicine)
30. A study of molecular markers in oral cancers (with Biochemistry, Surgery, Surgical Oncology)
31. A study of molecular markers in cervical cancers (with Biochemistry, Obstetrics and Gynaecology)
32. Evaluation of efficacy of radiofrequency ablation of primary tumour in early breast cancer (with Surgery, Radiation Oncology, Nuclear Medicine and Radio Diagnosis)
33. Role of FDG PET-CT in evaluation of axillary lymph node involvement in T1T2N0 Breast Cancer in comparison with sentinel lymph node biopsy (with Surgery and Nuclear Medicine)
34. Evaluation of neoadjuvant chemotherapy followed by postoperative chemoradiotherapy and assessment of expression of multidrug resistance gene and cell cycle specificity in locally advanced gastric and gastroesophageal junction adenocarcinoma (with Radiation Oncology, Surgical Oncology, Medical Oncology, Biotechnology and Radiodiagnosis)
35. Pilot study comparing p53, p16, k-ras and c-erb-2 expression in non-neoplastic gall bladder epithelium and gall bladder cancer (with Medical Oncology, Surgical Oncology, Surgery and GI Surgery)

36. Role of Centchroman in regression of mastalgia and regression of fibroadenoma and its correlation to histopathology and estrogen and progesterone receptor (with Surgery, Anatomay, Obstetrics and Gynecology and Radiodiagnosis)
37. Effect of glutamine supplementation on structure and function of the intestines in patients with Crohn's disease (with Gastroenterology)
38. Clinicopathological features of microscopic colitis (Gastroenterology and Paediatrics)
39. Evaluation of curcumin in advanced cervical cancer (with Biochemistry, Obstetrics and Gynecology and Radiation Oncology)
40. Histopathological study of aorta and pulmonary artery in congenital heart disease (with Cardiothoracic Surgery)
41. Immunogenetic analysis and human papilloma vilus (HPV) typing of cervical cancer in Indian women; in collaboration (with Obstetrics and Gynecology)
42. Development of HPV candidate vaccines: Preparation of a clinical trial site/cohort for vaccine testing (with Obstetrics and Gynecology)
43. Mutation in OXPHOS pathway and spermatogenic arrest in infertile males (with Anatomy)
44. Molecular analysis of gene markers in urinary cytology and tissue histology specimens of Indian patients with superficial and muscle invasive transitional cell carcinoma of urinary bladder (with Urology and Biochemistry)
45. A comparative study of visual inspection with acetic acid (VIA), cytodiagnosis, HPV testing and colposcopy as tools for cervical cancer screening (with Obstetrics and Gynaecology)
46. Evaluation of MRI in diagnosis of fetal anomalies in comparison with ultrasound (with Obstetrics and Gynaecology)
47. Detection and molecular characterization of *Pneumocystis jiroveci* from patients with clinical diagnosis of interstitial pneumonia (with Microbiology)
48. Study of genetic polymorphism of dihydropteroate synthase DHPS gene in *Pneumocystis jiroveci* isolates: Correlation with clinical outcome in patients with PCP (with Microbiology)

## **PUBLICATIONS**

### ***Journals***

1. Aron M, Kapila K, Verma K. Utility of galectin-3 expression in thyroid aspirates as a diagnostic marker in differentiating benign from malignant thyroid neoplasms. *Indian J Pathol Microbiol* 2006;**49**:376–80.
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#### Chapters in books

- Datta GS. Histopathological scoring of chronic viral hepatitis. In: Singh SP, Chawla YK (eds). *Hepatitis B*. Cuttack: Kalinga Gastroenterology Foundation 2004, Vol. 1; 92–112.

### **PATIENT CARE**

#### **Laboratory services**

##### **Surgical pathology laboratory**

Specimens processed	32,752
Special stains	27,423
Frozen sections	564

##### **Cytopathology laboratory**

Specimens processed	17,521
FNAC	8,564
Exfoliative	8,957
Immunocytology specimens	391

##### **Autopsies performed**

Electron microscopy	31
Specimens processed	938

##### **Immunohistochemistry laboratory**

Specimens processed	11,099
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**Neuropathology services**

Neuropathology surgical specimens	2,280
Immunohistochemistry	2,457
Muscle enzyme histochemistry	1,698
Muscle immunohistochemistry	2,457

**Renal pathology services**

Immunofluorescence on renal biopsies	525
Urinary sediment analysis	850

**Cardiac Pathology Services**

Immunohistochemistry	243
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**Hepatic pathology services****Markers for hepatitis viruses**

HBs Ag	1,245
HBe Ag	878
HBc-IgM	250
HAV IgM	198
Anti-HCV IgG	1,080
Anti-HEV IgM	776

**Molecular diagnostic tests**

HBV DNA	800
HBV DNA (quantitative)	30
HCV RNA (qualitative and quantitative)	500

**AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor S.K. Panda** received JC Bose National Fellowship of Department of Science and Technology in March 2007. He was honoured by Samanta Chandrasekhara Award of Orissa Bigyan Academy (Government of Orissa) Bhubaneswar, Orissa; Member of the 'Task force on infectious disease—biology', Department of Biotechnology, Ministry of Science and Technology, Government of India; Member, Advisory Committee on Biotechnology, Government of Orissa; Member, 'Medical Sciences Research Committee', Council for Scientific and Industrial Research for selection of Pool Officers; Adviser for selection of Senior Demonstrator Pathology by Rajasthan Public Service Commission on 12–13 March, 2007; Chairman, Research Advisory Committee of Indian Council of Agriculture and Research, New Delhi; Expert, Scientific Advisory Committee of Regional Medical Research Centre, Indian Council of Medical Research, Bhubaneswar, Orissa on 23 August 2007; Expert, Standing Selection Committee for selection of Assistant Professor at Indira Gandhi Medical College, Patna on 24 June 2006; Visited Venezuela as an Indian delegate, Department of Biotechnology; 10–14 July 2006; Member, consultative committee of Indo-US Meetings on Indian Health Science and Technology Initiative, New Delhi; 17–18 August 2006,

New Delhi; Chairman, Project Directorate on Animal Disease Monitoring and Surveillance (PD-ADMAS), Bangalore; Member, Technical Committee of Bureau of Indian Standards, Manak Bhawan, New Delhi.

**Professor Chitra Sarkar** was nominated as Member of the National Brain Research Centre, Research Advisory Committee; Member, Management Advisory Committee, Department of Science and Technology for Young Scientists for selection for BOYCAST Fellowship; Member, Research Review Committee, Tata Memorial Hospital, Mumbai; Expert in Himachal Public Service Commission; Executive Member, Neurological Society of India. Participated in the 9th Summer School of Myology at Institut de Myologie, Hopital de la Salpetriere, Paris, France; 14–23 June 2006; Invited to contribute to a chapter entitled ‘CNS primitive neuroectodermal tumours’ in the revised edition of the *WHO textbook of pathology and genetics of CNS tumours*.

**Professor S. Datta Gupta** was nominated as Member Advisory Committee for the International Pathology Update from 2–4 February 2007, New Delhi. He was elected the Honorary Secretary of the Indian Association of Pathologists and Microbiologists in 2006

**Professor M.K. Singh** was appointed Professor in charge of the Telemedicine Facility, AIIMS

**Professor R. Safaya** was Organizing Secretary of the International CME on Bone Pathology organized in collaboration with the faculty from Harvard Medical School and Mount Sinai School of Medicine; February 2007.

**Dr A.K. Dinda** appointed as Sub-Dean (Examination Section); Member, National-level Advisory Committee for developing a Nanoscience and Nanotechnology Center at Calcutta University, Calcutta; Member, Advisory Committee for development of nano-biotechnology center at JNU, Delhi; Founder Member, Society for Tissue Engineering and Regenerative Medicine India; Member, Research Advisory Committee of AIIMS; Co-coordinator for development of curriculum for e-education in the Telemedicine Project of AIIMS.

**Dr M.C. Sharma** was invited to contribute to a chapter entitled ‘Subependymal giant cell astrocytomas’ in the revised edition of the *WHO textbook on pathology and genetics of CNS tumours*.

**Dr Ayushi Jain**, Junior Resident, was awarded the Second Prize for her paper entitled ‘Role of major histocompatibility complex (MHC-I and II), cell adhesion molecules and membrane attack complex in pathogenesis of inflammatory muscle diseases’ at the 9th annual meeting of the Delhi Neurological Association; 3–4 February 2007; was awarded the Ramalingaswami Best Paper Award for her paper entitled ‘MHC class-I and II detection as a diagnostic tool in inflammatory myopathies’ at the Annual Conference of the Delhi Chapter of Indian Association of Pathologists and Microbiologists; April 2006.

## **VISITING SCIENTISTS**

1. Dr Aswini Panigrahi, Associate Scientist, Seattle Biomedical Research Institute, Seattle, WA, USA visited the Department of Pathology and delivered a lecture on 'Trypanosoma brucei mitochondrial proteome: Characterization of multi-protein complexes', 18 September 2006.
2. Professor K.T. Wong, Professor of Pathology University of Malaya, Kuala Lumpur, Malaysia visited the Department of Pathology and delivered a lecture on 'Pathogenesis of henipavirus encephalitis', 16 November 2006.
3. Dr Rachel Oommen, Consultant Pathologist, William Harvey Hospital, Ashford, Kent, UK, delivered a talk on 'Liquid-based cytology'; 29 January 2007.
4. Dr Stephens Kuppang, Application Specialist, Carl Zeiss Germany, delivered a talk on 'Laser scanning microscope and its application'; 20 February 2007.

## 9.28 Pharmacology

### Professor and Head

Y.K. Gupta

### Professors

V.L. Kumar

K. Kishore

N.R. Biswas

### Additional Professor

S.K. Maulik

### Associate Professor

D.S. Arya

### Assistant Professors

Jagriti Bhatia

J.P.K. Katyal

K.H. Reeta

N.S. Raj

Surender Singh

### Scientists

Uma Singh

Sujata Joshi

Sharda S. Peshin

Nabanita Halder

Thomas Kaleekal (ad hoc)

Amita Srivastava (ad hoc)

## EDUCATION

The department is engaged in the teaching programme of MB,BS (3rd, 4th and 5th Semesters), BSc Nursing (Hons), MSc, MD, PhD and DM (Clinical Pharmacology) courses.

Clinical Pharmacology has been introduced and conventional pharmacy and animal experiments are being reduced and replaced. Postgraduates are being trained to meet the current needs of industry, regulatory bodies, academic and research institutions and in scientific writing.

### Short- and long-term training

Short-term research training was provided to one MSc Biotechnology student.

### Continuing Medical Education

#### Organized by the department

- 'Pharmacogenomic Symposium 2006', 20 May 2006. Organized by the Department of Pharmacology, AIIMS, New Delhi in collaboration with Ranbaxy Research Laboratory, Gurgaon.
- Workshop on 'Good laboratory practices (GLP) for academia', AIIMS, New Delhi; 24–25 November 2006.

- ‘National Annual Stocktaking Meeting’ for National Pharmacovigilance Programme (NPVP), AIIMS, at SMS Medical College, Jaipur. 20 December 2006
- ‘Biomedical communication’, Preconference day of the Annual Meeting of the Indian Pharmacological Society; Jaipur, 20 December 2006.
- Symposium on ‘Emerging trends in medical toxicology’, AIIMS, New Delhi; 27–28 January 2007. Organized in collaboration with the Department of Forensic Medicine.
- A Multidisciplinary Symposium–cum–workshop on ‘Therapeutic drug monitoring for better therapeutics and drug development’, AIIMS, New Delhi; 2–3 February 2007. Organized in collaboration with the Department of Nephrology.
- ‘Clinical research inspections workshop’, organized under the aegis of Central Drugs Standards Control Organization (CDSCO), New Delhi; 24–25 August 2006.
- Academia Industry Synergy Continuum Symposium on ‘Promotion of pharmacovigilance in India’, AIIMS, New Delhi; 15 March 2007.
- Workshop on ‘Use of large animals in biomedical research’, Indian National Science Academy (INSA), New Delhi; 26 June 2006. Organized in collaboration with Indian Pharmacological Society (IPS), Association of Physiologists and Pharmacologists of India (APPI) and Nutrition Society of India, and sponsored by INSA.

## **National and International Conferences**

### **Lectures delivered**

#### **Professor Y.K. Gupta**

- Symposium on ‘Strategies for neural plasticity and repair’ and Workshop on ‘Evaluation of plasticity in pain’, AIIMS, New Delhi; 19 October 2006.
- ‘Safety aspect of herbal drugs’, Institute of Nuclear Medicine and Allied Sciences (INMAS), Delhi; 3 November 2006.
- ‘Clinical safety evaluation in traditional medicine’, Training Workshop on ‘Research methodology for young faculty’, WHO Biennium 2006–2007, Central Council for Research in Ayurveda and Siddha (CCRAS), New Delhi; 8–9 December 2006.
- ‘Academic need for clinical pharmacology teaching’, PG Training Programme, PSGIMSR Hospitals, Coimbatore; 10–11 January 2007.
- Keynote address in the International Conference on ‘Toxicology, toxicogenomics and occupational health’, 26th Annual Meeting of Society of Toxicology, Jiwaji University, Gwalior; 9–11 October 2006.
- ‘Pharmacology of sleep’, National Sleep Medicine Course, AIIMS, New Delhi; 14–15 October 2006.
- ‘Safety issues of herbal medicine’, International Conclave on ‘Traditional Medicine’, AYUSH, New Delhi; 16 November 2006.
- ‘Ethical considerations in carrying out bio-medical research’, Mahatma Gandhi Memorial College, Indore; 19 November 2006.

- Stocktaking meeting of 'National Pharmacovigilance Programme', Mumbai; 20 November 2006.
- 'Why, how, what and where to publish your research', Central Council for Research in Unani Medicine, Department of Ayush, New Delhi; 4 December 2006.
- 'Preclinical safety evaluation of herbal drugs', International Symposium on 'Herbal drug research and therapy', V.P. Chest Institute, University of Delhi; 10 December 2006.
- 'International update on basic and clinical neuroscience advances', XXIV Annual Conference of Indian Academy of Neurosciences, Industrial Toxicology Research Centre, Lucknow; 17–20 December 2006.
- 'Need for clinical pharmacology teaching', PG Training Programme, Coimbatore; 10 January 2007.
- 'Changing need of pharmacology training for postgraduates', National Institute of Pharmaceutical Education Research (NIPER), Mohali, Chandigarh; 9 February 2007.
- 'Presidential address', Annual Meeting of Indian Pharmacological Society, Jaipur; 21–23 December 2006.
- Dr S.J. Kale Oration Award in National Conference of National Medico Organization (NMO), Jaipur; 24–25 February 2007.
- Keynote Address at the National Conference on 'Nutraceuticals and the future of medical science', Coimbatore; 22–23 February 2007.
- 'Empiric antibiotic therapy: Results of clinical trials', Scientific Session on 'Microbiological and pharmacological strategies', National Conference on 'Intra-abdominal infections', Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh; 10–11 March 2007.

#### **Professor Jatinder Katyal**

- 'Pharmacogenomics and neurological disorders in pharmacogenomics', symposium organized by AIIMS, New Delhi in collaboration with Ranbaxy Research Laboratory, Gurgaon; 20 May 2006,

#### **Professor V.L. Kumar**

- 'Animal biotechnology—gene therapy and human genome project', Delhi University; 20 November 2006.
- 'Estrogen receptor—alpha and variants of its hormone binding domain in breast cancer', 52nd National Conference, Association of Physiologists and Pharmacologists of India, Surat; 21 December 2006.
- 'Estrogen receptor alpha and its e-domain variants in breast cancer', XXXIX Annual Conference of Indian Pharmacological Society, Jaipur; 22 December 2006.

#### **Dr N.R. Biswas**

- 'Ethical aspects of clinical trial', Sri Aurobindo Medical College, Indore; 20 April 2006.

- ‘*In vitro* release study of Nanoparticulated Sparfloxacin’, 8th International Conference on ‘Nano-structured Materials’, Bangalore; 20 August 2006.
- ‘Nanoparticulated drug delivery’, XXXIX Annual Conference of Indian Pharmacological Society, Jaipur; 22 December 2006.

## RESEARCH

### Funded Projects

#### Completed

1. Diagnostic approaches for rapid and specific diagnosis of *Mycoplasma pneumoniae* infections in asthmatics. N.R. Biswas. Funded by Department of Science and Technology (DST) for three years (2004–2006). Funds: Rs 16.8 lakh.
2. Study of antihyperlipidemic and hypolipidemic effects of a polyherbal preparation. S.K. Maulik. Funded by Dabur Research Foundation for 6 months (2006). Funds: Rs 2 lakh.
3. Development of herbal formulations used in the treatment of neurodegenerative diseases like Alzheimers’ K. Kishore. Funded by Department of Biotechnology (DBT) for two years (2004–2006). Funds: Rs 2.87 lakh.

#### Ongoing

1. Studies on the effect of latex of *Calotropis procera* against renal complications in diabetes. V.L. Kumar. Funded by AIIMS from 2005 to 2007. Funds: Rs 60,000.
2. Anti-cataract activity of itone and other herbal isolates. N.R. Biswas. Funded by Dey’s Medical (2005–continuing). Funds: Rs 6 lakh.
3. Clinical trial of a standardized preparation of *Terminalia arjuna* in patients with left ventricular dysfunction. S.K. Maulik. Funded by Department of Biotechnology (DBT) for 3 years (2004–2007). Funds: Rs 27 lakh.
4. Modulatory effect of phytoadaptogens on cardiovascular and neurological changes induced by experimental stress in rats. S.K. Maulik. Funded by Department of Science and Technology (DST) for 3 years (2006–2009). Funds: Rs 20 lakh.
5. Studies on cardioprotective potential of some medicinal plants in experimentally induced myocardial infarction in rats. D.S. Arya. Funded by Council for Scientific and Industrial Research (CSIR) for 3 years (2004–2007). Funds: Rs 1.5 lakh.
6. Evaluation of *Terminalia arjuna* as a potential prophylactic antihypertensive. Jagriti Bhatia. Funded by AIIMS for 1 year (2006–2007). Funds: Rs 70,000.
7. Evaluation of anti-inflammatory activity of plant lipids containing alpha-linolenic acid. Surender Singh. Funded by AIIMS for 1 year (2006–2007). Funds: Rs 1.05 lakh.
8. Standardization of processes and pharmacological studies of widely practiced anti-arthritic herbal Unani preparation ‘Majoon Suranjan’. Surender Singh. Funded by ICMR for 3 years (2006–2009). Funds: Rs. 19.88 lakh.
9. Evaluation of the effect of curcumin on phenytoin-induced cognitive impairment in oxidative stress in rats. K.H. Reeta. Funded by AIIMS for 1 year (2006–2007). Funds: Rs 1.06 lakh.



10. Pharmacokinetic interaction between thalidomide and dexamethasone in patients with multiple myeloma. J.P.K. Katyal. Funded by AIIMS for 1 year. Funds: Rs 42,000 approx.

## Departmental projects

### Completed and ongoing

1. Add-on *Acorus calamus* in the experimental model of stroke (middle cerebral artery occlusion) and seizures in rats
2. Evaluation of heavy metals content in herbal medicinal products marketed in and around Delhi
3. Effect of curcumin on cognitive impairment induced by antiepileptic drugs in rats
4. Plasma level monitoring of mycophenolic acid and clinical outcome in renal transplant patients
5. Detection of BCR–ABL mutation and plasma imatinib mesylate level in chronic myeloid leukemia (CML) patients: Correlation with response rate and toxicity
6. Model for drug-resistant seizures and the effect of curcumin on resistant animals
7. Effect of atorvastatin and pioglitazone on endothelial dysfunction in non-diabetic normolipidemic stable angina patients
8. Studies on the antihyperglycemic effect of *Calotropis procera*
9. Studies on the hepatoprotective effect of *Calotropis procera*
10. Inflammation related studies on the latex of *Calotropis procera*
11. Quantification of plasma level of imatinib mesilate (STI-571) in chronic myeloid leukemia (CML) patients and to correlate this with its safety and efficacy profile
12. Neurobehavioral evaluation of hydroalcoholic extract of *Embllica officinalis* with special reference to its antiepileptic activity

## Collaborative projects

### Completed

1. Ophthalmic drug formulation polymeric nanoparticles—as carriers. N.R. Biswas (2002–2006). Funded by Indian Council of Medical Research (ICMR). Funds: 14 lakh. (with Department of Chemistry, Delhi University)
2. Evaluation of the role of retinal P-gp drug transporters in the ocular disposition of drugs (2004–2006). Funds: Rs 82,000 (with Ocular Pharmacology, Dr Rajendra Prasad Centre).
3. Amniotic membrane transplantation in acute ocular burns: A randomized controlled clinical trial (with Dr Rajendra Prasad Centre).

### Ongoing

1. Evaluation of the biodisposition of xanthophylls in Indian donors eyes and detection of their content in commonly available fruits and vegetables (with Ocular Pharmacology, Dr Rajendra Prasad Centre)

2. Pharmacological evaluation of medicinal plants and their products. Y.K. Gupta, J.P.K. Katyal. Funded by Ranbaxy Research Laboratory for 2 years. Funds: Rs 10.6 lakh.
3. Screening of herbal drugs. Y.K. Gupta. Funded by Dabur Research Foundation for 2 years. Funds: Rs 5.5 lakh.

## PUBLICATIONS

### Journals

1. Arya DS, Bansal P, Ojha SK, Nandave M, Mohanty I, Gupta SK. Pyruvate provides cardioprotection in the experimental model of myocardial ischemic reperfusion injury. *Life Sci* 2006;**79**:38–44.
2. Arya DS, Nandave M, Ojha SK, Kumari S, Joshi S, Mohanty I. Myocardial salvaging effects of ocimum sanctum in experimental model of myocardial necrosis: A haemodynamic, biochemical and histoarchitectural assessment. *Curr Sci* 2006;**91**:667–72.
3. Briyal S, Pant AB, Gupta YK. Protective effect of endothelin antagonist (TAK-044) on neuronal cell viability in vitro oxygen–glucose deprivation model of stroke. *Indian J Physiol Pharmacol* 2006;**50**:157–62.
4. Choedon T, Mathan G, Arya S, Kumar VL, Kumar V. Anticancer and cytotoxic properties of the latex of *Calotropis procera* in transgenic mouse model of hepatocellular carcinoma. *World J Gastroenterol* 2006;**12**:2517–22.
5. Gupta M, Kohli K, Kumar D, Gupta YK. A reverse phase high performance liquid chromatography method for simultaneous estimation of melatonin, carbamazepine epoxide and carbamazepine simultaneously in serum. *Indian J Physiol Pharmacol* 2006;**50**:427–30.
6. Gupta MK, Neelakantan TV, Sangamitra M, Tyagi RK, Dinda A, Maulik SK. An assessment of the role of reactive oxygen species and redox signaling in norepinephrine-induced apoptosis and hypertrophy of H9c2 cardiac myoblasts. *Antioxid Redox Signal* 2006;**8**:1081–93.
7. Gupta YK, Reeta KH. Pharmacological aspects on drugs for breast disorders. *J Postgrad Med Edu Train Res* 2006;**1**:30–6.
8. Hanif K, Gupta K, Gupta S, Gupta YK, Maiti S, Pasha S. Chimeric peptide of met-enkephalin and FMRFa: Effect of chlorination on conformation and analgesia. *Neurosci Lett* 2006;**403**:131–5.
9. Kapoor N, Pant AB, Dhawan A, Dwivedi UN, Gupta YK, Seth PK, *et al.* Differences in sensitivity of cultured rat brain neuronal and glial cytochrome P450 2E1 to ethanol. *Life Sci* 2006;**79**:1514–22.
10. Kumar A, Patel S, Gupta YK, Singh MP. Involvement of endogenous nitric oxide in myeloperoxidase mediated benzo(a)pyrene induced polymorphonuclear leukocytes injury. *Mol Cell Biochem* 2006;**286**:43–51.
11. Kumar VL, Roy S, Sehgal R, Padhy BM. A comparative study on the efficacy of rofecoxib in monoarticular arthritis induced by latex of *Calotropis procera* and Freund's complete adjuvant. *Inflammopharmacology* 2006;**14**:17–21.

12. Kumar VL, Kumar S, Srivastava A, Kumar V. Observations on the presence of E domain variants of estrogen receptor-alpha in the breast tumours. *J Surg Oncol* 2006;**94**:332–7.
13. Misra R, Mangi S, Joshi S, Mittal S, Gupta SK, Pandey RM. Lycored as an alternative to hormone replacement therapy in lowering serum lipids and oxidative stress markers: A randomized controlled clinical trial. *J Obstet Gynecol Res* 2006;**32**:299–304.
14. Patel S, Singh V, Kumar A, Gupta YK, Singh MP. Status of antioxidant defense system and expression of toxicant responsive genes in striatum of maneb- and paraquat-induced Parkinson's disease phenotype in mouse: Mechanism of neurodegeneration. *Brain Res* 2006;**1081**:9–18.
15. Reeta KH, Mediratta PK, Rathi N, Jain H, Chugh C, Sharma KK. Role of k- and o- opioid receptors in the antinociceptive effect of oxytocin in formalin-induced pain response in mice. *Regul Pept* 2006;**135**:85–90.
16. Sehgal R, Roy S, Kumar VL. Evaluation of cytotoxic potential of latex of *Calotropis procera* and podophyllotoxin in *Allium cepa* root model. *Biocell* 2006;**30**:9–13.
17. Shukla J, Bandopadhyaya GP, Varma IK, Kumar R, Maulik SK. Morphology and release kinetics of technetium-99m(V) dimercaptosuccinic acid loaded, poly(lactic-co-glycolic) acid microspheric delivery system. An experimental approach that may be used for targeted radiation treatment. *Hell J Nucl Med.* 2007;**10**:9–13.
18. Singh MP, Patel S, Dikshit M, Gupta YK. Contribution of genomics and proteomics in understanding the role of modifying factors in Parkinson's disease. *Indian J Biochem Biophys* 2006;**43**:69–81.
19. Sood S, Narang D, Thomas MK, Gupta YK, Maulik SK. Effect of *Ocimum sanctum* Linn on cardiac changes in rats subjected to chronic restraint stress. *J Ethnopharmacol* 2006;**108**:423–7.
20. Thomas MK, Gupta YK. Drug-eluting stents: A pharmacoclinical perspective. *Natl Med J India* 2006; **19**:195–9.
21. Velpandian T, Saha K, Ravi AK, Kumari SS, Biswas NR, Ghose S. Ocular hazards of the colors used during the festival-of-colors (*Holi*) in India—malachite green toxicity. *J Hazard Mater* 2007;**139**:204–8.
22. Velpandian T, Bankoti R, Humayun S, Ravi AK, Kumari SS, Biswas NR. Comparative evaluation of possible ocular photochemical toxicity of fluoroquinolones meant for ocular use in experimental models. *Indian J Exp Biol* 2006;**44**:387–91.

### Abstracts

23. Kumar VL. Toxicity concerns of medicinal plants. *J Indian Soc Toxicol* 2006;**2**:11.
24. Kumar VL. Estrogen receptor—alpha and variants of its hormone—binding domain in breast cancer. *Indian J Physiol Pharmacol* 2006;**52**:31.
25. Kumar VL. Estrogen receptor—alpha and its E-domain variants in breast cancer. *Indian J Pharmacol* 2006;**38**:S36.

26. Mehla J, Reeta KH, Kumar G, Gupta YK. Effect of curcumin on epileptic seizures and oxidative stress in pentylenetetrazole-induced kindling in rats. *Indian J Physiol Pharmacol* 2006;**52**:186.
27. Mehla J, Reeta KH, Kumar G, Gupta YK. Effect of curcumin on cognitive impairment induced by pentylenetetrazole kindling in rats. *Indian J Pharmacol* 2006;**38** (Suppl.):S51.
28. Reeta KH, Mehla J, Kumar G, Gupta YK. Effect of garlic on cyclosporine-induced hepatotoxicity in rats. *Indian J Physical Pharmacol* 2006;**52**:190.
29. Reeta KH, Kumar R, Mehla J, Gupta YK. Evaluation of the effect of cyclosporine and resveratrol in the middle cerebral artery occlusion model of focal cerebral ischemia in rats. *Indian J Pharmacol* 2006;**38** (Suppl.): S52.
30. Gupta M, Kohli K, Gupta YK. A new reverse phase HPLC method for extraction, separation and quantification of melatonin, carbamazepine epoxide and carbamazepine simultaneously in serum samples. *Acta Pharmacologica Sinica*. Abstracts of the 15th World Congress of Pharmacology, Beijing, China; 2–7 July 2006.
31. Pathak A, Malhotra J, Raina V, Arya DS, Gupta YK. Single dose pharmacokinetic study of thalidomide in patients with multiple myeloma. *Acta Pharmacologica Sinica*. Abstracts of the 15th World Congress of Pharmacology, Beijing, China; 2–7 July 2006.
32. Sharma M, Briyal S, Gupta YK. Effect of vine shoot extract—vineatrol against pentylenetetrazole-induced seizures in rats. *Acta Pharmacologica Sinica*. Abstracts of the 15th World Congress of Pharmacology, Beijing, China; 2–7 July 2006.

### Chapters in Books and Monographs

1. Biswas NR, Ravi AK, Gogoi M. Nanotechnology in ophthalmology. In: Garg A, Fine IH, Pallikaris IG, Chang DF, Tsuneoka H, Bovet JJ (eds). *Innovative techniques in ophthalmology*. New Delhi: Jaypee Brothers; 2006:401–7.
2. Biswas NR, Verma K, Gupta SK, Velpandian T. Drugs used for the management of ocular viral infections. In: Gupta AK, Krishna V (eds). *Contemporary perspectives on ophthalmology*. 1st ed. New Delhi: Elsevier; 2006:88–97.
3. Biswas NR, Verma K, Gupta SK, Velpandian T. Antifungal drugs for ophthalmic use. In: Gupta AK, Krishna V (eds). *Contemporary perspectives on ophthalmology*. 1st ed. New Delhi: Elsevier; 2006:98–106.
4. Biswas NR, Verma K, Gupta SK, Velpandian T. Fluoroquinolones and other antibiotics in the management of ocular infections. In: Gupta AK, Krishna V (eds). *Contemporary perspectives on ophthalmology*. 1st ed. New Delhi: Elsevier; 2006: 107–26.
5. Biswas NR, Mohanty S, Das GK, Gogoi M. Clinical applications of antibiotics in the eye. In: Garg A, Sheppard JD, Donnenfeld ED, Friedlaender M (eds). *Clinical applications of antibiotics and anti-inflammatory drugs in ophthalmology*. 1st ed. New Delhi: Jaypee Brothers; 2007:146–54.
6. Biswas NR, Mohanty S, Das GK, Gogoi M. Pre- and post-operative antibiotic prophylaxis in cataract surgery. In: Garg A, Sheppard JD, Donnenfeld ED, Friedlaender M (eds)

- Clinical applications of antibiotics and anti-inflammatory drugs in ophthalmology*. 1st ed. New Delhi: Jaypee Brothers; 2007:124–32.
7. Biswas NR, Das GK, Gupta V. Management of iatrogenic inflammation of the eye. In: Garg A, Sheppard JD, Donnenfeld ED, Friedlaender M (eds). *Clinical applications of antibiotics and anti-inflammatory drugs in ophthalmology*. 1st ed. New Delhi: Jaypee Brothers; 2007:320–9.
  8. Gupta YK, Gupta M. ‘Challenges in clinical evaluation of herbal and herbo-metallic preparations’, Proceedings of National Consultation on ‘Herbo-metallic preparations of Indian systems of medicine; safety and quality standardization’, Indian National Science Academy (INSA), Delhi; 3–4 March 2006.
  9. Gupta YK, Gupta M, Perumal S. Proceeding of the international conclave on ‘Traditional medicine’, AYUSH, Ministry of Health and Family Welfare, Government of India; 16–17 November 2006.

### **Book**

Singh S. *Pharmacology for nurses*. 1st ed. New Delhi: Academa Publishers; 2006.

## **PATIENT CARE**

### **Clinical pharmacology facility**

A newly constructed wing in new private ward building was taken up as ‘Clinical Pharmacology Wing’ by the Department of Pharmacology in collaboration with Forensic Medicine to upscale patient care facilities and in-patient wards for various clinical pharmacology activities.

### **Therapeutic drug monitoring facility**

Therapeutic drug monitoring has become important for dose titration of many drugs of narrow therapeutic margin. The Department of Pharmacology in collaboration with the Department of Nephrology at AIIMS has started therapeutic drug-monitoring facility of several drugs for patient care and research. Monitoring of antiepileptic drugs, immunosuppressants such as cyclosporine, and methotrexate have been started for patient care free of cost.

### **National poison information centre**

The Department of Pharmacology has a National Poison Information Centre, which is functioning round the clock and caters to calls from all over the country in providing information about poisoning, management, symptomatology and specific antidotes. Some qualitative as well as quantitative tests are done in the department for various poisons.

### **National pharmacovigilance programme**

Central Drugs Standard Control Organization (CDSCO), Ministry of Health, Government of India has initiated the National Pharmacovigilance Programme with 32 centres including five regional and two zonal centres. AIIMS is the designated zonal centre for the North East region of the

country and receives data from peripheral and regional centres of this region. The data are then collated and analysed for causality assessment of the adverse drug reactions for submission CDSCO, which is the national centre.

### **Urinary catecholamine test**

24-hour urine catecholamine estimation has been done on 200 samples obtained from various clinics of AIIMS and other hospitals of NCT of Delhi for the diagnosis of pheochromocytoma.

## **AWARDS HONOURS AND SIGNIFICANT EVENTS**

**Dr Y.K. Gupta** was elected President, Indian Pharmacological Society (2005–2006); Member, Review Committee of Central Council for Research in Ayurveda, Siddha and Homeopathy; Member, Review Committee of Central Council for Research in Unani Medicine (CCRUM); Chairman, National Technical Committee on Good Laboratory Practices (GLP); Member, Expert Group to review applications for waiver of toxicity data for Directorate of Plant Protection, Quarantine and Storage; Member, Task Force to increase the undergraduate and postgraduate seats at AIIMS; Chairman, Project Advisory Committee on Biomedical Science and Technology, Department of Science and Technology; Member, Screening Committee for HIV/AIDS under Golden Triangle Partnership Programme, Central Council for Research in Ayurveda and Siddha, Department of AYUSH; Member, Working Group on Development of Antifertility Agent Indian System of Medicine (ISM) Drug Pippalyadi Yoga; Member, Task Force on 'Quality Standards of Indian Medicinal Plants' by ICMR; Member, Task Force for Science and Society Division of Department of Science and Technology; Member, Review Group of Programme 'Charak' by Defence Research and Development Organization, Delhi; Chairman, Ethics Committee, Fortis Flt Lt Rajan Dhall Hospital, Vasant Kunj, New Delhi; Expert Member, Biomedical Ethics Committee, Sitaram Bhartiya Institute for Science and Research; Chairman, Committee for Amendment of Insecticides Rules, 1971, Directorate of Plant Protection and Quarantine and Storage, Faridabad; Member, Task Force on Biotechnology for Medicinal and Aromatic Plants of Department of Biotechnology; Member, Task Force of Indian National Science Academy (INSA); Member, Ethics Committee, AIIMS; Member, National Disaster Management Authority, Government of India; Member, Navodaya Vidyalaya Samiti; Member, High Powered Committee on 'Global Environment Change and Health' of Indian Council of Medical Research (ICMR); Member, Drug Selection Committee, AIIMS; Member, Project Review Group INDO-US Project proposals of National Institute of Occupational Health, Ahmedabad; Member, Scientific Advisory Committee on Food and Water Safety, International Life Sciences Institute, India; Member, Expert Group for Pesticides, Directorate of Plant Protection, Quarantine and Storage, Faridabad; Editor, *Indian Journal of Pharmacology and Physiology (IJPP) (Pharmacology)*; Coordinator, Zonal Centre of National Pharmacovigilance Programme under the aegis of the CDSCO; Member, Research Council, Central Drugs Research Institute, Lucknow and Centre for Cellular and Molecular Biology, Hyderabad; Member, Institutional Review Board for National Institute of Health and Family Welfare, Delhi; Member, International Union of Nutritional Sciences (IUNS)–International Union of Physiological Sciences (IUPS)–International

Union of Basic and Clinical Pharmacology (IUPHAR) National Committee; Member of Consumer Awareness Task Force, Ministry of Health and Family Welfare; Member, National Environmental, Engineering Research Institute, Nagpur; Member, Editorial Board: *Indian Journal of Experimental Biology*, *Indian Journal of Pharmacology*, *Journal of Ecophysiology and Occupational Health*, *Annals of Neurosciences*, *Indian Journal of Medical and Pediatric Oncology*; Chaired a scientific session in International Symposium on 'Recent advances in cardiovascular diseases'; 14–15 February 2007.

**Dr V.L. Kumar** was awarded A.V. Tilak Parvathy Devi Prize for the best research paper in the area of endocrinology by the Association of Physiologists and Pharmacologists of India; 2006.

**Dr S.K. Maulik** was included as Member, Fellowship Expert Group (Pharmacology), Fellowship Expert Group (Traditional Medicine), Technical Expert Group on Medicinal Plant Monograph, Indian Council of Medical Research (ICMR), New Delhi; Member, Editorial Board, *Indian Journal of Pharmacology*, Member, Executive Committee, Heart Failure Society, India.

**Dr K.H. Reeta** was awarded C.L. Malhotra Prize for the best paper in Pharmacology by the Association of Physiologists and Pharmacologists of India; 2006.

## 9.29 Physical Medicine and Rehabilitation

### Professor and Head

U. Singh

### Additional Professor

Sanjay Wadhwa (on lien from 1 March 2006)

### Associate Professors

S.L. Yadav

Gita Handa

### EDUCATION

The department is involved in teaching of undergraduate medical students during MB,BS course through lectures, integrated seminars and practical demonstration/ visit to department including prosthetic–orthotic workshop.

The department is providing MD in Physical Medicine and Rehabilitation (PMR) training to postgraduate students, besides orientation training of MHA, MD (Community Medicine, Pharmacology, Medicine, Rheumatology, Paediatrics), MS (Orthopaedics), DM (Neurology and Paediatric Neurology) students, WHO fellows and postgraduate nursing students. The faculty has been involved in guiding postgraduate students of Orthopaedics, Pharmacology, Community Medicine and Paediatrics in their thesis, and Computer Facility project trainees.

### Continuing Medical Education

The faculty and resident doctors of the department participated in a number of national and international CME programmes, conferences, seminars, symposia and panel discussions.

### Lectures delivered

#### Dr U. Singh

- Was a panelist during a discussion on ‘Surgical versus conservative management of spinal cord injury’, VII Annual Conference of Indian Association of Physical Medicine and Rehabilitation (IAPMR) (Delhi Chapter), New Delhi; 15–16 April 2006.
- ‘Strategies of physical medicine and rehabilitation in rheumatological conditions’, National Rheumatology Update 2006, Army Hospital (Research and Referral), Delhi Cantt; 19–20 August 2006.
- ‘PMR interventions in spondarthritides’, Bone and Joint Decade Symposium, Indian Orthopaedic Association Conference (IOACON) 2006, New Delhi; 10 November 2006.
- ‘Experiences in multiple sclerosis’, Training Workshop on Multiple Sclerosis, Multiple Sclerosis Society of India, New Delhi; 14 February 2007.



- ‘Advances in the upper extremity prostheses’, CME Programme, Kerala Chapter of IAPMR, Calicut; 24–25 February 2007.

#### **Dr Gita Handa**

- ‘Neural prosthesis: Past, present and future’, IAPMR Mid-term CME, SV National Institute of Rehabilitation Training and Research (NIRTAR), Orissa; 8–11 September 2006.
- ‘Rehabilitation in multiple sclerosis’, Indo-UK workshop on Multiple Sclerosis, Multiple Sclerosis Society of India; 14 February 2007.
- ‘Spinal trauma rehabilitation: Issues and perspectives’, IAPMR Kerala State Chapter Conference; 24–25 February 2007.
- Guest lectures at the Institute of Physically Handicapped for students of Bachelors in Orthotics and Prosthetics.

#### Lectures delivered in mass media

##### **Dr U. Singh**

- Expert guest, ‘Naya Savera’ programme on Doordarshan to talk on issues related to spondylitis; 13 April 2006.
- Expert guest, Total Health programme on Doordarshan to talk on issues related to disabilities and their rehabilitation on the World Disabled Day; 3 December 2006.

##### **Dr Gita Handa**

- Expert guest, Total Health programme on Doordarshan to talk on issues related to postures and pain; 23 July 2006.
- Expert guest, Total Health programme on Doordarshan to talk on issues related to disability on the World Disabled Day; 5 December 2006

#### **Camps**

Faculty and residents participated in different camps

Camp at Srikrishna Janambhumi Mandir at Mathura

Camp organized by the Handicap Welfare Foundation

#### **RESEARCH**

##### **Collaborative Projects**

##### **Dr U. Singh**

##### **International Classification of Functioning (ICF) Delphi studies on:**

1. Stroke
2. Ank Spond [Ankolysing spondylitis]
3. SCI [Spinal cord injuries]

##### **Dr Gita Handa**

Participated in ICF Delphi Studies on ‘Spinal cord injuries management’.

## PUBLICATIONS

### Journals

1. Sindhu V, Borah D, Singh U. Significance of grip strength in geriatric rehabilitation: A pilot study. *Indian J Phys Med Rehabil* 2006;**17**:5–7.
2. Borah D, Wadhwa S, Singh U, Gupta AK. Sympalangism in an Indian family. *Indian J Phys Med Rehabil* 2006;**17**:18–20.
3. Sindhu V, Gupta AK, Araf MM, Borah D, Singh U, Wadhwa S. Multiple disabilities—challenges in rehabilitation. *Indian J Phys Med Rehabil* 2006;**17**:41–4.
4. Singh U. Pricks (Editorial). *Indian J Phys Med Rehabil* 2006;**17**:ii.
5. Singh U. Responsibilities of physiotherapist (Editorial). *Indian J Physiotherapy Occupational Therapy* 2006;**1**:1–2.
6. Handa G. Neural prosthesis—past, present and future (Editorial). *Indian J Phys Med Rehabil* 2006;**17**:

## PATIENT CARE

### Facilities Available in the Department

The department provides outpatient, inpatient and outreach services to people with disabilities. The department has many diagnostic as well as therapeutic facilities which include comprehensive rehabilitation facilities, balance laboratory, computerized dynamometry, electrophysiology laboratory, minor OT, etc.

### OPD and special clinics

#### New cases

OPD	11,265
Ballabgarh	3,638
Camps	250
Prosthetic and orthotic	2,069
<b>Total</b>	<b>17,222</b>

#### Old cases

OPD	7,557
OPD visits: PT section	17,818
OPD visits: OT section	14,264
OPD visits: MSW	2,148
OPD visits: Vocational counsellor	2,236
Disability evaluation clinic	191
Railway concession certificates	882
Prosthetic and orthotic	9,046
Minor OT procedures	2,355
<b>Total</b>	<b>56,497</b>

## **AWARDS AND HONOURS**

**Dr U. Singh**, Member of the Sub-Committee on Locomotor Disability and Leprosy (Cured), of the Rehabilitation Council of India, Ministry of Social Justice and Empowerment; Chairman, Specialty Advisory Board in PMR, National Board of Examinations; Chairman, Technical Advisory Group, District Rehabilitation Centre Scheme, Ministry of Social Justice and Empowerment; Member, Executive Council, National Institute for the Orthopaedically Handicapped, Kolkata; Inspector, Guru Govind Singh Indraprastha University, Government of National Capital Territory, Delhi; Inspector, Rehabilitation Council of India; Member Bureau of Indian Standards, Rehabilitation Appliances and Equipment for Disabled Sectional Committee (MHD 10); Consulting Editor and Reviewer, *Journal of Rehabilitation Council of India, Locomotor and Associated Disabilities*. Editor, *Indian Journal of Physical Medicine and Rehabilitation*; Chairman of the Scientific Committee, 7th Annual Conference of the Delhi Chapter of Indian Association of Physical Medicine and Rehabilitation (IAPMR), New Delhi; 15–16 April 2006; Chairman of the Scientific Session I, Annual Conference of the Kerala Chapter of IAPMR, Calicut; 24–25 February 2007.

**Dr Gita Handa**, Assistant Editor, *Indian Journal of Physical Medicine and Rehabilitation*; Examiner for Bachelor of Orthotics and Prosthetics, Delhi University; Examiner for Post Graduate Programme in Sports Physiotherapy for Guru Nanak Dev University, Amritsar.

## **VISITING SCIENTISTS**

1. Dr Maya Therattil, MD, Department of Rehabilitation Medicine, Spinal Cord Injury Medicine, Montefiore Medical Center, Jack D Weiler Hospital of the Albert Einstein College of Medicine, New York USA, delivered a talk on ‘Spinal cord injury’; 29 November 2006.
2. Dr Amarjit S. Arneja, Director, Peripheral Arterial Disease and Amputee Programme, Department of Medicine, University of Manitoba, Winnipeg, Canada delivered a talk on ‘Effects of anesthesia on pain after lower limb amputation’; 21 February 2007.

## 9.30 Physiology

### Professor and Head

V. Mohan Kumar  
(till 30 September 2006)

J. Sengupta  
(from 1 October 2006)

### Professors

R. Mathur

K.K. Deepak

H.N. Mallick

D. Ghosh

### Emeritus Professor

B.K. Anand

### Additional Professors

S.C. Bhatia\*  
(on deputation to BPKIHS,  
Nepal till 12 January 2007)

S.C. Mahapatra

K.P. Kochhar

### Associate Professors

Ratna Sharma

Nalin Mehta

### Assistant Professors

Suman Jain

Ashok Kumar Jaryal

Raj Kumar Yadav

Sanjay S. Sood

Anjana Talwar

\*Professor S.C. Bhatia passed away on 13 January 2007

## EDUCATION

### Undergraduate, Postgraduate and Paramedical

The department provided about 400 hours of teaching to the first year MBBS students and about 60 hours of teaching to students of BSc Nursing and allied courses, besides conducting MSc (Physiology) and MD (Physiology) courses and guiding PhD students. A module on Bioethics has been included in the departmental postgraduate programme.

### Short- and long-term training

The department provided short-term training for 3 months (1 September–12 November 2006) to a student from Department of Physiology, Maharaja Agrasen Medical College, Agroha, Hisar, Haryana; to a student for two weeks (25 December 2006–6 January 2007) to a student from Department of Physiology, Centre for Basic Sciences, Kasturba Medical College Bejai, Mangalore and to a student for 6 months (6 January–5 June 2006), Bundelkhand University, Jhansi.

## **Continuing Medical Education**

### **Organized by the department**

- 1st National Sleep Medicine School, AIIMS, New Delhi; 14–15 October 2006.
- National workshop on ‘Evaluation of plasticity in pain’, AIIMS, New Delhi; 19 October 2006.
- Training workshop for students and faculty members on 1. Ethics of Research involving Yoga and Naturopathy 2. Bioethics in Yoga and Naturopathy Practice, 3. Priority Setting in Research, 4. Essentials of Grant Proposal writing, in a Training Workshop on Research Yoga and Naturopathy (sponsored by the Central Council for Research on Yoga and Naturopathy), National Institute of Naturopathy, Pune; 2 December 2006.
- Pre-conference workshop on ‘Autonomic function testing: Principles and methods’ during the 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 19 December 2006.
- CME-cum-Workshop under the theme ‘Modern recording techniques in Physiology and Pharmacology’ during the International conference on ‘Cardio-pulmonary regulation in health and disease: Molecular and systemic integration’, Vallabhbhai Patel Chest Institute, University of Delhi, Delhi; 25 February 2007.

### **Lectures delivered**

#### **Dr R. Mathur**

- ‘Transition pattern in pain response from hyperacute to chronic stage’, National Workshop on Evaluation of Plasticity in Pain, AIIMS, New Delhi; 19 October 2006.
- ‘Demonstration of exteroceptive suppression of temporalis muscle’, National Workshop on Evaluation of Plasticity in Pain, AIIMS, New Delhi; 19 October 2006.
- ‘Procedure for recording nociceptive flexion reflex’, National Workshop on Evaluation of Plasticity in Pain, AIIMS, New Delhi; 19 October 2006.
- ‘Role of magnetic field in spinal cord injury’, Workshop cum Symposium on Electromagnetic Fields in Environment: Implications and Solutions, Jawaharlal Nehru University, New Delhi; 23–24 March 2007.

#### **Dr N. Mehta**

- ‘Relevance of yoga in modern medicine’, Pre-conference workshop on Yoga, during the 52nd Annual Conference of the Association of Physiologists and Pharmacologists of India, Surat; 19–23 December 2006.

#### **Dr S. Jain**

- ‘Electrophysiological and biochemical assessment of pain’, National Workshop on Evaluation of Plasticity in Pain, AIIMS, New Delhi; 19 October 2006.

## **National and International Conference**

### **Organized by the department**

- Professor Baldev Singh Symposium on Consciousness, AIIMS, New Delhi; 2 April 2006.
- National Symposium on 'Neural plasticity and repair', AIIMS, New Delhi; 18 October 2006.
- Updates in Pain Physiology during the 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 21 December 2006.

### **Lectures delivered**

#### **Dr J. Sengupta**

- 'Endocrine regulation of embryo implantation', Reproductive Biology of Implantation and Endometrial Receptivity, XVIII International Federation of Gynaecology and Obstetrics World Congress, Malaysia; 5–10 November 2006.

#### **Dr R. Mathur**

- 'Consequences of pain in early life and its remedy: Maternal responsibility', Workshop on 'Consultation and experience-sharing on safe motherhood—looking ahead', Birla Institute of Technology and Sciences, Pilani; 8–9 September 2006.
- 'Recovery of motor functions by electrical stimulation in spinalized rats', National symposium on 'Neural plasticity and repair', AIIMS, New Delhi; 18 October 2006.
- National Workshop on 'Evaluation of plasticity in pain', AIIMS, New Delhi; 19 October 2006.
- 'Effectiveness of lifestyle management course including Yoga in management of headache', 9th International Congress of Behavioural Medicine, Bangkok, Thailand; 29 November–2 December 2006.
- 'Physiological basis of pain management', Rajasthan University, Jaipur; 12 December 2006.
- 'Assessment techniques for pain status', Symposium on Updates in Pain Physiology, during the 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 21 December 2006.
- 'Pattern of social behaviour in rats exposed to chronic extremely low frequency-magnetic field', Workshop cum Symposium on Electromagnetic Fields in Environment: Implications and Solutions, Jawaharlal Nehru University, New Delhi; 23–24 March 2007.

#### **Dr K.K. Deepak**

- 'Revisiting the neurophysiologic model of meditation', 16th International Conference on Frontier in Yoga Research and its Applications, Kolkata; 25–27 December 2006.
- 'Indigenous software for quantification of autonomic tone under the theme Information and Communication Technology/Electronics Applications in Core Sectors, Electronics and Information Technology Exposition (ELITEX 2007), Department of Information Technology, Ministry of Communications and Information Technology, New Delhi; 10–11 January 2007.

- ‘Assessing autonomic nervous system non-invasively’, International Conference on ‘Cardio-pulmonary regulation in health and disease: Molecular and systemic integration’, University of Delhi, Delhi; 25 February 2007.
- ‘Conventional and yogic intervention obstacles and solutions’, National seminar on Yoga Therapy for Psychiatric and Neurological Disorders, Morarji Desai National Institute of Yoga, New Delhi; 2 March 2007.
- ‘Control systems in autonomic nervous system’, Technical Education Quality Improvement Programme short term course on recent advances in Instrumentation and Control Engineering, Department of Instrumentation and Control Engineering, B.R. Ambedkar National Institute of Technology, Jalandhar; 5 March 2007.
- ‘Physiologic basis of nonpharmacologic intervention in neurological disorders’, National Yoga Week–2007, Morarji Desai National Institute of Yoga, New Delhi; 12–16 March 2007.
- ‘Correlation between baroreflex sensitivity and respiratory sinus arrhythmia in myocardial infarction patients’, Annual meeting of British Society for Cardiovascular Research Spring Meeting, Reading, UK; 29 March 2007.

#### **Dr H.N. Mallick**

- ‘An insight into waking brain’, Professor Baldev Singh Symposium on Consciousness, AIIMS, New Delhi; 2 April 2006.
- ‘Neural correlates of Rapid Eye Movement (REM) sleep’, Max Hospital, New Delhi; 15 October 2006.
- ‘Looking into the waking brain’, Annual Conference of Association of Physiologists of Orissa, Bhuvneshwar; 19 November 2006.
- ‘Medial septum and sleep’, Symposium on Neurophysiology of Sleep, during the 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 21 December 2006.

#### **Dr N. Mehta**

- ‘Ethics of research and publication’, National Workshop on Postgraduate Dental Education, AIIMS, New Delhi; 28–29 April 2006.
- ‘Informed consent: Content and process’, Fogarty International Centre, National Institute of Health, USA sponsored Workshop on Ethical Review for Protection of Human Participants involved in Research, Indian Council of Medical Research, New Delhi; 29 April 2006.
- ‘Ethics of clinical trials involving Yoga and naturopathy as intervention; bioethics in Yoga and naturopathy practice’, priority setting in research and grant proposals: The essential aspects, Training Workshop on Research Methodology in Yoga and Naturopathy, Central Council for Research New Delhi; 2 September 2006.
- ‘Identifying outliers, processing missing data, and data transformation’, Workshop on

Scientific Writing and Grant Writing. Chandigarh Chapter of the Association of Physiologists and Pharmacologists of India, Chandigarh; 15 September 2006.

- ‘Importance of bioethics in medical research methodology and bioethics in research and practice of naturopathy and Yoga’, National Seminar on Bioethics in medicine and its application to Naturopathy and Yoga Research, Hyderabad; 2–3 February 2007.

#### **Dr R.K. Yadav**

- ‘Attenuation of oxidative stress injury by short term yoga-based life style intervention’, Symposium on ‘Therapeutic potential of yoga and naturopathy’, 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 23 December 2006.

#### **Dr A. Jaryal**

- ‘Heart rate variability’, pre-conference Workshop on Autonomic Function Testing: Principles and Methods, 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 19 December 2006.
- ‘Cardiac autonomic tone in paediatric hereditary sensory and autonomic neuropathy’, 52nd National Conference of Association of Physiologists and Pharmacologists of India, Surat; 19–23 December, 2006
- ‘Thallium-201 positive patients of coronary artery disease show high heart rate variability’, Annual Meeting of British Society for Cardiovascular Research Spring Meeting; Reading, UK; 29 March 2007.

#### **Dr S. Sood**

- ‘Neuroanatomical correlates of consciousness’, Professor Baldev Singh Symposium on Consciousness’, AIIMS, New Delhi; 2 April 2006.

## **RESEARCH**

### **Funded Projects**

#### **Completed**

1. Effect of (Ala<sup>8,13,18</sup>)-magainin II amide on human trophoblast cells *in vitro*. D. Ghosh. Funded by the Indian Council of Medical Research from 15 November 2003 to 14 November 2006. Funds: Rs 17,17,731.
2. A randomised controlled trial on the efficacy of yogic intervention in premenstrual syndrome. R. Sharma. Funded by the ICMR (2003–2006). Funds: Rs 16,83,000.
3. Yogic relaxation in the management of ulcerative colitis. K.K. Deepak. Funded by the Central Council for Research in Yoga and Naturopathy from 24 September 2004 to 31 March 2007. Funds: Rs 9,63,000.
4. The effect of stress induced changes in theta and alpha bands during memory retrieval. R. Sharma. Funded by the AIIMS Research Grant (2005–2007). Funds: Rs 1.4 lakh.



5. Effect of prolonged sucrose feeding on tonic pain and oro-sensory reward. S. Jain. Funded by the AIIMS Research Grant (2005–2006). Funds: Rs 40,000.
6. Correlation between cardiovascular autonomic function and indicators of myocardial infarction. A.K. Jaryal. Funded by the AIIMS Research Grant from April 2005 to March 2007. Funds: Rs 1,00,000.

### **Ongoing**

1. Elucidating endometriosis using genomic strategy. J. Sengupta. Funded by the Department of Biotechnology from March 2006 to February 2009. Funds: Rs 1,66,94,000.
2. Defining endometrial receptivity for blastocyst implantation using cDNA based array technology. D. Ghosh. Funded by the Department of Science and Technology from 23 January 2006 to 22 January 2009. Funds: Rs 44,48,700.
3. Motor responses to noxious/non-noxious stimuli in spinalised humans and rats: Role of electromagnetic stimulation in recovery. R. Mathur. Funded by the DST (Integrated Long-term Programme of Cooperation in Science and Technology between India and Russia) from 2006 to 2009. Funds: Rs 32,67,339.
4. Multicentric trial of integrated software for quantification of autonomic tone. K.K. Deepak. Funded by the Department of Information Technology, Ministry of Communication and Information Technology from 15 March 2004 to 14 March 2008. Funds: Rs 28,33,000.
5. Development of ECG amplifier: An essential hardware for the autonomic function tests (Heart Rate Variability). K.K. Deepak. Funded by the DST from 24 September 2004 to 23 May 2007. Funds: Rs 17,26,269.20.
6. A study to assess acute mental stress induced changes in EEG, cognitive behavior and neurosteroids across the menstrual cycle and effect of meditation on stress induced changes. R. Sharma. Funded by the Central Council for Research in Yoga and Naturopathy, Ministry of Health (2006–2009). Funds: Rs 15 lakh.
7. Prenatal auditory sound stimulation: Effect on spatial memory and expression of synaptic proteins in chick hippocampus. S. Jain. Funded by the CSIR (August 2006–2009). Total Funds: Rs 15 lakh.
8. Immuno-modulatory effect of *Tulsi* (*Ocimum sanctum*) on healthy human subjects. S.C. Mahapatra. Funded by the Central Council for Research in Ayurveda and Siddha (2007–2009). Funds: Rs 14,90,018.
9. Role of glutamate microinjection at the preoptic area on sleep-wakefulness. H.N. Mallick. Funded by the Ajinomoto Incorporation Company, Japan from 2006 to 2007. Funds: Rs 6 lakh.
10. Role of the warm receptors of the preoptic area in altering sleep. H.N. Mallick. Funded by Defense Institute of Physiology and Allied Sciences from 2003 to 2006. Funds: Rs 4.66 lakh.
11. The effect of smoking on stress induced changes in cognitive functions. A. Talwar. Funded by the AIIMS Research Grant from 2005 to 2007. Funds Rs 1.4 lakh.

12. Neural correlates of conflict: An event related functional magnetic resonance imaging study. S.K. Sood. Funded by the AIIMS Research Grant from April 2006 to March 2008. Funds: Rs 1.3 lakh.
13. Histochemical investigations into the possible neural substrates responsible for sucrose induced pain modulation. S. Jain. Funded by the AIIMS Research Grant from 2005 to 2006. Funds: Rs 1 lakh.
14. Autonomic status and leptin levels in serum and peritoneal fluid of patients with pelvic endometriosis. R.K. Yadav. Funded by the AIIMS Research Grant from 2006 to 2007. Funds: Rs 1 lakh.
15. Effect of tulsi (*ocimum sanctum*) leaves on the glucose profile of NIDDM patients. N. Mehta. Funded by the AIIMS Research Grants from 2006 to 2008. Funds: Rs 80,000.

## **Departmental Projects**

### **Completed**

Comparative study of cold pressor responses by using two different temperatures

### **Ongoing**

1. Effect of varying stimulus onset asynchronies on multisensory prepulse modulation of startle response
2. Modulation of startle reflex by attention in humans

## **Collaborative Projects**

### **Ongoing**

1. Purglautation of human adult retinal pigment epithelial (GRPE) cells in the 6-hydroxydopamine and lesioned rat model of Parkinson's disease (PD) (with Neurology)
2. Assessment of endogenous opioid system and muscle spasm in headache patients (with Neurology, Psychiatry, Endocrinology)
3. Modified neuroendocrine method to estimate endogenous opioid levels in healthy volunteers (with Endocrinology)
4. Role of dehydroepiandrosterone sulphate (DHEAS) as a neuroprotective agent in Parkinson's disease (PD) (with Neurology)
5. Bioeffects of magnetic field: Role of protein kinase C and cytochrome oxidase in adult rats (with School of Environment Sciences, JNU; Biosciences, Jamia Islamia)
6. A comparison of autonomic function before and after surgical intervention in patients with temporal lobe epilepsy (with Neurology, Neurosurgery)
7. Correlation between cardiovascular autonomic function and myocardial ischemia (with Cardiology)
8. Cardiovascular autonomic functions after myocardial infarction: Effect of short-term exercise training (with Cardiology)

9. Autonomic functions and selected immune markers in inflammatory bowel disease: Role of yogic intervention (with Gastroenterology)
10. Autonomic dysfunction in newly detected Type-II diabetes mellitus patients (with Endocrinology)
11. Electro-encephalographic and sympathetic responses to visual-cues with emotional and rational contents (with Atal Bihari Vajpayee Indian Institute of Information Technology and Management, Gwalior)
12. Assessment of autonomic response and arterial stiffness using photo-plethysmographic signal (with Centre for Biomedical Engineering, IIT Delhi)
13. Efficacy of a relaxation programme during early postpartum period on volume of expressed breast milk in mothers of very preterm babies: A randomized controlled trial (with Paediatrics)
14. Correlation between cardiovascular autonomic function and myocardial ischemia (with Cardiology)
15. Cardiovascular autonomic functions after myocardial infarction: effect of short-term exercise training (with Cardiology)

## **PUBLICATIONS**

### **Journals**

1. Barde PB, Jindal GD, Singh R, Deepak KK. New method of electrode placement for determination of cardiac output using impedance cardiography. *Indian J Physiol Pharmacol* 2006;**50**:234–40.
2. Ghosh D, Najwa AR, Sengupta J. In vitro action of leukemia inhibitory factor (LIF) on mid-secretory stage endometrial stromal cells collected from hormone-simulated, ovariectomized monkey and maintained in three-dimensional primary culture. *Indian J Physiol Pharmacol* 2006;**50**:355–66.
3. Ghosh D. Evolution of medical application of syringe (Editorial). *Indian J Physiol Pharmacol* 2006;**50**:199–204.
4. Ghosh D. Quo Vadis (whither goest thou) (Editorial). *Indian J Physiol Pharmacol* 2006;**50**:325–6.
5. Ghosh D. Remembering Emile Kraeplin and calling up a paradigm shift on the eve of the first century of Alzheimer's disease (Editorial). *Indian J Physiol Pharmacol* 2007;**51**:1–3.
6. Kumar VM, Vetrivelan R, Mallick HN. Alpha-I adrenergic receptors in the medial preoptic area are involved in the induction of sleep. *Neurochem Res* 2006;**8**:1095–1102.
7. Kushal M, Sharma PK, Makharia G, Poojary G, Deepak KK. Autonomic dysfunction due to lead poisoning. *Autonomic Neuroscience: Basic and Clinical* 2007;**132**:103–6.
8. Mallick HN, Tandon S, Gulia KK, Jagannathan NR, Kumar VM. Brain areas activated after ejaculation in human subjects. *Indian J Physiol Pharmacol* 2007;**51**:81–5.

9. Mehta N. Book review. *Indian J Med Ethics: Selected readings 1993–2003*. Madhiwala N, Mamdani B, Pai S, Roy N, Srinivasan S, (eds). Forum for Medical Ethics Society and Centre for Studies in Ethics and Rights, Mumbai, 2005. 248 pp. *Natl Med J India* 2006;19:290–1.
10. Mehta N. Book review. *Ethics in Health Research: A Social Science Perspective*. In: Amar Jesani, Tejal Barai-Jaitly (eds). SER (Centre for studies in Ethics and Rights: An Institute of Anusandhan Trust), Mumbai, 2005. 272 pp. *Natl Med J India* 2006;19:335–6.
11. Pankaj A, Kotwal PP, Mittal R, Deepak KK, Bal CS. Diagnosis of post-traumatic complex regional pain syndrome of the hand: Current role of sympathetic skin response and three-phase bone scintigraphy. *J Orthop Surg (Hong Kong)* 2006;14:284–90.
12. Sengupta J, Lalitkumar PGL, Najwa AR, Ghosh D. Monoclonal anti-leukemia inhibitory factor antibody inhibits blastocyst implantation in the rhesus monkey. *Contraception* 2006;74:419–25.
13. Sengupta J. Accessing modern contraceptive technologies in India. *Indian J Physiol Pharmacol* 2006; 50:327–40.
14. Sharma R. Meditation and mental well being. *Indian J Physiol Pharmacol* 2006; 50:205–14.
15. Sharma R, Khera S, Mohan A, Gupta, N, Basu Ray R. Assessment of computer game as a psychological stressor. *Indian J Physiol Pharmacol* 2006;50:367–74.
16. Singh D, Vinod K, Saxena SC, Deepak KK. Spectral evaluation of aging effects on blood pressure and heart rate variation in healthy subjects. *J Med Eng Tech* 2006;30:145–50.
17. Sood SK. Nobel prize in physiology or medicine 2005: Treating ulcers with antibiotics. *Indian J Physiol Pharmacol* 2006;50:91–2.
18. Sood SK. Nobel prize in physiology or medicine 2005: Sigmund Freud. *Indian J Physiol Pharmacol* 2007; 51:4–6.
19. Tewari HK, Gadia R, Deepak KK, Venkatesh P, Garg SP. Sympathetic-parasympathetic activity and reactivity in central serous chorioretinopathy. A case–control Study. *Invest Ophthalmol Vis Sci* 2006;47:3474–8.
20. Vetrivelan R, Mallick HN, Kumar VM. Sleep induction and temperature lowering by medial preoptic alpha(1) adrenergic receptors. *Physiol Behav* 2006;87:707–13.
21. Yadav RK, Gupta R, Molly MT, Gopal P, SM Madhavan, Deepak KK. Autonomic status in systemic sclerosis in India. *Indian J Physiol Pharmacol* 2006;50:397–402.

### Abstracts

1. Barde PB, Bhatnagar A, Jindal GD, Narang R, Deepak KK. Comparison of cardiac output measurement by impedance cardiography (ICG) using new electrode placement with Fick's method. *Indian J Physiol Pharmacol* 2006;52:163.
2. Bhatia R, Mathur R. Effectiveness of lifestyle management course including Yoga in management of headache. *Int J Behav Med* 2006;13:339.
3. Choudhary N, Barde P, Das L, Das S, Deepak KK. Autonomic functions and brain blood flow in a diabetic patient with left thalamic infarction. *Indian J Physiol Pharmacol* 2006;52:138.

4. Deepak KK, Wankhar S, Jaryal A, Anand S. Computerized program for providing visually guided instructions for performing deep breathing test for autonomic function testing. *Indian J Physiol Pharmacol* 2006;**52**:139.
5. Jain S, Mishra P, Mathur R. Attenuation of aggressive behaviour by chronic exposure to electromagnetic field. *Int J Behav Med* 2006;**13**:165.
6. Jaryal A, Kushal M, Deepak KK, Kalra V. Cardiac autonomic tone in paediatric hereditary sensory and autonomic neuropathy. *Indian J Physiol Pharmacol* 2006;**52**:133.
7. Khadka R, Narang R, Patel CD, Jaryal A, Deepak KK. Thallium-201 myocardial SPECT positive patients of anginal symptoms show higher heart rate variability than thallium-201 negative patients of anginal symptoms. *Indian J Physiol Pharmacol* 2006;**52**:109.
8. Kushal M, Goyal V, Deepak KK. Autonomic reactivity in micturition syncope. *Indian J Physiol Pharmacol* 2006;**52**:205.
9. Mallick HN, Srividya R, Gulia KK, Kumar VM. Septal nuclei and sleep. *Indian J Physiol Pharmacol* 2006;**52**:41.
10. Mane V, Jaryal A, Patil U, Deepak KK. Indigenous software for quantification of autonomic tone (HRV) and its validation. *Indian J Physiol Pharmacol* 2006;**52**:172.
11. Mathur R., Dalmia A, Jain S, Bhatia R, Bhattacharjee M. Assessment techniques for pain status. *Indian J Physiol Pharmacol* 2006;**52** (Suppl.):49.
12. Sharma P, Makharia G, Jaryal A, Deepak KK. Effect of water ingestion on gastric electrical activity and heart rate variability in patients with achalasia cardia. *Indian J Physiol Pharmacol* 2006;**52**:139.
13. Suri M, Behari M, Velpandian T, Jain S, Mathur R. Role of palatability and ventromedial hypothalamus in biphasic pain perception in rats. *Int J Behav Med* 2006;**13**(Suppl.):154.
14. Yadav RK, RP Vempati, Basu Ray R, Mehta N, Mahapatra SC, Bijlani RL. Attenuation of oxidative stress injury by short-term Yoga-based life style intervention. *Indian J Physiol Pharmacol* 2006;**52**:79.

### **Chapter in Book**

1. Singh D, Saini BS, Kumar V, Deepak KK. Time-evolution of cardiovascular variability during autonomic function tests in physiological investigations. In: *Proceedings of the 28th IEEE Engineering in Medicine and Biology Society*. The Printing House, Inc., New York; 2006:1772–5.

### **PATIENT CARE**

Autonomic function laboratory and vascular function laboratory provide diagnostic facilities for referred patients. The laboratory provided routine test of autonomic reactivity along with autonomic tone quantification and non-invasive recording of gastric motility (electrogastrography, EGG). A total of 1,131 persons were tested for autonomic function test this year, which included 979 patients.

Integral Health Clinic is a patient care facility that offers a lifestyle modification course for the treatment of lifestyle disorders, e.g. ischemic heart diseases, hypertension, peptic ulcer syndrome, bronchial asthma, diabetes mellitus and obesity. 9 courses, attended by 76 patients were completed during the year.

**The Department also provides central facilities for:**

- Confocal Imaging Laboratory; and
- Molecular Biology Laboratory.

The department faculty and staff contributed towards the mangement of dengue out-break in Delhi; October 2006.

**AWARDS, HONOURS AND SIGNIFICANT EVENTS**

The department faculty has chaired several sessions in national and international conferences/symposia. The faculty has been assisting various universities in India and abroad in various capacities as experts and examiners.

**Dr R. Mathur** was appointed Member Board of Studies, Department of Physiology, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh; and Department of Physiology and Anatomy, Jamia Hamdard (Deemed University), Delhi; was appointed Member of PhD Sub Committee in the department of Physiology, Delhi University, Delhi.

**Khan A, Mishra P, Mathur S, Paulraj R, Behari J, Jain S, Rizvi MA, Mathur R**, received the best poster award during the workshop on ‘Evaluation of Plasticity in Pain’, AIIMS, New Delhi; 19 October 2006.

**Dr K.K. Deepak** was awarded Professor A.K. Mukherjee Memorial Oration Award 2006 by Physiological Society of India, for the year 2006; He continues to be Chairperson of ‘Scientific Commission’ for Indian Federation of Sports Medicine; He is also a member of Education Commission, International Union of Physiological Sciences (IUPS); Ethics Committee, All India Institute of Medical Sciences, New Delhi; Selection Committee for research staff for extramurally funded projects; Sub Committee (Instrumentation Development) to prepare the white paper on ‘Biomedical Engineering Research Status in India’, DST, Government of India; Advisory Committee to discuss proposals of MCI for amendment of MCI regulation on minimum standard for opening of Medical College with 100 seats capacity; Advisory Board for popular physiology textbook ‘Medical Physiology’ by Guyton and Hall; Project Advisory committee (DST) for Biomedical ‘International Collaborative Projects’; Project Evaluation Committee, Basic Medical Sciences, ICMR; Project Evaluation Committee for evaluation of extramurally funded projects scheme of Morarji Desai National Institute of Yoga; Expert Committee for re-examination of quality requirements of bullet proof jackets, Bureau of Police R&D, Ministry of Home Affairs, Government of India; Research Committee, AIIMS; Specification Committee for purchase of exercise physiology

equipments in Defense Institute of Physiology and Allied Sciences, Defence Research and Development Organization (DRDO); Advisory Committee, Central Board of Secondary Education (CBSE); Editorial Board, *International Journal of Yoga*; he was appointed as sub-editor for *Indian Medical Journal*; was appointed as nominee of Director, AIIMS in the Advisory Committee constituted by the Hon'ble Supreme Court of India, to look into the various aspects of Bhopal Gas Victims (ICMR Headquarter), New Delhi; He is also a member of Postgraduate Thesis Committee i.e. MD/MS/MHA/MSc/MCh and PhD, AIIMS; Committee for research review presentation for extramurally funded projects, AIIMS; National Advisory Committee for organizing 'National Yoga Week' and 'Re-orientation Training programme' in yoga by Morarji Desai National Institute of Yoga, Department of Ayush, Ministry of Health and Family Welfare, Government of India; selection board for recruitment of scientist(G) in DRDO, Government of India; was appointed as member Task Force committee regarding 27% reservation for OBC in higher education, AIIMS; He continues as Chairman, Counseling Committee for AIIMS Postgraduate Junior Resident/Senior Resident selection; was appointed as Central Public Information Officer for examination-related matters, AIIMS.

**Dr H.N. Mallick** we awarded Baldev Singh oration, for outstanding contribution in neurophysiology by Association of Physiologists and Pharmacologists of India, for the year 2006; was appointed Chairman, Scientific Committee: Asian Sleep Research Society (2006–2009); was appointed General Secretary for Indian Society for Sleep Research; was reappointed as Finance Secretary for Associations of Physiologists and Pharmacologists of India.

**Dr D. Kumar** was awarded the Young Investigator Award during 5th Asian Sleep Research Society Congress at Seoul, South Korea.

**Dr D. Ghosh** continues as Executive Editor of the *Indian Journal of Physiology and Pharmacology*.

**Dr N. Mehta** was appointed Associate Editor of the *Indian Journal of Physiology and Pharmacology*; awarded PSG-FAIMER Fellowship for the year 2007–2009 at the PSG-FAIMER Regional Institute, sponsored by the Foundation for Advancement of International Medical Education and Research (FAIMER), a non-profit Foundation of the Educational Commission for Foreign Medical Graduates (ECFMG) Philadelphia, USA; was appointed Member, Committee for Tele Medicine, AIIMS; was appointed Member, Telemedicine Core Group, AIIMS; was appointed Chairman, Institutional Ethics Committee for Research involving Human Subjects, Noida College of Physical Education; Noida; was appointed Member, Institutional Ethics Committee for Research on Human Subjects, Dr Ram Manohar Lohia Hospital, New Delhi.

**Dr S. Jain** was appointed as Editor, *Indian Society for Pain Research and Therapy Newsletter*.

**Dr R.K. Yadav** was awarded a 'Best Presentation' award for his research presentation in the International Conference on Controversies in Reproductive Medicine, Mumbai; 15–17 September 2006.

**Dr S. Sood** continues as Associate Editor, *Indian Journal of Physiology and Pharmacology*.

## **VISITING SCIENTISTS**

1. Professor V.D. Azelev from I.P. Pavlov Institute of Physiology, St. Petersburg, Russian Academy of Science, Russia visited the department for one month (November–December 2006).
2. Dr Makaravich T.F. from I.P. Pavlov Institute of Physiology, St. Petersburg, Russian Academy of Science, Russia visited the department for one month (November–December 2006).
3. A.H. McGregor, Professor, Biodynamics, Human Performance Group, Biosurgery and Surgical Technology Division of Surgery, Oncology, Reproductive Biology and Anaesthetics Faculty of Medicine Imperial College London visited the department and delivered the lecture on 'Understanding Spinal Function'; 9 January 2007.
4. Anna, Human Performance Group, Biosurgery and Surgical Technology Division of Surgery, Oncology, Reproductive Biology and Anaesthetics Faculty of Medicine Imperial College London visited the department and delivered the lecture on 'The Use of Transcranial Magnetic Stimulation in Understanding Spinal Cord Injury'; 9 January 2007.
5. Professor S.K. Sarna, Internal Medicine Neuro Sciences, University of Toxous Galveston visited the department and delivered the lecture on VIP-induced gene expression in gut smooth muscle cells; 31 October 2006
6. Bhanu P. Jena, Director, Nano Bio Science Institute, Department. Physiology, Wayne State University School of Medicine, Detroit, USA visited the department and delivered the lecture on Molecular Machinery and Mechanisms of Cell Secretion; 29 June 2006.
7. Deepak Shrivastav, University of California, USA visited the department and delivered the lecture on Basic Science and Understanding Sleep; 5 October 2006.



## 9.31 Psychiatry

### Professor and Head

Rajat Ray

### Professors

Manju Mehta

S.K. Khandelwal

R.K. Chadda

Pratap Sharan

### Associate Professors

Rajesh Sagar

### Assistant Professors

Nand Kumar

Mamta Sood

## EDUCATION

### A) Under Graduate

#### Teaching

24 hrs: 3<sup>rd</sup> Semester

14 hrs: 6<sup>th</sup> Semester

6 hrs: 8<sup>th</sup> Semester

#### Clinical Posting

20 days: 4-5<sup>th</sup> Semester

40 days: 6-8<sup>th</sup> Semester

**B) BSC Nursing:** 38 hrs in 2 semesters

### C) Ph. D & Postgraduate teaching

Journal discussion once every week

Seminar once every week

Case Conference once every week

Faculty/Staff presentation once every week besides CCR & CGR in every semester

Psychotherapy supervision for postgraduate psychiatry and doctoral level clinical psychology students

## Continuing Medical Education

### Conferences, workshops, seminars, training course, symposium

- “Awareness programme on ‘road rage’ for traffic police personnel” at AIIMS, New Delhi, May, 2006.

- Symposium on “Psychosocial correlates on headache in adolescents” in International Conference on Pediatric Pain, at AIIMS, New Delhi, June 2006.

## **Lectures delivered**

### **Dr. Manju Mehta**

- ‘Non-pharmacological management of attention deficit hyperactivity disorder.’ CME of Indian Psychiatric Society (North Zone) on Child Psychiatry, Srinagar, May, 2006.
- ‘Stress and time management’ National Judicial Academy, Bhopal, September, 2006.

### **Dr. R.K. Chadda**

- ‘Somatoform disorders’ Training programme for Medical Officers under District Mental Health Programme, Post Graduate Institute of Medical Sciences, Rohtak, April 2006.
- ‘Anxiety Disorders’ in Training programme for Medical Officers under District Mental Health Programme, Post Graduate Institute of Medical Sciences, Rohtak, April 2006.
- One lecture per month on various topics, Training programme in Psychiatry for Medical Officers, Govind Ballabh Pant Hospital, New Delhi, 2006.
- ‘Bipolar disorders: new horizons of development’ 59<sup>th</sup> Annual Conference of the Indian Psychiatry Society, Chennai, 4-7 January 2007.

### **Dr. Pratap Sharan**

- ‘Situation analysis and needs assessment,’ Workshop on Development of Mental Health Services in Madhya Pradesh, Bhopal, May 2006.
- ‘Training initiatives and activities,’ Workshop on Development of Mental Health Services in Madhya Pradesh, Bhopal, May 2006.
- ‘Handling of psychiatric emergencies by caregivers,’ National Workshop on Community Psychiatry Services in India – Today and Tomorrow, Indian Psychiatric Society & Indian Psychiatric Society (North Zone), Chandigarh, September 2006.

## **National and International Conferences**

### **National conferences**

#### **Dr. Manju Mehta**

- ‘Achievement Motivation in Indian Expedition Members to Antarctica,’ National Association of Psychologist (NAOP), Mumbai, December, 2006.
- ‘Depression in chronic pain,’ Annual Conference of Association of Pharmacologists and Physiologists – India (APPI), Surat, December, 2006

#### **Dr. S.K. Khandelwal**

- Mental health research in the developing in India: past, present and future,’ Annual Conference of Patna Psychiatric Society, Patna, December, 2006.

**Dr. R.K. Chadda**

- ‘Bipolar disorders: beyond euphoric mania and depression,’ 59<sup>th</sup> Annual Conference of the Indian Psychiatry Society, Chennai, 4-7 January, 2007.
- ‘Essential psychotherapy skills,’ 59<sup>th</sup> Annual Conference of the Indian Psychiatry Society, Chennai, 4-7 January 2007.
- ‘Genetic investigations in psychiatry,’ 31<sup>st</sup> Annual Conference of the Indian Psychiatric Society, North Zone, Shimla, 14-15 October, 2006.

**Dr. Pratap Sharan**

- ‘Medico-legal aspects of violence,’ Symposium on Violence and Mentally Ill: Myths and Reality, 31<sup>st</sup> Annual Conference of Indian Psychiatric Society (North Zone), Shimla, 14-15 October 2006.

**Dr. Rajesh Sagar**

- ‘Bipolar affective disorders: public health issues,’ 59<sup>th</sup> Annual National Conference of Indian Psychiatry Society, Chennai, 4-7 January, 2007.

**International Conferences****Dr. S.K. Khandelwal**

- ‘Early psychosis,’ 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006.
- ‘Working in National Health Service (NHS) in England: challenges and opportunities,’ 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006
- ‘Prioritizing mental health research in the developing countries,’ World Psychiatric Association Symposium on Psychiatry in the Developing Countries, Lahore, Pakistan, 15-18 December, 2006.

**Dr. R.K. Chadda**

- ‘Somatoform disorders: Battleground between physicians and psychiatrists,’ 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006.
- ‘National Health Service (NHS) International Fellowship Programme: genesis & progress,’ 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006.

**Dr. Rajesh Sagar**

- ‘Characteristics of major depressive disorders in adolescents versus adults,’ 17<sup>th</sup> World Congress of International Association of Child and Adolescent Psychiatry and Allied Professions (IACAPAP), Melbourne, Australia, September, 2006.

- ‘Characteristics of patients with first episode acute psychosis,’ 5<sup>th</sup> International Conference on Early Psychosis, Birmingham, United Kingdom, October, 2006.
- ‘Role of central mental health authority in India,’ 4<sup>th</sup> Annual Academic Session-2007 of the Royal College of Sri Lankan Psychiatrists, Colombo, Sri Lanka, February, 2007.
- ‘Future of France-India interactions,’ 1<sup>st</sup> Indo French Conference on Psychiatry, Psychotherapy and Psychoanalysis, New Delhi, March, 2007.

## **RESEARCH**

### **Research Projects**

#### **Ongoing**

1. Road rage – A study of aggressive behaviour. Manju Mehta. Funded by Ministry of Health & Family Welfare (MOH& FW) for two years (May 2005 to May, 2007). Funds: Rs 1 lakh.
2. Risk factors of substance use and abuse in offspring of substance abuse patients. Manju Mehta. Funded by Indian Council of Medical Research for two and half years (October 2004 to April 2007). Funds: Rs 6 lakh.
3. A phase III, randomized, placebo-controlled, double-blind trial evaluating the safety and efficacy of sublingual asenapine vs. olanzapine and placebo in in-patients with an acute mania episode. Rajesh Sagar. Funded by Pfizer from 2005. Funds: Rs. 5 lakh.

#### **Completed**

1. Mapping of mental health research capacity in low- and middle-income countries. Pratap Sharan. Funded by Global Forum for Health Research, Geneva for 1 year (2006-2007). Funds: 2 lakh (TA/DA)
2. Review of feasibility of community based project on depression/anxiety for implementation in eleven member countries. Pratap Sharan & Rajesh Sagar (both were Principal Investigators of independent arms in the review), Funded by World Health Organization: South East Asia Region for 1 year (2006-2007). Funds: Rs 2.3 Lakh.
3. A multi-center, double blind, randomized, placebo controlled, parallel group, flexible dose titration, and add-on study of mecamlamine in the treatment of major depressive disorder with subjects who are partial responders to citalopram therapy. Rajesh Sagar. Funded by Targacept (USA) for 2 years (2005 and 2006). Funds: Rs. 4 lakh.

## **PUBLICATIONS**

### **Journals**

1. Balhara Y, Sagar R, Varghese ST. Bleeding gums: duloxetine may be the cause. *J Postgrad Med* 2007;**53**: 44-5.
2. Bharadwaj R, Sharan P. The Kraepelinian dichotomy. *Br J Psychiatry* 2006;**188**:392.
3. Chadda RK, Malhotra A. An experience of provision of psychiatric services in the earthquake-affected area of Kashmir in India. *Int Psychiatry* 2006;**3**:3-5.

4. Chadda RK. SSRIs: the continuing controversy regarding association with suicide risk. **E-response** in *Lancet* (to 'How have the SSRI antidepressants affected suicide risk?' By Hall WD, *Lancet* 2006;**367**:1959-1962)
5. Chadda RK. Mental illness in family: A story of denial in a facade of social acceptance. **E-Response** in *Lancet* (to 'A tale of madness and sanity' by Andreasen N, *Lancet* 2007; **369**:633-4).
6. Chawla JM, Balhara YP, Mohan I, Sagar R. Chronic mania: An unexpectedly long episode? *Indian J Med Sci* 2006;**60**:199-201.
7. Chawla JM, Sagar R. Baclofen-induced psychosis. *Ann Pharmacother* 2006; **40**:2071-3.
8. Grover S, Padhy SK, Das CP, Vasishta RK, Sharan P, Chakrabarti S. Mania as a first presentation in mitochondrial myopathy: a case report. *Psychiatry Clin Neurosci* 2006;**60**:774-5.
9. Grover S, Sharan P, Gupta N. Aripiprazole worsens psychosis. *Prim Care Companion J Clin Psychiatry* 2006;**8**:380-1.
10. Irpati AS, Avasthi A, Sharan P. Study of stress and vulnerability in patients with somatoform and dissociative disorders in a psychiatric clinic in North India. *Psychiatry Clin Neurosci* 2006;**60**:570-4.
11. Kumar A, Chadda RK, Kumar N, Balan S, Prakash SS. Clozapine for the treatment of neurogenic bladder. *Neurol Urodyn* 2007;**26**:537-9.
12. Mari JJ, Bressan RA, Almeida-Filho N, Gerolin J, Sharan P, Saxena S. Mental health research in Brazil: policies, infrastructure, financing and human resources. *Rev Saude Publica* 2006;**40**:161-9.
13. Saxena S, Sharan P, Garrido Cumbreira M, Saraceno B. World Health Organization's Mental Health Atlas 2005: implications for policy development. *World Psychiatry* 2006;**5**:179-184.
14. Saxena S, Paraje G, Sharan P, Karam G, Sadana R. The 10/90 divide in mental health research: trends over a 10-year period. *Br J Psychiatry* 2006;**188**:81-2.
15. Sharan P, Saxena S (Editorial). World mental health: role of journals edited in developing countries. *J Indian Assoc Child Adolesc Ment Health* 2006;**2**:1-8.
16. Sharan P. Open access publishing: a public funding model (Editorial). *J Indian Assoc Child Adolesc Ment Health* 2006;**2**:38-40.
17. Sharan P. Need for epidemiological work on autism in India (Editorial). *J Indian Assoc Child Adolesc Ment Health* 2006; **2**:70-1.
18. Sharan P. Prevention of substance abuse among adolescents in low- and middle-income countries (Editorial). *J Indian Assoc Child Adolesc Ment Health* 2006; **2**:96-9.
19. Subodh BN, Grover S, Sharan P. Asperger's disorder with co-morbid social anxiety disorder: a case report. *J Indian Assoc Child Adolesc Ment Health* 2006;**2**:68-9.
20. Varghese ST, Sagar R, Jhanjee S. Chronic renal failure and electroconvulsive therapy. *Indian J Med Sci* 2006;**60**:114-5.

21. Varghese ST, Balhara YP, George SA, Sagar R. Risperidone and dysphagia. *J Postgrad Med* 2006;**52**:327-8.
22. Varghese ST, Sagar R. Naltrexone-induced weight gain. *German J Psychiatry* 2006; **9**:60-1.

### Chapter in Books

1. Khandelwal SK. *Book Review: Joy of Mental Health* In: Chatrath KJS (Ed.). Popular teaching of Prof. N.N.Wig. Servants of People Society, Chandigarh; 2006.
2. George S, Calthorpe B, Khandelwal SK. *The International Fellowship Scheme for consultant Psychiatrists : trainees' perspective*. 2006;**30**:229-31.
3. Sagar R, Garg R, Mehta M. Child Abuse-an unrecognized problem. In: Dutta N, Sachdev A (Eds.). *Advances in Pediatrics*: 1<sup>st</sup> ed. New Delhi: Jaypee Brothers; 2006: 1023-31.
4. Sagar R, Shukla N. Mania and bipolar affective disorders. In: Jiloha RC, Bhatia MS (Eds.). *Psychiatry in General Practice*. Department of Psychiatry, GB Pant Hospital, New Delhi; 2006: pp 23-38.

### PATIENT CARE

	NEW	OLD	TOTAL
<b>General OPD</b>			
Walk in Clinic	12360	21459	33189
Detailed assessment:	1742	--	1742
<b>Specialty Clinic</b>			
Child Guidance:	417	331	748
De-Addiction Clinic:	180	1318	1498
<b>Total:</b>	<b>14699</b>	<b>23108</b>	<b>37807</b>
<b>GRAND TOTAL</b>	<b>18372</b>	<b>88901</b>	<b>107273</b>
<b>Inpatient Care</b>			
Admissions:	399		
Discharges	391		
<b>Laboratory Investigations for Patient Care:</b>			
Serum Lithium level:	800		

### AWARDS AND HONOURS AND SIGNIFICANT EVENTS

**Dr. Manju Mehta** was invited for development of Curriculum on M.Phil in Clinical Psychology at BP Koirala Institute of Medicine, Dharan, Nepal in May, 2006. She was nominated as a member

of Academic Committee of IHBAS in January, 2007, as a member of Executive Committee of the workshop on road rage organized for Police Officers in May, 2006. She chaired a session at Annual Conference of Indian Association of Clinical Psychologists at Salem.

**Dr. S.K. Khandelwal** was honoured by the Psychiatrists Association of Nepal for contributions to the mental health development in Nepal on the occasion of 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006. He was also the Chairperson of the scientific programme of 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006.

**Dr. R.K. Chadda** was selected as a Member, Scientific Committee, 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, and Nov 17-19, 2006; Member, Scientific Committee, First France India Meet on Psychiatry, Psychotherapy and Psychoanalysis, New Delhi, Feb 28- March 2, 2007. He chaired sessions on 'Stem Cell Research' in International Workshop on Ethical Issues and Genetic Counselling in Mental Illness, New Delhi, 17 December 2006, 'Community and Social Psychiatry' in 2nd International Conference of SAARC Psychiatric Federation, Kathmandu, Nepal, 17-19 November, 2006; and a Symposium 'Bipolar disorders: new horizons of development' in 59<sup>th</sup> Annual Conference of the Indian Psychiatry Society, Chennai, 4-7 January 2007.

**Dr. Pratap Sharan** is serving as the *Editor, Journal of Indian Association of Child and Adolescent Mental Health, Editorial board member, Indian Journal of Psychiatry, and Editorial board member, Journal of Mental Health and Human Behavior*. He also served as a Resource Person for the following: WHO's Research for Change Initiative: Enhancing the quality of mental health publications from low- and middle-income countries, WHO/APIRE Conference on Public Health Aspects of Diagnosis and Classification, Director of Civil Aviation's Committee on prevention of and negotiating with hijackers, WHO SEARO's Video module on training in psychiatry for general practitioners, and Government of Madhya Pradesh Expert Group on Improvement of Mental health Services in the State.

**Dr. Rajesh Sagar** was awarded DJ Cohen Fellowship of the International Association of Child and Adolescent Psychiatry and Allied Professions (IACAPAP) at the 17<sup>th</sup> World Congress of IACAPAP held in Melbourne, Australia, September, 2006. He received the Membership of American Academy of Child and Adolescent Psychiatry, December, 2006. He was also nominated as a Technical Advisory Group (TAG) member of the multi-centric research project on Neuro-developmental disability in children by International Clinical Epidemiology Network (INCLIN). He delivered a guest lecture on District Mental Health Program (DMHP), Rohtak, Haryana, April, 2006. He was invited member for National Advisory meeting on modification of National Mental Health Program (NMHP), Ministry of Health & Family Welfare, New Delhi, April 2006. He was nominated as a speaker and resource person in "Workshop on Development of Mental Health

Services in Madhya Pradesh organized by Department of Medical Education, Public Health & Family Welfare, Government of Madhya Pradesh, May 2006. He was invited to attend as India coordinator of the World Mental Health Survey Consortium Annual Meeting in Providence, Rhode Island, USA, June 2006. He is a member of Scientific Advisory Committee (SAC) of the National Brain Research Centre (NBRC) and attended the 9th meeting of SAC at NBRC, Manesar, Haryana, August, 2006. He was invited as the speaker and resource person in National Consultative meeting on District Mental Health Program (DMHP) for Ministry of Health & Family Welfare organized in Bangalore, October, 2006. He was invited as an External Expert for evaluation of research projects of the Department of Science and Technology, New Delhi, Oct, 2006. He was invited as a chairperson and resource person for the National Consultation of Mental Health Policy for Jan Sawathiya Abhiyan (JSA), Bapu Trust in Pune, December, 2006. He was invited to attend and give talks in the Inter-country meeting on Developing Community Mental Health Services, in Bangkok, Thailand as a Temporary Advisor to WHO-SEARO, December, 2006. He participated as an Expert in Development of Training Video for general practioners on Mental Health. He was invited as a Chairperson in the First France India Meet on Psychiatry, Psychotherapy and Psychoanalysis, New Delhi, Feb 28- March 2, 2007.



## 9.32 Radiodiagnosis

### Professor and Head

Sushma Vashisht

### Professors

Arun Kumar Gupta

Deep Narayan Srivastava

### Additional Professor

Raju Sharma

### Associate Professors

Sanjay Thulkar  
(IRCH)

Sanjay Sharma  
(RPC)

Suman Bandhu  
(resigned on  
17 October 2006)

Ashu Seith

### Assistant Professors

Smriti Hari  
(Trauma Centre)

Shivanand Gamanagatti

Atin Kumar  
(Trauma Centre)

## EDUCATION

### Undergraduate and Postgraduate

BSc (Hons) Medical Technology in Radiography: A batch of 7 students was admitted to the course in 2006–07. This course is of 3 years' duration. A total of 18 students were enrolled in this course.

MD: There were 19 junior residents out of whom three were sponsored candidates.

### Short- and long-term training

- Short-term training in CT/MRI was imparted to 1 Radiologist from Sri Lanka for 6 months.
- Short-term training in CT/MRI was imparted to 1 Radiologist each from Afghanistan and Meghalya for 2 months.
- Short-term training in CT was imparted to 1 Radiologist from Manipur for 15 days.
- Short-term training in CT was imparted to 4 Radiographers from Afghanistan for 2 months.
- Short-term training in Digital X-ray/CT/MRI was imparted to 3 Radiographers from Bhutan for 6 months.

## **Continuing Medical Education**

### **Organized by the department**

The department organized the Annual conference of IRIA Delhi Branch on 'Body Imaging: Recent Advances and Interventions', AIIMS; 11 March 2007.

### **Lectures delivered**

#### **Dr Sushma Vashisht**

- 'Recent advances in bowel imaging', Annual conference of IRIA Delhi Branch on 'Body imaging: Recent advances and interventions', AIIMS; 11 March 2007.
- 'Imaging in single pulmonary nodule', symposium on 'Thoracic imaging', Vallabhbhai Patel Chest Institute, Delhi; 5 April 2006.

#### **Dr Arun Kumar Gupta**

- 'Respiratory disorders of childhood', 1st National Mid-term CME of Indian Society of Pediatric Radiology, Lucknow; 22 July 2006.
- 'Gastrointestinal and hepato-biliary diseases in children', Workshop in Pediatric Radiology, Bhagirathi Neotia Woman and Child Care Centre, Kolkata; 17 March 2007.

#### **Dr Deep Narayan Srivastava**

- 'Percutaneous vertebroplasty', Annual conference of IRIA Delhi Branch on 'Body Imaging: Recent Advances and Interventions', AIIMS; 11 March 2007.
- 'Radiological interventions in HCC', 1st North-East CME on Diagnostic and Interventional Radiology, North-Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong; 14-15 October 2006.
- 'Vertebroplasty in pain management', 1st North-East CME on Diagnostic and Interventional Radiology, North-Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong; 14-15 October 2006.

#### **Dr Raju Sharma**

- 'Imaging the mediastinum', Symposium on 'Thoracic imaging', Vallabhbhai Patel Chest Institute, Delhi; 5 April 2006
- 'Introduction to CT and MRI', JDW National Referral Hospital, Bhutan; 5 July 2006.
- 'Dose issues in CT', Conference on 'Advances in Medical Physics', AIIMS; July 2006.
- 'Imaging of benign bone lesions', Annual Conference of Indian Radiology and Imaging Association, North Zone Chapter, IGMC, Shimla; 1-2 October 2006.
- 'Film reading session', Annual conference of IRIA Delhi Branch on 'Body imaging: Recent advances and interventions', AIIMS; 11 March 2007.

**Dr Sanjay Thulkar**

- 'Breast imaging: What's new', CME on 'Breast cancer awareness', PGIMER, Chandigarh; 29 October 2006.
- 'Recent advances in breast imaging and interventions', 2nd SGPGI Breast Course, SGPGI, Lucknow; 25–26 November 2006.
- 'Advances in breast imaging', Annual conference of IRIA Delhi Branch on 'Body Imaging: Recent Advances and Interventions', AIIMS; 11 March 2007.

**Dr Sanjay Sharma**

- 'Radiology of fungal chest infections' in the Delhi chapter of Associations of Physicians of India, AIIMS; 12 August 2006.

**Dr Ashu Seith**

- 'CT in the diagnosis and management of ILD', Symposium of Thoracic Imaging, Vallabhai Patel Chest Institute, New Delhi; 5 April 2006.
- 'Radiology of paediatric chest', CME Radiodiagnosis-2006, organized by Government Medical College, Amritsar; 22 April 2006.
- 'Film reading session', CME Radiodiagnosis-2006, organized by Government Medical College, Amritsar; 22 April 2006.
- 'Radiology of interstitial lung diseases', 6th CME-National Update on Interstitial Lung Diseases, Vallabhai Patel Chest Institute, New Delhi; 23 April 2006.
- 'Thoracic interventions', National Conference of Indian Radiological and Imaging Association, Delhi Branch, AIIMS; 11 March 2007.

**Dr Smriti Hari**

- 'Chest radiology for postgraduates', 2nd workshop on 'Clinical Methods in Medicine', Department of Medicine, AIIMS; 17–18 March 2007.

**Dr Shivanand Gamanagatti**

- 'Non vascular abdominal interventions', Annual conference of IRIA Delhi Branch on 'Body imaging: Recent advances and interventions', AIIMS; 11 March 2007.

**Dr Atin Kumar**

- 'Imaging of mediastinal masses', Annual conference of IRIA Haryana state branch, Rohtak; 31 March 2007.

**Other Departmental Staff**

- 'Cost effectiveness of and impact on survival of screening patients of cirrhosis to detect hepatocellular carcinoma', CME on Current Perspectives of Liver Diseases, Delhi; August 2006.

## **National and International Conferences**

### **National Conferences**

#### **Lectures delivered**

#### **Dr Sushma Vashisht**

- 'Current trends in evaluation of bowel disease', Annual conference of Indian Radiological and Imaging Association (IRIA), Mumbai; 4–7 January 2007.

#### **Dr Arun Kumar Gupta**

- 'Anorectal malformations', 4th Annual National Conference of 'Indian Society of Pediatric Radiology', Kolkata; 23–24 September 2006.
- 'Film Reading on Pediatric Imaging', 4th Annual National Conference of 'Indian Society of Pediatric Radiology', Kolkata; 23–24 September 2006.

#### **Dr Ashu Seith**

- 'Imaging of paediatric orbit', 4th Annual Conference of Indian Society of Pediatric Radiology, Kolkata; 23–24 September 2006.
- 'Pediatric chest-surgical conditions', 4th Annual Conference of Indian Society of Pediatric Radiology, Kolkata; 23–24 September 2006.
- 'CT and MRI in paediatric chest diseases', 18th National Conference of Indian Academy of Pediatrics and Indo-European Regional Seminar on Pediatric Respiratory Diseases, Lady Hardinge Medical College, New Delhi; 24–29 November 2006.
- 'Film reading session', 18th National Conference of Indian Academy of Pediatrics and Indo-European Regional Seminar on Pediatric Respiratory Diseases, New Delhi; 24–29 November 2006.

#### **Dr Smriti Hari**

- 'Imaging in thyroid disorders', First AIIMS Surgical Week. International conference, CME cum live workshop, Endosurg 2007, Department of Surgery AIIMS; 26–31 March 2007.

#### **Other Departmental Staff**

- 'Multislice CT physics and applications', 8th National Conference of IART (Indian Association of Radiological Technologists), Pune; 11–12 November 2006.
- 'Professional challenges in radiological imaging', 8th National Conference of IART (Indian Association of Radiological Technologists), Pune; 11–12 November 2006.
- 'India/WHO the domestic and international scene', Quality Assurance Workshop, Tata Memorial Hospital, Mumbai; 13–17 November 2006.
- 'Role of computers in radiology imaging', 12th National Conference of Society of Indian Radiographers, NIMS, Hyderabad; 15–16 December 2006.
- 'Introduction to quality assurance workbook', Quality Assurance Workshop, Tata Memorial

- Hospital, Mumbai; 13–17 November 2006.
- ‘Planning for future’, Quality Assurance Workshop, Tata Memorial Hospital, Mumbai; 13–17 November 2006.
- ‘Making of simple test tools’–demonstration, Quality Assurance Workshop, Tata Memorial Hospital, Mumbai; 13–17 November 2006.

## International Conferences

### **Dr Sushma Vashisht**

- ‘CT colonographic evaluation of patients with suspected colonic tuberculosis’, 106th Annual Meeting of American Roentgen Ray Society (ARRS), Vancouver, Canada; 30 April–5 May 2006.
- ‘Role of graded compression sonography and unenhanced helical CT in patients with suspected acute appendicitis’, 106th Annual Meeting of American Roentgen Ray Society (ARRS), Vancouver, Canada; 30 April–5 May 2006.

### **Dr Raju Sharma**

- ‘Differentiation of benign and malignant high biliary strictures’, Saluja S, Sharma R, Sahni P. Annual Conference of Hepatobiliary and Pancreatic Surgery, Edinburgh; 7-12 September 2006.

### **Dr Smriti Hari**

- ‘Lobar holoprosencephaly presenting as adipsic hypernatremia in a 5-year-old girl’. The 4th biennial scientific meeting of Asia Pacific Pediatric Endocrine Society, Pattaya, Thailand; 1–4 November 2006.

### **Other Departmental Staff**

- ‘Imaging the inferior vena cava: A road less travelled’, Radiological Society of North America (RSNA) Conference, Chicago, USA; 26 November–1 December 2006.
- ‘Effectiveness and safety of MRI-guided abdominal biopsy at 1.5T close MR system’ Radiological Society of North America (RSNA) Conference, Chicago, USA; 26 November–1 December 2006.
- ‘Use of rotational angiography in vertebroplasty’. 32nd Annual Meeting of Society of Interventional Radiology, Seattle, USA; March 2007.
- ‘Alternative screening protocol for detection of early hepatocellular carcinoma in India’, Asia Pacific Association for Study of Liver (APASL), Kyoto, Japan; 27-30 March 2007.
- ‘Cost effectiveness of hepatocellular carcinoma screening in India’, Asia Pacific Association for Study of Liver (APASL), Kyoto, Japan; 27-30 March 2007.
- ‘Clinical profile and therapy in hepatocellular carcinoma: Experience from a tertiary care center in India’, Asia Pacific Association for Study of Liver (APASL), Kyoto, Japan; 27-30 March 2007.

## **RESEARCH**

### **Funded Projects**

#### **Completed**

1. Management of liver cancer using radionuclide methods with special emphasis on early diagnosis, loco regional therapy (intra-arterial) and internal dosimetry. Deep N. Srivastava. Funding by IAEA from 2001 to 2006). Funds: US\$ 40,000.
2. Evaluation of extended venous thromboembolism prophylaxis with enoxaparin. (EXCLAIM project). S.K. Sharma (Medicine), Atin Kumar. Funded by Aventis Pharmaceuticals from 2005 to 2006. Funds: Rs 1 lakh.
3. Role of radio-frequency ablation in early breast cancers. Sanjay Sharma. Funded by the Intramural Institute Research Grant of the AIIMS, New Delhi from 2005 to 2006. Funds: Rs 1 lakh.

#### **Ongoing**

1. Effects of arzoxifene on vertebral fracture incidence and on invasive breast cancer incidence in postmenopausal women with osteoporosis or with low bone density. A.C. Ammini, Ashu Seith. Funded by Eli Lilly and Company from 2005 to 2009. Funds: Rs 50 lakh.
2. Postmenopausal evaluation and risk reduction with Lasoxifene. A.C. Ammini, Pfizer, Ashu Seith. PEARL project for trial of lasoxifene in senile osteoporosis for 5 years. Funds: 50 lakh.
3. Antibiotic prophylaxis in the management of VUR: A randomized double blind placebo controlled trial. Pankaj (Department of Pediatrics). Smriti Hari. Funded by ICMR for 3 years (2006-2009). Funds: Rs 12 lakh.
4. Incidence of deep venous thrombosis in high-risk patients admitted in medical wards and ICU in a tertiary care hospital. S.K. Sharma (Department of Medicine). Atin Kumar, Ashu Seith. Funded by Pfizer from 2006 to 2007. Funds: Rs 5 lakh.

### **Departmental Projects**

#### **Completed**

1. Chest tuberculosis in children: CT findings in active and post treatment cases
2. Evaluation of the role of MDCT, CT angiography and bronchial artery embolization in the management of hemoptysis
3. Pulmonary Tuberculosis: CT evaluation in active and inactive disease with limited MR correlation
4. Role of percutaneous vertebroplasty in management painful vertebral lesions
5. Role of MRCP in the diagnosis work-up of portal biliopathy
6. Characterization of bone tumors with *in vivo* proton MR spectroscopy aided by dynamic contrast-enhanced MRI
7. Preoperative evaluation of carcinoma of ovary with multidetector CT and its correlation with surgical findings

8. Whole body MR imaging for detection of skeletal metastases in pediatric patients of small cell neoplasms: Comparison with skeletal scintigraphy and FDG PET CT

### **Ongoing**

1. Comparison of US, CT and MR portography in children with extra-hepatic portal venous obstruction.
2. Role of directional vacuum assisted breast biopsies in patients with previously equivocal biopsy results
3. Imaging evaluation of intra-orbital masses causing proptosis
4. Imaging evaluation of locally advanced squamous cell carcinoma of oral cavity
5. Evaluation of tracheobronchial lesions by multidetector row CT
6. Role of MR arthrography in the assessment of glenohumeral instability
7. Role of magnetic resonance imaging and magnetic resonance sialography in salivary gland diseases
8. Comparison of conventional and gadobenate dimeglumine enhanced magnetic resonance cholangiopancreatography in the evaluation of biliary enteric anastomosis
9. To evaluate the role of CT-guided radiofrequency ablation in the management of inoperable primary lung cancer
10. Whole body MRI for detection of skeletal metastases in pediatric patients of small cell neoplasms: Comparison with skeletal scintigraphy and FDG PET-CT
11. Role of MRI in planning of breast conserving surgery for carcinoma breast
12. MRI and PET-CT evaluation of soft tissue sarcomas

### **Collaborative Projects**

#### **Completed**

1. Evaluation of uterine artery embolization in the management of uterine fibroid in comparison with medical and surgical treatment (with Obstetric and Gynaecology)
2. Dosimetric and therapeutic evaluation of transarterial Rhenium-188 in cases of inoperable liver cancer (with Nuclear Medicine)
3. Impact of pre-operative vascular evaluation by doppler ultrasound on early failure rate of AV fistula in haemodialysis patients (with Surgical Disciplines)
4. Abdominal infections in immunocompromised hosts: Clinical, radiological and microbiological correlation with special reference to bowel wall thickness (with Haematology)
5. CT Guided celiac plexus block for the management of benign pain due to chronic pancreatitis: A comparative study using steroid and alcohol neurolysis (with Anaesthesia)
6. Relationship of serum TSH with thyroid vascularity assessed at operation (with Surgery)
7. MRI study to compare changes in TM Joint following mandible advancement using Twin Block and Bionator Appliances (with Dental Surgery)
8. Assessment of latent manganese toxicity and development of intrapulmonary arterio-venous shunting as prognostic factors following surgery for biliary atresia (with Pediatric Surgery)

9. Neoadjuvant chemotherapy in advanced carcinoma breast (with General Surgery).
10. Clinical, endocrine and radiological profile of patients with possible lymphocytic hypophysitis (with Endocrinology)
11. High biliary obstruction: Indicators to diagnose benign versus malignant etiology (with GI Surgery)
12. Study of the effect of resistance muscle exercise on insulin sensitivity in non-obese Type-II diabetic Asian Indians (with Medicine)
13. Role of growth hormone- insulin like growth factor-1 axis in abnormal body composition and insulin resistance in Asian Indians (with Medicine)
14. Profile of micronutrient deficiency and hepatobiliary dysfunction in cystic fibrosis (with Pediatrics)
15. Prospective randomized double blind control trial of dexamethasone vs. albendazole on calcification as an outcome in 1–2 ring enhancing lesions in neurocysticercosis of children (with Pediatrics)
16. Study of radio-diagnostic services of AIIMS hospital and their utilization pattern so as to identify equipment, physical facilities and manpower for the diagnostic imaging services of hospitals of Coal India Ltd. Commensurating with their needs (with Hospital Administration)
17. MR Spectroscopy and endorectal MR imaging in the diagnosis of early prostate cancers and its correlation with histopathological results of TRUS guide prostate biopsies and surgical specimens (with NMR)
18. Evaluation of efficacy of Radio-frequency Ablation of primary tumour in early breast cancer (with Surgery)
19. Clinical and radiological evaluation of chest infections in patients with hematological malignancies presenting with febrile neutropenia (with Haematology)
20. To assess the utility of resistive index on doppler ultrasound in predicting chronic allograft nephropathy (with Nephrology)

### ***Ongoing***

1. Randomized controlled trial of radio frequency ablation (RFA) versus percutaneous acetic acid injection (PAI) therapy for the treatment of small hepatocellular carcinoma (with Gastroenterology)
2. Surveillance of patients of cirrhosis for detection of hepatocellular carcinoma: A cohort study (with Gastroenterology)
3. Validation of the symptomatology as a predictor of hepatocellular carcinoma in patients of cirrhosis of liver (with Gastroenterology)
4. Randomized controlled trial of transarterial chemoembolization (TACE) versus TACE plus oral chemotherapy in the treatment of unresectable hepatocellular carcinoma (with Gastroenterology)
5. Randomized controlled trial of transarterial chemotherapy (TAC) versus Oral chemotherapy in the treatment of unresectable Hepatocellular carcinoma (with Gastroenterology)



6. Randomized controlled trial of N-Acetylcysteine in prevention of renal failure in hepatocellular carcinoma patients undergoing Transarterial Chemotherapy (TAC) and Transarterial Chemoembolisation (TACE) (with Gastroenterology)
7. Randomized controlled trial of oral chemotherapy versus supportive therapy in the treatment of unresectable hepatocellular carcinoma (with Gastroenterology)
8. Evaluation of image based treatment planning in radiotherapy (with Radiotherapy).
9. Role of neoadjuvant chemotherapy in management of patients with advanced ovarian cancer (with Medical Oncology)
10. Study of physical parameters and quality assurance in the gamma knife based stereotactic radiosurgery with non-coplanar beam in the phantom (with Medical Physics)
11. Study of effectiveness of virtual simulation in external beam radiotherapy planning of carcinoma cervix (with Radiotherapy)
12. Metabolic characterization of soft tissue tumours and pathologic and radiological correlation with in vivo Magnetic Resonance Spectroscopy (MRS) (with Surgical Oncology and NMR)
13. Randomised comparison of ABVD with EVAP in newly diagnosed cases of Hodgkin's lymphoma (with Medical Oncology)
14. Role of three dimensional computed tomographic scanning in assessment of mandibular invasion and its utility in planning mandibular resection and reconstruction in oral cancer patients (with Surgical Oncology)
15. Study of structure and function of lung in patients with achalasia cardia (with gastroenterology)
16. Effect of vitamin D3 supplementation on bone disorders in children with chronic kidney disease (with Paediatrics)
17. Evaluation of high-resolution ultrasound for screening of premature atherosclerosis in children with nephrotic syndrome (with Paediatrics)
18. Prevalence of osteoporosis in patients with ankylosing spondylitis (with Medicine)
19. Role of  $^{18}\text{F}$ -FDG PET/CT in the evaluation of nodular pulmonary lesions and its comparison with CT scan findings (with Surgery)
20. Evaluation of  $^{18}\text{F}$ - FDG PET/CT and comparison with CT findings in patients with mediastinal lymphadenopathy due to tuberculosis and sarcoidosis (with Medicine)
21. Molecular Genetic Studies in patients with leukodystrophy (with Pediatrics)
22. Study of etiological risk factor profile in pediatric strokes (with Pediatrics)
23. Efficiency of zinc supplement as an adjunct with ATT in children below 15 years age with pulmonary TB in reducing time to sputum conversion, a randomized blind control trial (with Paediatrics)
24. Renal functions and their maturation and renal volume in normal and growth restricted neonates (with Paediatrics)
25. Endothelial dysfunction in rheumatoid arthritis (with Medicine)
26. A Survey on the prevalence of pulmonary tuberculosis (with Medicine)

27. Role of centchroman in regression of mastalgia and regression of fibroadenoma and its correlation to histopathology and estrogen and progesterone receptors. (with Surgery)
28. Evaluation of the efficacy of thrice weekly DOTS regimen in TB pleural effusion at six months (with Medicine)
29. Quantitative imaging study of breast cancer and its correlation with oxidative stress (with Medical Physics)
30. To determine the efficacy of flutamide as a tumour volume reducing agent in nasopharyngeal angiofibroma (with ENT)
31. Comparative evaluation of ultrasonography and MRI in prenatal diagnosis of fetal anomalies (with Gynecology and Obstetrics)
32. Comparative evaluation of MRI and arthroscopy in the diagnosis of meniscal tears in anterior cruciate ligament deficient knees (with Orthopaedics)
33. Role of PET-CT in differentiating benign and malignant pancreatic mass lesions in patients with or without chronic pancreatitis (with Nuclear Medicine)
34. Comparative study of MR enteroclysis and double balloon enteroscopy in ulcero-constrictive lesions of small bowel (with Gastroenterology)
35. MRI as a tool for staging Carcinoma Rectum before and after radiotherapy (with Gastrointestinal Surgery)
36. To document the effect of the time of institution of DMARDs on the radiological outcome in patients with rheumatoid arthritis (with Medicine)
37. To study the role of core decompression with and without fibular grafting in patents with avascular necrosis of femoral head; and its effects on the disease progression (with Orthopaedics)
38. Role of stem cell therapy in peripheral vascular disease (with Surgery)
39. Role of FDG-PET and MRI in assessment of osteosarcoma: Prechemotherapy and post-chemotherapy (with Medical Oncology)
40. Regulation of coagulation in orthopedic surgery to prevent DVT and pulmonary embolism (with Orthopaedics)
41. Comparison of FDG-PET and dynamic MRI in correlation of VEGF expression on tumour cells in patients with osteosarcoma (with Medical Oncology)

## **Publications**

### **Journals**

1. Kandpal H, Vashisht S, Sharma R, Seith A. Imaging spectrum of pediatric orbital pathology: A pictorial review. *Indian J Ophthal* 2006;**54**:227–36.
2. Das CJ, Neyaz Z, Thapa P, Sharma S, Vashisht S. Fibromuscular dysplasia of the renal arteries: A radiological review. *Int Urol Nephrol* 2007; **39**: 233-8.
3. Kumar R, Srivastava DN, Seth A. Spontaneous resolution of delayed onset, post-traumatic high-flow priapism. *J Postgrad Med* 2006;**52**:298-9.

4. Gupta H, Verma D, Ahuja RK, Srivastava DN, Wadhwa S, Ray SB. Intrathecal co-administration of morphine and nimodipine produces higher antinociceptive effect by synergistic interaction as evident by injecting different doses of each drug in rats. *Eur J Pharmacol* 2007;**561**:46–53.
5. Gunabushnam G, Sharma S, Thulkar S, Srivastava DN, Rath GK, Julka PK, *et al.* Radiofrequency ablation of liver metastases from breast cancer: Results in 14 patients. *J Vasc Interv Radiol* 2007;**18**:67–72.
6. Sharma R, Shivanand G, Kumar R, Prem S, Kandpal H, Das CJ, *et al.* Isolated renal mucormycosis: An unusual cause of acute renal infarction in a boy with aplastic anaemia. *Br J Radiol* 2006;**79**:e19–e21.
7. Gamanagatti S, Kandpal H. MR imaging of cerebral malaria in a child. *Eur J Radiol.* 2006; **60**: 46-7.
8. Das CJ, Seith A, Gamanagatti S, Goswami R. Ectopic pituitary adenoma with empty sella. *Am J Roentgenol* 2006;**186**:1468–9.
9. Gamanagatti S, Subramanian S. Hypertensive encephalopathy: Isolated pons involvement mimicking central pontine myelinolysis. *Korean J Radiol* 2006;**7**:218–9.
10. Hiralal, Shivanand G, Bhatti S. Plasma cell tumors with calcified amyloid mimicking chondrosarcoma. *Eur J Radiol Extra* 2006;**59**:131–2.
11. Shivanand G, Kandpal H, Mishra V. Pancreatitis complicated by intrasplenic and intrahepatic pseudocysts. *Eur J Radiology Extra* 2006;**60**:29–31.
12. Neyaz Z, Srivastava DN, Thulkar S, Bandhu S, Gamanagatti S, Julka PK, *et al.* Radiological evaluation of covered self-expandable metallic stents used for palliation in patients with malignant esophageal strictures. *Acta Radiol* 2007;**48**:156–64.
13. Gamanagatti S, Vashisht S, Kapoor A, Chumber S, Bal S. Comparison of graded compression ultrasonography and unenhanced spiral computed tomography in the diagnosis of acute appendicitis. *Singapore Med J* 2007;**48**:80–7.
14. Hiralal, Gamanagatti S, Thulkar S, Rao SK. Desmoplastic round cell tumour of the abdomen. *Singapore Med J* 2007;**48**:e19–21.
15. Wechalekar M, Falodia S, Gamanagatti S, Makharia GK. An extension of pancreatic pseudocysts in the neck. *Pancreas* 2007;**34**:171–3.
16. Hari P, Mantan M, Dinda A, Hari S, Bagga A. Steroid-responsive nephrotic syndrome in a patient with nail-patella syndrome. *Pediatr Nephrol* 2006;**21**:1197–9.
17. Das CJ, Pangtey GS, Hari S, Hari P, Das AK. Biliary cryptococcosis in a child: MR imaging findings. *Pediatr Radiol* 2006;**36**:877–80.
18. Kandpal H, Subramanian S, Hari S. Langerhans cell histiocytosis of pituitary stalk. *Neurol India* 2007;**55**:91–2.
19. Hari S, Subramanian S, Sharma R. Magnetic resonance imaging appearance of ulnar nerve abscess in leprosy. *Leprosy Review* 2006;**77**:381–5.
20. Laway BA, Goswami R, Singh N, Gupta N, Seith A. Pattern of bone mineral density in patients with sporadic idiopathic hypoparathyroidism. *Clin Endocrinol* 2006;**64**:405–9.

21. Gunabhushanam G, Subramanian S, Seith A. Peutz-Jeghers syndrome. *Pediatr Radiol* 2006;**36**:888–9.
22. Das CJ, Seith A, Sharma R, Baruah MP. A young female with galactorrhoea and sudden onset chest pain. *Br J Radiol* 2006;**79**:703–5.
23. Das CJ, Seith A. Posterior reversible encephalopathy syndrome (PRES). *Indian Pediatr* 2006;**43**:657–8.
24. Chaudhary A, Seith A, Debnath J. Inner Visions: Spectacular Vision. *Radiographics* 2006;**26**:1354.
25. Jyotsna VP, Rangel N, Pal S, Seith A, Sahni P, Ammini AC. Insulinoma: Diagnosis and surgical treatment. Retrospective analysis of 31 cases. *Indian J Gastroenterol* 2006;**25**:244–7.
26. Vinodh BN, Sharma SK, Duncan Smith-Rohrberg, Seith A. Tubercular oesophagocutaneous fistula. *Indian J Chest Dis Allied Sci* 2006;**48**:209–11.
27. Das CJ, Seith A, Mukhopadhyay S. Thoracic application of multi-detector CT. *Indian J Chest Dis Allied Sci* 2007;**49**:29–36.
28. Makharia GK, Seith A, Sharma SK. Pulmonary dysfunctions in patients with achalasia of the cardia. *J Clin Gastroenterol* 2006;**40**:S187.
29. Das CJ, Sharma R, Pangtey G, Hari S, Das AK. Idiopathic Hypereosinophilic syndrome presenting as paravertebral mass. *Am J Radiol* 2006;**186**:1470–72.
30. Das CJ, Sharma R, Jain T, Rai V, Chumber S, Das AK. An unusual case of mass forming retroperitoneal fibrosis. *Br J Radiol* 2006;**79**:e137–9.
31. Das CJ, Jain TP, Sharma R. Giant intraluminal duodenal diverticulum causing gastric outlet obstruction in an adult. *Indian J Gastroenterol* 2006;**25**:106–7.
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35. Kandpal H, Sharma R, Saluja S, Sahni P, Vashisht S. Combined transmesocolic and left paraduodenal hernia: Barium, CT and MRI features. *Abdo Imaging*. 2006; **32**:224-7.
36. Gogia N, Sharma R, Gamangatti S, Seenu V, Madhusudan KS, Parshad R. Hepatic hydatid cyst with biliary and peritoneal rupture and transdiaphragmatic migration. *Trop Gastroenterol* 2006;**27**:93–6.
37. Tsapaki V, Aldrich J, Sharma R, Staniszevska MA, Krisanachinda A, Rehani M *et al*. Dose reduction in CT while maintaining diagnostic confidence: Diagnostic reference levels at routine head, chest, and abdominal CT- IAEA-coordinated research project. *Radiology* 2006; **240**: 828-34.
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## Abstracts

1. Vashisht S, Jain V, Gulati M, Bandhu S, Garg P. CT Colonographic evaluation of patients with suspected colonic tuberculosis. *AJR* 2006;**186** (Suppl.):A25.
2. Vashisht S, Gamangatti S, Kapoor A, Chumber S, Bal S. Role of graded compression sonography and unenhanced helical CT in patients with suspected acute appendicitis. *AJR* 2006;**186** (Suppl.):A52.
3. Kumar P, Gupta N, Manwar SR, Chavan TC, Pandey A, Thulkar S, *et al.* Quality assessment of bedside portable chest radiography: A comparison with OPD based fixed X-ray unit chest Imaging. *J Med Physics* 2006;**31**:207–8.
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5. Das CJ, Srivastava DN, Vashisht S. Effectiveness and safety of MRI guided abdominal biopsy at 1.5T close MR system. *RSNA program* 2006;485.
6. Paul SB, Acharya SK, Sreenivas V, Gulati MS, Madan K, Gupta AK, *et al.* Is serum alpha-fetoprotein (AFP) a useful screening marker for hepatocellular carcinoma (HCC) in patients of cirrhosis? *J Gastroenterol Hepatol* 2006;**21**:A466.
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## Chapters in Books

1. Sharma S, Jain T, Thulkar S. Newer cross-sectional imaging techniques in ophthalmology. In: Dada T, Mandal S (eds). *New investigations in ophthalmology*. 1st ed. New Delhi: Jaypee Publishers; 2006:184–91.
2. Sharma S, Jain T, Thulkar S. Cross-sectional orbital imaging in various pathological conditions in ophthalmology. In: Dada T, Mandal S (eds). *New investigations in ophthalmology*. 1st ed. New Delhi: Jaypee Publishers; 2006:192–208.

## PATIENT CARE

### Radiological procedures

Details of investigations for the period April 2006–March 2007

<b>Routine studies</b>	
OPD	1,05,288
Indoor	25,145
Casualty	93,518
Portable	22,200
<b>Total</b>	<b>2,46,151</b>
<b>Special investigations</b>	
<b>Contrast studies</b>	
Barium studies	2,770
Intravenous pyelography	1,724
Mituring cystourethrography	1,524
Hysterosalpingography (HSG)	200
Operation theater (OT) studies	63
Endoscopic retrograde cholangio-pancreatography (ERCP)	–
Other contrast studies: Sinogram, fistulogram, T-tube choangiogram, etc.	768
<b>Total</b>	<b>7,049</b>
<b>Mammography</b>	<b>1,441</b>
<b>Ultrasound:</b>	
Routine	19,144
Emergency	21,527
Doppler	2,828
<b>Total</b>	<b>43,499</b>
<b>CT</b>	
Body	7,541
Head	3,202
<b>Total</b>	<b>10,743</b>
<b>Vascular studies</b>	
Digital subtraction arteriography (DSA)	257
Venography	72
<b>Total</b>	<b>329</b>
<b>MRI</b>	<b>2,327</b>
<b>Interventional procedures</b>	
Ultrasound-guided	1,168
CT-guided	307
Vascular	541
<b>Total</b>	<b>2,016</b>
<b>Total investigations</b>	<b>3,13,555</b>

### **New equipment**

- 1 Multislice CT scanner (Somatom Sensation 40) for the main department
- 1 Mobile X-ray unit for the main department
- 1 heavy duty automatic film processor

### **The departmental faculty assisted in purchase of following equipments for the Trauma Centre:**

- 1 Multislice CT scanner (Somatom sensation 40)
- 2 Mobile X-ray units
- 2 heavy duty automatic processors for radiography
- 1 MRI (Avanto)
- 1 C–arm X-ray unit for OT

### **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr Sushma Vashisht** attended selection committee meeting of Delhi Government as an external expert for selection of the faculty (Radiology), Delhi, 18 May 2006; attended technical committee meeting for procurement of MRI, CT scanner and digital X-ray for Sher-i-Kashmir, Jammu and Kashmir, Srinagar, Delhi, 5 June 2006; was an expert for Senior Resident selection for UCMS, GTB Hospital for University College of Medical Sciences; was an external examiner for Postgraduate Final Examination in MD (Radiodiagnosis) BPKIHS, Dharan, Nepal; attended ‘Scrutinizing and counting of votes committee meeting’ for election of council members of NAMS for the year, 2006 at National Academy of Medical Sciences, 7 August 2006; attended technical specification committee meeting, Srinagar to finalize the purchase of CT Simulator, US and Mammography equipments for Regional Cancer Research Centre at Sher-i-Kashmir, Institute of Medical Sciences, Srinagar, Jammu and Kashmir, 21 August 2006.

**Dr D.N. Srivastava** elected as Joint Secretary of Indian Society of Vascular and Interventional Radiology, 2007–2008; awarded ‘Life Time Achievement’ Award at the Annual Conference of Indian Society of Vascular and Interventional Radiology, Chennai, 2006.

**Dr Raju Sharma** elected as President of the Delhi Branch of Indian Radiology and Imaging Association, 2006–2007.

**Dr Sanjay Sharma** continues to be External Expert at the University Grants Commission, New Delhi, for the Committee for Approval of Travel Grant for attending Scientific Conferences in India and Abroad.

**Dr Harsh Kandpal** given award of Excellence in Design for the Poster ‘Imaging inferior vena cava: A road less travelled’, Annual RSNA Conference, 2006.



**Dr Shivanand** awarded Editor's Recognition Award for reviewing (*European Journal of Radiology*).

**Dr Shashi Paul** won the third prize for poster presentation, 'Percutaneous acetic acid injection for treatment of small and medium hepatocellular carcinoma', 47 Annual conference of the Indian Society of Gastroenterology, Mumbai, November 2006. She is a reviewer for the *Journal of Gastroenterology and Hepatology*.

**Mr R.K. Goyal**, Chief Technical Officer, elected as President of Indian Association of Radiological Technologists.

**Mr R.S. Kapoor**, Senior Technical Officer, elected as Zonal secretary of Indian Association of Radiological Technologists.

**Mr Pawan Kumar Popli**, Technical Officer, elected as Zonal Secretary of Society of Indian Radiographers.

## 9.33 Reproductive Biology

### Professor and Head

Anand Kumar

### Associate Professors

Narendra Nath Sarkar

Ashutosh Halder

### Assistant Professor

Pradeep Kumar Chaturvedi

## EDUCATION

### Undergraduate/Postgraduate Training

Two WHO trainee and five postgraduate students for short-term training.

### PhD

Four

Undergraduate

-

Postgraduate

:

MD Laboratory Medicine Students on RIA

### Short- and long-term training

#### Long-term

One as Research Associate (Post-doctoral).

Two WHO-In Country Fellows.

#### Short-term

Short-term training was provided to 7 students.

### Continuing Medical Education

Department organized First National Workshop on Microdeletion Fluorescent *in situ* Hybridization; 7–12 August 2006.

- ‘FISH in clinical genetics’, SGPGIMS, 7th ICMR course in Medical Genetics and Genetic Counselling Lucknow; 18 July 2006.
- Dr A. Halder delivered invited lecture and faculty for AIIMS, Genetic Course; 19 April 2006 (DBT sponsored).
- Brain storming discussion on ‘Tackling India’s polluted places’, Asian Development Bank and Janhit NGO, New Delhi; 22 January 2007

### National and International Conferences

#### Lectures delivered

#### Dr A. Kumar

- ‘Testicular steroidogenesis and the regulation of gonadotropin secretion in the hypothyroid

- males: From clinic to basics', National Symposium on an Update of Reproductive Endocrinology: Novel and applied Strategies, BHU, Varanasi; 26–28 February 2007.
- 'Reproductive and endocrinological changes in thyroid disorders in males', XII Annual Congress of the Society of Andrology, Meerut, India; 8–10 April 2006.

### **Dr A. Halder**

- 'Skewed sex ratio in India', Indo–French Congress on Gynecological Endoscopy, Ultrasound and Infertility, Varanasi; 23–26 November 2007.
- 'Teratogenesis', All India Congress of Obstetrics and Gynaecology in assistance with Bengal Obstetric and Gynecological Society, Kolkata; 6–9 January 2007.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

1. Secretion of progesterone and expression of hypoxia inducible factor 1 $\pm$  during hypoxia induced by cobalt chloride in MA10 cells. Anand Kumar. Funded by Agency ICMR RA Project for 3 years (2004-2007). Funds: Rs 1.89 lakh per year.
2. Effect of cryo-freezing on human spermatozoa: Sperm functions and ultrastructure study. P.K. Chaturvedi. Funded by AIIMS for 1 year (2006-2007). Funds: Rs 0.50 lakh.
3. Role of hypoxia on vascular endothelial growth factors secretion in MA10 Leydig cells. P.K. Chaturvedi. Funded by ICMR SRF Project for 3 years (2006-2009). Funds: Rs 1.55 lakh per year.
4. Prevalence of 22q11.2 microdeletion syndrome in children with structural cardiac malformation: A tertiary care referral hospital-based study in Delhi. A. Halder. Funded by ICMR for 3 years (2006-2009). Funds: Rs 8.73 lakh.

#### **Completed**

1. Chromosome aneuploidy and mosaicism in preimplantation embryo on mouse model. A Halder. Funded by ICMR SRF Project.
2. Chromosome aneuploidy and mosaicism in preimplantation embryo. A Halder. Funded by AIIMS for 3 years (2003-2006). Funds: Rs 1.5 lakh.

### **Departmental Projects**

#### **Ongoing**

1. Role of hypoxia on progesterone and vascular endothelial growth factor secretions in MA-10 cells
2. Role of cobalt chloride induced hypoxia on MA-10 cells
3. Regulation of proliferation of prostatic cancer cell line LNCaP
4. Gonadal functions in endocrine disorders
5. Regulation of granulosa cell steroidogenesis

6. Genetic and endocrine factors in primary testicular failure
7. Chromosome aneuploidy and mosaicism in preimplantation embryo
8. Evaluation of sexually transmitted diseases among adolescents and young adults in India

### **Completed**

1. Evaluation of intracytoplasmic sperm injection: An assisted reproductive technique and its outcome to overcome infertility of a couple (Review of literature)
2. Evaluation of Nuva ring: A potential combined contraceptive vaginal device (Review of literature)

### **Collaborative Projects**

#### **Ongoing**

1. Characterization of chromosomal anomalies in multiple myeloma patients using cytogenetics and FISH (with Medical Oncology and IRCH)
2. Genetics of Acute Lymphoblastic Leukemia (with Medical Oncology and IRCH).
3. FISH in glioma (with Pathology)
4. Use of letrozole versus clomiphene citrate combined with gonadotropins in superovulation and IUI cycles (with Obstetrics and Gynaecology)
5. Effect of oral contraceptive containing ethinyl estradiol combined with drospirenone vs. desogestrel on clinical and biochemical parameters in patients of polycystic ovarian syndrome (with Obstetrics and Gynaecology)

### **PUBLICATIONS**

#### **Journals**

1. Kumar A, Chaturvedi PK, Mohanty Bidut P. Hypoandrogenaemia is associated with subclinical hypothyroidism in men. *Int J Androl* 2007;**30**:14–20.
2. Mohanty BP, Rani L, Chaturvedi PK, Kumar A. Effect of cobalt chloride in steroidogenesis of MA-10 cells. *Indian J Physiol Pharmacol* 2006;**52**:117.
3. Halder A, Fauzdar A. Extreme Skewing of Sex Ratio and Low Aneuploidy in Recurrent Early Missed Abortion. *Indian J Med Res* 2006;**124**:41–50.
4. Halder A. Skewed Sex Ratio in India. *Indian J med Res* 2006;**124**:583–4.
5. Halder A, Fauzdar A. Potential use of blood, buccal and urine cells for rapid noninvasive diagnosis of suspected aneuploidy using FISH. *J Clin Diagn Res* 2007;**1**:32–8.
6. Halder A, Halder S, Fauzdar A. A preliminary investigation on molecular basis for clinical aggressiveness in cervical carcinoma by comparative genomic hybridization and conventional fluorescent *in situ* hybridization. *J Cancer Res Ther* 2006;**2**:S15.
7. Sharma SK, Kumpawat S, Goel A, Banga A, Ramakrishnan L, Chaturvedi P. Obesity, and not obstructive sleep apnea, is responsible for metabolic abnormalities in a cohort with sleep-disordered breathing. *Sleep Med* 2007;**8**:12–7.
8. Sarkar NN. Emergency contraception: A contraceptive intervention-approaching target

- despite controversy and opposition. *J Public Health* 2006;**14**:164–73.
9. Sarkar NN. Does use of condom involve risk for contracting sexually transmitted infections, HIV/AIDS? *J Public Health* 2007;**15**:121–8.

## PATIENT CARE

- **Andrological examinations:**

Semen examination	330
Seminal Fructose	125
- 60 Male infertility (primary hypogonadism), reproductive genetic counselling-cum-management planning/expert opinion was provided to cases of male infertility, female infertility, RSA, fetal malformation and hematologic malignancy, microdeletion syndrome, etc.
- 7 International consultation cum counselling through e-mail.

Name of Assays	Number
FSH	1,783
LH	1,447
Prolactin	1,308
T3	3,216
T4	4,056
TSH	7,828
Testosterone	746
Estradiol	408
Progesterone	107
AFP	1,362
PSA	1,299
Beta hCG	479
CA-125	783
Cortisol	113
<b>Total</b>	<b>24,935</b>

## Diagnostic Services

35 Microdeletion FISH for microdeletion syndromes (DiGeorge, Wolf-Hirschhorn syndrome, retinoblastoma, William, Cri-du-Chat, Prader Willi syndrome, etc.).

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Dr A. Halder** received ICMR international fellowship for senior bio-medical scientist, 2006–2007 for two weeks training on molecular cytogenetic techniques, Uniba Biologia, University of Bari, Bari, Italy; 28 January–9 February 2007.

## **VISITING SCIENTISTS**

1. Professor C.V. Rao, PhD, Director, Division of Research, Department of Obstetrics and Gynecology and Women's Health, University of Louisville Health Science Center, Louisville KY, USA on 21.02.2007.
2. Dr Nafis Rahman, MD, PhD, Associate Professor, Specialist in Gynecology and Obstetrics, Department of Physiology, University of Turku, Turku, Finland on 20.01.2007.

## 9.34 Surgical Disciplines

### Professor and Head

M.C. Misra

### Professors

Anurag Srivastava

Arvind Kumar

### Additional Professors

Sunil Chumber

Sandeep Guleria

Rajinder Parshad

### Associate Professors

V. Seenu

Sandeep Aggarwal

### Assistant Professors

V.K. Bansal

Anita Dhar

Biplab Mishra  
(Trauma centre)

Maneesh Singhal  
(Trauma Centre)

Sushma  
(Trauma Centre)

Amit Gupta  
(Trauma Centre)

Subodh Kumar  
(Trauma Centre)

## EDUCATION

### Postgraduate training

The Department of Surgery established minimally invasive surgery training centre at the Department of Surgical Disciplines, AIIMS in collaboration with University of Tuebingen, Germany. The centre was inaugurated on 26 March 2007. The first training course in 'Operative laparoscopy—basic and advanced' was organized in the department from 26–30 March 2007.

### Short-term training

12 undergraduate students from foreign countries viz., USA, Germany and UK came for elective training in surgery.

## Continuing Medical Education

### Organized by the department

#### Professor M.C. Misra

- Course Director, Organizing Chairman, First AIIMS Surgical Week, International Conference, CME and Live Workshop, AIIMS, New Delhi; 26–31 March 2007. The

- Surgical Week consisted of a week long CME with a day each devoted to breast surgery, endocrine surgery and two days to minimal access surgery. There was Live Tele-video conferencing from Bordeaux, France and Paris with Live demonstration of Left colectomy for diverticular disease (J.L. Dulucq) and subtotal colectomy for cancer (Pr. Brice Gayet) and total extraperitoneal repair (TEP) of groin hernia. Live surgery for morbid obesity was also telecast from Westchester Medical center, New York.
- Organized joint meeting between Department of Surgical Disciplines and the Surgical Section of Royal Society of Medicine, UK. V. Ramalingaswami Board Room, AIIMS, New Delhi; 3 March 2007.
  - Organizing Chairman of CME under ASICON Foundation of Delhi State Chapter of Association of Surgeons of India; 25 February 2007.
  - Organized monthly meeting, Delhi State Chapter, Association of Surgeons of India, AIIMS; 17 February 2007.
  - Conference President: Mid-term conference of Indian Hernia Society and live workshop, Hernia Update 2007, Hotel Centre Point, Nagpur; 20–21 January 2007.
  - IMRCS Examiners' training course, AIIMS; 20–21 May 2006.

**Professor Anurag Srivastava**

- 'First AIIMS Surgical Week' organized at AIIMS; 26–31 March 2007.

**Professor Arvind Kumar**

- Organized the 3rd Amasi Skills Course, Department of GI Surgery, AIIMS; 29 November to 2 December 2006.

**Dr Sandeep Guleria**

- Co-convenor of joint meeting between Department of Surgical Disciplines and the Surgical Section of Royal Society of Medicine, UK; 3 March 2007.

**Dr Rajinder Parshad**

- 'Gastrointestinal malignancies', ASICON Surgical Education and Research Foundation and Department of Surgical Disciplines, AIIMS; 25 February 2007.

**Dr V.K. Bansal**

- Organizing secretary of 'First AIIMS Surgical Week', AIIMS; 26–31 2007.
- Course co-coordinator for first training course in 'Operative laparoscopy—Basic and advanced', Minimally Invasive Surgery Training Centre, Department of Surgical Disciplines, AIIMS; 26–31 March 2007.



## Lectures delivered

### Professor M.C. Misra

- ‘Value of relaparoscopy in an unsettled abdomen following laparoscopic surgery’, The Department of Surgery, Government Medical College, Srinagar; 18 March 2007.
- ‘Strategies in peritonitis—laparoscopy technology’, Conference on ‘Intra abdominal infections—facing the challenge’, Department of Surgery, PGIMER, Chandigarh; 10–11 March 2007.
- ‘Laparoscopic vs. Open colorectal surgery for cancer’, ASICON Foundation of Delhi State Chapter of Association of Surgeons of India; 25 February 2007
- ‘Professor B.B. Ohri Memorial Oration’, M.P. Chapter of Association of Surgeons of India at its 25th Annual Conference, the Sri Aurobindo Institute of Medical Sciences, Indore; 16–18 February 2007.
- ‘Basics in Laparoscopy’, 5th Live Endolaparoscopic Workshop, Agra under the Association of Endolaparoscopic Surgeons of Agra; 27–28 January 2007.
- ‘Experience of total extraperitoneal (TEP) repair of groin hernia’, Mid-term conference of Indian Hernia Society and Live Workshop, Hernia Update 2007, Hotel Centre Point, Nagpur; 20–21 January 2007.
- Laparoscopy Update 2007, SMS Medical College and Hospital, Jaipur in association with Rajasthan Chapter of Association of Surgeons of India and Surgical Society of Jaipur; 12–13 January 2007. Delivered a Guest lecture on:
  - Laparoscopic repair of ventral hernia;
  - Live demonstration of laparoscopic repair of ventral hernia; and
  - Chairman, scientific session during live demonstration of ‘Thoracoscopic removal of a mediastinal tumour and laparoscopic pyeloplasty’
- ‘Breast conservation surgery—Indian perspective’, 2nd SGPGI Breast Course, Department of Endocrine and Breast Surgery, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India; 25–26 November 2006.
- ‘Newer developments in minimal access surgery’, 32nd Annual Conference of Association of Surgeons of India (UPASICON 2006), Live Workshop, the MLN Medical College and SRN Hospital, Allahabad; 3–5 November 2006.
- ‘Role of MAS in Colo-rectal cancer’, SURGICON 2006, Symposium on ‘Colorectal surgery’, Delhi State Chapter, Association of Surgeons of India, Dr RML Hospital, New Delhi; 27–29 October 2006.
- ‘Laparoscopic vs. open repair of incisional and primary ventral hernia: Results of a prospective randomized study’, the Faculty research presentation meeting; 17 October 2006 at AIIMS, New Delhi.
- ‘Dr H. Lalmohan Singh Memorial Oration’, 11th annual conference on ‘Newer horizons in minimally invasive surgery’, Association of Surgeons of India, Manipur, Regional Institute of Medical Sciences, Imphal; 7–8 October 2006.
- ‘Triage’, Indo–US Emergency Summit, AIIMS, New Delhi; 27 September–1 October 2006.

- ‘Management of pancreatic stump following pancreatico-duodenal resection: Pancreatico-gastrostomy (PG)’, International integrated meeting of Indian Association of Surgical Oncology (IASO) with World Federation of Surgical Oncologic Societies (WFSOS), IMS, BHU, Varanasi; 21–24 September 2006.
- ‘Evaluation of blunt abdominal trauma’, 10th International Conference of ITACCS (Indian Chapter), Trauma Criticare–2006, Hotel Mughal Sheraton, Agra; 8–10 September 2006.
- ‘Laparoscopic management of adrenal diseases’, CME and live workshop on Minimal Access Surgery, UP Chapter of Association of Surgeons of India, MLB Medical College and Hospital, Jhansi; 20–21 August 2006.
- ‘Triage’, Meeting of National Disaster Management Authority, Hotel Centaur, New Delhi; 18 August 2006.
- ‘Newer strategies in the management of soft tissue sarcoma’, CME under ASICON surgical foundation, Jaipur Golden Hospital, Delhi; 28 May 2006.
- ‘Advanced laparoscopic procedures’, Surgery update 2006, Dr STM Forest Hospital, Haldwani, Nainital; 9 April 2006.

#### **Dr Sunil Chumber**

- ‘Pancreatic endocrine tumours’, Annual CME of Department of Surgery, Maulana Azad Medical College, New Delhi; 25 August to 1 September 2006.

#### **Dr Sandeep Guleria**

- ‘Tacrolimus in transplantation’, North Zone chapter of the Indian Society of Nephrology, Jaipur; 3 March 2007.
- ‘Donor selection’, Organ Retrieval and Banking Organization, AIIMS, New Delhi; 10 February 2007.
- ‘PSI in transplantation’, Focused group, New Delhi; 16 February 2007.
- ‘Experience in pediatric transplantation in developing countries’, The Indian Paediatric Nephrology Group, New Delhi; 9 March 2007.
- ‘Preemptive transplantation’, The Indian Academy of Nephrology and the Delhi Nephrology Society, New Delhi; 17 March 2007.
- ‘Abdominal compartment syndrome’, Apollo Hospitals, Delhi; 5 December 2006.
- ‘Association of Surgeons of India’, Delhi state chapter, Annual conference ‘Varicose veins’, Delhi; 27 October 2006.
- ‘Tacrolimus in renal transplantation’, Plenary session, Annual meeting of the Indian Society of Organ Transplantation, Ahmedabad; 6 October 2006.
- ‘Biphosphonates in renal transplantation’, Annual meeting of the Indian Society of Organ Transplantation, Ahmedabad; 7 October 2006.
- ‘Status of transplant surgery in the present era’, Surgical update, Department of Surgery, Maulana Azad Medical College, New Delhi; 30 September 2006.
- ‘Planning and designing facilities for organ transplantation’, Department of Hospital

- Administration, Goa; 16 September 2006.
- ‘Renal transplantation’, Consultants Club, GM Modi Hospital, Delhi; 26 August 2006.
- ‘Newer immunosuppressants have they improved outcome or added to the cost’, Annual Conference of the Delhi Nephrology Society, Sir Ganga Ram Hospital, New Delhi; 22 January 2006.
- ‘Renal transplantation’, Max Hospitals, Patparganj, Delhi; 6 May 2006.
- ‘Ventral hernia’, AMASICON 2006, Kolkatta; 1 April 2006.

#### **Dr Rajinder Parshad**

- ‘Surgical management of achalasia cardia in NZ’, AMASICON-2006, Government Medical College, Jammu; 2–4 November 2006.

#### **Dr Sandeep Aggarwal**

- ‘Diaphragmatic hernia’, Mid-term national conference of Indian Hernia Society, Nagpur; 20-21 January 2007.
- ‘Bariatric surgery: An overview’, First AIIMS surgical week–ENDOSURG 2007, AIIMS; 26-31 March 2007.

#### **Dr V.K. Bansal**

- ‘Laparoscopic or open repair of inguinal hernia—is the controversy over? For laparoscopic repair’, Mid-term CME of Indian Hernia Society, Nagpur; 17–18 January 2007.

#### **Dr Amit Gupta**

- ‘Model guidelines for hospital emergency contingency planning’, Workshop on ‘Hospital emergency preparedness planning’, Disaster Risk Management Programme, Government of NCT Delhi; 16 March 2007.
- ‘National trauma management course’, Department of Medical Health Services and State Disaster Management Authority, Government of Uttar Pradesh, Ghaziabad; 30 November–3 December 2006.
- ‘Trauma shock’, TREAT–India, Central Railway Hospital, Byculla, Mumbai; 4–5 October 2006.
- ‘ABCD of Trauma Care’, Trauma Alert Assembly. INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘Emergency management of head injuries’, National Trauma Management Course, Department of Medical Health Services and State Disaster Management Authority, Government of Uttar Pradesh, Lucknow; 13–14 September 2006.
- ‘Management of long-term effects of disaster’, National Conference on Medical Preparedness and Mass Casualties Management, National Disaster Management Authority, Government of India, New Delhi; 22–23 August 2006.
- ‘Recent trends in trauma management’, Surgery Update 2006, Department of Surgery, Dr STM Forest Hospital, Haldwani, Uttarnchal, India; 9 April 2006.

### **Dr Maneesh Singhal**

- ‘Maxillofacial trauma’, Trauma Alert Assembly, INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘*Gyan Vani*’, National Board of Examination.

### **Dr Subodh Kumar**

- ‘Emergency room management of thoracic trauma’, Trauma Alert Assembly, INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘Management of pancreatic duodenal stump after pancreatico-duodenectomy’, NATCON–IASO, Varanasi; 20 September 2006.
- ‘Colo-rectal cancer—Role of minimally access surgery’, CME on colo-rectal cancer, Max Devki Devi Hospital, New Delhi; 18 November 2006.
- ‘Surgical emergencies’, CME, AIIMS; 10 January 2007.
- ‘Groin hernia surgery—an enlightening story’, Mid-term conference cum workshop of Indian Hernia Society, Nagpur; 20-21 January 2007.

### **Dr Sushma**

- ‘Trauma in special scenario: Paediatric/Geriatric/Pregnancy’, Trauma Alert Assembly. INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘Newer strategies in the management of soft tissue tumor’, SURGICON 2006, RML Hospital, New Delhi; 26 October 2006.
- ‘Blast injuries-triage to psychosocial care: Crime and mental illness’, Annual academic sessions of Sri Lanka College of Psychiatrists, Colombo; 22–24 February 2007.

## **RESEARCH**

### **Ongoing Projects**

1. Feasibility study on injury and road traffic injury surveillance. Misra MC, Gupta A. Funded by MoHFW-WHO-ICMR.
2. Prospective case control study to evaluate role of Glutathione S transferase (GSTT1 and GSTM 1) gene deletion in breast carcinoma and its prognostic significance, Institute Research Grant, in collaboration with Department of Anatomy, AIIMS.
3. ‘Prospective study to evaluate the role of helicobactor pylori in benign and malignant hepato-biliary disease’ Institute Research Grant. Funded by AIIMS. Funds: Rs. 20,000.

### **Funded Projects**

1. To evaluate the efficacy and tolerability of tacrolimus in patients undergoing renal transplantation. Sandeep Guleria. Funded by Panacea Biotec (2004-2007). Funds Rs. 6 lakh.

2. 'Save the Kidney'. Sandeep Guleria. Funded by Rajiv Gandhi Foundation. (2007 Funds: Rs. 10 lakh)
3. Effect of famotidine on tumor infiltrating lymphocytes in breast cancer: A double blind placebo controlled randomized clinical trial. Rajinder Parshad. Funded by CSIR for 2 years. Funds: Rs 20,000 per year.
4. Evaluation of the role of proton MR spectroscopy in the non-invasive detection, assessment of treatment response and tumor metabolism in breast cancer. V. Seenu. Funded by Department of Science and Technology (DST). (2002–2007). Funds: 20 lakh.
5. Evaluation of radiofrequency ablation in treatment of primary breast lesion. V. Seenu. Funded by Institute Research Grant (AIIMS) for 1 year (2006-2007). Funds: Rs 40,000.
6. Prospective case control study to evaluate role of Glutathione S Transferase (GSTT1 and GSTM 1) gene deletion in breast carcinoma and its prognostic significance. Virinder Kumar Bansal. Funded by Institute Research Grant (AIIMS). (2006-2007) Funds: Rs 20,000.
7. Prospective study to evaluate the role of helicobacter pylori in benign and malignant hepatobiliary disease. Virinder Kumar Bansal. Funded by Institute Research Grant (AIIMS). (2005-2007) Funds: Rs 60,000.

## Departmental Projects

### **Completed**

1. Accuracy of sentinel node biopsy in predicting axillary nodal status following neo adjuvant chemotherapy in locally advanced breast cancer
2. Role of *in vitro* MR spectroscopy in evaluation of lymph nodes in patients with lymphadenopathy
3. Effect of bisphosphonates on bone mineral density after renal transplantation as assessed by bone mineral densitometry
4. Evaluation of feasibility and performance of minimally invasive radioguided parathyroidectomy in established cases of primary hyperparathyroidism
5. Evaluation of the role of pneumatic compression pump in the management of post-mastectomy lymphedema
6. Factors affecting incidence of early postoperative complications
7. Three port vs. four ports laparoscopic cholecystectomy: A prospective randomized controlled study
8. Focused abdominal sonography in trauma (FAST) in patients with blunt trauma abdomen: A prospective study
9. Post cholecystectomy symptoms following laparoscopic cholecystectomy
10. Ambulatory laparoscopic hernia repair: A feasibility study
11. Evaluation of early outcomes and quality of life after day care conventional inguinal hernia repair
12. Role of centchroman in management of mastalgia and fibroadenoma—a randomized study
13. Relationship of serum TSH with thyroid vascularity assessed at operation

14. Advanced sentinel lymph node evaluation in breast and head and neck cancers
15. To study the burden of post-operative surgical site infections in clean and clean contaminated operations
16. To evaluate the role of intra-abdominal pressure as a predictor of abdominal wound dehiscence

### **Ongoing**

1. Dyslipidaemia and cardiovascular risk factors in renal transplant recipients
2. Total extraperitoneal hernia repair comparison of space creation by direct telescope vs. balloon dissection: A randomized controlled study
3. Standardized mesh repair for inguinal hernia: A pilot study
4. To study the feasibility of fast track thyroidectomy
5. Post-operative surgical site infection in clean and clean contaminated operations.
6. BhCG expression inpatients with benign and malignant breast diseases
7. Prospective study to evaluate the role of *Helicobacter pylori* in benign and malignant hepatobiliary disease
8. Mammotome guided biopsy for indeterminate breast lesions following fine needle aspiration cytology
9. Radical duct excision for nipple discharge (benign breast disease)—its long-term follow up
10. Role of Centchroman in regression of mastalgia and regression of fibroadenoma and its correlation to histopathology and estrogen and progesterone receptor
11. Safety and efficacy of autologous stem cells in prevention of amputation in patients with chronic critical limb: a randomized multi-centric study
13. Standardized open mesh repair for primary inguinal hernia: A pilot study
14. Role of FDG PET-CT in evaluation of axillary lymph node involvement in T1 T2 N0 M0 breast cancer in comparison with sentinel node biopsy

### **Collaborative Projects**

#### **Completed**

1. Evaluation of neo-adjuvant chemotherapy in locally advanced breast cancer (with Radiotherapy, Radiology and Pathology)
2. Sentinel lymph node biopsy for locally advanced breast carcinoma after neoadjuvant chemotherapy (with Nuclear Medicine, Pathology and Radiotherapy)
3. Characterization of thymoma using F18 fluorodeoxyglucose positron emission tomography (FDG PET-CT) and its correlation with histopathology (with Nuclear Medicine and Pathology)
4. Evaluation of patients with primary mediastinal lymphadenopathy using FDG-PET-CT scan and its correlation with histopathology: A prospective study (with Medicine, Nuclear Medicine and Pathology)

5. Clinical co-relation of ER, PR, HER2 neu expression and BRCA1 gene mutations in Indian breast cancer patients. (with Pathology)
6. CMV disease in transplantation (with Microbiology)

### **Ongoing**

1. Quality of life of live related donors (with Nephrology)
2. Molecular typing and detection of mupirocin and methicillin resistant *Staph aureus* (with Microbiology)
3. Cytokine Gene Polymorphism in Renal Transplant Patients (with Transplant Immunology and Immunogenetics)
4. Outcome after laparoscopic cardiomyotomy—early and late (with Gastroenterology)
5. Efficacy and feasibility of regional anaesthesia compared to general anaesthesia for totally extraperitoneal laparoscopic inguinal hernia repair (with Anaesthesiology)
6. ‘Breast cancer: Local tumour staging by MRI and its impact on therapeutic approach’ (with Radiodiagnosis and Pathology)
7. ‘Evaluation of sentinel lymph nodes in patients with early breast cancer using PET scan’ (with Endocrinology, Pathology and Nuclear Medicine)
8. Characterization of thymoma using F18 fluorodeoxyglucose positron emission tomography (FDG PET–CT) and its correlation with histopathology (with Nuclear Medicine and Pathology)
9. Evaluation of patients with primary mediastinal lymphadenopathy using FDG-PET-CT scan and its correlation with histopathology: A prospective study (with Medicine, Nuclear Medicine and Pathology)

## **Publications**

### **Journals**

1. Gupta A., Kumar S, Kumar S, Mishra MC, Kumar S. Surgical residency programme: Training, teaching and evaluation in general surgery: A peer opinion poll in five medical colleges in Northern India. *Indian J Surg* 2006;**68**:310–15.
2. Misra MC, Bansal VK, Kulkarni MP, Pawar DK. Comparison of laparoscopic and open repair of incisional and primary ventral hernia: Results of a prospective randomized study. *Surg Endosc* 2006;**20**:1839–45.
3. Misra MC, Guleria S. Management of cancer gallbladder found as a surprise on a resected gallbladder specimen. *J Surg Oncol* 2006;**93**:690–8.
4. Aggarwal S, Guleria S, Misra MC, Goswami R, Seth A, Kumar S. Transperitoneal, transmesocolic approach for laparoscopic excision of an extra-adrenal pheochromocytoma. *J Laparoendosc Adv Surg Tech A* 2006;**16**:261–3.
5. Guleria S, Kamboj M, Singh P, Sharma M, Pandey S, Chatterjee A, *et al.* Tacrolimus (Pan Graf) as de novo therapy in renal transplant recipients in India. *Transplant Proc* 2006;**38**:2029–31.

6. Varma M, Guleria S, Gupta S, Dinda AK, Agarwal SK, Mahajan S, *et al.* Significance of protocol biopsies in living related renal transplant recipients. *Transplant Proc* 2006;**38**:2016–17.
7. Aggarwal S, Kini S, Herron D. Laparoscopic sleeve gastrectomy for morbid obesity: A review. *Surg Obes Relat Dis* 2007;**3**:189–94.
8. Gamangatti S, Vashisht S, Kapoor A, Chumber S, Bal S. Comparison of graded compression ultrasonography and unenhanced spiral computed tomography in the diagnosis of acute appendicitis. *Singapore Med J* 2007;**48**:80–7.
9. Gogia N, Sharma R, Gamangatti S, Seenu V, Madhusudhan KS, Parshad R. Hepatic Hydatid cysts with billiary and peritoneal rupture and transdiaphragmatic migration. *Trop Gastroenterol* 2006;**27**:93–6.
10. Appala S, Bagadi R, Prasad CP, Srivastava A, Parshad R, Gupta V, *et al.* Frequent loss of Dab2 protein and infrequent promoter hypermethylation in breast cancer. *Breast Cancer Res Treat* 2006.
11. Bassi KK, Seenu V, Ballehaninna UK, Parshad R, Chumber S, Dhar A, *et al.* Second echelon node predicts metastatic involvement of additional axillary nodes following sentinel node biopsy in early breast cancer. *Indian J Cancer* 2006;**43**:103–9.
12. Kumar M, Jagannathan NR, Seenu V, Dwivedi SN, Julak PK, Rath GK. Monitoring of therapeutic response of locally advanced breast cancer patients: Sequential in vivo proton MR spectroscopy study. *J Magn Reson Imaging* 2006;**24**:325–37.
13. Tahir M, Ahmed FU, Seenu V. Giant inguinoscrotal hernia: Case report and management principles. *Int J Surg* 2006;**20**:1–3.

### Abstracts

1. Guleria S, Kamboj M, Singh P, *et al.* Generic Tacrolimus in a live related renal transplantation: A preliminary report. *Am J Transplant* 2006;**6** (Suppl. 2); and *Transplantation* 2006; 82: (Suppl. 3).
2. Singh G, Kumar P, Thulkar S, Parshad R. An overview of computer aided image segmentation analysis for breast tumors in mammogram. *J Med Physics* 2006;**31**:**[Au? Page spread?]**.
3. Parshad R, Hazrah P, Saraya A, Garg P, Makharia G. Laparoscopic cardiomyotomy without fundoplication four years experience from a tertiary care center in India (Abstract) scientific session of the society of american gastrointestinal and Endoscopic Surgeons (SAGES), 2006;**20** (Suppl. 1):S292–S407.
4. Taranikanti V, Seenu V, Roy TS, Kumar R. Impact of medroxy progesterone on expression of cell cycle regulatory genes with metastatic ability in breast cancer. *FASEB* 2007;**8**:A385.
5. Seenu V, Malankar D, Thulkar S, Sharma S, Rath GK, Julka PK, *et al.* Evaluation of efficacy of radiofrequency ablation in early breast cancer. *FASEB* 2007;**9**:A385.
6. Taranikanti V, Seenu V, Dattagupta, Kumar R. Role of cell cycle regulatory molecules in patients of breast cancer on hormonal therapy. *AACR Abstract online* #5217.



7. Danishad KA, Seenu V, Jagannathan NR. Predicting the response of neo-adjuvant chemotherapy in locally advanced breast cancer patients by diffusion weighted imaging. *Proc Int Soc Magn Reson Med*. 2006;**14**:300.
8. Danishad K. A, Seenu V, Roell S, Vorbuchner M, Jagannathan NR. Sequential MRSI and DWI study for early assessment of response of breast cancer to neo-adjuvant chemotherapy: A pilot study. *Proc Int Soc Magn Reson Med* 2006;**14**:1784.
9. Jagannathan NR, Sharma U, Kumar MNP, Seenu V. Evaluation of in-vitro NMR spectroscopy in detecting metastasis in axillary nodes in breast cancer in a clinical setting. *Proc Int Soc Magn Reson Med* 2006;**14**:1997.

### **Chapters in Books**

1. Guleria S. Prosthetic materials and fixation devices in surgery. In: Agarwala R, Bandhyopadhyay SK, Om Tania (eds). *Laparoscopic surgery instruments and equipments*. ILS Multispeciality Clinic, 1<sup>st</sup> Edition, Kolkatta; 2006;93–103.
2. Srivastava A, Dhar A. Benign breast disease—a neglected entity. In: Gupta RL (ed). *Recent advances surgery*. New Delhi: Jaypee Brothers 2006;**10**:175–201.

### **Patient Care**

The department runs a general surgical OPD every day, a follow up clinic 4 days a week, breast cancer clinic twice a week and renal transplant clinic once a week. The department is providing regular services in multiple fields including minimally invasive surgery, renal transplantation, hepato-biliary and pancreatic surgery, thoracic and thoracoscopic surgery, plastic and reconstructive surgery, endocrine surgery, vascular surgery and cancer surgery.

The department provides emergency care for traumatic and non-traumatic emergencies round the clock.

The department provides for consultation and care of patients suffering from chronic wounds and patients with chronic venous insufficiency, patients with benign and malignant diseases of the breast. The patients with critical limb ischemia are offered stem cell therapy as part of a DBT funded multi-centre randomized trial.

### **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor M.C. Misra**, Visited Thimpu technical expert group to help set-up National Referral Hospital at Thimpu, Bhutan on the invitation of Ministry of Health, Royal Government of Bhutan, Bhutan; 22–25 February 2007; Nominated as Chairman, Committee on Education and Training (CET) of the Association for Trauma Care of India (ATCI), with the responsibility to promulgate ATLS in to India; February 2007; Invited to deliver ‘Professor B.B. Ohri Memorial Oration’ on ‘Newer Developments in Minimal Access Surgery—a Myth or Reality’, 25th Annual Conference of MP Chapter of Association of Surgeons of India, the Sri Aurobindo Institute of medical Sciences

Medical College, Indore; 16–18 February 2007; Invited to deliver ‘Dr H. Lalmohan Singh Memorial Oration’ on ‘Newer Horizons in Minimally Invasive Surgery’, 11th Annual Conference of the Association of Surgeons of India, Manipur State Chapter, Regional Institute of Medical Sciences, Imphal; 7 October 2006; The Founder President, Indian Hernia Society; Appointed Examiner by the Royal College of Physicians and Surgeons, Glasgow for MRCS Examination, New Delhi; 11–15 September 2006; Visiting Professor to Division of Minimally Invasive Abdominal and Bariatric Surgery, Department of Surgery, Mount Sinai Medical Center, New York, USA; Department of Surgery and Emergency Medicine, Harlem Hospital Center (Level 1 Trauma Center) and Department of Physical Medicine and Rehabilitation, Harlem Hospital Center, New York, USA; Level I Trauma Center, Westchester Medical Center, New York Medical College, New York, USA, Department of Emergency Medicine, Bellevue Hospital Center (Level I Trauma Center), New York University School of Medicine, New York, USA, 17 June–7 July 2006. (To study Center for Minimal Access Surgery set up and Trauma Systems); Visiting Professor to Department for General and Visceral Surgery, Marien Hospital, Stuttgart, Germany; Klinik für Allgemein-, Viszeral- und Transplantationschirurgie, Universitätsklinikum Tübingen, Germany; Section for Minimally Invasive Surgery, Eberhard–Karls–Universität, Tübingen, Germany; University Women Hospital Tübingen, Germany, 10–13 July 2006. (to explore collaboration to set up Training Center for Minimal Access Surgery at AIIMS, New Delhi).

**Professor Arvind Kumar** visited Liverpool Hospital at Sydney on a ‘WHO’ training in the field of Trauma. Liverpool Hospital is the tertiary care trauma center serving the South West Sydney Area with a separate trauma unit. He observed the pre hospital as well as hospital care of trauma patients in detail from 1-30 October 2006.

**Dr Sandeep Guleria** was awarded the Luminary award by the IMA South Delhi Branch. He continues to be a member of the Government of India Authorization Committee for Liver and Renal Transplantation in the union territory of Delhi. He was appointed as a Examiner for the Royal College of Surgeons of Glasgow for the MRCS examination.

**Dr V. Seenu** was designated as Trainer for No scalpel Vasectomy (NSV) by the Ministry of Health and Family Welfare. He was Invited faculty at SGPGI Breast Course 2006–2007 and invited faculty at MAMC Delhi Surgery Update.

**Dr Sandeep Aggarwal** a 1-year fellowship from Mount Sinai School of Medicine during which he visited Division of Minimally Invasive Surgery and Center for Bariatric Surgery at Mount Sinai School of Medicine, New York City, USA, December 2005–December 2006.

**Dr V.K. Bansal** received a Short-term Fellowship to Visit Training Centre for Minimally Invasive Surgery at Eberhard-Karls University, University Hospital, Tuebingen, Germany, 18 September 2006–30 November 2006. He attended the following Training Courses in Laparoscopic Surgery

as a Tutor during the above fellowship:

1. Basic and Advanced course for laparoscopic surgery.
2. Intensive course for Trans Anal Endoscopic Microsurgery.
3. Laparoscopic colorectal surgery.
4. Laparoscopic upper abdominal surgery.

## **VISITING SCIENTISTS**

1. Dr Thomas M. Scalea, MD, FACS, Physician in Chief, Shock Trauma Centre.
2. Francis X. Kelly/MBNA, Professor of Trauma Surgery, Director, Programme in Trauma, R Adams Cowley Shock Trauma Center, University of Maryland School of Medicine.
3. Mr John H. Spearman, MBA, Vice President, Manjari Joshi MD, Associate Professor of Medicine, Senior attending in Infectious Diseases.
4. Dr James Cushman, Trauma surgeon, R Adams Cowley Shock Trauma Center, University of Maryland School of Medicine.
5. Professor Gerhard F. Buess, MD FRCS Ed, Professor of Surgery and Director, Section for MIS, University of Tuebingen, Germany. 26-31 March 2007(During Endo Surg 2007)
6. Mrs Lilo Milander, Course Director, Section for MIS, University of Tuebingen, Germany.26-31 March 2007
7. Dr Ravi Kumar Chittoria, Plastic, Cosmetic and Reconstructive Surgeon, Associate Professor and Head, Department of Plastic Surgery, Sri Venkateswara Institute of Medical Sciences (SVIMS) and University, Tirupati, Andhra Pradesh.26-31 March 2007
8. Professor Robert E. Mansel Chairman of Hospital based disciplines, Cardiff University, UK. 26-31 March 2007
9. Dr Barnard Harrison, Chief Endocrine Surgeon, University of Sheffield, UK.26-31 March 2007.
10. Mr Amit Goyal, Lecturer, Cardiff University, UK.26-31 March 2007.

## 9.35 Transplant Immunology and Immunogenetics

### Professor and Head

N.K. Mehra

### Associate Professor

D.K. Mitra

### Scientists

Uma Kanga

Gurvinder Kaur

Sunil Kumar

Arundhati Panigrahi

## EDUCATION

### Short-term training

The department provided short-term training to junior residents of Pathology and Laboratory Medicine and senior residents (DM students) of the Department of Haematology. During the year, 30 students from various universities and institutions as well as doctors from hospitals in and around Delhi received 4–6 months' training for laboratory techniques in HLA testing and other immunological investigations.

### Long-term training

One doctor Jasmeet Kaur (Lt. Col) from the Armed Forces Medical Services (AFMC) joined for long-term training and was also registered for a PhD degree.

Training to overseas doctors: One trainee from USA attended the 8-week training programme in the department.

### Continuing Medical Education

The faculty of the department participated in and delivered several lectures in national and international conferences during the year. A quality control exercise for DNA typing of *HLA* genes is in progress at the national level. Training on various cell culture assays, including flowcytometry-based assays have been regularly given to students and visiting trainees. The faculty also delivered special lectures in various department of the institute (Biotechnology, Medical Oncology, Medicine) as part of the academic curriculum of these departments.

## Lectures delivered

### Professor N.K. Mehra

- Genetics of T1D, Indo-Swedish Symposium on Genetics and Proteomics of Diabetes, Chennai, 1-2 April 2006.

- ‘Asian Indian Donor Marrow Registry (AIDMR)’, National Meeting, Gujarat State Biotechnology Mission, Ahmedabad; 16 May 2006.
- ‘A journey into the world of HLA and medicine’, DBT sponsored Workshop on ‘HLA techniques’, SGPGI, Lucknow; 27 May 2006.
- A journey into the world of HLA during HLA and Medicine at Hungarian Acad. Of Sciences, Budapest; 13 June 2006.
- ‘MHC as an efficient biomarker of disease’, 3rd Winter School on Immunology, Goa; 4-10 August 2006.
- ‘Unrelated donor marrow registries and their role in HSCT’, 1st International Conference on Treatment in Paediatrics, New Delhi; 19 August 2006.
- ‘Chaired a session during global convention expo on telemedicine and health’, Health Conference, New Delhi; 22 August 2006.
- ‘Developments in genomics and proteomics: Implications in health and diseases’, Medical development conference, ICMR, New Delhi; 8 September 2006.
- ‘Genetics of HIV-1 infection’, Boston University Health Centre, Boston, USA; 10 October 2006.
- ‘Host genetics of HIV infection’, Montreal general hospital, Montreal; 11 October 2006.
- A journey into the World of HLA and Medicine. 10<sup>th</sup> Anniversary of the International Academy of Cardiovascular Sciences, Global Conference on Heart Healthy and Disease, Winnipeg, Canada; 12-15 October 2006.
- ‘Genetics of autoimmune diseases’, Joint Scientific Meeting of ICMR and University of Minnesota, New Delhi; 18-19 October 2006.
- ‘Genetic heterogeneity in HLA loci: Implications in treatment’, Indo-US Symposium on Genetic Disorders: Focus on haemoglobinopathies Varanasi 29-31 October 2006.
- ‘From serology to sequencing: A journey into HLA’, Workshop cum Training on ‘Molecular biology concepts and techniques’, Institute of Life Sciences, Bhubaneswar; 14 December 2006.
- ‘Immune-based markers in CVD and diabetes mellitus’, ICMR-INSERM Workshop on Development of Biomarkers for CVD and Diabetes, New Delhi; 23-24 January 2007.
- ‘Immunomodulatory genes and their polymorphism’, Indian Immunology Society Conference, New Delhi; 28-31 January 2007.
- As a Chairperson in the 1st Meeting of Stem Cell Research Foundation of India, Bangalore; 29 January 2007.
- ‘Role of HLA in HSCT’, International Conference on Emerging Trends in Health and Immunohaematology, Mumbai; 31 January -3 February 2007.
- ‘Identification of genetic markers in streptococcal infection’, Kick off meeting for ASSIST Project, PGI, Chandigarh; 5-6 February 2007.
- Session chair and lead discussant at Haematology update, AIIMS; 2 March 2007.
- ‘New developments in medicine and biology’, University Teachers, Guru Nanak Dev University, Amritsar; 7 March 2007.

- Chaired a session during International Symposium on Chemical Biology, Indian Institute of Chemical Biology Golden Jubilee, Kolkata; 9 March 2007.
- 'Review of TB challenge facility', DBT Meeting, ICGEB, New Delhi; 15 March 2007.
- Chaired a session at 2nd Annual Conference of Indian Academy of Nephrology and Delhi Nephrological Society Update, New Delhi; 18 March 2007.
- 'Immunological aspects of renal treatment', Rockland Hospital, New Delhi; 29 March 2007.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

1. Monitoring T cell activation markers and cytokine production following allogenic renal transplantation. N.K. Mehra. Funded by Indian Council of Medical Research for 3 years (2005-2008). Funds: Rs 17 lakh.
2. Programme support for Advanced Programme in Histocompatibility and Immunogenetics (PS-APHTI). N.K. Mehra. Funded by Department of Biotechnology for 3 years (2005-2008). Funds: Rs 163.43 lakh.
3. ICMR-INSERM Project on Type 1 Diabetes. N.K. Mehra. Funded by Indian Council of Medical Research for 5 years (2004-2009). Funds: Rs 120.20 lakh.
4. Comprehensive approach to understand streptococcal disease and their sequel to develop innovative strategies for diagnosis for diagnosis, therapy, prevention and control. N.K. Mehra. Funded by European Commission for 3 years (2006-2009). Funds: Rs 114 lakh.
5. Type 1 diabetes genetics consortium: An international effort. N.K. Mehra. Funded by NIH, USA for 3 years (2005-2008). Funds: US\$ 25,000.
6. HLA profile of Raica community of Rajasthan. N.K. Mehra. Funded by ICMR for 2 years (2006-2008). Funds: Rs 10.08 lakh.
7. Genomic analysis of MHC region genes (HLA and Non HLA) in type 1 diabetes in the Indian population. N.K. Mehra. Funded by ICMR for 3 years (2006-2009). Funds: Rs 27.70 lakh.
8. Studies on T cell mediated suppression of immunity in visceral leishmaniasis patients. D.K. Mitra. Funded by DBT for 3 years (2006-2009). Funds: Rs 79.29 lakh.
9. Efficacy of oral zinc administration as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters (Double-blind, Randomized, placebo-controlled, multicentre clinical trial). D.K. Mitra. Funded by DBT for 3 years (2006-2009). Funds: Rs 23.18 lakh.
10. Role of oral vitamin D as an adjunct therapy in category I pulmonary tuberculosis along with assessment of immunological parameters. D.K. Mitra. Funded by DBT for 3 years (2006-2009). Funds: Rs 20.64 lakh.
11. Impact of HIV infection on latent TB among patients with HIV-TB co-infection. D.K. Mitra. Funded by DBT, ICMR for 3 years (2007-2010). Funds: Rs 134 lakh.

## Publications

### Journals

1. Kaur G, Rapphap CC, Kumar S, Bhatnagar S, Bhan MK, Mehra NK. Polymorphism in L selectin, E selectin and ICAM-1 genes in Asian Indian Pediatric patients with celiac disease. *Hum Immunol* 2006;**67**:634–8.
2. Kanga U, Tandon N, Marwaha RK, Khanna R, Bhattacharaya B, Singh S, *et al* Immunogenetic association and thyroid autoantibodies in juvenile autoimmune thyroiditis in North India. *Clin Endocrinol* 2006;**64**:373–9.
3. Kumar R, Prem S, Mahapatra M, Seth T, Chowdhary DR, Mishra P, *et al*. Fludarabine, cyclophosphamide and horse antithymocyte globulin conditioning regimen for allogeneic peripheral blood stem cell transplantation performed in non-HEPA filter rooms for multiply transfused patients with severe aplastic anemia. *Bone Marrow Transplant* 2006;**37**:745–9.
4. Mehra NK, Kaur G, Singh M. 8th FIMSA/IIS advanced course on immunology: Focus on clinical immunology. *Expert Rev Clin Immunol* 2006;**2**:491–3.
5. Alcais A, Alter A, Antoni G, Orlova M, Van Thuc N, *et al*. The functional LTA+80 variant is a strong age dependent risk factor for leprosy. *Nat Genet* 2007;**39**:517–22.
6. Kaur G, Singh P, Vajpayee M, Wig N, Mehra NK. CCR5 polymorphism is associated with disease progression in HIV infected Asian Indians. *Hum Immunol* 2007;**68**:454–61.
7. Mehra NK, Kaur G. HLA genetics and disease with particular reference to type I diabetes and HIV infection in Asian Indians. *Expert Rev Clin Immunol* 2006;**2**:901–13.
8. Mehra NK, Kumar N, Kaur G, Kanga U, Tandon N. Biomarkers of susceptibility to type 1 diabetes with special reference to the Indian population. *Indian J Med Res* 2007;**125**:321–44.
9. Panigrahi A, Gupta N, Siddiqui JA, Margoob A, Bhowmik D, Guleria S, *et al*. Simultaneous monitoring for anti HLA and MICA antibodies following live related donor (LRD) renal transplantation. *Hum Immunol* 2007;**68**:362–7.
10. Kaur G, Rapphap CC, Kumar N, Kumar S, Neolia S, Mehra NK. Frequency distribution of cytokine gene polymorphism in the healthy North Indian population. *Tissue Antigens* 2007;**69**:113–20.
11. Panigrahi A, Gupta N, Siddiqui JA, Margoob A, Bhowmik D, Guleria S, Mehra NK. Monitoring of anti HLA and anti-Major Histocompatibility complex class I related chain A antibodies in living related donor transplantation. *Transplant Proc* 2007;**39**:759–60.
12. Kanga U, Panigrahi A, Kumar S, Mehra NK. Asian Indian donor marrow registry: All India institute of medical sciences experience. *Transplant Proc* 2007;**39**:719–20.
13. Kaur G, Singh M, Mehra NK. 14th IHIWS MHC and infection study: Summary and conclusions. *Tissue Antigens* 2007;**69**:243–4.
14. Morahan G, Kaur G, Singh M, Rapphap CC, Kumar N, Katock K, *et al*. Association of variants in the IL12B gene with leprosy and tuberculosis. *Tissue Antigens* 2007;**69**:234–36.

15. Singh M, Balamurugan A, Katoch K, Sharma SK, Mehra NK. Immunogenetics of mycobacterial infections in the North Indian population. *Tissue Antigens* 2007; **69**: 228–30.
16. Mehra NK, Kaur G. 14th International HLA and immunogenetics workshop: Report on joint study on MHC and infection. *Tissue Antigens* 2007; **69**:226–7.
17. Kaur G, Rappaport CC, Kumar N, Kumar S, Neolia S, Mehra NK. Frequency distribution of cytokine gene polymorphism in the healthy North Indian population. *Tissue Antigens* 2007; **69**:231–3.
18. Ozawa M, Terasaki PI, Lee JH, Castro R, Alberu J, Alonso C, *et al.* 14th International HLA and immunogenetics workshop: Report on the prospective chronic rejection project. *Tissue Antigens* 2007; **69**:174–9.

### Chapters in Books

1. Kaur G, Kumar N, Kanga U, Tandon N, Mehra NK. Immunogenetic aspects of autoimmune diseases. In: Mehra NK, Sood OP (eds). *Immunotherapeutics and disease management*. New Delhi: Ranbaxy Science Foundation; 2005:111–18. (Proceedings of the 12th Annual Symposium)
2. Mehra NK, Singh P, Vajpayee M, Kaur G. Immunomodulatory genes and HIV infection. In: Mehra NK, Sharma SK, Sood OP (eds). *Round Table Conference Series on HIV and Tuberculosis: Co-infection*. Proceedings of the 15th Round Table Conference. New Delhi: Ranbaxy Science Foundation; 2005:53–69.
3. Toubert A, Reveille J, Gorodezky C, Mehra NK, Tamouza R, Thomson G, *et al.* 13th International Histocompatibility Working Group for spondyloarthropathies: Joint Report. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:811–16.
4. Terasaki P, Ozawa M, Castro R, Lee S, Cook D, Abdelnoor A, *et al.* Prospective chronic rejection study report. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1404–07.
5. Louie LG, Silver EW, Direskeneli GS, Schmelzer K, Kearney FC, Crowley K, *et al.* Report of the Anthropology group from the Cytokine Polymorphism Component. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1428–50.
6. Mehra NK, Kaur G. HLA and Mycobacterial Disease: Introduction and work plan. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1485–7.



7. Balamurugan A, Sharma SK, Mehra NK. HLA-DRB1 and DQ allele association with various clinical forms of tuberculosis in North India. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1488–90.
8. Singh M, Jaini R, Katoch K, Sengupta U, Mehra NK. Molecular basis of MHC association with leprosy in North Indian patients. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1497–99.
9. Kaur G, Rappthap CC, Mytilineos J, Schmelzer Chae GT, Han H, Agrawal S, *et al.* Cytokine gene polymorphisms in leprosy and tuberculosis: A multicentric study. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1502–07.
10. Kaur G, Rappthap CC, Naruse T, Kawata H, Chae GT, Han H, *et al.* Polymorphism of NRAMO1 in mycobacterial infections: A multicentric study. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1508–11.
11. Kaur G, Bansal A, Chae GT, Han H, Agrawal S, Majundar D, *et al.* Soluble CD23 levels in mycobacterial infections: A multicentric study. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1512–14.
12. Mehra NK, Kaur G. HLA and Mycobacterial Disease: Summary and conclusions. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 1. USA: IHWG Press, Seattle, WA; 2006:1515–17.
13. Jaini R, Kaur G, Kanga U, Mehra NK. External genetic influences on MHC diversity in Asian Indians. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 11. USA: IHWG Press, Seattle, WA; 2006:194–99.
14. Arnaiz-Villena A, Martinez-Laso J, Moscoso J, Zamora E, Lowy E, Gomez-Casado E, *et al.* HLA-G and E alleles: A worldwide study. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 11. USA: IHWG Press, Seattle, WA; 2006:220–21.
15. Arnaiz-Villena A, Martinez-Laso J, Moscoso J, Zamora E, Lowy E, Gomez-Casado E, *et al.* HLA-F and E alleles: A worldwide study. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 11. USA: IHWG Press, Seattle, WA; 2006:222–23.

16. Panigrahi A, Deka R, Mehra NK. Clinical relevance of donor specific and non donor anti HLA antibodies in live donor renal transplantation. In: John A. Hansen (ed). *Immunobiology of the Human MHC*. Proceedings of the 13th International Histocompatibility Workshop and Conference, Vol. 11. USA: IHWG Press, Seattle, WA; 2006:591–96.

### Books

1. Mehra NK, Sharma SK, Sood OP (eds). *HIV and tuberculosis: Co-infection*. Round Table Conference Series. Ranbaxy Science Foundation; 2005(Vol.12).
2. Mehra NK, Sood OP (eds). *Immunotherapeutics and disease management*. Ranbaxy Science Foundation; 2006 (Vol.15).

## PATIENT CARE

### Laboratory services

#### Transplantation

HLA matching	Recipients	Donors	Total
Renal transplant patients	250	290	540
Bone marrow transplant patients			
Leukemia	100	350	450
Aplastic anemia	50	100	150
Thalassaemia	50	120	170
Others	50	100	150
<b>Total</b>	<b>500</b>	<b>960</b>	<b>1,460</b>
<b>HLA-DNA matching</b>	<b>200</b>	<b>225</b>	<b>425</b>
<b>Cadaver donor organ transplantation</b>			
Cadaver donor	4		
Kidney recipients	0		
Heart recipients	0		
<b>Cross-match test</b>			
Serology	625		
Flowcytometry	78		
Panel reactive antibody (PRA) screening	500		
Flow PRA	40		
ELISA PRA	200		
<b>Diagnostics</b>			
<b>Spondyloarthropathies</b>		<b>600</b>	
<b>Other diseases</b>			
Chimerism studies in BMT		225	
Immunophenotyping of leukemia patients		300	
Unrelated donor search for BMT		400	

During the year, 400 requests for search of unrelated HLA-matched donor for bone marrow transplantation (BMT) were received from the 'Asian Indian Donor Marrow Registry'. These include 200 from USA, 75 from Europe, 60 from various Asian countries and 65 from India.

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Professor N.K. Mehra** received his 'Diploma' as Honorary Member of the Hungarian Academy of Sciences at a function, the Academy office in Budapest, June 2006. He was invited as a 'Guest Speaker' at the Global Conference on Heart Health and Disease at Winnipeg, Canada, October 2006; delivered lectures at Boston University Health Science Centre, USA and at Montreal General Hospital, Montreal, Canada; was invited to the National Institute of Health, USA, October 2006 and attended a meeting of the Type 1 Diabetes Genetics Consortium, Bethesda, USA, November 2006; Member of the ICMR Expert Group for formulating National Guidelines on Stem cell Research; Member of the INSERM-ICMR joint working group to promote Indo-French collaboration; ICMR Special Review Committee on North-East Projects, ICMR Expert Group on Human Resource Development; ICMR Technical Committee, Immunology Task Force of ICMR; ICMR Expert Group on Studies on Camel Milk; ICMR Advisory Group on CVD and Diabetes; ICMR Expert Group on Stem Cell Research; Biomedical Research Board of ICMR; He was a member of the S.S. Bhatnagar Award Selection Committee; Member of the jury for Ranbaxy Science Foundation awards; member of the DST Technology Development Board Project Monitoring Committee and Member, Scientific Advisory Committee of Talwar Research Foundation; served as a member of the DBT Task Force on Stem Cell Research and Regenerative Medicine; Expert-cum-monitoring Group on Mw Research; Inter Disciplinary Research Committee of the DBT, and Expert Group on Research on Tuberculosis; continues to be the 'Council Member of the International Union of Immunological Societies (IUIS)', Vice President of the Federation of Immunological Societies of Asia-Oceania (FIMSA). 'Councillor' for the International Histocompatibility Advisory Council and of the Australasian and South East Asian tissue typing Association (ASEATTA). He is a member of the joint Scientific Advisory Committee of the JALMA Institute for Leprosy and other Mycobacterial Diseases, Agra and Tuberculosis Research Center, Chennai; and National Institute of Research in Reproductive Health (NIRRH), Mumbai. He is a member of the Research Council of the Indian Institute of Chemical Biology, (IICB), Kolkata and Member of the Indo-French technical association; member of the ICMR Task Force on Immunology, Diabetes, molecular cardiology; member of the several project review committees of ICMR projects; the Editorial Board of several prestigious international journals: *Tissue Antigens* (Australia), *Modern Rheumatology* (Japan), *International Journal of Human Genetics* (India) and *Journal of Clinical Immunology* (USA). He is a member of the ethical, legal and social implications (ELSI) Committee of the Type 1 Diabetes Genetics consortium (T1DGC) of the NIH, Washington, USA, He was invited Guest Speaker in several national and International meetings.

**Dr Uma Kanga** (Scientist-II) continues to serve as the 'Councillor' for the Australasian and South East Asian Tissue Typing Association (ASEATTA).

**Dr Arundhati Panigrahi** (Scientist I) received the 'Best Poster Presentation Award' at the Annual Conference of the Indian Society of Organ Transplantation, Ahmedabad, 2006.

**Mr Ankit Saxena**, PhD student was awarded 'Best Poster Presentation' during the Indian Immunology Society Conference; 2007.

### **Visiting Scientists**

Dr Amanda Loth (Australia); Dr Nina Bhardwaj (USA); Professor Malcolm Simons (Australia); French Scientists-Professor F. Tourraine; Professor Blin; led by Bernarde Montferra; Professor John Davies; Professor Jeff Turner, University of Toronto (Canada); Professor Bhagirath Singh (Canada); Dr Ami Shah (USA); delegations led by Professor Frank B. Cerra and comprising several eminent Physicians, Surgeons and Basic Scientists from University of Minnesota; Professor Juergen Mlynek; President of the German Helmholtz Association, Germany; Professor Erwin Schurr (Germany); Professor Harpal S. Buttar (Canada); and Professor G.S. Chhatwal (Germany).

## 9.36 Urology

### **Professor and Head**

N.P. Gupta

### **Professors**

A.K. Hemal

P.N. Dogra

### **Additional Professor**

Amlesh Seth

### **Assistant Professor**

Rajeev Kumar

## **EDUCATION**

The faculty of the department participated in and delivered lectures in continuing medical education programmes, symposia, national and international conferences during the year.

The department imparted lectures for the undergraduates and nursing students. The postgraduate education is continuing and 11 postgraduates are under training.

The department had postgraduate students in Urology from CMC, Vellore; PGI, Chandigarh and SGPGI, Lucknow to observe and learn Endourology, Laparoscopy and Microsurgery in Urology.

The faculty of the department continues to be examiners for NBE and MCh Urology in various universities and Inspector for the Medical Council of India and National Board for recognition of standard of examination and facilities for Urology postgraduate courses.

## **Continuing Medical Education**

The faculty of the department participated in and delivered lectures in continuing medical education programmes, symposia, national and international conferences during the year.

### **Organized by the department**

- Conducted International Live Operative Workshop on 'Robotic urologic surgery', AIIMS, New Delhi; 31 July–1 August 2006.

## **National and International Conferences**

### **Lectures delivered**

#### **Professor N.P. Gupta**

- 'Robotic urologic surgery: Asian perspective', 8th Asian Congress of Urology, Bali Indonesia; 22-26 August 2006.
- 'Robotic urologic surgery: Asian perspective', ASIMANICON-2006, Mumbai; 7-8 October 2006.
- 'Robotic urologic surgery', East Zone Conference-USI, Ranchi; 13-15 October 2006.
- 'Vapour resection of prostate', New York Section AUA, New Delhi; 2 November 2006.
- 'Reconstructive urethral surgery-PUDD management', Societe Internationale d'Urologie Congress, Cape Town; 9-15 November 2006.
- Annual Conference of North Zone Chapter-USI, Jaipur; 3-5 November 2006.
- 'Robotic urologic surgery: Asian perspective', Dr B.N. Oration, Conference of Association of Surgeons of Nepal, Kathmandu; 23-24 November 2006.
- 'Surgical management of BPH and management of male infertility', Sri Lanka Urology Assoc of Surgeons Conference, Colombo; 1-2 December 2006.
- 'Robotic urologic surgery: Asian perspective', ASICON, Varanasi; 25-29 December 2006.
- 'Evidence-based medicine in Urology and vapour resection of prostate', USICON, Patna; 6-10 February 2007.
- 'Nephron sparing surgery in RCC: Video urology', World Congress, Singapore; 28 February-3 March 2007.

#### **Professor A.K. Hemal**

- 'Robotic urologic surgery', Urolapacon, Calicut, Kerala; 16-18 March 2007.
- 'Robotic reconstructive urologic surgery', 18th Video Urology World Congress and Singapore Urology Fair 2007, Singapore; 1-2 March 2007. 'Laparoscopy for upper and lower urinary tract', Pre-congress Robotic Workshop, 28 February 2007, Live demonstration of robotic and laparoscopic surgery.
- 'Robotic assisted urologic surgery: A new chapter in MIS', Proctored (Live demonstration of robotic radical prostatectomy) and mentored for Robotic Urologic Surgery, Inaugural conference on 'Robotic surgery', Police General and Bangkok General Hospital, Bangkok, Thailand; 17-19 February 2007.
- Delivered guest lectures and live demonstration in the Korean Society of Endourology Annual meeting, Seoul, Korea; 21-22 October 2006.
- 'Robotic urologic surgery', Live demonstration of Robotic Radical Prostatectomy, Taichung Veterans General Hospital, Taichung, Taiwan; 1 October 2006.
- 'Robotic radical prostatectomy', Live demonstration of Robotic Radical Prostatectomy, Tri-Service General Hospital, Taipei, Taiwan; 30 September 2006.
- Delivered lecture and performed live demonstration of 'Robotic urologic surgery', International Robotic Urologic Symposium, New Delhi, India; 31 July-1 August 2006.

### **Professor P.N. Dogra**

- ‘Minimally invasive procedures for stress urinary incontinence in MIPS’, Professional Programme, Ethicon Institute of Surgical Education, Delhi; 24 February 2007.

### **Dr Rajeev Kumar**

- ‘Microsurgical VEA’, 2nd APSSM and 1st AGASSI annual meeting, Mumbai; 1-3 December 2006.
- ‘Varicocelelectomy’, 2nd APSSM and 1st AGASSI annual meeting, Mumbai; 1-3 December 2006.
- ‘Genetics and ROS’, 2nd APSSM and 1st AGASSI annual meeting, Mumbai; 1-3 December 2006.
- ‘Medical therapy future in male infertility’, 2nd APSSM and 1st AGASSI annual meeting, Mumbai; 1-3 December 2006.
- ‘Environmental factors in male infertility’, Annual Conference, Indian Fertility Society, New Delhi; 9-10 December 2006.
- ‘Genetic tests in male infertility’, Annual meeting of the ISAR, Chandigarh; 8-11 February 2007.
- Convenor: Symposium on male infertility: Annual conference, North Zone USI, Jaipur; 3-5 November 2006.
- Chairperson: Male infertility panel: Annual Conference, Indian Fertility Society, New Delhi; 9-10 December 2006.
- Chairperson: Male infertility Annual meeting of the ISAR, Chandigarh; 8-11 February 2007.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

Homocysteine as a marker for male infertility. Principal Investigator: Dr. Rajeev Kumar. Funded by Research Grant, AIIMS for 1 year (2006–2007). Funds: Rs 1 lakh

### **Departmental Projects**

#### **Completed**

1. Her2/neu over expression and gene amplification in transitional cell carcinoma of urinary bladder
2. Evaluation of laparoscopic radical cystectomy for carcinoma of bladder
3. Comparison of laparoscopic and open radical cystectomy for carcinoma of bladder
4. Evaluation of laparoscopic radical prostatectomy
5. Comparison of laparoscopic and open radical prostatectomy for carcinoma of prostate
6. Comparison of laparoscopic and open radical nephrectomy for renal cancer

### **Ongoing**

1. Prevalence of androgen deficiency and sexual function status in the ageing Indian male
2. Sexual function status of patients before and after treatment of BPH
3. Evaluation of laparoscopy in the management of carcinoma bladder
4. Effect of stone and pelvicalyceal system configuration on the morbidity and relook rates with PCNL and its impact on training
5. Development and validation of a stratification System to grade the degree of difficulty of PCNL
6. Robotic surgery
7. Laparoscopic surgery in urology
8. Genitourinary cancer (Renal, Bladder and Prostate Cancer)
9. Minimal invasive surgery in urology

### **Collaborative Projects**

#### **Ongoing**

1. Mitochondrial genes and Y chromosome deletions in male infertility (with Anatomy)
2. 3 dimensional chemical shift imaging and diffusion weighted imaging using proton MRS in the diagnosis of carcinoma prostate (with NMR)
3. Stone analysis using X-ray diffraction studies (with Biophysics)
4. Prospective randomized study of radical cystectomy versus concurrent chemo-radiotherapy in muscle invasive cancer of urinary bladder (with Radiotherapy)
5. Molecular epidemiology of prostate cancer: Polymorphosis in hormone-related and prostatic cancer candidate (with Punjab University Chandigarh and PGI, Chandigarh)
6. Characterization of testing specific sperm associated antigen 9 (SPAG9) gene expression and humoral immune response in various human cancers (with National Institute of Immunology, New Delhi and Safdarjung Hospital, New Delhi)
7. Molecular analysis of gene markers in urine cytology and tissue histology specimens of Indian patients with superficial and muscle invasive transitional cell carcinoma of urinary bladder (with Biochemistry and Pathology)
8. Multicentre open-label, randomized, phase III trial comparing adjuvant hormonal therapy (Eligard-Leuprolide acetate) in combination with taxotere (docetaxel) versus hormonal therapy alone versus deferred therapy in patients with prostate cancer at high-risk of relapse after radical prostatectomy (with Medical Oncology)

### **PUBLICATIONS**

#### **Journals**

1. Gupta NP, Kumar R, Mundada OP, Aron M, Hemal AK, Dogra PN, *et al.* Reconstructive surgery for the management of genitourinary tuberculosis: A single center experience. *J Urol* 2006;**175**:2150–4.



2. Gupta NP, Kumar R, Yadav R. Safety of holmium laser prostatectomy in patients with cardiac pacemaker implant. *Indian J Urol* 2006;**22**:46–8.
3. Gupta NP, Kumar A, Hemal AK, Dogra PN, Seth A, Kumar R. Open nephron-sparing surgery in renal tumors with normal contralateral kidney: A single centre experience of 8 years. *Indian J Urol* 2007;**23**:18–22.
4. Gupta NP, Yadav R. Eggshell calcification of kidney in ureteropelvic junction obstruction. *Int Braz J Urol* 2006;**32**:557–9.
5. Gupta NP, Ansari MS, Nabi G. National survey on orthotopic neobladder. *Int Urol Nephrol* 2007;**39**:143–8.
6. Hemal AK, Kumar A, Kumar R, Wadhwa P, Seth A, Gupta NP. Laparoscopic versus open radical nephrectomy for large renal tumors: A long-term prospective comparison. *J Urol* 2007;**177**:862–6.
7. Dogra PN, Gautam G, Ansari MS. Retroperitoneoscopic adrenalectomy for pheochromocytoma in a morbidly obese patient: A case report. *Int Urol Nephrol* 2007;**39**:99–101.
8. Kumar R, Gautam G, Gupta NP. Drug therapy for idiopathic male infertility: Rationale versus evidence. *J Urol* 2006;**176**:1307–12.
9. Kumar R, Hemal AK. The ‘scrubbed surgeon’ in robotic surgery. *World J Urol* 2006;**24**:144–7.
10. Kumar R, Shrivastava DN, Seth A. Spontaneous resolution of delayed onset, posttraumatic high-flow priapism. *J Postgrad Med* 2006;**52**:298–9.
11. Kumar R, Gupta NP. Varicocele and the urologist. *Indian J Urol* 2006;**22**:98–104.
12. Kumar R, Dada R, Gupta NP, Kucheria K. Serum FSH levels and testicular histology in infertile men with non obstructive azoospermia and Y chromosome microdeletions. *Indian J Urol* 2006;**22**:332–6.
13. Kumar R, Dada R, Kumar R, Sharma RK, Kucheria K. Importance of genetic analysis prior to ICSI. *Obs Gynae Today* 2006;**11**:461–3.
14. Kumar R, Shamsi MB, Gaznavi MI, Jena M, Kucheria K, Sharma RK, *et al*. Structural chromosomal anomalies and their association with reproductive failure. *Obs Gynae Today* 2007;**12**:152–4.
15. Kumar R. Increasing use of nephron sparing surgery for T1a renal tumors. *Indian J Urol* 2007;**23**:84.
16. Kumar R, Yadav R. Autopsy prostate cancer: Pre- and post-PSA era. *Indian J Urol* 2006;**22**:82.
17. Kumar R, Yadav R. Little of no residual prostate cancer at radical prostatectomy. *Indian J Urol* 2006;**22**:83.
18. Kumar R, Yadav R. Adolescent varicocele repair. *Indian J Urol* 2006;**22**:83.
19. Kumar R, Gautam G. Stop smoking to get a male child. *Indian J Urol* 2006;**22**:160.
20. Kumar R, Gautam G. Tobacco chewing and male infertility. *Indian J Urol* 2006;**22**:161.

21. Aron M, Ansari MS, Singh I, Gautam G, Kolla SB, Seth A, Gupta NP. Forgotten ureteral stents causing renal failure: Multimodal endourologic treatment. *J Endourol* 2006;**20**:423–8.
22. Aron M, Goel R, Gautam G, Seth A, Gupta NP. Percutaneous versus transurethral cystolithotripsy and TURP for large prostates and large vesical calculi: Refinement of technique and updated data. *Int Urol Nephrol* 2007;**39**:173–7.
23. Goel R, Yadav R, Gupta NP, Aron M. Laparoscopic assisted percutaneous nephrolithotomy (PCNL) in ectopic kidneys: Two different techniques. *Int Urol Nephrol* 2006;**38**:75–8.
24. Yadav R, Kumar R. Virtual versus real cystoscopy. *Indian J Urol* 2007;**23**:85.
25. Yadav R, Kumar R. Dietary modifications for preventing recurrent stones. *Indian J Urol* 2006;**22**:386.
26. Yadav R, Aron M, Gupta NP, Hemal AK, Seth A, Kolla SB. Safety of supracostal punctures for percutaneous renal surgery. *Int J Urol* 2006;**13**:1267–70.
27. Gautam G, Singh AK, Kumar R, Hemal AK, Kothari A. Beware! Fungal urosepsis may follow endoscopic intervention for prolonged indwelling ureteral stent. *J Endourol* 2006;**20**:522–4.
28. Wadhwa P, Kumar A, Sharma S, Dogra PN, Hemal AK. Renal lymphangiomatosis: Imaging and management of a rare renal anomaly. *Int Urol Nephrol* 2007;**39**(2):365-8.
29. Wadhwa P, Aron M, Seth A, Dogra PN, Hemal AK, Gupta NP. Pediatric shockwave lithotripsy: Size matters! *J Endourol* 2007;**21**:31–4.
30. Wadhwa P, Kolla SB, Hemal AK. Laparoscopic en bloc partial cystectomy with bilateral pelvic lymphadenectomy for urachal adenocarcinoma. *Urology* 2006;**67**:837–43.
31. Kolla SB, Hemal AK. An unusual case of transitional cell carcinoma of renal pelvis presenting with brain metastases. *Int Urol Nephrol* 2007;**39**(3):747-50.
32. Jindal L, Gupta AK, Mumtaz F, Sunder R, Hemal AK. Laparoscopic nephroplication and nephropexy as an adjunct to pyeloplasty in UPJO with giant hydronephrosis. *Int Urol Nephrol* 2006;**38**:443–6.
33. Kumari G, Kumar P, Wadhwa P, Aron M, Gupta NP, Dogra PN. Radiation exposure to the patient and operating room personnel during percutaneous nephrolithotomy. *Int Urol Nephrol* 2006;**38**:207–10.
34. Kumar A, Kumar R, Gupta NP. Comparison of NMP22 Bladder Check test and urine cytology for the detection of recurrent bladder cancer. *Jpn J Clin Oncol* 2006;**36**:172–5.
35. Kumar V, Jagannathan NR, Kumar R, Thulkar S, Gupta SD, Dwivedi SN, *et al.* Apparent diffusion coefficient of the prostate in men prior to biopsy: Determination of a cut-off value to predict malignancy of the peripheral zone. *NMR Biomed* 2007;**20**:505-11.
36. Kumar V, Jagannathan NR, Kumar R, Das SC, Jindal L, Thulkar S, *et al.* Correlation between metabolite ratios and ADC values of prostate in men with increased PSA level. *Magn Reson Imaging* 2006;**24**:541–8.
37. Kumar V, Jagannathan NR, Kumar R, Thulkar S, Gupta SD, Hemal AK, *et al.* Transrectal ultrasound-guided biopsy of prostate voxels identified as suspicious of malignancy on

- three-dimensional (1)H MR spectroscopic imaging in patients with abnormal digital rectal examination or raised prostate specific antigen level of 4-10 ng/ml. *NMR Biomed* 2007;**20**:11–20.
38. Gupta R, Sharma R, Gamanagatti S, Dogra PN, Kumar A. Unilateral renal lymphangiectasia: Imaging appearance on sonography, CT and MRI. *Int Urol Nephrol* 2007;**39**(2):361-4.
  39. Mumtaz FH, Kommu SS, Siddiqui E, Le Roux PJ, Hellowell G, Hemal AK. Minimally invasive treatment of ureteropelvic junction obstruction: Optimizing outcomes with concomitant cost reduction. *J Endourol* 2006;**20**:663–8.
  40. Badani KK, Hemal AK, Fumo M, Kaul S, Shrivastava A, Rajendram AK, *et al.* Robotic extended pyelolithotomy for treatment of renal calculi: a feasibility study. *World J Urol* 2006;**24**:198–201.
  41. Sundaram BM, Kalidasan G, Hemal AK. Robotic repair of vesicovaginal fistula: Case series of five patients. *Urology* 2006;**67**:970–3.
  42. Menon M, Hemal AK. Robotic urologic surgery: Is this the way of the future? *World J Urol* 2006;**24**(2):1199.
  43. Sahabudin RM, Arni T, Ashani N, Arumuga K, Rajenthiran S, Murali S, *et al.* Development of robotic program: An Asian experience. *World J Urol* 2006;**24**(2):161-4.
  44. Badani KK, Hemal AK, Peabody JO, Menon M. Robotic radical prostatectomy: The Vattikuti Urology Institute training experience. *World J Urol* 2006;**24**(2):148-51.

#### Abstracts

1. Kumar R, Kumar R, Kucheria K, Dada R. High frequency of robertsonian translocation in infertile men with azoospermia and severe oligospermia. *Asian J Androl* 2006;**8** (Suppl. 5):P5–4, 101.
2. Dada R, Kumar R, Shamsi M, Kumar R, Sidhu T, Kucheria K. genetic screening in men with severe oligozoospermia and azoospermia. *Asian J Androl* 2006;**8** (Suppl. 5): S2–3, 34.
3. Kumar R, Nayyar R, Kumar V, Gupta NP, Jagannathan NR, Hemal AK. Magnetic resonance spectroscopic imaging can improve prostate cancer detection rates of transrectal ultrasound guided biopsy in men with serum prostate specific antigen less than 10ng/mL. *J Urol* 2006;**175** (Suppl.):A1500, 484.
4. Gupta NP, Kumar A, Hemal AK, Dogra PN, Seth A, Kumar R. Open nephron sparing surgery in renal tumors with contralateral normal kidney: A single institution experience of 7 years. *Indian J Urol* 2006;**21** (Suppl.): 18 [Abstr. Uro PII;]
5. Kumar R, Gautam G, Gupta NP. Modified two stitch invagination technique of vaso-epididymal anastomosis for idiopathic obstruction: Video and results. *Indian J Urol* 2006;**21**(Suppl.): 21.
6. Kumar A, Hemal AK, Dogra PN, Seth A, Kumar R, Gupta NP. Comparison of clinical outcome between open and laparoscopic radical nephroureterectomy with excision of cuff of bladder for upper urinary tract transitional cell carcinoma. *Indian J Urol* 2006;**21** (Suppl.): A Uro PI; 42.

## COMMUNITY SERVICE

The faculty of department of Urology participated in the following community service:  
Programmes on Urological diseases in Doordarshan and All India Radio.

## PATIENT CARE

### OPD and specialty clinics

New cases (Please Chapter No.6 Hospital)  
Old cases

### Surgical procedures

Open	369
Endourology	
Lower tract	728
Upper tract	238
Percutaneous renal surgery	162
Ureterorenoscopy	90
Microsurgery	31
Laparoscopic surgery	48
Robotic surgery	133
Radical prostatectomy:	56
Pyeloplasty	43
Others	34
<b>Minor OT</b>	
Cystoscopy	1,816
Minor cases	3,463

### Extracorporeal Shock Wave Lithotripsy (ESWL)

New cases	320
Re-do cases	828

### Urodynamic procedures

Uroflowmetry	2,706
Cystometrogram	316

### Ultrasound procedures

Diagnostic	53
Interventional	183

### Laboratory investigations

X-ray diffraction of urinary calculi.

## **AWARDS AND HONOURS**

**Professor N.P. Gupta** was recipient of Padma Shree for the year 2007 by the President of India Republic Day 2007 in recognition of his contribution to the growth of Urology in India and 32 years of dedicated services. Installed as President of Urological Society of India. President-Elect of Urological Association of Asia for 2006–2008 during 8th ACU, Bali. Board Member of Society International d’Urologie for 2004–2006; received Dr B.N. Oration by the Society of Surgeons of Nepal, 23 November 2006; Invited as an External Examiner by Kingdom of Saudi Arabia for Urology Board examination.

**Professor A.K. Hemal** awarded Padma Shri by President of India, 5 March 2007; Visiting professor and performed live demonstration of laparoscopic partial nephrectomy in National University Hospital, Singapore, 3 April 2006.

**Professor P.N. Dogra** IAEA/RCA Regional training course on Radiation protection for doctors (Non-Radiologists and Non-Cardiologists) using Fluoroscopy, Auckland, New Zealand, 4–5 September 2006.

**Dr Rajeev Kumar** Agra Urological Association Best Video Prize (*Bilateral robotic pyeloplasty*); Annual Conference, NZ-Urological Society of India, Jaipur, 2006; MIUC Fellowship, Urology Society of India, 2007; Chakroborty Fellowship, IAUA, 2007; Elected: Council Member: North Zone, Urological Society of India; Appointed Associate Editor, Indian Journal of Urology.

## 10.1 Cardiothoracic Sciences Centre

### Chief

P. Venugopal

### CARDIOTHORACIC AND VASCULAR SURGERY

#### Professor and Head

P. Venugopal

#### Professors

A. Sampath Kumar

Balram Airan

#### Additional Professors

U.K. Chowdhury

S.K. Choudhary

A.K. Bisoi

#### Assistant Professors

Milind Hote

Sachin Talwar

V. Devagourou

### CARDIOLOGY

#### Professor and Head

V.K. Bahl

#### Professors

K.K. Talwar

K.S. Reddy

(On lien)

(On lien)

Anita Saxena

S.S. Kothari

Balram Bhargava

K.C. Goswami

#### Additional Professors

R. Juneja

D. Prabhakaran

R. Narang

S. Ramamurthy

#### Associate Professors

S. Mishra

S. Seth

Rakesh Yadav

N. Naik

#### Assistant Professors

G. Karthikeyan

Gautam Sharma

S. Singh

S. Anandraja

Ambuj Roy

S. Ramakrishnan

**CARDIAC ANAESTHESIA**

**Professor and Head**

Usha Kiran

**Professor**

Sandeep Chauhan

**Associate Professors**

Neeti Makhija

Poonam Malhotra

Minati Choudhary

**Assistant Professors**

Shmbhu Nath Das

Parag Gharde

Vishwas Mallik

**CARDIAC RADIOLOGY**

**Professor and Head**

Sanjiv Sharma

**Assistant Professors**

Gurpreet Singh Gulati

Priya Jagia

**BLOOD TRANSFUSION SERVICES (CARDIAC NEURO CENTRE)**

**Senior Chief Medical Officer**

Rama Bhasin

**Chief Medical Officer**

Anjali Hazarika

**Senior Technical Officer**

Kalpana Misra

**CARDIAC BIOCHEMISTRY**

**Associate Professor**

R. Lakshmy

**CARDIAC PATHOLOGY**

**Professor**

Ruma Ray

**CARDIAC NUCLEAR MEDICINE**

**Assistant Professor**

Chetan D. Patel

## **EDUCATION**

### **Cardiothoracic and vascular surgery**

- Produced computer-based e-learning module for CABG

### **Video on CTS NET**

- Repair of ruptured sinus of Valsalva aneurysm
- Reconstructive surgery for tricuspid incompetence
- Repair of TAPVC, cardiac type
- Resection of subaortic membrane
- Trans Atrial Repair of TOF
- Trans Aortic Repair of TOF
- Isolated AML cleft repair
- Repair of rheumatic tricuspid valve disease
- Repair of rheumatic mitral and aortic valves

### **Training**

- Following Cardiac Surgeons have undergone short-term training at the department of CTVS:
  - Majid Ahmed Talikoti from Al Ameen Medical College and Hospital, Karnataka
  - Sisir Ranjan Das from Guwahati Medical College, Guwahati
  - Amarjyoti Rai Baruah from Guwahati Medical College, Guwahati
  - Dhiman Choudhary from Guwahati Medical College, Guwahati
  - Assad Zahid from University of New South Wales, Australia
  - Anuradha Tarafdar from Amity Institute of Biotechnology
  - Shahki P. MCh Student from Thiruvananthapuram Medical College
- Trained two perfusionists from Bageshree, 28, Pandurang Wadi, Mumbai
- Trained one perfusionist from Sher-I-Kashmir Institute of Medical Sciences
- Trained two physiotherapists from Jamia Hamdard University, New Delhi
- Trained one blood Bank Technician from KEM Hospital, Parel, Mumbai

## **Cardiac Anaesthesia**

### **DM Cardiac Anaesthesia**

In DM Cardiac Anaesthesia Programme: Four new candidates were selected for postdoctoral training including one sponsored candidate. Three DM candidates passed the examination successfully in July 2006 and one in December 2006. At present nine are pursuing DM Cardiac Anaesthesia course with ICU training as well. Three of the nine DM students are sponsored candidates, two of them are Lt. Col. from the Army.

### **Postgraduate training**

This year 5 postgraduate students from the department of General Anaesthesia, AIIMS were posted for a period of 2 months each for training in cardiac anaesthesia; 14 June–31 March 2007.



### **Short-term superspeciality training**

Five faculty members from various medical colleges underwent short training in cardiac anaesthesia. MSc perfusion technology and classes coordinated by faculty.

### **Cardiac Biochemistry**

Two PhD students are working in the department.

### **Cardiac Nuclear Medicine**

Number of postgraduate students	3
(training of postgraduates on rotational basis in Nuclear Cardiology)	
Number of thesis/research papers completed	2
Number of lectures for postgraduate students	10
Moderator in Journal Club/Seminars	10
Number of lectures for undergraduate/paramedical students	0
Number of new theses started	2

### **Continuing Medical Education**

#### **Cardiothoracic and Vascular Surgery**

- Professor A. Sampath Kumar conducted Cardiac Surgery Workshop, Indore; 21–23 April 2006.
- Professor A. Sampath Kumar attended CT CME 2006, Madras Medical College, Chennai; 2–3 September 2006.
- Professor A. Sampath Kumar attended Workshop on Valvular Heart Disease, Deenanath Mangeshkar Hospital, Pune; 30 September–1 October 2006.
- Professor A. Sampath Kumar conducted Cardiac Surgery Workshop, LPS Institute of Cardiology, Kanpur; 12–15 October 2006.

### **Cardiology**

#### **Organized by the department**

- AIIMS Arrhythmia update 2006 was attended by nearly 250 delegates.

#### **Lectures delivered**

##### **Professor Anita Saxena**

- ‘Congenital heart disease’, World Health Updates in Karachi, Pakistan; 26–28 January 2007.
- ‘Evaluation of ventricular septal defect’, CME on hemodynamic assessment and angiography in patients with congenital heart disease. Escorts Heart Institute, New Delhi; 10–11 March 2007.
- ‘Pitfalls in clinical diagnosis of CHD’, ‘How to analyse hemodynamic data set?’ and ‘When to intervene in a child with CHD-current practice’. CME on ‘DM/DNB teaching

- programme in congenital heart disease', Escorts Heart Institute, New Delhi; 5–6 August 2006.
- 'Role of echocardiography in the neonatal ICU for congenital heart disease' in NEOHEART, Apollo Hospital, New Delhi; 7 October 2006.
- 'Hot topics in neonatology', Department of Paediatrics, AIIMS; 2–3 September 2006.
- 'Neonatal cardiac interventions', 5th National CME Programme in Neonatology, Department of Pediatrics, AIIMS; 11 February 2007.

### **Professor Balram Bhargava**

- 'Are all drug eluting stents the same?', American College of Chest Physicians Mumbai, India; 2006.
- 'Future of drug-eluting stents', 7th Indo-French Symposium in Interventional Cardiology, New Delhi; 2006.
- 'Future of DES technology', Fudan University, *Shanghai* and Zhejiang University, Hangzhou, Peoples Republic of China; 2006.
- 'Early invasive vs. conservative strategy in NSTEMI ACS', International Symposium on Cardiology, Diabetes and Stroke, New Delhi; 2006.
- 'Pulmonary embolism', Respiratory and Critical Care Update, Lucknow, India; 2006.
- 'Cor pulmonale', Respiratory and Critical Care Update, Lucknow, India; 2006.
- 'Management of acute MI', CME for the HS Mittal Memorial Foundation at the LLRM Medical College, Meerut; 2006.
- 'Newer antiplatelet and antithrombotic drugs', Ninth Complex Angioplasty Course, Mount Sinai Hospital, New York, USA; 2006.
- 'Tips and tricks for tortuous lesions', Third Malaysian Cardiovascular Interventional Symposium with Live Transmission, Kuala Lumpur, Malaysia; 2006.
- 'Antiplatelets and antithrombotics for ACS and PCI', CME of the Delhi Medical Association, the Maulana Azad Medical College, New Delhi; 2006.
- 'Newer DES: Indian perspective', Seventh Panafrican Course in Interventional Cardiology, Monastir, Tunisia; 2006
- 'Mitral stenosis: Balloon mightier than the knife', Endoluminal Therapy: Twenty Years of Stenting, Geneva, Switzerland; 2006.
- 'Newer Indian drug eluting stents', International Federation of Cardiologists. Mumbai; 2006.
- 'Future of stem cell therapy', World Congress of Cardiology and International Congress of Clinical Nutrition. Mumbai; 2006.
- 'Management of tortuous and calcific lesions: Optimal strategy', Live Intervention Cardiology Workshop at the Army Hospital (Research and Referral Hospital), New Delhi; July 2006.
- 'Stanford India biodesign: Role of AIIMS', Department of Biotechnology, Stanford India Biodesign Programme, Joint meeting. New Delhi; January 2007.

- ‘Enoxaparin vs. other LMWH vs. unfractionated heparin? Where are we in 2007?’ 3C-Con-2007, Ahmedabad; January 2007.
- ‘My approach to CAD patient’, Debate-I. Stable angina with SVD normal LV function: Medical treatment is equally good. 13th Annual Conference of the Cardiological Society of India (UP Chapter), Lucknow; February 2007.
- ‘Stem cell therapy in CVD’, 13th Annual Conference of the Cardiological Society of India (UP Chapter). Lucknow; February 2007.
- ‘Stem cell therapy in cardiology’, National Hematology Update, New Delhi; February 2007.

## **Cardiac Anaesthesia**

### **Dr Usha Kiran**

- Cath lab and anaesthesia
- ASD, VSD, PDA
- Echocardiography of coronary artery disease
- Advanced cardio respiratory life support
- Renal failure—anaesthetic implication

### **Dr Sandeep Chauhan**

- Myocardial preservation
- Extracorporeal membrane oxygenation
- Robotic cardiac surgery and the anaesthetic
- Coronary anatomy and physiology

### **Dr Neeti Makhija**

- Neurological dysfunction after CPB
- Pathophysiology of congenital heart disease
- Cardiopulmonary bypass and anaesthetist
- Regional anaesthesia in cardiac surgery
- EKG in health and disease

### **Dr Poonam Malhotra Kapoor**

- Newer anaesthetic agent
- Emergencies in cardiac anaesthesia
- Echocardiography of aortic valve
- Investigating coronary artery disease

### **Dr Minati Choudhary**

- Tetralogy of fallot
- Aortic aneurysm: Descending aortic and abdominal

**Dr Shambhu N. Das**

- Fontan procedure—anaesthetic concerns
- The pregnant patient for cardiac surgery

**Dr Parag Gharde**

- Transposition of great arteries
- Cardiopulmonary bypass emergencies
- Diabetes and anaesthetic implication
- Off pump CABG and variants

**Dr Vishwas Malik**

- Cardiopulmonary bypass equipment
- Echocardiography of mitral valve
- X-ray chest in cardiac disease
- Risk assessment in patients with CAD

**Cardiac Radiology****Dr Sanjiv Sharma**

- ‘Complications of endovascular repair of aortic aneurysms’, Advanced Cardiovascular Therapeutics symposium, Chennai; 23–25 June 2006.
- Mid-term CME of Indian Society of Vascular and Interventional Radiology, MHRC, Madurai; 22 July 2006. Guest lectures on:
  - Role of stem cell therapy in interventional radiology
  - Interventional radiology ‘What, when and where’
  - Chaired a panel discussion on Peripheral Vascular Disease
- Annual meeting of Cardiovascular and Interventional Radiological Society of Europe, Rome; 9–13 September 2006:
  - Chaired a session on CIRSE meets India
  - Endovascular management of nonspecific arteritis: Current trends and future directions.
- ‘Intervention in musculoskeletal system’, Conference-cum-CME 2nd Chapter IRIA HP State Branch and North Zone Meeting, IG Medical College, Shimla; 1–2 October 2006.
- ‘World vision in interventional radiology: Asia pacific countries’ and ‘Endovascular repair for AAA’, 7th Asia-Pacific Congress of Cardiovascular and Interventional Radiology, Thailand; 8–11 October 2006. Presided over the Congress as the President of the Asia-Pacific Society.
- Panna Lal Oration on ‘Imaging diagnosis of peripheral vascular diseases’. Annual meeting of the UP State Chapter of Indian Radiology and Imaging association, Bareilly; 5 November 2006
- ‘Interventions: Past, present and future in India’ and ‘Next generation vascular devices’, 9th Annual Congress of Indian Society of Vascular and Interventional Radiology, Chennai;

10–12 November 2006

- ‘Debate-endovascular procedures should be done by interventional radiologists’, and ‘Interventions in nonspecific aortoarteritis’, 60th Annual Congress of Indian Radiology and Imaging Association, Mumbai; 3–7 January 2007.
- ‘Endovascular repair of thoracic aneurysm and dissections’, Current status: In a course on Endovascular Interventions, Jaipur; 20–21 January 2007.
- ‘Trends in endovascular interventions in nonspecific arteritis’, 32nd Annual Meeting of Society of Interventional Radiology, Seattle, USA; 1–6 March 2007.
- ‘Imaging diagnosis of peripheral vascular diseases’, Annual Conference of IRIA, Haryana State Branch 2007, BD Sharma Post Graduate Institute of Medical Sciences, Rohtak; 31 March 2007.

## **National and International Conferences**

### **Conferences, Seminars**

#### **Cardiothoracic and Vascular Surgery**

##### **Professor A. Sampath Kumar**

- Invited to attend the 14th Annual Meeting, of Osaka, Japan; 1 June–3 2006.

##### **V. Devagourou**

- Symposium on ‘Aortic valve surgery’ in Chiang Rai, Thailand, 2–5 November 2006 (4th Mulu Raffle Asia Conference).

#### **Cardiology**

- 58th Annual conference of Cardiac Society of India (CSI) 2006 was successfully organized by the Department of Cardiology with Professor V.K. Bahl as the organizing secretary.
- PCSI 2006 (Pediatric Cardiac Society of India) conference was successfully organized at AIIMS

#### **Cardiac Radiology**

##### **Dr Sanjiv Sharma**

- External examiner for practical examination of DMRD and MD (Radiodiagnosis) and BSc (Medical Technology), Indira Gandhi Medical College, Shimla; 19–21 June 2006. Visit as external expert for evaluation and training of the staff for CT and MRI Facility, JDW National Referral Hospital, Thimpu, Bhutan; 10–21 July 2006. External examiner for practical examination of MD in Radio-diagnosis, University of Delhi; May–October 2006. External examiner for practical examination of MSc in Radio-diagnosis, PGIMER, Chandigarh; May 2006. External Expert, Core Technical Committee ‘A’, PGIMER, Chandigarh; 27 September 2006.
- Technical Expert Committee meeting, Bhutan; 25–28 February 2007.

### **Dr Gurpreet Singh Gulati**

- Annual Meeting of the American Roentgen Ray Society, Vancouver, BC, Canada; 29 April–4 May 2006. Presented 1 poster and 2 oral scientific papers.
- Annual conference of the Cardiological Society of India, New Delhi, India; 7–10 December 2006.
- Annual meeting of the Pediatric Cardiology Society of India, New Delhi; 14–15 October 2006. Presented 2 posters.
- Annual meeting of the Indian Radiological and Imaging Association, 4–7 January 2007. Presented 3 oral scientific papers.
- Joint annual meeting of the 10th Annual Scientific Sessions of the Society of Cardiovascular Magnetic Resonance/Euro CMR group, Rome, Italy; 1–4 February 2007. Presented 1 poster.

### **Dr Priya Jagia**

- Attended Annual meeting of the Pediatric Cardiology Society of India, New Delhi; 14–15 October 2006.
- Attended Annual conference of the Cardiological Society of India, New Delhi; 7–10 December 2006.
- Attended Seminar in MRI, Department of NMR, AIIMS; 22 March 2007.
- Attended CME on ‘Color doppler and breast imaging’, Punjab and Chandigarh Branch of the Indian Radiological and Imaging Association, Patiala; 25 March 2007.

## **Lectures delivered**

### **Cardiothoracic and Vascular Surgery**

#### **Professor Balram Airan**

- ‘Robotic cardiac surgery and application of stem cell technology for CAD’, AIIMS at Integrated Coronary Revascularization Workshop 2006, Innsbruck, Austria; 6–8 December 2006.
- ‘Donor maintenance’, Workshop on ‘Cadaver donation process’, AIIMS; 10 February 2007.
- ‘Carotid atherosclerosis—art and science’, Joint Meeting of AIIMS and Section of Surgery—Royal Society of Medicine, AIIMS; 3 March 2007.

#### **S.K. Choudhary**

- ‘Glenn without cardiopulmonary bypass-how to do it?’, Annual conference of the Pediatric Cardiac Society of India, New Delhi; September–October 2006.
- ‘Improving the outcome of pulmonary artery banding by percutaneously adjustable pulmonary artery band’, 59th Annual meeting of the Japanese association for Thoracic Surgery, Tokyo, Japan; 1–4 October 2006.

### **Sachin Talwar**

- ‘Surgical management of valvular heart diseases’, XVII Rajasthan Association of Physicians of India conference 2006, JLN Medical College, Ajmer, Mount Abu; 16–17 September 2006.
- ‘Glenn without cardiopulmonary bypass—How to do it?’, Annual conference of the Paediatric Cardiac Society of India, New Delhi, September–October 2006.

### **Ujjwal Chowdhury**

- ‘Anaesthesia management for robotic myocardial revascularization’ (As a co-author. This poster won the Best Poster Award), Annual Indian Society of Anaesthesia, Delhi 2006.
- ‘Comparison of central venous and mixed venous oxygen saturation in adults undergoing cardiac surgery’, Annual ISA Delhi 2006.
- ‘Anaesthesia management of tetralogy of fallot which absent pulmonary valve’, Annual PCSI Conference, Delhi 2006.
- ‘Anaesthetic management of adult of ALCAPA repair’, Annual Indian Association of Cardiovascular and Thoracic Anaesthesia, Chandigarh; 2007.
- ‘Efficacy of early goal direct therapy in moderate to high-risk surgical patients’, Annual Indian Association of Cardiovascular and Thoracic Anaesthesia, Chandigarh; 2007.
- ‘Efficacy of lactate concentration gradient from right atrium to pulmonary artery in goal-direct management of cardiac surgical patients’ (This poster was selected in the Award session as one of the six best posters for free paper presentation), Xth IACTA Conference 2007.

## **Cardiology**

### **Professor Anita Saxena**

- ‘Basics of pediatric echocardiography step by step approach’, 12th Annual Conference of Indian Academy of Echocardiography, Pune; 2–4 February 2007.
- ‘Adult congenital heart disease: Septal defects and obstructions’, IInd AICT, New Delhi; 1–4 October 2006.

### **Professor Balram Bhargava**

- ‘Drug eluting stents in India’, SAARC Congress of Cardiology organized by the Liaquat National Hospital, Karachi, Pakistan; 2006.
- ‘Future of drug eluting stents’, Seventh Annual Scientific Session of Sri Lanka Heart Association. Colombo, Sri Lanka; 2006.
- ‘First in man ABCD trial’, (Autologous Bone Marrow Cells in Dilated Cardiomyopathy) Asia Pacific Interventional Advances. Sydney, Australia; 2006 (Late-Breaking Trials from Asia Pacific Region).
- ‘Newer platforms for drug coated stents’, Asia Pacific Interventional Advances. Sydney, Australia; 2006.

- ‘Safety issues with drug eluting stents: These issues are of great concern!’ 58th Annual Conference of the Cardiology Society of India, New Delhi, India; 2006.
- ‘Indian stents tested in India’, I2 (Innovation in Intervention) Summit of the American College of Cardiology, New Orleans, USA; 2007.
- ‘Mitral stenosis: Balloon mightier than the knife’, Department of Cardiology, Stanford University, Palo Alto, Ca, USA; 2007.

#### **Dr G. Kathikeyan**

- ‘When should we initiate statins for primary prevention’, AIIMS International Symposium, New Delhi; February 2006.
- ‘ACS-pathophysiology and diagnosis’, Indo-US Summit on Emergency Medicine, October 2006.

#### **Dr S. Ramakrishnan**

- Cardiac Involvement in Rheumatological Diseases, IRACON 2006, Lucknow.

### **Cardiac Anaesthesia**

#### **Usha Kiran**

- ‘Critical concerns’ in Annual Conference Indian Society of Anaesthesiologist, New Delhi; April 2006.
- ‘Cyanotic congenital heart disease the anaesthesiologist concern’, PGI Chandigarh during Annual Conference of Indian Association of Cardiac Anaesthesiologists.
- ‘World peace festival’, Nehru Auditorium, New Delhi; 29 October–5 November 2006.
- ‘Multi speciality health *mela*’ at Beri organized by Chief Minister of Haryana and R.B.S. Jhakar and local Medical Association; 3 December 2006.
- ‘Women empowerment programme’, JLN grounds; 28 October 2006 and on International Women Day; 8 March 2007.
- ‘Role of meditation and relaxation of patient of parkinson’s disease and their care givers’, World Parkinson’s day celebration, AIIMS; 2 April.
- Meditation and Relaxation Therapy Camp for Parkinson’s disease patients and their caregivers, Maneser, Om Shanti Retreat Center, Delhi–Jaipur Highway; 1–2 September.

#### **Sandeep Chauhan**

- ‘ECMO’, International Conference of Paediatric Cardiological Society of India, October 2006.
- ‘Anaesthesia management of carotid endoarterectomy’, Chandigarh; February 2007. During Annual Conference of IACTA.



### **Poonam Malhotra Kapoor**

- ‘Anaesthesia management for aortic valve lesions: Aortic stenosis and aortic regurgitation’, Postgraduate Assembly, UCMS College, Delhi University; 16 September 2006.
- ‘Tight glycaemic control in intensive care: How tight’, Regional Society of Anaesthesia and Clinical Pharmacology Annual Conference, Pune; 17–19 November 2006.
- ‘Anaesthesia management for implantation of assist devices’, Annual Update in Cardiac Anaesthesia, IACTA South Zone, Chennai; 25-26 November 2006.
- Efficacy of lactate concentration gradient from right atrium to pulmonary artery in good directed management of cardiac surgical patients, IACTA Annual Conference, Chandigarh; 23-25 February 2007.

### **Cardiac Radiology**

#### **Dr Gurpreet Singh Gulati**

- Cardiac CT and MR Course organized by the Radiology Education Foundation, Mumbai, India; 5–6 August 2006. Lectures on:
  - Cardiac MRI in thrombus imaging
  - Cardiac MRI in the evaluation of cardiomyopathies
  - Cardiac MRI in the evaluation of cardiac tumours
- ‘Intervention in vascular malformation’, Annual conference of the Vascular Society of India, New Delhi; 3–5 November 2006.
- ‘Doppler US evaluation of the lower limb arteries’, Branch of the Indian Radiological and Imaging Association, Patiala, Punjab, Chandigarh; 25 March 2007.

#### **Dr Priya Jagia**

1. ‘Endovascular interventions: AIIMS experience’, Joint meeting of Department of Surgical Disciplines, with the section of Surgery, Royal Society of Medicine, AIIMS, New Delhi; 3 March 2007.
2. ‘Doppler US evaluation of the renal artery stenosis’, CME organized by the Punjab and Chandigarh Branch of the Indian Radiological and Imaging Association, Patiala; 25 March 2007.

## **RESEARCH**

### **Cardiothoracic and Vascular Surgery**

#### **Funded Projects**

##### **Ongoing**

1. Myocardial preconditioning against infarction in patients undergoing coronary artery bypass surgery: a comparison of isoflurane and sevoflurane. Funded by ICMR for 2 years (2006-2008). Funds: Rs 8 lakh.

## **Departmental projects**

### **Research as part of MCh Thoracic and Cardiovascular Surgery**

1. Histopathology and morphometry of pulmonary arteries in patients undergoing systemic to pulmonary arterial shunting procedures
2. A prospective study of individual pulmonary vein size and survival in patients with totally anomalous pulmonary venous connection: How small is too small for survival after surgical correction of totally anomalous pulmonary venous connection?

### **Research as part of DM Cardiac Anaesthesia Thesis**

#### **Ongoing**

1. Efficacy of early goal direct therapy in moderate to high-risk cardiac surgical patients. This has been presented at National Conference IACTA.
2. Comparative study of lactate, pyruvate and lactate pyruvate ratio as markers of myocardial ischemia in adult patients undergoing open heart surgery
3. Myocardial preconditioning against infarction in patients undergoing cardiac surgery isoflurane and sevoflurane
4. Intraoperative central venous oxygen saturation as a surrogate for mixed venous oxygen saturation in patients undergoing cardiac surgery
5. The role of transthoracic as a monitoring tool during induction of anaesthesia in cardiac surgical patients

## **Collaborative Projects**

Through a global tender preliminary work for producing a valve for the heart valve project have begin with M/s Romsons Scientific

## **Cardiology**

### **Funded Projects**

#### **Ongoing**

1. Non-invasive detection of sub-clinical disease activity in patients with established rheumatic valvular heart disease. G. Karthikeyan. Funded by DBT (2006–2008). Funds: Rs 22 lakh.
2. Role of homocysteine in coronary disease: Genetic and epigenetic studies. Shantanu Sengupta (Scientist, IGIB, New Delhi). G. Karthikeyan. Funded by DBT (2005–2007). Funds: Rs 60 lakh.
3. Serum fatty acid levels and their correlation with other CVD risk factors in Industrial population from Delhi and Trivandrum. D. Prabhakaran. Funded by ICMR. Funds: Rs 8,80,441.

4. A prospective randomized, double-blind, placebo-controlled trial of ramipril in asymptomatic chronic severe mitral regurgitation (the RARE study) with normal left ventricular systolic function. G. Karthikeyan. Funded by Reddy's Laboratories (2007–2008). Funds: Rs 60,000.
5. Evaluation of NT-pro-BNP levels in the differentiation of constrictive pericarditis from restrictive cardiomyopathy. S. Ramakrishnan. Funded by Faculty research grant (2006–2007). Funds: Rs 55,000.

### **Completed**

1. Are dilated aortic roots in patients with bicuspid aortic valve associated with mutations in the fibrillin 1 gene? G. Karthikeyan. Funded by Faculty research grant (2005–2006). Funds: Rs 50,000.
2. Plasma homocysteine levels in patients with mitral stenosis with and without left atrial thrombus. G Karthikeyan. Funded by ICMR (2004–2006). Funds: Rs 3 lakh.

## **Departmental Projects**

### **Completed**

1. The hemodynamic effect of sildenafil on hemodynamics in dilated cardiomyopathy
2. Safety and efficacy of percutaneous stem cell injection in dilated cardiomyopathy

### **Ongoing**

1. Multicentric Clinical Evaluation of an Indigenous Paclitaxel-eluting Stent in De-novo Coronary Artery Stenosis

### **Collaborative Projects**

1. SPIRIT V: The SPIRIT clinical trial programme consists of six studies evaluating the XIENCE<sup>TM</sup>V Everolimus Eluting Coronary Stent System for the treatment of coronary artery disease.
2. FREEDOM trial: Future revascularization evaluation in patients with Diabetes mellitus: Optimal management of Multivessel disease (FREEDOM) Trial. Clinical trial comparing multivessel DES versus CABG in diabetics. Funded by the NIH, Bethesda, MD, USA National Coordinator (India)
3. Multicentric Clinical Evaluation of an Indigenous Nanoporous carbon coated Paclitaxel-eluting cobalt chromium stent in De-novo Coronary Artery Stenosis
4. The ADVANCE study (with Endocrinology)
5. Surgical Treatment of Ischemic Heart Failure (STICH) trial
6. The hyperglycemia and its effect after acute myocardial infarction on cardiovascular outcomes in patients with type 2 diabetes (HEART2D study) (with Endocrinology)

## **Cardiac Anaesthesia**

### **Funded Projects**

#### **Completed**

1. Auditing of early goal directed therapy. Poonam Malhotra Kapoor. Funded by AIIMS Research Section for 2 year (2005–2007). Funds: Rs 2.11 lakh.

#### **Ongoing**

1. Role of coenzyme Q10 and alpha lipoic acid in attenuating the oxidative stress and systemic inflammatory response in patients undergoing coronary artery bypass graft surgery. Neeti Makhija. Funded by AIIMS Research Grant (June–March 2007). Funds: Rs 1 lakh.
2. Myocardial preconditioning against infarction in patients undergoing coronary artery bypass surgery: A comparison of Isoflurane and sevoflurane. Poonam Malhotra Kapoor. Funded by ICMR for 2 years (2006–2008). Funds: Rs 8 lakh.
3. 'Imbalance Between Plasma Endothelin and Nitric Oxide Synthase in the Clinical Outcome of Congenital Cardiac Surgical Children Suffering from Severe Pulmonary Artery Hypertension: A Clinico biochemical correction'. Minati Choudhary. Funded by AIIMS for 2 years (2006–2008). Funds: Rs 3 lakh.
4. Plasma ET-1 in clinical outcome of CABG patients: Imported with Rajyog Meditation. Minati Choudhary.
5. Genetic polymorphism in CABG patients: A clinical outcome study. Minati Choudhary.

## **Departmental Projects**

#### **Completed**

1. Role of caudal epidural for glycaemic control in children undergoing cardiac surgery. Dr. Minati Choudhary.
2. Stress attenuation by caudal epidural injection of combined sufentanil and bupivacaine in paediatric cardiac surgical patients. Dr. Minati Choudhary.
3. Efficacy of combined conventional ultrafiltration and a simplified modified ultrafiltration in adult cardiac surgery. Dr. Usha Kiran.
4. Intraoperative Central Venous Oxygen Saturation as a surrogate for Mixed Venous Oxygen Saturation in Patients Undergoing Cardiac Surgery. Dr. Poonam Malhotra.
5. Efficacy of Early Goal Directed Therapy in moderate to high-risk cardiac surgical patients. Dr. Poonam Malhotra.
6. Comparison of analgesic efficacy of fentanyl and sufentanil during chest tube removal in cardiac patients

#### **Ongoing**

1. Comparative study of lactate, pyruvate and lactate pyruvate ratio as markers of myocardial Ischemia in adult patients undergoing open heart surgery. Dr. Poonam Malhotra.

2. Role of nitroglycerin inhalation in adult valvular surgery. Does it reduce pulmonary hypertension? Dr. Poonam Malhotra.
3. Myocardial preconditioning against infarction in patients undergoing cardiac surgery comparing Isoflurane and sevoflurane. Dr. Poonam Malhotra.
4. The role of transthoracic echocardiography as a monitoring tool during induction of anaesthesia in cardiac surgical patients. Dr. Poonam Malhotra.
5. Nosocomial infections in children under two years undergoing cardiac surgery
6. A comparison of fentanyl and sufentanil in patients undergoing off pump coronary artery bypass surgery
7. Effects of two different rewarming strategies on neuropsychological function in patients undergoing CABG with CPB
8. Effects of two different rewarming strategies on neuropsychological function in patients undergoing TOF correction with CPB
9. Role of transthoracic echocardiography during induction of anaesthesia in cardiac surgical patients
10. Role of intravenous amiodarone in patients undergoing mitral valve replacement

## **Cardiac Radiology**

### **Completed**

1. Assessment of ventricular function and pulmonary regurgitation by MRI, in patients operated with total correction procedure in Tetralogy of Fallot'.
2. Comparison of efficacy of somatostatin and nitroglycerin infusion with somatostatin monotherapy in control of acute variceal bleeding and prevention of early rebleeding among patients with cirrhosis of liver.

### **Ongoing**

1. 'Induction of therapeutic angiogenesis in critical limb ischemia by intra-arterial delivery of autologous bone-marrow derived stem cells'. Funded by Department of Biotechnology. Funds: Rs 20.09 lakh.
2. Avoiding unnecessary radiation dose to the patient during interventional radiological procedures. A multicentre study funded by the International Atomic Energy Agency
3. Percutaneous intracoronary cellular cardiomyoplasty for non-ischemic cardiomyopathy: Clinical and histopathological result: The *First in Man* ABCD trial. Funded through the Institute Research Funds of AIIMS, as part of the Stem Cell Research Program. Part of the results published in the *Journal of American College of Cardiology*
4. To assess the role of 18-FDG CT-PET scan in diagnosis, monitoring disease activity and response to therapy of primary systemic necrotising vasculitis
5. Ultrasound evaluation of carotid intimo-medial thickness in patients with rheumatoid arthritis

## **Blood Transfusion Services (Cardiothoracic and Neurosciences Centre)**

### **Collaboration Project**

#### **Ongoing**

1. Frequency distribution of 3 HIV I resistance conferring polymorphism–SDF–3 alpha, CCR-2, 641, and CCR-5 delta in Asian Indians. Rama Bhasin (with Biochemistry)

## **Cardiac Biochemistry**

### **Funded Projects**

#### **Completed**

1. Research Associate project: C667T and A1298C mutation in methylene tetra hydrofolate gene in patients with myocardial infarction in comparison with healthy controls. R. Lakshmy. Funded by ICMR for 3 years (2002–2005). Funds: Rs 30,000.
2. Sentinel health monitoring centres in India: Risk factor surveillance for non-communicable diseases. ICMR-WHO study. R. Lakshmy. Funded by WHO for 1 year (2005–2006). Funds: Rs 90,000.
3. Phenotypic characterization of diabetes in a young Delhi cohort: Association with low birth weight. R. Lakshmy, Nikhil Tandon, H.P.S. Sachdev, S. Bhargava. Funded by ICMR for 1 year (2005–2006). Funds: Rs 14.95 lakh.

#### **Ongoing**

1. Relation of APOA-V gene variants to serial changes in childhood body mass index and coronary artery disease risk factors in young adulthood. H.P.S. Sachdev, R. Lakshmy, K.S. Reddy, G. Chandak, Meenakshi Sharma, S. Bhargava. Funded by ICMR for 2 years (2005–2007). Funds: Rs 35 lakh.
2. LDL particle heterogeneity and its association with other established risk factors for CHD in an Indian industrial population: Role of CETP gene. R. Lakshmy, K.S. Reddy, D. Prabhakaran. Funded by ICMR for 2 years (2005–2007). Funds: Rs 8 lakh
3. Recovery and stability of routine chemistry analytes from filter paper. R. Lakshmy. Funded by ICMR for 2 years (2005–2007). Funds: Rs 3.8 lakh.

### **Collaborative Projects**

1. Role of homocysteine in coronary artery disease: Genetic and epigenetic studies (with Cardiology and Institute of Genomics and Integrated Biology)
2. ADVANCE-A factorial randomized trial of blood pressure lowering with fixed low dose perindopril-indapamide combination and intensive glucose control with a modified release gliclazide based regimen for the prevention of vascular disease among high risk individuals with type 2 diabetes (with Endocrinology and Cardiology)
3. Rural-urban migration: Effects on obesity and diabetes in Indians (with Cardiology and University of Bristol)

4. Prevalence of obesity and associated diseases amongst children in 5–18 years of age in the National Capital territory of Delhi (with Human Nutrition Unit)
5. Serum trans fatty acid levels and their correlation with other CVD risk factors in Industrial populations from Delhi and Trivandrum (with Cardiology)
6. Auditing of early goal direct therapy in patients undergoing cardiac surgery (with Cardiac Anesthesia)
7. Non-invasive detection of sub clinical disease in patients with established rheumatic valvular heart disease (with Cardiology)
8. Paraoxonase and its gene variants in relation to coronary artery disease (with Biochemistry)

## **Cardiac Pathology**

### **Collaborative Projects**

#### **Completed**

1. Histopathology of the right ventricular outflow tract in patient with tetralogy of Fallot (with Cardiothoracic Surgery)
2. Histological study of remnant long saphenous veins before aorto coronary bypass grafting (with Cardiothoracic Surgery)

#### **Ongoing**

1. Histopathological study of aorta and pulmonary artery in congenital heart disease (with Cardiothoracic Surgery)

## **Cardiac Nuclear Medicine**

### **Funded Projects**

#### **Ongoing**

1. Role of radionuclide techniques in diagnosis of early dementia. Funding by International Atomic Energy Agency for 3 years (2004–2007). Funds: \$ 4000.
2. 'Detection of myocardial ischemia in asymptomatic diabetes' with Tc99m MIBI myocardial perfusion scintigraphy. Funded by International Atomic Energy Agency for 3 years (2006–ongoing).
3. Use of autologous bone marrow stem cells for myocardium regeneration. Funding by Department of Biotechnology sponsored project (2006–ongoing).

### **Collaborative Projects**

#### **Completed**

1. Evaluation of cardiac function in patients receiving anthracycline therapy by 1st pass study and equilibrium radionuclide ventriculography. Nuclear Medicine MD thesis of B. Vijay Babu (with Medical Oncology and Nuclear Medicine)
2. Usefulness of Tc99m–MAA lung perfusion imaging in patients post BD Glenn and TCPC. MCh research paper of Buddhaditya (with Nuclear Medicine and CTVS)

### **Ongoing**

1. Role of F-18 FDG in acute Rheumatic heart disease. DM research paper of Dr. Nagesh (with Nuclear Medicine and Cardiology)
2. Correlation between cardiovascular autonomic function and indicators of myocardial ischemia in patients presenting anginal symptoms. PhD thesis of Rita Khadka in physiology (with Physiology, Nuclear Medicine and Cardiology)
2. F-18 FDG in detecting 'Metabolic signature of ischemia'. Comparison with perfusion SPECT (with Nuclear Medicine and Cardiology)
3. F-18 FDG in detecting ischemia at rest in patients with known coronary artery disease (with Nuclear Medicine and Cardiology)
4. Prevalence of symptomatic and asymptomatic coronary artery disease in stroke patients. Kapil Agarwal, DM thesis (with Neurology, Cardiology and Nuclear Medicine)

### **Guide for Thesis**

#### **Completed**

1. Evaluation of cardiac function in patients receiving anthracycline therapy by 1st pass study and equilibrium radionuclide ventriculography. Co-guide in MD thesis of B. Vijay Babu (with Nuclear Medicine MD student)
2. Usefulness of Tc99m-MAA lung perfusion imaging in patients post BD Glenn and TCPC. MCh research paper of Buddhaditya (with Nuclear Medicine and CTVS)
3. Prevalence of symptomatic and asymptomatic coronary artery disease in stroke patients. Co-guide in DM thesis of Dr Kapil Agarwal (with DM Neurology student)
4. Role of PET-CT in initial staging and post therapy assessment in patients of carcinoma ovary—Chief Guide in MD thesis of G. Ramamohan Reddy (with Nuclear Medicine MD student)

### **PUBLICATIONS**

#### **Cardiothoracic and Vascular Surgery**

##### **Journals**

1. Kumar AS, Talwar S, Saxena A, Singh R. Ross procedure in rheumatic aortic valve disease. *Eur J Cardiothorac Surg* 2006;**29**:156–61.
2. Chowdhury UK, Pradeep KK, Patel CD, Singh R, Kumar AS, Airan B, *et al.* Noninvasive assessment of repaired tetralogy of fallot by magnetic resonance imaging and dynamic radionuclide studies. *Ann Thorac Surg* 2006;**81**:1436–42.
3. Kumar AS, Talwar S, Devagourou Velayoudam, Transaortic correction of tetralogy of Fallot and similar defects. *J Thoracic Cardiovasc Surg* 2006;**131**:1185–6.
4. Choudhary SK, Talwar S, Airan B, Yadav S, Venugopal P. A simplified circuit of modified ultrafiltration. *Heart, Lung, Circulation* 2007;**16**:113–15.
5. Choudhary SK, Talwar S, Juneja R, Airan B, Venugopal P. Anomalous right subclavian artery proximal to juxtaductal coarctation. *Int J Cardiol* 2007;**114**:100–102.



6. Choudhary SK, Talwar S, Venugopal P. Post-percutaneous transmitral Commissurotomy in severe mitral regurgitation: Underestimated subvalvular disease. *J Thorac Cardiovasc Surg* 2006;**131**:927.
7. Choudhary SK, Talwar S, Saxena A, Airan B. Left main coronary stenosis or left coronary artery from pulmonary artery? *Asian Cardiovasc Thorac Ann* 2006;**14**:445.
8. Talwar S, Choudhary SK, Airan B. Diaphragmatic fenestration for resistant chylothorax. *Ann Thorac Surg* 2006;**82**:76–8.
9. Talwar S, Choudhary SK, Airan B. Gore-Tex ‘New-innominate vein’ for complicated bilateral cavopulmonary shunts. *Eur J Cardiothorac Surg* 2006;**30**:414.
10. Chakraborty B, Talwar S, Choudhary SK, Kothari SS, Airan B. Use of aortic homograft conduit in bidirectional glenn shunt. *Heart, Lung, Circulation* 2007;**16**:52–4.
11. Sharma V, Talwar S, Choudhary SK, Kale S, Kumar AS. Evaluation of Epsilon aminocaproic acid (EACA) and autologous blood as blood conservation strategies in patients undergoing cardiac surgery. *Heart, Lung, Circulation* 2006;**15**:261–5.
12. Madan K, Gupta V, Singh R, Talwar S, Choudhary SK, Airan B, *et al.* Comparison of straight sternotomy and interlocking sternotomy in open heart surgery. *Indian J Med Res* 2006;**124**:57–62.
13. Airan B, Choudhary SK, Jayantkumar HV, Talwar S, *et al.* Total transatrial correction of tetralogy of fallot: No outflow patch technique. *Ann Thorac Surg* 2006;**82**:1316–21.
14. Kumar AS, Talwar S, Saxena A, Singh R, Velayoudham D. Results of mitral valve repair in rheumatic patients. *Interac Cardiovasc Thorac Surg* 2006;**5**:35–61.
15. Talwar S, Gulati GS, Sharma G, Kumar AS. Left main ostial reconstruction. *Indian J Thorac Cardiovasc Surg* 2006;**22**:153.
16. Choudhary SK, Talwar S, Venugopal P. Post-percutaneous transmitral commissurotomy severe mitral regurgitation: Underestimated subvalvular disease. *J Thorac Cardiovasc Surg* 2006;**131**:927.
17. Kumar AS, Talwar S, Velayoudham D. Transaortic correction of tetralogy of Fallot and similar defects. *J Thorac Cardiovasc Surg* 2006;**131**:1185–6.
18. Bisoi AK, Rajesh MR, Talwar S, Chauhan S, Ray R, Venugopal P. Mitral stenosis after Duran Ring annuloplasty for non-rheumatic mitral regurgitation: A foreign body response?. *Heart Lung Circulation* 2006;**15**:189–90.
19. Chowdhury UK, Venkataiyya JKH, Patel CD, Seth S, Yadav R, Singh R, *et al.* Serial radionuclide Angiographic assessment of left ventricular ejection fraction and regional wall motion after mitral valve replacement in patients with rheumatic disease. *Ann Heart J* 2006;**152**:1201–07.
20. Aggarwal NK, Kiran U, Malhotra P, Chowdhury UK. Intraoperative central venous oxygen saturation as a surrogate for mixed venous oxygen saturation in patients undergoing cardiac surgery. *J Anaesthesiol Clin Pharmacol* 2007;**123**:29–33.
21. Seth A, Chowdhury UK, Gupta NP, Dogra PN. Intrahepatic inferior vena cava. An alternative approach for venous thrombectomy in renal cell carcinoma with level III IVC

- thrombus. *Urology* 2006;**68** (Suppl. SDA):209.
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## **Cardiac Pathology**

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## Chapter in Book

Nil

### Patient Care

#### Cardiothoracic and Vascular Surgery

Total operation performed in the year 2006–2007 (w.e.f. April 2006–March 2007).

Open heart surgery	2,356
Close heart surgery	0,795
Total operation	3,151

28,097 patients have attended and were seen in the Cardiothoracic and Vascular Surgery out patient department.

#### Cardiology

Total numbers

New OPD cases	24,497
Old cases	68,424

#### Patient services

TMT	2,178
Holter	1,691
Echocardiography	22,000
Fetal Echocardiography	230

#### Cath lab services

Diagnostic

Coronary angiograms	2,658
Catheterization studies	1,469

#### Interventions

Coronary Interventions	939
Mitral Valve Dilatations	270
Device Closures	45
Other Interventions	159

#### Cardiac Anaesthesia

1. *Operation theatre:* 7-operation theatres work from 8 a.m.–5 p.m. from Monday–Friday and till 2 p.m. on Saturday.
2. *CTAngio:* CT Angiography of children in Multi Slice CT Scanner Room under monitored anaesthesia care/general anaesthesia/sedation in 64 slices multi scanner room.
3. *Pre-anaesthesia round:* Pre-anaesthesia round from 6.30–8.30 p.m. for all the patients planned for operation.

4. *Cath lab*: General anaesthesia/LA/MAC for children undergoing ASD/VSD/PSD closure.
  - a. In adults GA/LA monitored anaesthesia care for adult automated cardioverter device implantation (AICD) and dual chamber pace maker implantation.
  - b. Aortic Stent placement in cath lab, for patient of Aortic aneurysm under general anaesthesia.
5. *MRI angio*: In MRI angiography room under general anaesthesia and/or monitored anaesthesia care. All MRI compatible equipment is kept inside
6. Stress management programme for patients and their family Medical education in CT5 Ward Meditation Room.
7. Emergency Services by the residents and faculty for emergency surgery.
8. Resuscitative and ventilatory management in CCU, CTVS, ICU A and ICU B and CT5 recovery room.

### **Cardiac Radiology**

Total number of cine-angiography done for the period from 1 April 2006–31 March 2007:

Cine fluoroscopy	6,123
Vascular catheter procedures	5,641
Ultrasound	1,835
CT	1,150
MRI	455
OPD Data: Routine X-ray for CTVS and cardiology	65,271
Portable	22,507
Ward	33,204

Blood Transfusion Services (Cardiothoracic and Neurosciences Centre) Workload 1 January 2006–December 2006.

### **Blood units collected**

Replacement donors	16,057
Voluntary donors in the department	180
Voluntary donors through blood mobiles	1,385
Blood received from IRCS	5
Blood received from blood bank, AIIMS	1,060
Blood received from other hospitals	167

**Total number of blood units collected 18,854**

### **Blood units issued**

Blood units issued to CTVS/NS	1,6194
Blood units issued blood bank, AIIMS	1,650
Blood units issued to IRCS	95
Blood units issued to other hospitals	597

Blood units issued to the Trauma Centre	87
HIV/HB2Ag/HCV/VDRL reaction units discarded	597

**Total number of blood units issued 19,220**

**Laboratory procedures**

Total number of blood grouping (ABO)	75,372
Number of Rh-grouping	47,091

**Total number of cross matching done 73,921**

**Infection markers**

HIV testing	23,505
HBV testing	23,829
HCV testing	23,408
VDRL testing	21,420
CMV testing	16
HBV confirmatory testing	682

**Total 2,42,153**

**Total number of blood components**

Fresh frozen plasma (FFP)	14,083
Platelet rich plasma (PRP)	710
Platelet concentrate	14,569
Recovered plasma	2,598
Cryoprecipitate	502
Packed red blood cells	16,618

**Total 49,080**

**Special procedures**

Single donor plateletpheresis	49
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**Cardiac Biochemistry**

The cardiac biochemistry lab is externally validated by Birmingham, UK through quality control programmes for clinical chemistry.

Investigations being carried out in the department for inpatients and outpatients are:

### **Clinical Chemistry**

<b>Name of the investigation</b>	<b>Number of samples/year</b>
Routine chemistry analysis	68,128

### **Haemogram**

<b>Name of the investigation</b>	<b>Number of samples/year</b>
Routine hematology	31,250

### **Coagulation**

<b>Name of the investigation</b>	<b>Number of samples/year</b>
PT	30,400
APTT	13,000
FDP	20
Protein C	5
Protein S	5
Fibrinogen	500

### **Cardiac enzymes**

<b>Name of the investigation</b>	<b>Number of samples/year</b>
CK	7,500
CK-MB	3,200
LDH	7,500

### **Lipid profile**

<b>Name of the investigation</b>	<b>Number of samples/year</b>
Cholesterol-total	34,300
Cholesterol-HDL	21,000
Cholesterol-LDL	21,000
Cholesterol-VLDL	21,000
Triglycerides	26,450

### **Specialized investigations**

<b>Name of the investigation</b>	<b>Number of samples/year</b>
Digoxin	2,230
Cyclosporine	50
Thyroid hormones-T <sub>3</sub> , T <sub>4</sub> , TSH	7,300
ASLO	5,400
CRP	5,400
Homocystiene	1,400
Lipoprotein(a)	125
Apo(a)	125
Apo(b)	125
RA factor	752

<b>Name of the investigation</b>	<b>Number of samples/year</b>
Catecholamines (plasma and urine)	121
VMA (urine)	170
Glycosylated haemoglobin	53
HLA-A, B, C, DR, DQ	50

### **Cardiac Pathology**

#### **Cardiac Path Laboratory**

Total number of specimens/slides Routine cases	243
Research cases	293
Poly-L-lysine coated slides slides	11,425

#### **Others works**

HE slides	398
Unstained slides	150
Special stains slides	295
IHC slides	10
Thioflavin-T slides	3

### **Cardiac Nuclear Medicine**

The department is equipped with a dual head SPECT Gamma camera catering to patients referred for cardiac studies from CN center and other departments of the hospital. Both thallium and tetrofosmin Gated SPECT myocardial perfusion studies are performed. The department also performs MUGA studies for assessment of left ventricular function in CAD patients referred from the center and from IRCH for cardiac evaluation in patients receiving chemotherapy.

#### **Total number of patients investigated in Nuclear Cardiology from 1 April 2006–31 March 2007**

Stress thallium	979
Stress tetro/MIBI	141
MUGA study	1,272
Lung perfusion study	54
Total number of studies performed	2,446

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

### **Cardiothoracic and Vascular Surgery**

**Dr V. Devagourou** underwent training in Mitral Valve Repair for six months (August 2006–January 2007), Heart Institute (Alain Carpentier Heart Foundation) in the HO CHI MINH City, Vietnam.

### **Cardiac Anaesthesia**

‘Free Paper Award’ in IACTA–2007 to Minati Choudhary for the paper titled as ‘Relationship between Endothelin-1, Arterial to end-tidal carbon dioxide tension difference and clinical outcome in children undergoing fontan operation’ (authors: Minati Choudhary, Usha Kiran, Neeti Makhija, Balram Airan).

**Dr Alok Mehra**, Senior Resident: Best paper award at Delhi Branch ISA Conference for the poster entitled Robotic assisted Cardiac Surgery AIIMS experience (authors: Alok Mehra, Poonam Malhotra, Sandeep Chauhan, Ujjwal Choudhary, Usha Kiran).

### **Cardiac Radiology**

**Dr Sanjiv Sharma** Member: Cardiovascular and Interventional Radiology Society of Europe; Member: Society of Interventional Radiology of North America; President: Asia-Pacific Society of Cardiovascular and Interventional Radiology; President: Indian Society of Vascular and Interventional Radiology; National Coordinator: Indian National Registry of Vascular and Interventional Procedures; Associate Editor: Indian Journal of Radiology and Imaging, Indian Heart Journal; International referee for: (a) Cardiovascular and Interventional Radiology, and (b) Biomedical Imaging and intervention Journal; Referee for: (a) Indian Heart Journal, (b) Indian Journal of Thoracic and Cardiovascular Surgery, and (c) Indian Journal of Radiology and Imaging.

**Dr Gurpreet Singh Gulati** Cardiovascular fellow: Under Andrew Powell and Tal Geva at the Division of Cardiac MRI, Pediatric Cardiology, Children’s Hospital, Boston, MA, USA; 3–30 April 2006; Appointed member: Editorial Board for Cardiovascular Imaging Section of Indian Journal of Radiology and Imaging; Invited to conduct a guest symposium on ‘Cardiac MRI’ for the Indian Journal of Radiology and Imaging; Name included in the Marquis Who’s Who Collection (24<sup>th</sup> Edition) for the year 2007; Annual membership of Society of Cardiovascular Magnetic Resonance 2006–2007; Annual membership of the American Roentgen Ray Society 2006; Referee for: (a) Heart (b) Indian Heart Journal, and (c) Indian Journal of Thoracic and Cardiovascular Surgery.

### **Blood Transfusion Services (Cardiothoracic and Neurosciences Centre)**

**Anjali Hazarika** attended ‘Consultative workshop for strengthening BTS’, Delhi; 26 May 2006. Organized by Delhi State AIDS Control Society; attended ‘Transfusion Update’ AIIMS; 18 July. Gave a Presentation on ‘Universal leucoreduction—absolutely essential’ (a debate).



The following members attended the 'Re-orientation training' at Conference hall Delhi State AIDS Control Society+ 12 December 2006. Anjali Hazarika, Gulshan Mehta, Rahul Gautam.

The following members attended Trans-Q-2006, Ahmedabad; 10–12 November 2006. Kalpana Misra, G.S. Chauhan, Jeevan Bisht.

### **Cardiac Nuclear Medicine**

Awarded one month UICC fellowship in Positron Emission Tomography at Department of Nuclear Medicine, University of Pennsylvania, Philadelphia, USA: August–September 2006.

## **VISITING SCIENTISTS**

### **Cardiac Anaesthesia**

Visitors from various other hospitals/national/international faculties for training and as observers:

1. Surgical Cardiology, Arindam Dutta, Anaesthesiologist from Visakhapatnam attended a short-term training in Cardiac Anaesthesia; 15–28 April 2006.
2. Kanta Meena MD student from Lady Harding Medical College, New Delhi attended a short-term training in Cardiac Anaesthesia; 1–17 August 2006.
3. Neha Baduni MD student from Lady Harding Medical College, New Delhi attended a short-term training in Cardiac Anaesthesia; 1–17 August 2006.
4. Rajesh Kumar DA student from Lady Harding Medical College, New Delhi attended a short-term training in Cardiac Anaesthesia; 1–17 August 2006.
5. Jyotirmay Datta, Consultant Anaesthesiologist from Bangladesh attended a short-term training in Cardiac Anaesthesia; 7 August–6 September 2006.
6. Bipul Deka, Anaesthetist from Guwahati Medical College attended a short-term training in Cardiac Anaesthesia; 1–30 November 2006.

## 10.2 National Drug Dependence Treatment Centre

	<b>Professor and Chief</b>	
	Rajat Ray	
	<b>Professors</b>	
B.M. Tripathi	Raka Jain	Rakesh Lal
	<b>Additional Professor</b>	
	Meera Vaswani	
	<b>Associate Professors</b>	
	Anju Dhawan	
	<b>Assistant Professors</b>	
N. Kaw	Sonali Jhanjee	Atul Ambekar
	<b>Scientists</b>	
H.K. Sharma	Anita Chopra	Hem Sethi

### EDUCATION

- A) **Undergraduate**-During their posting in the Department of Psychiatry, students are posted for a day in the Centre.
- B) **Postgraduate**-Residents doing MD (Psychiatry) are posted for 6 months during their entire course duration.
- C) **Ph. D & Postgraduate teaching**  
Journal discussion once every week  
Seminar once every week  
Case conference once every week  
Tutorials faculty/staff presentation once every week besides CCR & CGR in every semester

**Note: These are conjoint activity of the department of Psychiatry and the Centre**

### Continuing Medical Education

#### Conferences, Workshops, Seminars, Training Courses and Symposia

- Seminar on Workplace Intervention for Substance Abuse, NDDTC, AIIMS, Ghaziabad, 12 April 2006.
- Tobacco Awareness Programme, NDDTC, AIIMS, Ghaziabad, 5 May 2006.
- The National Workshop on Control of Drug Abuse and HIV Risk Reduction, NDDTC, AIIMS, Ghaziabad, 10-11 August 2006.

- Training of Trainers Programme on Substance Use Disorder for Doctors from Central Reserve Police Force, NDDTC, AIIMS, Ghaziabad, 8-13 May, 2006; 14-28 September, 2006; and 14-18 November 2006.
- Training of Staff on Substance Use Disorder from APON, Bangladesh, NDDTC, AIIMS, Ghaziabad, 6-11 November 2006.

## **Lectures**

Faculty, Senior Residents, Research Officers and Scientists delivered lectures in the aforesaid training courses

### **Dr. B.M. Tripathi**

- ‘Intravenous Drug Use (IDU) size estimation at 300 peer-led intervention (PLI) sites,’ Regional Resource & Training Centre (RRTC – North), Society for Promotion of Youth and Masses (SPYM), New Delhi

### **Dr. Rakesh Lal**

- ‘Alcohol and HIV,’ Training course for Central Reserve Police Force Officials, Bhopal, 3-15 September, 2006.

## **National and International Conferences**

### **National Workshops/Conferences/Symposium/Seminars**

#### **Dr. Rajat Ray**

- Participated as a resource person in the workshop on Development of Mental Health and De-addiction Services for Govt. of Madhya Pradesh, Bhopal on 6<sup>th</sup> May 2006.
- ‘Drug Abuse Scenario: National and International Perspective’ National Institute of Social Defence, Ministry of Social Justice & Empowerment, Govt. of India, 15 June 2006.
- ‘Prevention of amphetamine type stimulants (ATS) abuse among young people,’ United Nations Office on Drugs and Crime (UNODC), New Delhi, 6-7 July 2006.
- ‘Drug Abuse,’ 28<sup>th</sup> Annual Conference of the Indian Psychiatric Society (IPS), Central Zone, Gwalior, Madhya Pradesh., 8 October 2006.
- ‘Concept of Agonist Maintenance,’ seminar hosted by United Nations Office on Drugs and Crime (UNODC), New Delhi, 27-29 November 2006.

#### **Dr. B.M. Tripathi**

- Resource Person for the ‘Training Programme for Management of HIV/AIDS,’ Department of Medicine, AIIMS, New Delhi, 19-20 April, 2006.
- Resource Person for the ‘Postgraduate (P.G.) Development Programme,’ Banaras Hindu University, Varanasi, 25 June, 2006.
- Resource Person for the ‘Workshop on Role of alcohol in spread of the AIDS epidemic in

India,' International Institute of Population Studies, Mumbai, 28 August, 2006.

**Dr. Rakesh Lal**

- 'Substance Abuse,' Radio Phone-in programme on All India Radio, 23 June, 2006.
- 'Substance Abuse: Diagnosis, Etiology and Prevention,' Mothers International School, New Delhi, 26 July, 2006.
- Resource Person in the 'Meeting on strengthening drug de-addiction services in Nagaland,' Kohima, 4-7 October, 2006.
- Resource Person in the 'Meeting on strengthening drug de-addiction services in Himachal Pradesh, Shimla, 23-25 November, 2006.
- Resource person in the 'Training programme for Central Reserve Police Force personnel on management of HIV & Alcohol Abuse,' Gauwhati.

**Dr. Meera Vaswani**

- Resource Person for the 'Symposium on, International Society of Biological Research in Alcoholism,' Sydney, September, 2006.

**Dr. Anju Dhawan**

- 'Oral substitution with buprenorphine: Phase-I,' United Nations Office on Drugs and Crime (UNODC), New Delhi, 27-29 November, 2006.

**Dr. Sonali Jhanjee**

- Resource Person in the seminar on 'Oral Substitution with Buprenorphine,' United Nations Office on Drugs and Crime (UNODC), New Delhi, 27-29<sup>th</sup> November 2006.
- 'One year profile of patients attending tobacco cessation clinic in a national level de-addiction centre,' 59<sup>th</sup> Annual National Conference of Indian Psychiatric Society (ANCIPS), Chennai, 4-7 January, 2007.

**Dr. Atul Amkekar**

- 'Management of substance abuse and HIV prevention' Training Programme on International Training of Trainers, United Nations Office on Drugs and Crime (UNODC) – Regional Office of South Asia (ROSA), New Delhi, 27 April, 2006.
- 'Basics of infection and HIV' Training Programme on International Training of Trainers, United Nations Office on Drugs and Crime (UNODC) – Regional Office of South Asia (ROSA), New Delhi, 28 April, 2006.
- 'Promoting safer practices,' Training Programme on International Training of Trainers, United Nations Office on Drugs and Crime (UNODC) – Regional Office of South Asia (ROSA), New Delhi, 28 April, 2006.
- 'Addictive behaviour,' Training Programme for NGOs, Regional Resource Training Centre, North Zone, Ministry of Social Justice & Empowerment, 29 April, 2006.

- ‘Stages of addiction,’ Training Programme for NGOs, Regional Resource Training Centre, North Zone, Ministry of Social Justice & Empowerment, 29 April, 2006.
- ‘Drug abuse among youth,’ Indian Psychiatric Society, North Zone, Srinagar, Jammu and Kashmir, 14 May, 2006.
- ‘Drug abuse prevention among student youth,’ National Sensitization Workshop for Faculty of Social Work, Ministry of Social Justice & Empowerment, 16 June, 2006.
- ‘Strategy for national drug awareness campaign,’ Ministry of Social Justice & Empowerment, 20 June 2006.
- “Attitude, behaviour and personality tests,’ Basic training course on “Drug Abuse Prevention,” Society for Promotion of Youth and Masses (SPYM), Regional Resource Training Centre (RRTC) and Ministry of Social Justice & Empowerment, 9 October, 2006.
- ‘Drug addiction process,’ Basic training course on “Drug Abuse Prevention,” Society for Promotion of Youth and Masses (SPYM), Regional Resource Training Centre (RRTC) and Ministry of Social Justice & Empowerment, 9 October, 2006.
- ‘Components of effective treatment,’ Training course on “Relapse Prevention”, Society for Promotion of Youth and Masses (SPYM), Regional Resource Training Centre (RRTC) and Ministry of Social Justice & Empowerment, 16 December 2006.
- ‘Phases of recovery,’ Society for Promotion of Youth and Masses (SPYM), Regional Resource Training Centre (RRTC) and Ministry of Social Justice & Empowerment, 16 December, 2006.
- ‘Drug abuse in children,’ Workshop on “Developing Understanding on Laws, Rights and Practical tips to handle Children Cases”, CHETNA, 23 December 2006.

## International Conferences

### **Dr. Rajat Ray**

- ‘Maintenance treatment for opiate injecting drug users,’ Kyiv, Ukraine, 2-3 December, 2006.

### **Dr. B.M. Tripathi**

- Resource Peon, ‘International Conference on Opportunistic Pathogens in AIDS,’ New Delhi, 27-29 March, 2006.

### **Dr. Raka Jain**

- ‘Can you trust self-reports among injectable drug users in clinical setting?’ 6<sup>th</sup> National Institute of Drug Abuse Meeting on ‘International Trends and Needs in Drug Abuse Research,’ Scottsdale, Arizona, 16-19 June, 2006.

### **Dr. Anju Dhawan**

- ‘Database on drug abuse and HIV/AIDS’ United Nations Office on Drugs and Crime (UNODC), New Delhi, Pakistan, 5-8 June 2006.

- ‘Experience with morphine maintenance,’ Workshop on Practical Approaches to the Use of Opioid Substitution Treatment with Antiretroviral Medication for the Effective Treatment of Both HIV and Heroin Addiction, Adelaide University, Kuala Lumpur, 28–30 August 2006.

**Dr. Atul Ambekar**

- Resource Person for the seminar on “Harm reduction forum: injecting drug use size estimation,’ Seminar organized by DFID, United Kingdom, 17-18 November, 2006.
- Resource Person for the seminar on “South Asia Workshop: injecting drug use & HIV epidemic in South Asia”, UN AIDS, 11-12 December, 2006.

**Ms. Anil Chopra**

- ‘Prevalence of environmental tobacco smoke (ETS) exposure in households with children in Jodhpur district, India.’ 13th World Congress on Tobacco or Health, Washington DC, 8-15 July 2006

**RESEARCH**

**Research Projects**

**A. Ongoing funded**

Post marketing surveillance of addnok-n (combination of buprenorphine and naloxone). Dr. Rajat Ray, Dr. Meera Vaswani. Funded by Rusan Pharma. From June 2006 Rs. 10 lakh.

Oral substitution treatment with buprenorphine. Dr. Anju Dhawan, Dr. Raka Jain, Ms. Anita Chopra, Dr. Sonali Jhanjee. Funded by United Nations Office on Drugs and Crime, Regional Office for South Asia, New Delhi. from Nov. 2005 Rs. 9 lakh

**B. Departmental Ongoing**

Effect of nitric oxide synthase inhibitor 7-NI on sensitization to the operant decrement produced by naloxone in morphine treated rats. Dr. Raka Jain.

Workplace intervention for management of alcohol abuse. Dr. Rakesh Lal, Dr. Atul Ambekar, Mr. HK Sharma, Mr. Deepak Yadav, Ms. Hem Sethi.

**C. Collaborative Ongoing**

Genetic basis of alcohol induced pancreatic disorders. Dr. Meera Vaswani. With Department of Gastroenterology. Funded by ICMR.

Database on drug abuse and HIV/AIDS. Dr. Anju Dhawan. Funded by United Nations Office of Drugs and Crime, Regional Office for South Asia, New Delhi. With Department of Biophysics

Phase–2 clinical study to evaluate the safety and efficacy of ESD-27 in patients of chronic primary insomnia. Dr. Rakesh Lal, Dr. Mamta Bhushan Singh. With Department of Neurology

(Neurophysiology Section). Funded by Himalaya Drug Company. From 2005. Rs. 3 lakh.

### **Completed**

Size estimation of IDU at 300 sites in India. Dr. BM Tripathi , Dr. Atul Ambekar. Funded by Society for Promotion of Youth and Masses (SPYM), Regional Resource & Training Centre (RRTC – North), Ministry of Social Justice & Empowerment.

### **Collaborative completed projects**

Distribution of alleles at the human ALDH2 and ADH2 loci in North Indian subjects. Dr. Meera Vaswani.

## **PUBLICATIONS**

### **Journals**

1. Chawla JM, Handa KK, Tripathi BM. Unilateral pseudohypoacusis in children *Indian J Pediatr* 2006;**74**:312.
2. Jain R, Tripathi BM, Varghese ST, Kumar N, Kumar M. Can you trust self-reports among injectable drug users in clinical setting? *J Subs Use* 2006;**11**:431-6.
3. Malhotra S, Jain R, Varghese ST. Effectiveness and compliance of naltrexone in opioid-dependent patients: A pilot study from India. *Addict Disord Their Treatment* 2006; **5**:129-132.
4. Mohan D, Dhawan A, Chopra A, Sethi H. A 24-week outcome following buprenorphine maintenance among opiate users in India. *J Subs Use* 2006;**11**: 409-15.
5. Singhal A, Tripathi BM, Pal HR, Jena R, Jain R. Subjective effects of additional doses of buprenorphine in patients on buprenorphine maintenance. *Addict Behav* 2007; **32**:320-31.
6. Varghese S, Sagar R, Jhanjee S. Chronic renal failure and electroconvulsive therapy. *Ind J Med Sci* 2006;**60**:114-5.
7. Vaswani M, Rao R. Risk behaviors and HIV infection in alcohol/drug abuse: Indian scenario. *Addict Disord Their Treatment* 2006;**5**:35-40.
8. Vaswani M, Rao R. Biochemical measures for diagnosis of alcohol dependence using discriminant analysis. *Ind J Med Sci* 2006;**10**:423-30.

### **Books/Chapters in Books/Reports**

Ambekar A, Rao R, Chawla J, Dhawan A. Coverage and portrayal of HIV/ AIDS in Indian newspapers. Abstract published in proceedings of International AIDS conference, Canada, 2006.

## **PATIENT CARE**

### **General Information**

- |                      |   |    |
|----------------------|---|----|
| 1. Total No. of beds | : | 50 |
| 2. General Ward beds | : | 50 |

3.	Private Ward beds	:	Nil
4.	OPD Attendance (NDDTC & Trilokpuri Community)		32885
5.	Admission	:	1066
6.	Discharges	:	1073
7.	Average % of Bed Occupancy		56%

<b>OPD &amp; Specialty Clinics Attendance</b>	<b>New Cases</b>	<b>Old Cases</b>	<b>Total</b>
General OPD:	3322	28610	31932

#### **Specialty Clinic**

a)	Tobacco Use Cessation Clinics	108	610	718
b)	Adolescent Clinic:	16	23	39
c)	Dual Diagnosis Clinic:	48	148	196
	<b>Total:</b>	<b>3494</b>	<b>29391</b>	<b>32885</b>

<b>Trilokpuri Community Clinic:</b>	<b>179</b>	<b>36402</b>	<b>36581</b>
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#### **Laboratory Investigations for Patient Care**

a) Total Number of Drugs of Abuse Screened in urine Samples : 20969

Drugs	Number
Morphine :	2590
Codeine:	2590
Buprenorphine:	2590
Detropropoxyphene:	2590
Pentazocine:	57
Naltrexone	42
Naloxone:	84
Pheniramine (Avil):	2590
Nitrazepam:	2590
Diazepam:	2590
Chlordiazepoxide:	2590
Canabinoids:	66
<b>b) Biochemical investigations:</b>	<b>12,000</b>
<b>c) Hematological investigations:</b>	<b>6,000</b>
<b>d) HIV screening:</b>	<b>600</b>

#### **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

**Dr. Rajat Ray** assisted the UPSC, Govt. of Uttar Pradesh in selection of Assistant Professors and Specialists (Psychiatry) in 2006. He is an honorary member of the WHO Expert Advisory Panel on Drug Dependence and Alcohol Problems, WHO, Geneva. With his team, he assisted in planning and refining the national Drug Abuse Control Programme being carried out by the Ministry



of Health and Family Welfare, Government of India. He is a member of the Inter-ministerial group to review of schedules of National Drugs and Psychosocial Substance Rules 1985, Govt. of India. He attended the technical guideline development group (a joint project of the United Nations Office on Drugs and Crime and World health Organization) in Vienna from 28<sup>th</sup>-31<sup>st</sup> August 2006.

**Dr. B.M. Tripathi** received BHU Alumni Association-NCR-Certificate of honour on 20<sup>th</sup> May 2006. He is a member of Technical Resource Group on Injecting Drug Use, National AIDS Control Organisation, Ministry of Health and Family Welfare, Government of India and a member of the Task Force for Research in Ayurveda and Siddha, Dept. of AYUSH, Ministry of Health and Family Welfare, Government of India. He is also a consultant for the Society for Promotion of Youth and Masses (SPYM) study on intravenous drug use size estimation at 300 PLI sites funded by DFID, UK

**Dr. Raka Jain** received the Distinguished International Scientific Collaboration Award (DISCA) by the National Institute of Drug Abuse, NIH, USA. She is a member of selection committee for convening of Departmental Promotion Committee meeting for the post of Assistant Director (Biochemistry), CCRAS, Department of AYUSH, Ministry of Health and family Welfare, Government of India, 2006. She also received the National Institute of Drug Abuse INVEST Travel Award for presenting papers in the 6<sup>th</sup> National Institute of Drug Abuse International Meeting on 'International Trends and Needs in Drug Abuse Research' at Scottsdale, Arizona, USA (16-19 June, 2006) and in 'College on Problems of Drug Dependence,' 67<sup>th</sup> Annual Scientific Meeting, Scottsdale, Arizona, USA (18-22 June, 2006).

**Dr. Rakesh Lal** was an examiner for Diploma in Psychological Medicine in Central Institute of Psychiatry, Ranchi (14-16 July, 2006). He is a member of the Selection Committee for Postgraduate courses in the Central Institute of Psychiatry, Ranchi

**Dr. Meera Vaswani** was awarded a travel grant from Japanese Society of Biological Research on Alcoholism (JSBRA) to deliver a symposium lecture in International Society of Biological Research in Alcoholism in Sydney, Australia in September 2006.

**Dr. Anju Dhawan** is a member of Expert Advisory Panel on Drug Dependence (Abuse Liability Evaluation), was the Organizing Secretary for National Workshop on control of Drug Abuse and HIV Risk reduction (10-11 August 2006), is the departmental co-ordinator for WHO biennium activities in substance use disorder for year 2006-2007, is a coordinator for 'Training for Trainers' programme for substance use disorders funded by Ministry of Health and Family Welfare and World Health Organization (2 programmes of 2 weeks duration were held at AIIMS, New Delhi and 2 programmes of 6 days duration were held at Bangalore and Imphal). She is also the coordinator for 'Training Programmes for Central Reserve Police Force doctors' (Six programmes in year 2006-2007) and 'Training Programme on Long Term Treatment of Opiate Dependence' for APON,

a NGO from Bangladesh (6-10 November 2006).

**Dr. Atul Ambekar** joined the Multiple Expert Consultation on Drug and HIV in South Asia, United Nations Office on Drugs and Crime (UNODC) – Regional Office of South Asia (ROSA), New Delhi (10 April, 2006).

*The NDDTC is coordinating the various programmes as part of WHO Biennium Activities (2006-07) and as part of National Drug Abuse Control Programme:*

- Development of Resource Materials-Pharmacotherapy for Alcohol and Opiate Dependence (ongoing)
- Manual for Nurses on Substance Use Disorders (ongoing)
- Training by Trainers Programme at Nagaland (4-7 October, 2006)
- Drug Abuse Monitoring System
- Assessment of functioning of various government de-addiction centres including site visits (e.g. field visit to Nagaland and Himachal Pradesh was conducted by Dr. Rakesh Lal on 7<sup>th</sup> October 2006 & 25<sup>th</sup> November 2006).
- Publication of Newsletter, Drug Abuse News & Views (Editors: Tripathi BM, Ambekar A) – the theme of the inaugural issue (November 2006) was ‘Abuse of Psychotropic Drugs.’

## 10.3 Centre for Dental Education and Research

### Chief

Naseem Shah

### Professor

Om Prakash Kharbanda

### Additional Professor

Ritu Duggal

### Associate Professors

Ajoy Roychoudhury

Veena Jain

### Assistant Professors

Ongkila Bhutia

Vijay Prakash Mathur

Ajay Logani

## EDUCATION

### Undergraduate

The Centre conducted the teaching programme of MBBS undergraduate students during their clinical posting in VIIth Semester.

### Postgraduate

At present, the Centre is conducting postgraduate programmes in Orthodontics, Prosthodontics and Conservative Dentistry and Endodontics. A new postgraduate degree course (MDS) has been started in the specialty of Oral and Maxillofacial Surgery from January 2007 session.

### Short-term training

Training of dentists and technicians from India and abroad in various aspects of dental surgery is continuing. Six candidates have undergone short-term training varying from 3 to 6 months at the Centre during 2006–07. The Centre also provided training to 3 WHO fellows from Bhutan for 3 weeks and 1 Trauma Fellow from the Indian Army in advanced craniofacial trauma for 1 year.

## Continuing Medical Education

### Conferences, seminars, workshops

- A national workshop on 'Postgraduate dental education' with the objectives to revise and update curriculum in the 9 specialties of Dentistry was successfully organized in collaboration with Dental Council of India. The revised updated curriculum has been submitted to DCI

- and is under active consideration by the Ministry of Health, Government of India.
- ‘Philosophies and techniques of full mouth rehabilitation’, MGPGI of Dental Sciences, VIII National Convention of Prosthodontic postgraduate students of IPS; 23–25 June 2006.
- ‘Oral and maxillofacial surgery’, CDER by group of experts, Glasgow; 20 November 2006.
- Conducted the 11th Postgraduate Convention of the Indian Orthodontic Society; 25–27 February 2007.
- Training and re-orientation workshop for master trainers of government hospitals of Haryana, Rohtak and Chandigarh; 16 and 19 March 2007, respectively, under the aegis of the National Oral Health Care Programme.
- ‘Nano-technology and adhesive bonding of aesthetic restorations’, Madhav Moorthy; 11 November 2006.
- ‘Esthetic periodontal plastic surgery’, Lisa Harpenau, University of Pacific; 8 December 2006.

## Lectures delivered

### **Professor Naseem Shah**

- ‘Oral cancer and pre-cancer: Causes and prevention’, Training and re-orientation workshop for master trainers of government hospitals of Haryana, Rohtak; March 2007.
- ‘Oral health status, its perspectives and implications’, Training and re-orientation workshop for master trainers of government hospitals of Haryana, Rohtak; March 2007.

### **Ritu Duggal**

- ‘Oral health module for prevention of dental problems in schoolchildren’, Workshop for Global Child Dental Health Task Force (India Section); July 2006.
- ‘Dental professionals and stakeholders’ perception of dental primary health care’, National Consensus Workshop for Effective Utilization of available Manpower in Dental Institutions for Primary Prevention, Murad Nagar, Ghaziabad; November 2006.

### **Vijay Prakash Mathur**

- ‘Integration of child dental health into existing child development schemes of Government of India’, Workshop for Global Child Dental Health Task Force (India Section); July 2006.
- ‘Reorientation of medical education as an example to dental fraternity’, National Consensus Workshop for Effective Utilization of available Manpower in Dental Institutions for Primary Prevention, Murad Nagar, Ghaziabad; November 2006.
- ‘Role of health communication skills in prevention and control of dental diseases and behavior analysis’, Training and re-orientation workshop for master trainers of government hospitals of Haryana, Rohtak and Chandigarh; March 2007.

- ‘Etiology and prevention of periodontal diseases’, Training and re-orientation workshop for master trainers of government hospitals of Haryana, Chandigarh; March 2007.

## National and International Conferences

11th Postgraduate Convention of the Indian Orthodontic Society, New Delhi; February 2007.

## Lectures delivered

### **Professor Kharbanda**

- Guest lecture at the 20th Australian Orthodontic Society Conference, Melbourne, Australia and Faculty of Dentistry University of Honk Kong; March 2006.
- Guest lecture at 13th National Conference of the Indian College of Cardiology Khajuraho; September 2006.
- Guest lecture at 41st Indian Orthodontic Conference, Chennai, Craniofacial Distraction workshop, Chennai; November 2006.
- Invited lecture at the World Health Updates, Agha Khan University, Karachi, Pakistan; January 2007.
- Guest lecture at the Asian Pacific Conference on Dental Education, Chennai, India.
- Guest lecture at the 6th Conference of the Indian Cleft Lip Palate and Craniofacial Association, Chandigarh; February 2007.

### **Ritu Duggal**

- ‘Oral health module among schoolchildren’, 94th FDI Annual World Dental Congress 2006, Schezen, China; September 2006.

### **Vijay Prakash Mathur**

- ‘Prevalence of dental fluorosis among Delhi schoolchildren’, 94th FDI Annual World Dental Congress 2006, Schezen, China; September 2006.
- ‘Oral health–systemic health connection’, Rajasthan State Dental Conference, Jaipur, Rajasthan; March 2007.

### **Ajay Logani**

- ‘Apically extruded debris with three cotemporary Ni-Ti rotary instrumentation system’, the National conference of FODI-IES, Mumbai; 22–25 December 2006.

## **Papers presented by the residents under faculty’s guidance**

### **Abhinav Singh**

- ‘Newer imaging techniques in endodontics’, Annual National Conference of FODI-IES, Mumbai; 22–25 December 2006.

**Vivek Aggarwal**

- 'Future of regenerative endodontics: Stem cells', Annual Postgraduate Convention of FODI-IES, Mumbai; 22–25 December 2006.

**Sarita Bhushan**

- 'Alternative conservative approach for caries arrested and treatment', Annual Postgraduate Convention of FODI-IES, Mumbai; 22–25 December 2006.

**Uday Bhasker**

- 'Evaluation of sealing ability of Ni-Ti obturator with glass ionomer sealer compared with lateral condensation and thermoplasticised gutta percha and zinc oxide sealer obturation: A confocal microscopic study', Annual Postgraduate Convention of FODI-IES, Mumbai; 22–25 December 2006.

**Ashwani Kar**

- 'Prosthodontic management of post-surgical hemi-mandibulectomy patient: A challenge', PG Convention, Pondicherry; June 2006.

**Agnihotri Hema**

- 'Conservative approach for management of facial disfigurement: A case report', PG Convention, Pondicherry; June 2006.

**Shahriq Rehan**

- 'Methods of hollow bulb fabrication in maxillary obturator prosthesis', PG Convention, Pondicherry; June 2006.

**Kabra Krishna**

- 'Gold lid implant prosthesis to treat lagophthalmos in patients with facial paralysis: Prosthodontic rehabilitation', PG Convention, Pondicherry; June 2006.

**Neeraj Wadhawan**

- 'TMJ adaptations following functional appliance therapy: 11<sup>th</sup> IOS. A MRI study', PG convention, AIIMS; 25–27 February 2007.

**Hari P.**

- 'Implants as anchorage savers: Clinical performance', 11<sup>th</sup> IOS. The PG convention, AIIMS; 25–27 February 2007.

**Anupama**

- 'Evaluation of the adaptive changes associated with masseter and temporalis after twin

block therapy with and without prior muscle deprogramming an EMG study', 11<sup>th</sup> IOS. PG convention, AIIMS; 25–27 February 2007.

## Research

### Funded Projects

#### Completed

1. A hospital-based study on progressive and regressive changes in oral precancerous lesions in north Indian population: An ICMR Extramural Fellowship. Ajoy Roychoudhury. 2003–2006. Funds: SRF salary only.

#### Ongoing

1. National oral health care programme: Project in collaboration with Directorate General Health Services and Ministry of Health and Family Welfare. The Centre for Dental Education and Research is the Nodal agency to implement the programme. Naseem Shah. Funded by Ministry of Health and Family Welfare (From 1999). Funds: Rs 30 lakh.
2. Analysis of data for multicentric oral health survey for the Biennium 2006–2007. Naseem Shah, Ritu Duggal, Vijay Mathur, GOI–WHO-India project for 6 months from September 2006 onwards. Funds: Rs.2,59,600.
3. Dentofacial development of cleft lip and palate patients has been initiated in collaboration with the University of Manchester, UK. O.P. Kharbanda. No funds.
4. Development of visual analog scale for smile characteristics following orthodontic treatment and its correlation with the treatment outcome. O.P. Kharbanda. Funded by an ICMR project for 3 years (2006–2008). Funds: Rs 4.5 lakh.
5. Detection of apoptosis in human periodontal ligamental during orthodontic tooth movement. Ritu Dugal. Funded by an ICMR Project for 3 years (2005–2008). Funds: Rs 2.6 lakh.
6. A randomized, double-blind, placebo controlled study of efficacy of lactobacillus CD2 lozenges in patients with chronic periodontitis. Ajoy Roychoudhury, Ongkila Bhutia, Ajay Logani. Funded by CD Pharma India for 2 years (2006–2008). Funds: Rs 9,88,911.

### Departmental Projects

1. A comparative evaluation of screw implants over traditional anchorage saver for *en mass* retraction of anterior teeth
2. An *in vitro* study to evaluate the effect of different impression techniques on dimensional accuracy and surface detail reproduction using addition silicone impression materials
3. 3D finite element study of stress distribution and displacement of various craniofacial structures following application of transverse force in cleft lip and palate patients
4. A clinical study to evaluate and compare centric relation and condylar guidance by the conventional and the gothic arch methods
5. Effect of different design preparation on flexural and fracture strength of fibre-reinforced

- composite-fixed partial dentures: An *in vitro* study
6. Effectiveness of home bleaching agents on the colour change and surface characteristics of direct composite veneering materials and discoloration: A gonioreflectometer and SEM study
  7. An *in vitro* evaluation of the effect of cyclic loading on the marginal adaptation and bond strength in direct vs indirect Class II MO composite restoration
  8. Effects of prepolymerized composite magafiller on the marginal adaptation of composite restorations in cavities with different configuration factors: An *ex vivo* SEM study
  9. Influence of variable instrument taper on cleaning efficacy and resultant effect on strength of root canal system: An ex-vivo comparative evaluation
  10. An *ex vivo* study evaluating and comparing the retention of chair side fabricated fiber reinforced composite (FRC) posts to that of prefabricated metal and FRC posts before and after cyclic loading

### **Collaborative Projects**

1. Ocular surface reconstruction with alternative autografts of non ocular surface origin (with Science and Technology Project, collaborating with RP Centre)

### **Publications**

#### **Journals**

1. Mahal AS, Shah N. Implications of the growth of dental education in India. *J Dent Ed* 2006;**70**:884–91.
2. Goyal P, Kale SC, Chaudhry R, Chauhan S, Shah N. Association of common chronic infections with coronary artery disease in patients without any conventional risk factors. *Indian J Med Res* 2007;**125**:133–40.
3. Batra P, Kharbanda OP, Duggal R, Parkash H. Alkaline phosphatase activity in gingival crevicular fluid during canine retraction. *Orthod Craniofac Res* 2006;**9**:44–51.
4. Kharbanda OP. Global issues with orthodontic education: A personal viewpoint. Invited guest editorial. *J Orthod* 2006;**33**:237–41.
5. Armstrong D, Kharbanda OP, Petrocz P, Darendeliler MA. Root resorption after orthodontic treatment. *Aust Orthodont J* 2006;**22**:153–60.
6. Steinbach G, Armstrong D, Kharbanda OP, Petrocz P, Darendeliler MA. An investigation of the forces used by clinicians to open spaces with coil springs. *Aust Orthodont J* 2006;**22**:115–20.
7. Rex T, Kharbanda OP, Petrocz P, Darendeliler MA. Physical properties of root cementum: Part 6. A comparative quantitative analysis of the mineral composition of human premolar cementum after the application of orthodontic forces. *Am J Orthod Dentofacial Orthop* 2006;**129**:358–67.
8. Jena AK, Duggal R, Parkash H Skeletal, dentoalveolar effects of Twin-block and Bionator appliances in the treatment of Class II malocclusion: A comparative study. *Am J Orthod Dentofacial Orthop* 2006;**130**:594–602.



9. Jena AK, Duggal R, Mathur VP, Parkash H. Class III malocclusion: Genetics or environment? A twins study. *J Indian Soc Pedod Prev Dent* 2005;**23**:27–30.
10. Jain V, Gupta R, Duggal R, Parkash H. Restoration of traumatized anterior teeth by interdisciplinary approach: Report of three cases. *J Indian Soc Pedod Prev Dent* 2005;**23**:193–7.
11. Duggal R, Jena AK. Quantitative and Qualitative effects of Twin Block Appliance. *J Indian Orthod Soc* 2006;**39**:30–41.
12. Parkash H, Mathur VP, Duggal R, Jhuraney B. Dental workforce issues: A global concern. *J Dent Educ* 2006;**70** (Suppl. 11):22–6.

### **Chapter in Book**

1. Duggal R. Dental pharmacology. In: Seth SD (ed). *Textbook of pharmacology*. 3rd ed. New Delhi: B.I. Churchill Livingstone; 2006.

## **PATIENT CARE**

The centre provides state of art dental treatment to the general public. The centre is well equipped with latest machinery and diagnostic equipments.

The centre provides following advanced treatment procedures.

### **Conservative Dentistry and Endodontics**

#### **Advanced restorative procedures**

Cast metal, inlays/onlays and crowns

Composite inlay/only/veneers

Ceramic inlay/onlay/ veneers

Esthetic restoration and bleaching of teeth

Root canal treatment in anterior and posterior teeth

Surgical endodontics

#### **Orthodontics**

Dento-facial orthopaedics and cleft palate orthodontics

Removal and fixed orthodontics

Myofunctional therapy

Orthodontic implants assisted treatment

#### **Prosthodontics**

Complete dentures, partial dentures, fixed prosthodontics

Total mouth rehabilitation

Maxillofacial prosthesis

Implant supported prosthesis

### **Oral and Maxillofacial Surgery**

Craniofacial trauma management  
Facial esthetic surgery  
Maxillofacial pathology treatment  
Cleft lip and palate repair  
Distraction osteogenesis and obstructive sleep apnea management  
Temporomandibular joint surgery  
Simple and complicated exodontias  
Trigeminal neuralgia management  
Dental implants

### **Paediatric Dentistry**

Prevention and management of dental problems in children  
Preventive orthodontics  
    Serial extractions  
    Space maintainers and regainers  
Paediatric dentistry for children with special needs

### **Periodontics**

Oral prophylaxis  
Advanced bone grafting and flap surgery procedures

### **Special Laboratory Facilities**

Orthodontic laboratory  
Prosthodontic laboratory  
Conservative dentistry laboratory

### **Community Services/Camps**

The faculty of the centre is continuing to work on the 'National Oral Health Care Programme'. The centre conducted an oral health camp, AIIMS Rotary Midtown Hospital, Trilokpuri and National Drug De-addiction Centre, Ghaziabad. A school oral health education programme was also conducted in Delhi Public School, Vasant Kunj.

### **AWARDS AND HONOURS**

**Professor Naseem Shah** was invited to participate in a Panel Discussion on AIR on 'Geriatric health', 22 June 2006. She gave a teleconferencing for PG Diploma course in Geriatric Medicine, 8 October 2006.

**Professor Kharbanda** has been made a member of the Editorial Board of the *Australian Orthodontic Journal*; He has been nominated a Fellow of National Academy of Medical Sciences

(FAMS); He continues to be on the International Editorial Board of the *American Journal of Orthodontics and Dentofacial Orthopaedics* and *British Journal of Orthodontics*; has been inducted on the Advisory Board of the *Journal of Indian Orthodontic Society*; He has been nominated Vice-President of the Asian Pacific Cleft Congress, 2007 and Scientific Chairman of the International Orthodontic and 44th Indian Orthodontic Conference, Delhi, 2009.

### **SIGNIFICANT EVENTS**

**Professor Naseem Shah** was appointed by the Hon. Supreme Court of India to re-evaluate the PG entrance examination conducted by K.M. Shah Dental College, Baroda. She was an invited participant at a workshop organized by IGNOU and DCI to start PG Diploma in Endodontics, Chennai, 19–20 August 2006. She participated in a 3-day National Workshop organized by CHEB to review the course content of Diploma in Health Education. She was appointed as an UGC inspector for permission to start an off-shore campus at Mauritius by Sri Ramachandra Medical College and Research Institute, Chennai, 18–19 July 2006. She was an expert member at DGHS to grant permission to start new Medical/Dental Colleges, 8–10 September 2006; and at Army Dental Centre (R&R) for selection of the Implant System. Professor Shah is on the Governing Council of Maulana Azad Institute of Dental Sciences, New Delhi. She has been nominated as an Expert member on Bureau of Indian Standards, and on Selection Committee for the post of Professor at the Mahatma Gandhi PG Institute of Dental Sciences, Pondicherry, 6 November 2006. Professor Naseem Shah was one of the technical experts to finalize machinery and equipment, JDW National and Regional Referral Hospitals, Thimpu and Manger, Bhutan. She also visited Bhutan during 22–24 February 2007.

**Dr Kharbanda** successfully completed ‘Masters in medical education’ (M.MEd, Dundee) from the Dundee University, Dundee, Scotland, UK. He has been nominated as Member, Board of Studies, Banaras Hindu University, Varanasi; nominated to the Bureau of Indian Standards as representative member of the Indian Orthodontic Society. He served as an expert to the Faculty selection Committee Punjab University, Chandigarh and DAV College management committee for the University of Kurushetra; He was invited by ICMR as a subject expert to review research projects in the field of Oral Health and as member of the Advisory Committee to approve research grants to postgraduates and as an Inspector and was a special invitee to the 112th session of DCI and later to the Executive committee to make presentation on the revised postgraduate curriculum; also advised Dental Council of India on issues of equalization of foreign Master’s degrees earned from New York, Sydney and Thailand.

**Dr Ritu Duggal** was appointed as Dental Council Inspector for approval of MDS and BDS courses, Dental Colleges, India.

**Dr Ajoy Roychoudhury** was nominated to the Bureau of Indian Standards as the AIIMS representative; He was appointed Dental Council Inspector for approval of BDS courses, Dental Colleges, India.

**Dr Veena Jain** was appointed as Dental Council Inspector for approval of MDS and BDS courses, Dental Colleges, India.

**Dr Vijay Prakash Mathur** was elected as executive member of Delhi State Branch of Indian Dental Association and Representative to Council on Dental Health for South Delhi Branch of Indian Dental Association.

### **VISITING SCIENTISTS**

1. Dr Varun Kalra, Associate Professor, University of Pittsburgh Connecticut, USA.
2. A delegation from Kyushu University, Japan visited the Centre for Dental Education and Research.

## 10.4 Dr B.R. Ambedkar Institute Rotary Cancer Hospital

### Professor and Chief

Vinod Kochipillai  
(till 28.02.2007)  
(Medical Oncology)

G.K. Rath  
(wef 1 March 2007)  
(Radiation Oncology)

### Professors

P.K. Julka  
(Radiation Oncology)  
Subhash Chander  
(Radiation Oncology)

N.K. Shukla  
(Surgical Oncology)  
Rajive Kumar  
(Laboratory Oncology)

V. Raina  
(Medical Oncology)  
B.K. Mohanti  
(Radiation Oncology)

Lovleen Bijlani  
(Medical Oncology)

Lalit Kumar  
(Medical Oncology)

### Additional Professor

S. Satpathy  
(Hospital Administration)

### Associate Professors

Sanjay Thulkar  
(Radio-diagnosis)

S.V.S. Deo  
(Surgical Oncology)

S. Bhatnagar  
(Anaesthesiology)

Atul Sharma  
(Medical Oncology)

Semeer Bakshi  
(Paediatric Oncology)

### Assistant Professors

Pratik Kumar  
(Medical Physics)

Seema Mishra  
(Anaesthesiology)

D.N. Sharma  
(Radiation Oncology)

Suman Bhaskar  
(Radiation Oncology)

Sushmita Pathy  
(Radiation Oncology)

Ritu Gupta  
(Laboratory Oncology)

## EDUCATION

### Anesthesiology

The following activities are conducted:

- IRCH seminar every Monday and Thursday at 8.15 a.m.
- Unit seminar every Monday at 2.30 p.m.
- Unit journal club every Saturday at 10:00 a.m.
- Unit radio conference every Saturday at 9:00 a.m.

### **Laboratory Oncology**

- The Department provides training to students of MD Pathology and Paediatrics
- Combined clinicopathological discussions are held with the Department of Paediatrics

### **Medical Oncology**

#### **Undergraduate**

Participation in undergraduate teaching programme as per Dean's circular.

#### **Postgraduate**

Medical oncology is running a DM programme under which there are 8 regular and 3 sponsored students.

#### **PhD training**

Five students are undergoing PhD training.

#### **Short- and long-term training**

Lt. Col. Amul Kapoor from the Ministry of Defence, New Delhi joined the Department of Medical Oncology on 30 December 2005 as a long-term trainee for a period of 2 years.

### **Medical Physics**

#### **Undergraduate and Postgraduate training**

The Medical Physics unit has actively participated in imparting education in the field of radiation protection, radiation physics and quality in radiological imaging to the students doing MD Radiology, MB,BS, BSc (Hons) Nursing and BSc (Hons) Radiography. In addition, the unit has 2 PhD students

The faculty and staff participated in the seminars conducted by the Unit and BRA IRCH.

#### **Short-term training**

The Unit imparted short-term training to 2 students of MSc Medical/Radiation Physics from Bhartiya University for 15 days in radiation safety and quality in Diagnostic Medical Physics course. The training included practical demonstrations, smaller projects and theoretical seminars on the topics of diagnostic imaging (physics).

### **RADIOTHERAPY**

#### **Undergraduate and Postgraduate training**

The department is involved in undergraduate, postgraduate, BSc Nursing and PhD teaching programmes

**Short-term training was given to:**

- Tarun Verma and Prantar, DM (Haematology) student, AIIMS.
- Sarat Chandra and Amit Attam, senior residents in Surgical Oncology, AIIMS.
- Bidya Pati Jha and Ram N. Yadav, medical physicists, Bhaktapur Cancer Hospital, Nepal.
- Rajesh Jakibanja, Rajeev Karn, Viswa Raj Gautam and Shiva Ram Dhukhwa, therapy radiographers, Bhaktapur Cancer Hospital, Nepal.
- Puneet Seth, 3rd year PG Student (MD Radiotherapy), Government Cancer Hospital, MGM Medical College, Indore (MP).
- Rakesh Rawat and Neha Gupta, residents of SGPGI, Lucknow.
- J. Arun and K. Ananda Krishnan, trainee physicists, Bharatiyar University.
- Ranjit George and Silambarasan, trainee physicists, Anna University.

**Surgical Oncology****Undergraduate**

The faculty were involved in undergraduate teaching by giving didactic lectures and participating/moderating seminars on oncological topics.

**Postgraduate**

The faculty were involved in teaching and training of 6 surgical oncology senior residents, DM medical oncology residents, MD radiotherapy junior residents by giving didactic lectures, moderating seminars, journal clubs, etc. and clinical teaching during ward rounds and in special cancer clinics of IRCH. Both Shukla and Deo acted as co-guide and co-supervisors for DM Medical Oncology thesis, MD Radiation Oncology thesis and PhD students from different department of IRCH and AIIMS.

**Paraclinical**

The faculty were involved in the teaching of BSc Nursing students.

**Short- and long-term training**

- Gaurav Jain, Senior Lecturer, Subhatrti Dental College, Meerut joined on 1 July 2006 as a short-term trainee for head and neck cancer training in the Department of Surgical Oncology for a period of 6 months.

**Continuing Medical Education****Anesthesiology**

- Organized AIIMS Golden Jubilee and IRCH Foundation Day, AIIMS; 17–18 November 2006.
- Organized 6th Foundation course on ‘Palliative care for medical practitioners and nursing staff treating cancer patients’, Delhi; 16–17 February 2007.

- Lectures for nursing staff deputed at IRCH from all over the country for advanced courses in Oncology.

### **Medical physics**

The faculty and staff of Medical Physics Unit delivered guest lectures for imaging personnel in workshops and CME organized for radiologists, radiographers and physicists.

### **Radiotherapy**

Organized a workshop (AGOICON 2006) on 'Interstitial implant and brachytherapy' in collaboration with the Department of Gynaecology, AIIMS; 24–26 November 2006.

### **Surgical oncology**

#### **N.K. Shukla**

- 'Management of early breast cancer', CME programme for postgraduates, Maulana Azad Medical College, New Delhi; 25 September 2006.
- 'Management of ostomies', Annual general body meeting of Indian Ostomy Society; 8 October 2006.
- 'Gastrointestinal cancer in ASICON', Surgical Education and Research Foundation of Delhi State Chapter of ASI; 25 February 2007.
- 'Breast cancer', Joint conference of AIIMS and Royal Society of Medicine, UK.

### **National and International Conferences**

#### **Anesthesiology**

##### **Lectures delivered**

#### **Dr Sushma Bhatnagar**

- 'Neuropathic pain management', 17th Biennial National Conference of RSACP, Pune; 10–12 November 2006.
- 'Cancer pain management', 10th National Conference of International Trauma Anaesthesia and Critical Care Society, Agra; 8–10 September 2006.
- 'Pain survey', Asia Pacific Region meeting, Singapore; 28 October 2006.
- 'Prediction of life expectancy in cancer patients', 28th Annual Conference of the Association of Radiation Oncologists of India, Varanasi; 1–2 December 2006.
- 'Availability of morphine in India', Workshop on Cancer Pain Management vis-à-vis oral morphine at SGPGIMS, Lucknow; 17 March.
- 'Chronic pelvic pain management', 21st Annual Conference ISPRAT, Apollo, Delhi; 23–24 February 2007.
- 'Introduction to palliative care', 6th Cancer Foundation Course on 'Pain and palliative care', Delhi; 17–18 February 2007.



### **Dr Seema Mishra**

- ‘Cancer pain management’, 6th Cancer Foundation Course on ‘Pain and palliative care’, Delhi; 17–18 February 2007.

### **The faculty and residents of the department presented paper/poster**

- Best poster award on ‘Efficacy and safety of a mixture of ketamine, midazolam and atropine for procedural sedation in paediatric oncology: A randomized study of oral vs. intramuscular route’, 17th Biennial National Conference of RSACP, Pune; 10–12 November 2006.
- Best paper award on ‘A randomized double-blinded study of clonidine as an analgesic adjuvant to continuous extra pleural intercostals bupivacaine for post-thoracotomy pain’, 17th Biennial National Conference of RSACP, Pune; 10–12 November 2006.
- Best paper award on ‘An audit of routine clinical practice of blind insertion of peripherally inserted central catheters in surgical oncology patients’, 46th Annual Conference of Indian Society of Anaesthesiologists (Delhi Chapter), Delhi; 7–8 April.
- Best Research Protocol Presentation award on ‘A randomized double-blinded study of clonidine as an analgesic adjuvant to continuous extra pleural intercostals bupivacaine for post-thoracotomy pain’, AIIMS Golden Jubilee and IRCH Foundation Day, AIIMS; 17–18 November 2006.

### Laboratory Oncology

#### **Lectures delivered**

#### **Dr Rajive Kumar**

- ‘Serum-free light chains in multiple myeloma’, National Haematology Update, Department of Hematology, AIIMS; February 2007.

### Medical Oncology

#### **Lectures delivered**

#### **Professor V. Raina**

- Attended investigators meeting with GSK, London; 3 March 2006.
- Attended Steering Committee Meeting of Early Breast Cancer Trialists Cooperative Group (EBCTCG), Oxford University; 26–30 June 2006.
- Attended training programme of INDOX Network, Oxford; 28–30 June 2006.
- Attended investigators meeting in Hyderabad on ‘Safety and efficacy of rituximab and CHOP chemotherapy’; 30 July 2006.
- Attended CME on ‘Targeted therapies’, Udaipur; 19 August 2006.
- Attended main meeting of EBCTCG, Oxford University and ATLAS (Ongoing Breast Cancer Project with Oxford University); 11–14 September 2006.
- Attended TEACH investigators meeting in London, UK; 24–25 October 2006.
- Attended Investigators meeting on targeted therapies in renal cancer by GSK, Hong Kong; 1 November 2006.

- Attended the Annual Review Meeting of National Cancer Registry Programme, GCRI, Ahmedabad; 17–18 November 2006.
- Attended investigators (PAPRIKA) meeting, Pancreatic Cancer, Mumbai; 24 February 2007
- ‘Stem cell transplant’, ‘Breast cancer’, NEIGRIMS, Imphal; 13–4 July 2006.
- ‘The role of chemotherapy in breast cancer’ and ‘Stem cell transplant’, Bihar Society of Oncology; 12 August 2006.
- Workshop on ‘Management of fungal infection’, Ambi Valley; 2 September 2006.
- Chaired a session and was a panelist on an International Workshop on Molecular Basis of Haematological Malignancies, Mumbai; 7–8 October 2006.
- Chaired a CME session on ‘Breast cancer’, Lonavala; 14 October 2006.

### **Dr Lalit Kumar**

- ‘Chemotherapy in testicular tumours’, during the Biennial Conference of the Indian Society of Medical and Paediatric Oncology and Indian Society of Oncology, Patna; 11 November 2006.
- ‘Progress in cancer’, Indian Medical Association, SIRSA Branch, Haryana; 9 December 2006.
- Invited lecture during the 28th Annual Conference of the Association of Radiation Oncologists of India (AROICON-2006). ‘Chemotherapy of cervix cancer’, BHU, Varanasi; 2 December 2006.
- ‘Cancer cervix: The Indian perspective’, 28<sup>th</sup> Annual Conference of the Association of Radiotherapists/Oncologists of India (AROICON-2006), BHU, Varanasi; 2 December 2006.
- ‘Management of multiple myeloma’, Nizam’s Institute of Medical Sciences, Hyderabad; 9 September 2006.
- ‘Bone marrow/stem cell transplantation’, First National Medical Students Research Conference, Pune; 7 October 2006.
- ‘Molecular basis of haematological malignancies: Pathogenesis, treatment and monitoring’, Department of Medical Oncology, Jaslok Hospital, Mumbai; 8 October 2006.
- ‘Breast cancer’, Surgery Update 2006, Department of Surgery, Maulana Azad Medical College, Delhi; 25 September 2006.
- ‘Upfront debulking surgery versus neoadjuvant chemotherapy in advanced epithelial ovarian cancer’, Oral presentation, UICC World Cancer Congress, Washington DC, USA; 8–12 July 2006.
- ‘Childhood haematological malignant disorders’, Golden Jubilee, Department of Paediatrics. AIIMS; 3 September 2006.
- ‘Stem cell therapy’, Clinical Genetic Course, AIIMS; 25 April 2006.
- ‘Pharmacogenomics symposium’, R&D Centre, Ranbaxy Research Laboratory, Gurgaon; 20 May 2006.
- ‘Cancer is curable’, JLN Auditorium, AIIMS; 9 May 2006.

- ‘Diagnostic approach to pulmonary complications’, SCT during the meeting on ‘Stem cell transplantation’, Army Hospital (R&R), New Delhi; 1 October 2006.
- ‘Stem cell transplantation in multiple myeloma and lymphoma’, Conference on ‘Stem cell transplantation’, Gujarat Cancer Research Institute, Ahmedabad; 21 January 2007.
- Chaired a session during the 33rd Indian Immunology Society Conference, AIIMS; 30 January 2007.
- Chairperson during the symposium on ‘Therapeutic drug monitoring’, Department of Pharmacology, AIIMS; 3 February 2007.
- ‘Chemotherapy of ovarian tumours’, JLN Medical College, Aligarh; 27 February 2007.
- ‘National Haematology Update VI’, Session on ‘Multiple myeloma advances in management’, AIIMS; 2 March 2007.

#### **Dr Sameer Bakhshi**

- ‘Acute leukemias: Case studies’, ‘Advances in Hemato-Oncology’, Hotel Le-Meridien, New Delhi; 16 April 2006.
- ‘Challenges of managing paediatric malignancies in the developing world’, ORCI Scientific Conference, Dar-e-Salam, Tanzania; 18 August 2006.
- ‘GLIVEC in CML/GIST patients’, GIPAP/Max Foundation, AIIMS; 2 November 2006.
- ‘Clinical applications of methotrexate monitoring in lymphoid malignancies’, A multidisciplinary symposium cum workshop on ‘Therapeutic drug monitoring for better therapeutics and drug development’, AIIMS; 3 February 2007.
- ‘Therapy of bone lymphomas’, International CME on ‘Bone pathology’, Department of Pathology, AIIMS in collaboration with Harvard Medical School and Mount Sinai School of Medicine, USA at India Habitat Center, New Delhi; 23–34 February 2007.
- ‘Acute lymphoblastic leukemia: Panel discussion’, ICON, Jaipur; 11 March 2007.

#### **Medical Physics**

##### **Dr Pratik Kumar**

- ‘Patient dose evaluation during interventional fluoroscopy: Where we stand today?’, Medical Physics and 27th Annual Conference of Medical Physicists of India, Bhubaneswar; 9–12 November 2006.
- ‘Medical imaging: Basics and quality assurance’, Radiation imaging system, Bureau of Indian Standards and Atomic Energy Regulatory Board, Niyamak Bhawan, AERB, Anushaktinagar, Mumbai; 15 February 2007.

#### **Radio Diagnosis**

**Organized by the department: Annual Conference of IRIA, 11 March 2007.**

##### **Lectures delivered**

- ‘Breast imaging—What’s new?’, CME on ‘Breast cancer awareness’, PGIMER, Chandigarh; 29 October 2006.

- 'Recent advances in breast imaging and interventions', 2nd SGPGI Breast Course, SGPGI, Lucknow; 25–27 November 2006.
- 'Advances in breast imaging', Annual Conference of IRIA, Delhi Chapter; 11 March 2007.

## **Radiotherapy**

### **Lecture delivered**

#### **Dr G.K. Rath**

- 'Radiation therapy practice in India: Current status and future plans', CME on 'Cancer challenges in India with particular reference to North East', Neigrihms; 13–14 July 2006.
- Keynote address at the National Review Meeting, NCCP, Government of India, GCRI, Ahmedabad; 24 July 2006.
- 'Quality assurance in radiotherapy', National Review Meeting, NCCP, Government of India, GCRI, Ahmedabad; 24 July 2006.
- Chaired session on 'Anatomy for the gynae surgeon', Pre-congress operative gynaecology and radiation therapy workshop, AGOICON 2006, AIIMS; 24 November 2006.
- Moderated the live demonstration of 'Interstitial implant and brachytherapy at pre-congress operative gynae-oncology and radiation therapy workshop, AGOICON 2006, AIIMS; 24 November 2006.
- 'Public policy on cervical cancer control in India', Pre-congress operative gynae-oncology and radiation therapy workshop, AGOICON 2006, AIIMS; 26 November 2006.
- 'Research needs for the North Eastern region', Aizwal; 12 February 2007.
- 'Current status of radiotherapy for lung cancer', Lung Cancer Update, LRS Institute of Tuberculosis and Respiratory Diseases, New Delhi; 16 December 2006.
- Chaired a session in National Hematology Update VI; 1 March 2007.
- Chaired Professor Solomon Singh Oration of AROI, AROICON, BHU, Varanasi; 1 December 2006.
- Chaired Professor P.K. Haldar Oration of AROI, AROICON, BHU, Varanasi; 1 December 2006.

#### **Dr P.K. Julka**

- CME on Breast Cancer, Delhi; 30 April 2006.
- Clinical Trial Meeting, Delhi; 4 May 2006.
- Conference on Head and Neck Cancer, Paris; 5–6 May 2006.
- Clinical Trial Meeting, Breast Cancer, Delhi; 20–21 May 2006.
- Chaired a session for GI Malignancy, Delhi; 9 July 2006.
- CME on Breast Cancer, Delhi; 13 July 2006.
- Symposium on Brain tumour, Kolkata; 16 July 2006.
- Symposium on Breast Cancer, Australia, 21–22 July 2006.

- Symposium on Prostate Cancer, Delhi; 10 August 2006.
- Management of GBM, Delhi; 12 August 2006.
- ‘Recent advances in breast cancer’, Delhi; 11 August 2006.
- Chairperson for CME on brain mets, Delhi; 5 September 2006.
- ‘Role of erythropoietin in oncology’; 9 September 2006.
- ESMO Conference, Istanbul, Turkey; 29 September–2 October 2006.
- 15th International Conference on ‘Update on breast cancer’, Sydney; 15 October 2006.
- ‘New drugs in solid tumours’; 15 October 2006.
- ‘Targeted therapy in gliomas’; 2 November 2006.
- Chairperson for AGOICON; 26 November 2006.
- ‘Concurrent chemotherapy/radiotherapy in carcinoma prostate’, ICRO CME; 30 November 2006.
- ‘Targeted therapy in breast cancer’; 30 November 2006.
- Panel discussion on carcinoma of breast; 3 December 2006.

#### **Dr B. K. Mohanti**

- ‘Palliative care in India: Past present and future’, AIIMS Golden Jubilee and IRCH Foundation Day; 18 November 2006.
- ‘Small cell lung cancer’, Meeting on ‘Evidence-based management of cancers in India: Tobacco control and lung cancer’, TMH, Mumbai; 28 February 2007.
- ‘Palliative care in a cancer centre’, 1st International Conference of National Oncology Centre, Royal Hospital, Muscat; 22–23 February 2007.
- ‘Diffusion weighted MRI to evaluate radiotherapy response in carcinoma cervix’, 1st International Conference of National Oncology Centre, Royal Hospital, Muscat; 22–23 February 2007.
- ‘Head and neck cancer care in India’, AROICON-2006, Varanasi; 30 November–3 December 2006.
- ‘Conventional simulator (2D) is obsolete’, AMPI debate, AMPICON-2006, Bhubaneswar; 9–12 November 2006.

#### **Dr D.N. Sharma**

- ‘Brachytherapy in breast cancer’, Annual Conference of Indian Brachytherapy Society, Madurai; January 2007.
- Floor coordinator for live demonstration of ‘Interstitial template brachytherapy in cervical cancer’ at the Annual Conference of Indian Brachytherapy Society, Madurai; January 2007.
- ‘Role of radiotherapy in organ preservation in soft tissue sarcomas’, National Cancer Conference, New Delhi; February 2007.
- ‘Role of radiotherapy in lung cancer’, NATCON 2007, Udaipur; February 2007.
- ‘Pulse dose rate brachytherapy in cervical cancer: Our institutional experience’, Annual

- conference of AROI, Varanasi; December 2006.
- ‘Concurrent chemo-radiotherapy in carcinoma of cervix: AIIMS experience’, Annual Conference of ESTRO, Leipzig, Germany; October 2006.
- Performed live demonstration of ‘Interstitial template: Brachytherapy in cervical cancer’ at AGOICON-2006, AIIMS; November 2006.

**Dr T. Ganesh (Medical Physicist)**

- ‘Plan evaluation in 3-D CRT’, Annual Conference of the Association of Radiation Oncologists of India (AROICON-2006), Varanasi; 1–3 December 2006.
- ‘Comprehensive quality assurance in radiation oncology’, WHO Workshop, RGCRI, New Delhi; July 2006.
- ‘Planning aspects of IMRT’, Annual Conference of the UP Chapter of the Association of Radiation of Radiation Oncologists of India (AROI-UPCON), Allahabad; November 2006.
- Panelist in the panel discussion on ‘Equipment for RT setup’, Annual Conference of the North Zone AROI, Jalandhar; 1–2 October 2006.
- ‘Medical physics as a career’, University of Calicut; 17–18 August 2006 to the students of MSc Medical Physics.

**Dr V. Subramani (Medical Physicist)**

- ‘Comparison of CT versus radiography-based planning in HDR intracavitary brachytherapy for cervical carcinoma’ at RGCON-2007. 6th International Conference on Cervical Cancer, New Delhi; 31 March 2007.

**Dr R. Prabhakar (Medical Physicist)**

- ‘Impact of different breathing conditions on the dose to surrounding normal structures in tangential field breast radiotherapy’, AMPICON-2006, Bhubaneswar; 7 November 2006.

**Surgical Oncology**

**Dr N.K. Shukla**

- ‘Surgical management of oral cancers’ and ‘Surgical management of esophageal cancers’, NEIGRIMS, Shilong; 13-14 July 2006.

**Dr S.V.S. Deo**

- ‘Recent advances in the surgical management of breast cancer’, Oncomeet conference organized by the Department of Surgery and Radiotherapy, King George’s Medical College, Visakhapatnam; 25 June 2006.
- ‘Bone marrow micrometastases in breast cancer—Indian experience’, IV WCI–TMH conference, TMH, Mumbai; 5–6 September 2006.

- 'What is new in breast cancer staging', Symposium on 'Breast cancer', PGI, Chandigarh; 29 October 2006.
- 'What is new in breast conservation therapy', Symposium on 'Breast cancer', PGI, Chandigarh; 29 October 2006.
- 'Breast oncoplasty—Indian perspective', IInd SGPGI Breast Course, SGPGI, Lucknow; 25–26 November 2006.
- 'Breast cancer database development', IInd SGPGI Breast Course, SGPGI, Lucknow; 25–26 November 2006.
- 'Current status of surgery in gastro esophageal cancers', AORI conference, Varanasi; 1–2 December 2006.
- 'Current concepts—GIST', CME on 'GI malignancies', Delhi chapter ASI, AIIMS, New Delhi; 25 February 2007.
- 'Rectal cancer—Indian scenario', Joint meeting of Royal Society of Medicine, Section of Surgery and AIIMS; 3 March 2007.

### **Papers presented in Conferences**

- **Deo** presented a video on 'Titanium plate reconstruction of mandibular defect in a oral cancer patient', NATCON-IASO meeting, Varanasi; 22–25 September 2006.
- **Sunil** (Senior Research Officer) presented a paper on 'Neo adjuvant chemotherapy followed by surgical cytoreduction in advanced ovarian cancer patients' during the Annual ISO conference, Patna; 20–22 October 2006.
- **Gaurav Jain** (Short-term trainee) presented a paper on 'Epidemiology and patterns of care of 485 oral cancer patients treated at a tertiary cancer centre', Annual Conference of the Association of Oral and Maxillofacial Surgeons of India, Kolkata; 18–20 December 2006.
- **Manish Verma**, Senior resident presented a paper on 'Clinical profile and patterns of care of 283 soft tissue sarcoma patients', NATCON-2006, Varanasi; 22–25 September 2006.

## **RESEARCH**

### **Funded Projects**

#### **Delhi Cancer Registry**

##### **Ongoing**

1. Pattern of care and survival study in cancer breast, head, neck and breast. Funded by National Cancer Registry Programme, ICMR, Bangalore for 3 years (2007-2009). Funds: Rs 3.6 per year.

#### **Laboratory Oncology**

##### **Completed**

1. Comparison of four techniques for detection of fetomaternal haemorrhage. Ritu Gupta. Funded by SGPGIMS, Lucknow. Funds: Rs 1.85 lakh.

### **Ongoing**

1. Immunophenotypic characterization of plasma cells by flow cytometry in health and disease with particular reference to plasma cell myeloma. Ritu Gupta. Funded by DST. Funds: Rs 8.7 lakh.
2. Assessment of multi-drug resistance pattern in acute myeloid leukemia and response to therapy. Ritu Gupta. Funded by AIIMS. Funds: Rs 1.9 lakh.

### **Medical Oncology**

#### **Completed**

1. A multicentre study of Cremophore-free, polymeric nanoparticle formulation of paclitaxel (DONDR/02) in locally advanced and metastatic breast cancer. Vinod Raina. Funded by Dabur Research Foundation. Funds: Rs 6 lakh.
2. Adjuvant Breast Cancer Trial (ABC) sponsored by University of London. Vinod Raina. Funded by University of London for 7 years. Funds: Rs 20 lakh.
3. A randomized phase III, study of the efficacy and safety of glufosfamide compared with best supportive care in metastatic pancreatic adenocarcinoma previously treated with gemcitabine. Atul Sharma. Funded by Threshold Pharmaceuticals (2006–2007). Funds: Rs 4 lakh.

#### **Ongoing**

1. ATLAS in Breast cancer sponsored by Oxford University. Vinod Raina. Funded by Oxford University for 7 years. Funds: Rs 25 lakh.
2. A treatment protocol for patients with gastrointestinal stromal tumor who are ineligible for participation in other SU011248 protocols and are refractory to or intolerant of imatinib mesylate. Vinod Raina. Funded by Pfizer for 1 year. Funds: Rs 7 lakh.
3. A su011248 expanded access protocol for systemic therapy of patients with metastatic renal cell carcinoma who are ineligible for participation in other SU011248 protocols but may derive benefit from the treatment with SU011248. Vinod Raina. Funded by Pfizer for 1 year. Funds: Rs 7 lakh.
4. An ascending dose, sequential group, placebo-controlled multicentre, phase I study of RWJ-800088 in subjects with cancer receiving platinum-based chemotherapy regimens protocol 800088-NAP-1002; Phase I. Vinod Raina. Funded by Johnson & Johnson for 1 year. Funds: Rs 7 lakh.
5. An open-label study to evaluate efficacy and safety of human recombinant granulocyte colony stimulating factor developed by Biocon Limited in patients with chemotherapy induced neutropenia. Vinod Raina. Funded by Clinigene, Biocon for 1 year. Funds: Rs 5 lakh.
6. A randomized, double-blind, multicentre, placebo-controlled study of adjuvant lapatinib in women with early-stage ErbB2 overexpressing breast cancer. Vinod Raina. Funded by GSK (as part of INDOX network). Funds: Rs 12 lakh.



7. An open-label randomized phase II study of two different dosing regimens of capecitabine in combination with intravenous docetaxel (Q3W) in patients with locally advanced and/or metastatic breast cancer and Roche Sample Repository Research Project NO16853RG for use in conjunction with protocol No16853D. Vinod Raina. Funded by Roche, Quintiles. Funds: Rs 12 lakh.
8. Indox cancer trials network centre. Vinod Raina. Funded by Oxford University, UK. Funds: Rs 20 lakh.
9. A multicentric, open, comparative, randomized study to optimize dose, duration, safety, efficacy and cost of two treatment regimens with liposomal amphotericin b (fungisome) in the treatment of systemic fungal infections in India. Atul Sharma. Funded by DBT, Government of India (2006–likely to continue). Funds: Rs 18 lakh.
10. A randomized double-blind study of efficacy of lactobacillus CD 2 lozenges in preventing radiation and chemotherapy induced oral mucositis in head and neck cancer protocol. Atul Sharma. Funded by CD Pharma India (2006–continuing). Funds: Rs 4,75,448.
11. Randomized study comparing upfront surgery followed by chemotherapy versus upfront chemotherapy followed by interval debulking surgery in previously untreated epithelial ovarian cancer stage III C and stage IV (pleural effusion only). Lalit Kumar. Funded by ICMR. Funds: Rs 7,31,300.
12. Grastim (G-CSF) mobilized peripheral blood progenitor cell (PBPC) transplantation (allogeneic vs. autologous): A multicentric study. Lalit Kumar. (Initiated in December 2005). Funds: Rs 7,94,576.
13. Elucidation of molecular mechanisms causing or favouring resistance to STI-571 in Philadelphia chromosome-positive Indian leukemia patients. Lalit Kumar. Funded by Terry Fox Foundation. Funds: Rs 6 lakh.

## Radiotherapy Completed

1. A randomized, double-blind placebo-controlled phase II study of oral recombinant human lectoferrin (rhLF) in combination with carboplatin and paclitaxel chemotherapy in patients with locally advanced and/or metastatic non small cell lung cancer (NSCLC). P.K. Julka, G.K. Rath, Arvind Kumar, Balram Bhargava, D.N. Sharma, O. Nair, Gursimran. Funded by Reliance. [??funds]
2. A phase 3 randomized, double-blind study of oral CCI-779 administered in combination with letrozole vs. letrozole alone as first-line hormonal therapy in postmenopausal women with locally advanced or metastatic breast cancer. P.K. Julka, G.K. Rath, R. Prasad, O. Nair. Funded by Quintiles. [??funds]
3. A multicentric, open-label, phase III clinical trial to evaluate the safety and efficacy of interleukin-2 in patients with metastatic renal cell carcinoma followed up to 6 months for survival. P.K. Julka, G.K. Rath, O. Nair, Gursimran. Funded by Siro. Funds: US \$ 12,500.

4. Modification of number of fractions per week in head and neck cancer—aspects of radiobiology applicable in clinical radiotherapy. B.K. Mohanti, Suman Bhasker. Funded by IAEA. Funds: US \$ 12,500.

### **Ongoing**

1. A multicentric phase III randomized trial comparing doxorubicin and cyclophosphamide followed by docetaxel (AC–T) with doxorubicin and cyclophosphamide followed by docetaxel and trastuzumab (Herceptin) (AC–TH) and with docetaxel, carboplatin and trastuzumab (TCH) in the adjuvant treatment of node-positive and high-risk node-negative patients with operable breast cancer containing the HER2 alteration—BCIRG Trial. P.K. Julka, G.K. Rath, O. Nair, Gursimran. Funded by Aventis. Funds: Rs 1,62,313.
2. A randomized, double-blind, parallel-group, multicentre, phase III study comparing the efficacy and tolerability of fulvestrant (FASLODEX™ 500 mg with fulvestrant (FASLODEX™ 250 mg in postmenopausal women with oestrogen receptor positive advanced breast cancer progressing or relapsing after previous endocrine therapy. P.K. Julka, G.K. Rath, R. Parshad, O. Nair. Funded by Quintiles. Funds: Rs 2,45,700.
3. An open-label randomized multicentre phase III study of transtuzumab in combination with a fluopyrimidine and cisplatin versus chemotherapy alone as first line therapy in patients with HER-2 positive advanced gastric cancer. P.K. Julka, G.K. Rath, O. Nair, Gursimran, Renita, T. Puri. Funded by Roche. Rs 1.5 lakh.
4. A randomized controlled comparative trial to evaluate the efficacy and safety of 2-Deoxy-D-Glucose (2DG) as a radiomodifier in the treatment of glioblastoma multiforme. G.K. Rath, P.K. Julka, O. Nair, Gursimran, Renita, T. Puri, K.P. Haresh. Funded by Reddy's. Rs 2 lakh.
5. Patterns of care and survival studies in cancers of head and neck, breast and cervix at Dr BRA IRCH, AIIMS). B.K. Mohanti. Funded by a grant from National Cancer Registry Programme, ICMR. Funds: Rs 3.6 per year.
6. A study to assess economic costs of cancer care in Indian patients receiving radiotherapy with or without chemotherapy/surgery at a Regional Cancer Centre at Dr. BRA IRCH, AIIMS. Sanghamitra Das, B.K. Mohanti. Funded by a grant from Indian Statistical Institute, Delhi. Funds: Rs 2.2 lakh per year.
7. A prospective randomized trial of amifostine given subcutaneously during radiotherapy in head and neck cancer patients. D.N. Sharma. Funded by AIIMS. Funds: Rs 97,850.
8. A study of acute radiation toxicity in patients of curable head and neck cancers undergoing radical vs. postoperative radiotherapy. S. Bhasker, B.K. Mohanti, S. Bahadur. Funded by AIIMS.
9. A phase two study of sequential neoadjuvant gemcitabine plus doxorubicin and gemcitabine plus cisplatin in large T2 (>3 cm) and locally advanced (T3, T4, or N2) operable breast cancer. P.K. Julka, G.K. Rath, O. Nair, R. Parshad. Funded by Eli-Lilly. Funds: Rs 4,72,000.

10. A randomized, controlled, open-label study to evaluate the efficacy and safety of Herceptin® (trastuzumab) in combination with the oral aromatase inhibitor Arimidex® (anastrozole) compared with Arimidex® alone as first and second line treatment administered to postmenopausal, hormone receptor positive (ER+ve and/or PR+ve) patients with HER2 over expressing metastatic breast cancer. P.K. Julka, G.K. Rath, O. Nair, R. Parshad, R. Bhamrah. Funded by Quintiles. [??funds]
11. A centrally randomized, open multicentre study evaluating the efficacy and safety of combination therapy with Intermix alpha™ and vinblastine versus vinblastine monotherapy in patients with advanced renal cell carcinoma. P.K. Julka, G.K. Rath, A. Seth, R. Bhamrah. Funded by Sterling. Funds: Rs 6,18,000.

## Surgical Oncology

### Completed

1. Bone marrow micrometastases detection in breast cancer patients using monoclonal antibodies against pan cytokeratin: Incidence and clinical correlation. S.V.S. Deo. Funded by Terry Fox, Canada for 2 years. Funds: Rs 1 lakh.

## Departmental Projects

### Anesthesiology

#### Completed

1. Incidence and management of phantom limb pain according to WHO analgesic ladder in amputees of malignant origin. Seema Mishra, Sushma Bhatnagar, Deepak Gupta.
2. An audit of routine clinical practice of blind insertion of peripherally inserted central catheters in surgical oncology patients. Manisha Singh, Seema Mishra, Sushma Bhatnagar.
3. Management of neuropathic cancer pain following WHO guidelines. Seema Mishra, Sushma Bhatnagar.
4. Pediatric cancer pain management following WHO analgesic ladder: A prospective study. Seema Mishra, Sushma Bhatnagar, Manisha Singh.
5. Comparison of different anaesthetic techniques for intracavitary radiotherapy for carcinoma cervix. Roopesh Jain, Seema Mishra, Sushma Bhatnagar.

#### Ongoing

1. Evaluating the correlation of serum levels of morphine and its metabolites on pain in cancer patients. Sushma Bhatnagar, Seema Mishra, V. Pandey, Madhurima Srikanti.
2. A comparative efficacy of amitriptyline, gabapentine and pregabalin in neuropathic cancer pain: A prospective randomized double-blind placebo-controlled trial. Seema Mishra, Sushma Bhatnagar, Roopesh Jain.
3. Effect of pre-emptive oral gabapentin for post-operative pain at rest and on movement after modified radical mastectomies. Himanshu, Sushma Bhatnagar, Seema Mishra.

4. Comparative study of prophylactic administration of tramadol, pethidine, ketamine and placebo on postoperative shivering. Manisha Singh, Seema Mishra, Sushma Bhatnagar.
5. Preferred anesthetic technique for intracavitary radiotherapy for carcinoma cervix: A randomized trial. Seema Mishra, Sushma Bhatnagar, Roopesh Jain.
6. Effect of gender on pain perception and analgesic requirement in patients undergoing exploratory laparotomy and surgery for carcinoma esophagus: A randomized control trial. Deepak Gupta, Seema Mishra, Sushma Bhatnagar.
7. Effect of pre-emptive duloxetine and methylcobalamine combination on postoperative pain relief and morphine consumption in oral surgeries: A randomized, double-blind, placebo-controlled study. Roopesh Jain, Seema Mishra, Sushma Bhatnagar.

## Medical Oncology

### **Ongoing**

1. Docetaxel and non-docetaxel-based neo-adjuvant chemotherapy in locally advanced breast cancer. Vinod Raina. [??funding agency, funds]
2. Retrospective analysis of multiple myeloma for last 7 years. Vinod Raina. [??funding agency, funds]
3. Thalidomide+Melphalan and Dexamethasone in myeloma. Vinod Raina. [??funding agency, funds]
4. Randomized comparison of ABVD with EVAP in newly diagnosed cases of Hodgkin's lymphoma- protocol p-0402. Atul Sharma.
5. Role of arsenic trioxide with ascorbic acid in treatment of multiple myeloma: A pilot study. Atul Sharma, Funded by DST only for drug support.
6. Comparison of efficacy of oral antibiotics (amoxicillin clavulanate+ofloxacin) with that of intravenous antibiotics (ceftriaxone+amikacin) in low risk febrile neutropenia in children. Sameer Bakhshi.

## Medical Physics

### **Departmental Projects**

1. Development of protocol for quality control of ultrasonography and US Doppler
2. Development of document scanner-based dosimetry methods for gafchromic films
3. Doppler ultrasonography-based tumour vascularity index and its use
4. Contrast enhancement techniques for mammograms
5. Reducing radiation dose in digital radiography
6. Dose reduction approaches in head CT examination

## Radio-diagnosis

### **Completed**

1. Preoperative evaluation of carcinoma of ovary with multidetector CT and its correlation with surgical findings (MD Thesis: Department of Radio-diagnosis)

### **Ongoing**

1. Role of directional vacuum assisted large core breast biopsy in patients with previously equivocal biopsies for breast masses suspicious for malignancy (MD thesis: Radio-diagnosis)
2. MRI and PET CT evaluation of soft tissue sarcomas (MD thesis: Radio-diagnosis)

### **Radiotherapy**

#### **Completed**

1. Computerized patient database management system. G.K. Rath, R. Prabhakar, R.C. Joshi, T. Ganesh.
2. Software tool for comparison of portal images with digitally reconstructed radiograph. R. Prabhakar, T. Ganesh, R.C. Joshi, A.K. Bansal, V. Subramani, G.K. Rath.
3. Effectiveness of virtual simulation in radiotherapy planning of carcinoma cervix. S. Bhasker, G.K. Rath, P.K. Julka, T. Ganesh, S. Thulkar, S. Pathy.

### **Ongoing**

1. BRCA-I gene mutations in Indian breast cancer patients and its significance. P.K. Julka, G.K. Rath, O. Nair, Gursimran Kaur.
2. Prognostic value of epidermal growth factor receptors in carcinoma of breast. P.K. Julka, G.K. Rath, O. Nair, R. Bhamrah.
3. Development of DICOM-RT software for interfacing the treatment planning system with treatment machines. R.C. Joshi, T. Ganesh, R. Prabhakar, A.K. Bansal, S.K. Sridhar, G.K. Rath.
4. Role of neoadjuvant chemotherapy followed by concurrent CT+RT in advanced carcinoma hypopharynx. P.K. Julka, G.K. Rath, S. Bahadur, D.N. Sharma, Jaspreet Kaur.
5. Concurrent chemo-radiotherapy with or without subcutaneous administration of amifostine in cervical cancer: A randomized study.

### **Surgical Oncology**

#### **Departmental Ongoing**

1. Functional assessment of oral cancer patients after radical surgery and radiotherapy. Dr. N.K. Shukla.
2. Sentinal lymph node biopsy in locally advanced breast cancer patients. Dr. S.V.S. Deo.
3. A prospective study comparing histopathological versus biomarker assessment of surgical margins in operable oral cancer patients. Dr. N.K. Shukla.
4. Oncoplastic breast surgery: Prospective evaluation of patient profile and outcome. Dr. S.V.S. Deo.
5. Assessment of skin involvement in breast cancer patients with T4b lesions. Dr. S.V.S. Deo.

## Collaborative Projects

### Completed/Ongoing

1. Role of minimally invasive guided therapy in treatment of focal liver neoplasms (with Anesthesiology and Radio-diagnosis)
2. Role of minimally invasive guided therapy in treatment of lung metastasis (with Anesthesiology and General Surgery)
3. Role of minimally invasive guided therapy in treatment of focal bone neoplasms (with Anesthesiology and Orthopaedics)
4. Characterization of testis-specific sperm associated antigen 9 (SPAG9) gene expression and humoral immune response in various human cancers (with Lab Oncology and National Institute of Immunology)
5. Molecular characterization of Indian patients with Glanzmann thrombosthenia (with Lab Oncology and Haematology)
6. Expansion of adult human bone marrow and cord blood stem cells for reconstituting marrow and for programming into hepatocytes (with ICMR)
7. Use of autologous bone marrow stem cells for myocardium regeneration (with DBT, Government of India)
8. Serial skin biopsy in chronic myeloid leukemia (CML) patients on Imatinib mesylate-protocol p-0404. Atul Sharma, Funded by Nil (with Medical Oncology and Pathology)
9. Study of her2-neu and p-53 expression in osteosarcoma by immunohistochemical methods (with Medical Oncology and Pathology)
10. Whole body MRI for detection of skeletal metastases in pediatric patients on small cell neoplasms: Comparison with skeletal scintigraphy and FDG PET CT (with Medical Oncology, Radiology and Nuclear Medicine)
11. Role of imaging in diagnosis of orbital tumours (with Medical Oncology and Radiology and Ophthalmology)
12. Treatment and characterization of acute lymphoblastic leukemia in children, adolescents and young adults. Sameer Bakhshi. Funded by International Network of Cancer Treatment and Research and Sir Ratan Tata Trust, for 3 years. Funds: Rs 12 lakh/year (ongoing)
13. Evaluation of vascular permeability by dynamic contrast enhanced—MRI and glucose metabolism by PET-CT scan as surrogate markers of angiogenesis in Osteosarcoma (with Medical Oncology, Radiology, Nuclear Medicine and Orthopaedics)
14. Role of PET-CT in osteosarcoma for initial staging and chemotherapy response evaluation; Comparison with conventional radiological modalities (MRI scan, CT scan, and Bone scan) and histopathological tumour necrosis (with Medical Oncology, Radiology, Nuclear Medicine and Orthopaedics)
15. Expansion of adult human bone marrow and cord blood stem cells for reconstituting marrow and for programming into hepatocytes (with ICMR)
16. Use of autologous bone marrow stem cells for myocardium regeneration. Funded by DBT, Government of India.

17. Characterization of chromosomal anomalies in multiple myeloma patients using cytogenetics and fluorescence *in situ* hybridization technique (FISH) (with Medical Oncology and Reproductive Biology)
18. Randomized trial to assess role of chemotherapy vs. best supportive care in unresectable gallbladder cancer (with Medical Oncology, Surgical Oncology, Radiation Oncology, and Gastroenterology)
19. Role of neoadjuvant chemo-radiotherapy in gallbladder cancer (with Medical Oncology, GI Surgery and Radiation Oncology)
20. Role of neoadjuvant chemotherapy in gastric cancer (with Medical Oncology and GI Surgery)
21. Avoiding unnecessary radiation doses to the patient during interventional radiological procedures (with Medical Physics Unit, Radio-diagnosis, Cardio-radiology)
22. Dose reduction in CT while, maintaining diagnostic confidence (with Medical Physics Unit and Radiology)
23. Quantitative imaging study of breast cancer and its correlation with oxidative stress (with Medical Physics Unit, Radio-diagnosis and Pharmacology)
24. Estimation of patients' satisfaction availing imaging services (with Medical Physics Unit, Radio-diagnosis and BRA IRCH)
25. Comparison of image quality of bedside chest radiography with fixed unit radiography (with Medical Physics, Radio-diagnosis and BRA IRCH)
26. Verification of CT displayed dosimetric parameter (CTDI) for various scanning protocol (with Medical Physics, Radio-diagnosis, BRA IRCH)
27. Quality control of PET/CT (with Medical Physics and Nuclear Medicine)
28. Collaborative research completed: Evaluation of efficacy of radio-frequency ablation of primary tumour in early breast cancer (with Radio-diagnosis and Surgery)
29. MR spectroscopy and endorectal MR imaging in the diagnosis of early prostate cancers and its correlation with histopathological results of TRUS guide prostate biopsies and surgical specimens (with Radio-diagnosis and NMR)
30. Evaluation of image based treatment planning in radiotherapy (with Radio-diagnosis and Radiotherapy)
31. Role of neoadjuvant chemotherapy in management of patients with advanced ovarian cancer (with Radio-diagnosis and Medical Oncology)
32. Study of physical parameters and quality assurance in the gamma knife-based stereotactic radiosurgery with non-coplanar beam in the phantom (with Radio-diagnosis and Medical Physics)
33. Randomized comparison of ABVD with EVAP in newly diagnosed cases of Hodgkin's lymphoma (with Radio-diagnosis and Medical Oncology)
34. Role of three dimensional computed tomographic scanning in assessment of mandibular invasion and its utility in planning mandibular resection and reconstruction in oral cancer patients (with Radio-diagnosis and Surgical Oncology)

35. Radiofrequency ablation in metastatic liver tumours (with Radio-diagnosis and Radiation Oncology)
36. HDR intraluminal radiotherapy in advanced carcinoma of oesophagus (with Radiation Oncology and Surgical Oncology)
37. Radiofrequency ablation in early breast cancer (with General Surgery, Radiation Oncology and Radio-diagnosis)
38. Evaluation of neo-adjuvant chemotherapy in locally advanced breast cancer (with Surgery and Radiation Oncology)
39. The role of percutaneous vertebroplasty in the management of painful vertebral lesions (with Radio-diagnosis and Radiation Oncology)
40. Biological dosimetry in therapeutic irradiation by cytogenetic analysis (with Nuclear Medicine and Radiation Oncology)
41. Pre-operative short course RT (25 Gy/5 Fr) followed by surgery for rectal cancer (with Surgical Oncology and Radiation Oncology)
42. Radiation-induced chromosomal aberration analysis and their use as biodosimetry (with Nuclear Medicine and Radiation Oncology) Funded by AERB
43. Concomitant chemoradiation in advanced/unresectable head and neck cancer (with Medical Oncology, Radiation Oncology and ENT)
44. Adjuvant tamoxifen long against short (ATLAS): Multicentre international trial, Oxford, UK (with Surgical Oncology, Medical Oncology and Radiation Oncology) Funded by ATLAS
45. Protocol 1839IL/0706: A phase II randomized, double-blind, placebo-controlled, multicentre comparative study of ZD1839 250 mg or 500 mg (Iressa™) given either continuously or concomitantly with cisplatin plus radiotherapy for the treatment of patients with previously untreated unresected late stage III/IV non-metastatic head and neck squamous cell carcinoma (with Radiation Oncology and ENT) Funded by Quintiles.
46. LF-0202-an open-label phase 2 study of oral recombinant human lactoferrin (rhLF) monotherapy in patients with advanced or metastatic renal cell carcinoma (RCC) (with Radiation Oncology and Urology) Funded by Reliance
47. Study to evaluate the feasibility of neoadjuvant chemotherapy followed by postoperative chemoradiation in the management of locally advanced gastric and gastroesophageal junction tumors and to assess the expression of multidrug resistance gene (with Radiation Oncology, Surgical Oncology, Medical oncology and Pathology)
48. Randomized study of preoperative short course radiotherapy (25 Gy) vs. preoperative concurrent radiotherapy (45 Gy) and chemotherapy followed by surgery in rectal cancer (with Radiation Oncology, Medical oncology, Surgical Oncology, Pathology, Gastroenterology, GI Surgery)
49. A multinational, multicentre open-label active controlled randomized parallel group dose finding study to evaluate the efficacy and safety of two doses of AP 12009 in adult patients with recurrent high-grade glioma, administered intratumorally as continuous high-flow



- microfusion over a 7-day period every other week (with Neurosurgery and Radiation Oncology) Funded by Antisense Pharma
50. Randomized study of concomitant chemoradiation versus radiotherapy alone for advanced and or unresectable squamous cell carcinoma of oropharynx and nasopharynx (with Medical Oncology, Radiation Oncology and ENT)
  51. Adjuvant tamoxifen long against short (ATLAS): Multicentre International trial, Oxford, UK (with surgical and Medical oncology)
  52. Cell cycle regulatory proteins WAF-e and p16 in human esophageal cancer (with Surgical Oncology, Biochemistry and Pathology)
  53. Multicentric national programme on evaluation and validation of molecular markers in oral cancer: A cross-sectional study (with Surgical Oncology and Biochemistry)
  54. To evaluated microsatellite instabilities in different chromosomes in Indian female breast cancer patients (with Surgical Oncology and Biosciences, Jamila Milia Islamia, New Delhi)
  55. Role of CT scan and MRI in the evaluation of locally advanced oral cancer
  56. Molecular evaluation of p21 WAF-1 gene in Indian female breast cancer patients (with Surgical Oncology and Bio Sciences, Jamia Milia Islamia)
  57. Molecular basis of tobacco-associated oral carcinogenesis (with Biochemistry and Surgical Oncology)
  58. Methylation and expression of FHIT gene in Indian female breast cancer patients (with Surgical Oncology and Bio Sciences, Jamia Milia Islamia)

## PUBLICATIONS

### Journal

1. Agarwala S, Bakhshi S, Sriniwas M, Bajpai M, Bhatnagar V, Gupta AK, *et al.* AIIMS-WT-99 trial for Wilm's tumor: Indian perspective. *Pediatr Blood Cancer* 2006;**47**:359.
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### Abstract

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### PATIENT CARE

<b>Total bed strength</b>	<b>127</b>
(January–March 2007)	
General	112
Private	15
<b>General beds</b>	
Medical oncology	23
Radiation oncology	32
Surgical oncology	20
Palliative care unit	6
Day care	22
Minor OT	6
ICU	3

<b>Private beds</b>		
Medical oncology		5
Radiation oncology		5
Surgical oncology		5
<b>Total bed strength</b>		<b>106</b>
(April–December 2006)		
General		106
Private		Nil
<b>General beds</b>		
Medical oncology		23
Radiation oncology		32
Surgical oncology		20
Day care		22
Minor OT		6
ICU		3
<b>Total OPD attendance</b>		<b>74,273</b>
New cases		14,209
Old cases		60,064

#### Description of various OPD/clinics at IRCH year 2006–2007

No.	Name of the OPD/clinic	New case	Old cases	Total
1.	Bone and soft (tissue)	237	807	1,044
2.	Breast cancer clinic	507	3902	4,409
3.	Chemotherapy evaluation	3,082	23,011	26,093
4.	Gastro-intestinal clinic	563	1,130	1,693
5.	Gynecology 'A'	269	799	1,068
6.	Gynecology 'B'	566	1,586	2,152
7.	Head and neck oncology-A	182	960	1,142
8.	Head and neck oncology-B	1,474	3,807	5,281
9.	Lymphoma leukaemia	1,126	12,336	13,462
10.	Ophthalmic tumour clinic	91	164	255
11.	Pain clinic	1,534	2,711	4,245
12.	Paediatric surgery clinic	136	1,624	1,760
13.	Radiotherapy evaluation	3,813	4,081	7,894
14.	Urology malignant clinic	318	2,057	2,375
15.	Surgical oncology OPD	311	1,089	1,400
16.	<b>Total</b>	<b>14,209</b>	<b>60,064</b>	<b>74,273</b>

Total admissions	20,826
Regular	2,501
Short (day care)	18,325
Total discharges	20,758
Regular	2,433
Short (day care)	18,325
Average length of stay	2.0
Total no. of patients cared in hospital	25,834
	(7,499+18,335)
Bed occupancy rate	
(January–March 2007)	84.2%
(April–December 2006)	85.5%
Total deaths at IRCH	156
Gross death rate	0.7%

### **Anesthesiology**

#### **Facilities available in the department:**

1. ICU facilities for postoperative patients.
2. Pain and palliative care clinic is run four times a week in addition to the anesthesiology related work.
3. Home support to patients with advanced malignancies by NGOs and keeping monthly meeting with them to know follow up reports
4. Providing critical care to patients of radiotherapy, medical oncology, and surgical oncology.
5. Facility for pediatric radiotherapy.
6. Anesthesia for minor pediatric oncology procedures like bone marrow biopsy, central line insertion, bone marrow harvesting and others
7. Facility for pediatric radiological procedures under anaesthesia, radiofrequency ablation for liver, lung, and breast carcinoma.

#### **Newer Facility**

1. Pain and Palliative Care ward started in Jan 2007
2. Increase in clinic days from two in number to four in number (Monday and Thursday from 9 a.m.–1 p.m.; Wednesday and Friday from 2 p.m.–5 p.m.)
3. Interventional pain management techniques: SCS (Spinal Cord Stimulator) in phantom limb patient—1st time in India
4. USG guided nerve blocks

### **Delhi Cancer Registry**

**Cancer registry** is the institution which is responsible for the collection, storage, analysis and interpretation of data on persons with cancer.

***Cancer registration*** is a process of continuing, systematic collection of data on the occurrence, characteristics and outcome of reportable neoplasms with the purpose of helping to assess and control the impact of malignant disease in the community. Broadly there are two types of Population-Based Cancer Registries (PBCR) and Hospital-Based Cancer Registries (HBCR).

The HBCR records all cases of cancer treated in a given hospital irrespective of the population from which the cases has come. The main interest is clinical care in hospital setting.

The primary concern of PBCR is cancer in the community. The PBCR collects information on all new cancer in a defined population and provide information on cancer incidence, mortality and trends over time in the defined population/geographic area covered by the registry.

Collect Delhi Cancer Registry is a PBCR established in January 1986 with the aim of obtaining reliable morbidity and mortality data on cancer among the Delhi urban residents.

The Delhi PBCR covers an urban area of 891.09 square kilometres of Delhi Municipal Corporation, New Delhi Municipal Committee and Delhi Cantonment and 29 census towns with an estimated population of 1,30,88,133 (males: 7186306, females: 5901827) as per 2001 census.

The sources of cancer data are more than 160 major Government hospital centres, 250 private hospitals and nursing homes and Department of Vital Statistics of New Delhi Municipal Committee and Delhi Municipal Corporation.

The Medical Social Service Officers (MSSO) of our registry visits all these hospitals and nursing homes and interviews the patients who are either undergoing cancer treatment or being investigated for cancer at radiotherapy department. They also examine the case records maintained by various departments of these hospitals viz. Pathology, Hematology, Radiology, etc. All the information collected is cross-checked for completeness of data.

MSSOs also personally visit the offices of New Delhi Municipal Committee and Municipal Corporation of Delhi and collect information about deaths where the death certificates states the cause of death as cancer or tumours. These death records are then matched with the morbidity records. Cases not matching with the records are registered as Death certificates only cases (DCOs) in that corresponding year.

The scientists of the registry regularly taught the MSSOs about the interviewing techniques and abstraction of data on cancer patients from hospital in patients and out patient records, radiotherapy and pathology files, medical record and death records. Data abstractors were also trained in topographical and morphological terminology and impart training on coding of cancer cases using the International Classification of Diseases for Oncology.

## Laboratory Oncology

Haemogram (Hb, TLC, Platelets)	36,933
Peripheral blood smear	5,160
Bone marrow aspiration and touch preparation	2,580
Cytochemistry	972
Serum electrophoresis	1,358
Urine electrophoresis	28
Immunofixation	35
APAAP	47
Cytocentrifuge	4
FNAC/lymph node	27
Cytospin	2
ESR	4

## Medical Oncology

Medical oncology clinical services	
New cases (CTE+ LL)	4,208
Old cases (CTE+LL)	35,347
<b>Total</b>	<b>39,555</b>

Admission (ward and day care)	18,197 (452+17,745)
Chemotherapy cases (day care and OPD)	
Total chemotherapy in day care (Including blood transfusion and others)	17,745

Cases of OPD chemotherapy	8,198
OPD procedures	3,195

## Diagnostic and Therapeutic Procedures (Total: 3195)

Bone marrow biopsy	1,116
Bone marrow aspiration	712
Peripherally inserted central line catheter	26
Pleural tapping	138
Abdominal tapping (including ascitic tapping)	261
Intra thecal methoxerate	840
Trucut biopsy	1
Skin biopsy	4
Cerebral spinal fluid for cytology	53
Catherization	37
Ryles tube insertion/removal	6
Incisional drainage	1

Dressings	314
Suture removal	54

### **Laboratory services**

Haemogram	13,771
Single donor platelets	1,228
PBSC harvesting	94
Cytogenetics reports	428
Cryopreservation of PBSC	47
MNC of stem cells	97
Infusion of stem cells	86
Viability of stem cells	86
CD34 count of stem cells	89
Polymerase chain reaction	89
Storage of PBSC at 4 °C	35
Allogenic bone marrow/stem cell transplantation granulocyte harvest	7
Storage of peripheral blood stem cells (PBSC) at 4 °C	35
Patient care: Stem cell transplants	70

### **Medical Physics**

Medical Physics Unit looks after patient care activities in IRCH and AIIMS in terms of medical imaging related activities. MPU carries out the blood-bag irradiation before blood transfusion to patients undergoing bone marrow transplantation. This unit also performs the irradiator's periodic calibration and maintenance. MPU carries out quality assurance tests of imaging machines, which include X-ray units, mammography, ultrasonography, spiral CT and film processors. Other important contributions are radiation protection survey for benefit of staff and general public and patient's radiation dose measurement in medical imaging for optimization.

Number of blood bags irradiated	1,625
Quality assurance (QA) tests done on X-ray machines	1,591
QA test done on film processor at room no. 10 (X-ray)	302
QA test done on film processor at room no. 46 (US, Mammo)	235
Radiation output measurements in X-ray units	190
Phantom experiments for clinical CT protocol optimization	35
Patient dose measurement Gafchromic films	13
Patient satisfaction survey in imaging	101
Experiments for dose reduction in imaging	20
Radiation protection survey measurements	8
Experiments for quality in mammogram	10
Experiments for exposure factor optimization in chest X-ray	7
QA tests done in Doppler ultrasound	3
Advice in inadvertent exposure in pregnancy	4

## **Radio Diagnosis**

X-ray	9,060
Ultrasound	3,100
CT scan	4,090
Mammogram	400
Intervention	607

## **Radiotherapy**

Total cases on radiotherapy	64,199
Total fields on radiotherapy	1,51,248
Cases on brachytherapy	697
Treatment planning and simulations	4,300
2D and 3D distribution	676
Compensators	456
Shielding blocks, immobilization devices, moulds	1,017
Radiation review clinic	6,192
Number of cases on chemotherapy	7,211
Number of injections	32,588
Intra-operative high-dose rate brachytherapy	1
Radiofrequency ablation (RFA)	21

## **Surgical Oncology**

### ***Facilities available***

#### **Minor operation theatre**

Diagnostic and minor therapeutic procedures including lymph node biopsy, punch/trucut biopsy, excision of skin/oral tumours, soft tissue tumours, feeding jejunostomy, colostomy, insertion of Hickman's catheter/chemo ports for long-term chemotherapy are available in the Minor OT.

#### **Endoscopy services (diagnostic and therapeutic)**

- *Diagnostic endoscopy:* Fibreoptic upper GI endoscopy, side-viewing duodenoscopy, colonoscopy, sigmoidoscopy, bronchoscopy, cystoscopy, nasopharyngolaryngoscopy and laparoscopy.
- *Therapeutic endoscopy:* Stricture dilatation, intraluminal radiotherapy, stenting and percutaneous endoscopic gastrostomy.

#### **Major cancer operation theatre**

- Facilities available for all major cancer surgeries including radical resection and reconstruction of tumours involving head and neck, GI tract, breast, bone and soft tissue, gynaecological malignancies and thoracic tumours. Advanced reconstructive surgical procedures including microvascular-free tissue transfer facilities are also available.
- Advanced state of the art technologies like LASERS, CUSA, harmonic scalpel and intraoperative radiotherapy are also available.



<b>Total number of minor operations and endoscopic procedures performed</b>	<b>3,889</b>
Endoscopy procedures	1,552
Other procedures	1,871
Total number of major cancer operations performed	466

### **Community Service**

**Professor G.K. Rath** published an article on cancer in the *Hindustan Times*; published an article on cancer in the *Times of India*.

**Professor P.K. Julka** seminar on Cancer Awareness, FICCI Auditorium; 15–16 July 2006; Cancer awareness programme; 25 November 2006; Gynae malignancies on DD News; 26 November 2006.

**Professor N. K. Shukla** participated as a panelist in the public lecture on ‘Cancer is curable’ on 12 May 2006, as a part of Golden Jubilee celebrations of AIIMS; was involved in care and advice to the ostomates (patients of colostomy, ileostomy and urostomy).

**Dr S.V.S. Deo** contributed an article in the *Hindustan Times* on Cancer awareness programme; contributed for formulating WHO treatment guidelines for breast cancer patients in developing countries.

**Dr D.N. Sharma** participated in a live show on Delhi Doordarshan (DD News) on breast cancer; December 2006.

### **AWARDS AND HONOURS**

**Dr G.K. Rath** took over as the chief of BRA IRCH; president of the Association of Radiation Oncologists of India (AROI); chairman of the subgroup of the Ministry of Information Technology, Government of India to review the progress of the Jai Vigyan Project, Science and Technology on ‘Development and deployment of 6 MV medical linear accelerator’; ICMR Monitoring Committee of the project on screening for cancers in Himachal Pradesh, Shimla; Committee constituted by Atomic Energy Regulatory Board, Government of India on neutron component of medical accelerators; ICMR task force on cancer management guidelines; member, technical assessment committee for purchase of advanced radiotherapy equipment for the Uttaranchal Forest Hospital Trust, Haldwani, Nainital, Uttaranchal; The project review group of the project of the Ministry of Information Technology, Government of India, ‘Design and development of electronic portal imaging device for radiation therapy’ being carried out by CSIO and TSG integration; member, Advisory Committee to plan for the Indo-German Workshop; member, Governing Bodies of two Regional Cancer Centres (Bikaner, Allahabad); Governing Body of Delhi State Cancer Institute, New Delhi; Standing Committee on Radiotherapy Development Programme, Ministry of Health and Family Welfare, Government of India; Advisory Committee BRA IRCH; Member of the Core Committee

projects under the North East Initiative of ICMR, Aizwal; Project Review Committee on Working Group of Medical Electronics, Ministry of Communication and Information Technology, Government of India; Project Review Committee, Oncology-ICMR, New Delhi; Safety Review Committee for Application of Radiation (SARCAR) of the Atomic Energy Regulatory Board, Government of India; Scientific Advisory Committee of three Institutes (a) Gujarat Cancer and Research Institute Ahmedabad, (b) Institute of Pathology and (c) Institute of Cytology and Preventive Oncology, ICMR; Expert Group on Indo German Project on Oncology of ICMR; Technical expert for the core technical committee of PGIMER, Chandigarh for the purchase of High dose rate brachytherapy unit; Executive Committee, Indian Society of Oncology; Selection committee of medical physicists, senior residents and junior residents, of Department of radiotherapy, Delhi state cancer Institute; The Scientific Advisory Group for the division of Non-communicable diseases, ICMR, New Delhi; advisory editor, *Journal Academy of Hospital Administration*; member of Editorial Board, *Indian Journal of Chest Disease and Allied Sciences*; *Indian Journal of Cancer*; consulting editor, *Journal of Cancer Research and Therapeutics*.

**Professor P.K. Julka** is member/awardee, Chairperson of Store Purchase Committee, IRCH, 3 April 2006; member, Purchase Committee, SGPGI, 28–29 April 2006; member, Purchase Committee of Mould Room and patient support/alignment accessories at PGIMER, Chandigarh, 20 May 2006; member, Standing Selection Committee meeting for Additional Professor, PGIMER Chandigarh, 24 May 2006; member, Doctoral Committee for PhD, Delhi, 31 July 2006; member, DPC of Technical Staff, AIIMS; 1 August 2006; member, ICMR Task Force Meeting, AIIMS, 4 August 2006; member, National Medical Library for selection of books, Delhi, 11 August 2006; expert, Central Council for Research in Homeopathy, Delhi, 30 August 2006; external examiner for MD Radiotherapy, Bir Hospital, Kathmandu, 14–15 September 2006; awarded G.D. Pandey Oration, Haldwani on Breast Cancer, 12 October 2006; Appraiser by National Board for DNB for Batra Hospital, 21 December 2006; appointed Appraiser by National Board for DNB for Dharmashilla Cancer Hospital, New Delhi; vice-president, Indian College of Radiation Oncology; awarded Leading Scientist of the World in the field of clinical oncology by International Biographical Society, Cambridge, England; DNB specialty Board for Curriculum for Radiotherapy and Oncology; Project Review Committee, ICMR, New Delhi; member, expert committee, Commonwealth Fellowship Selection; Advisory Committee on Breast Cancer Investigator Meeting; member, expert committee of Linear Accelerator, Ministry of Health and Family Welfare; coordinator, BCIRG trial on breast cancer video conference; Inspector, MCI for MD and DNB (RT); member, Advisory Board Meeting on Breast Cancer; member, expert committee senior research associate selection of CSIR; member, executive committee, New Delhi branch, IMA; expert for Procurement of TLD for Department of Radiotherapy, PGIMER; expert for Commonwealth Scholarship; expert, University Grants Commission for Travel Grants; member of editorial board, *Journal of Cancer Research and Therapeutics*.

**Professor N.K. Shukla** reviewed research papers published in *Indian Journal of Medical and Pediatric Oncology*; appointed by MCI as inspector of MCI.

**Dr Vinod Raina** was made Associate Editor of *Annual of Oncology*, December 2006.

**Dr Lalit Kumar** Mathur–Mehrotra Oration (SN Medical College, Agra) for the year 2006; 24 January 2007 on ‘Stem cell transplantation’; Editor, *Indian Journal of Medical and Paediatric Oncology*; research guide for 2 PhD students, guide and co-guide for DM (Medical Oncology) and MD students in the Departments of Pathology, Pharmacology, and Ophthalmology and Nuclear Medicine, AIIMS; Examiner for DM Medical Oncology for the Gujarat University, Ahmedabad (Gujarat Cancer and Research Institute, Ahmedabad 2006); UICC Scholarship to attend UICC World Cancer Congress, Washington, DC; 8–12 July 2006; examiner for evaluation of PhD thesis (2006), University of Madras, Chennai; appraiser for DNB in Medical Oncology, 2006; member, Research Advisory Committee of Cancer Institute, Adyar, Chennai, 2006; reviewer for cancer-related research projects submitted to the DBT, ICMR and other agencies; member, Expert Committee, DBT, Government of India to monitor/review the projects entitled ‘Curcumin and clinical trials in cancer and Mw related projects’, 2007–2008; Reviewer for the *Postgraduate Medical Journal*, *National Medical Journal of India*, *Paediatric Haematology Oncology*, *Indian Journal of Biochemistry*; member, advisory board of the e-journal *Stem cell Transplantation and Regenerative Medicine*; invited expert member for the management committee of the Indian Cancer Society, New Delhi.

**Dr S.V.S Deo**’s name was included in Marquis (USA) WHO’s WHO in Medicine and Healthcare, 2006; member, International Society of Surgery, Switzerland; member, Breast Surgery International; was appointed as a scientific reviewer for the Health Information Research Unit, McMaster university, UK; was nominated to the Research Board of Advisors–American Biographical Institute, USA; member, WHO Expert Committee on ‘Development of treatment guidelines for breast cancer in developing countries’.

**Dr Pratik Kumar** continued to be the member of the editorial board of the *Journal of Medical Physics*; member of Electro-medical Equipment Sectional Committee, BIS, New Delhi; Secretary, UP–Delhi Chapter of the Association of Medical Physicists of India (AMPI) and referee for the *Journal of Medical Physics*. He also organized the first ever All India Medical Physics Essay Competition in May 2006 on the topic ‘Medical physics: A road map for the next century’ under the aegis of UP–Delhi Chapter of AMPI.

**Dr D.N. Sharma** was awarded one-month UICC (ICRETT) fellowship for PET-CT based IMRT in cervical carcinoma at Mallinckrodt Institute of Radiology, St. Louis, MO, USA; member, Review Committee for UICC (ICRETT) fellowships; member, editorial committee, *AROI Newsletter*; member, Review Committee, *Postgraduate Medical Journal*; expert member for the review of DNB thesis.

**Dr T. Ganesh** is a member of the Governing Body for the Uttaranchal Forest Hospital Trust and as an Advisor for their radiotherapy project; member of Staff Selection Committee for Government

of NCT, New Delhi and also Delhi State Cancer Institute, Delhi; Technical Expert/Member in the Specification Committee/Purchase Committee for the purchase of advanced RT equipments in SKIMS, Srinagar, Government of Jammu and Kashmir; Uttaranchal Forest Hospital Trust, Haldwani, PGIMER, Chandigarh and Delhi State Cancer Institute, Delhi; peer-reviewer for the *Clinical Oncology*; member of editorial board for the *Journal of Medical Physics* and the *Journal of Cancer Research and Therapeutics*; news editor for the *Journal of Medical Physics*.

## **SIGNIFICANT EVENTS**

### **Anaesthesiology**

1. Organized AIIMS Golden Jubilee and IRCH Foundation Day, AIIMS; 17–18 November 2006.
2. Organized 6th Foundation Course on Palliative Care; 16–17 February 2007 for medical practitioners and nursing staff treating cancer patients in and around Delhi.

### **Radiotherapy**

1. Started the innovative technique of interstitial brachytherapy in CA lung.

### **Surgical Oncology**

**Dr N.K. Shukla** participated as an expert in the selection of Senior Research Associates conducted by CSIR, New Delhi; was an external expert for the selection of the post of Assistant Professor of Surgical Oncology for PGIMS Rohtak; acted as a paper setter, thesis appraiser and external examiner for the MCh Course of Gujarat Cancer Research Institute, Ahmedabad; acted as a paper setter, thesis evaluator and external expert for MS Surgery examination of Pt. Ravishankar University Raipur (CG); acted as an external examiner for the MS Surgery of PGI Chandigarh; participated in a course on phase I trial organized by INDOX (India Oxford group) for clinical trials at Oxford; 11–18 September 2006; participated in the Annual Review Meeting of ATLAS Project, Oxford, 14 September 2006.

## **VISITING SCIENTISTS**

1. Dr Michael Minton, Director at Sir Michal Sobell House, Churchill Hospital UK visited IRCH and delivered a lecture on ‘Neuropathic management of cancer pain’.
2. Dr Allan, Pediatric Pain Specialist, UK.
3. Dr Moira Long, Palliative Care Specialist, Scotland.
4. Dr Sunil, Radiation Oncologist, MD Anderson Cancer Center; December 2006.
5. Dr Ashwatha Narayan, Radiation Oncologist, MSKCC, USA; December 2006.
6. Dr Alan Nuhan, Medical Physicist, UK; February 2007.

**ADMINISTRATION**

Administrative Chief  
Assistant Administrative Officer

Professor G.K. Rath  
Shri R. Simon

**Total staff of Dr BRA IRCH**

Faculty	21
Group A and B	40
Technical Staff	67
Nursing Staff	157
Resident Staff (SR, JR, RO, etc.)	50
Stores Staff	03
Ministerial Staff	26
Group D Staff	86
Outsourced Sanitation Staff	112
Outsourced Data Entry Operators	8
<b>Total</b>	<b>570</b>

**FINANCE**

Accounts Officer

Shri C.L. Raina

**STORES**

Assistant Stores Officer

Shri Narender Kumar

## 10.5 Neurosciences Centre

### Chief

Hari Hara Dash

### Neurosurgery

#### Professor and Head

Ashok Kumar Mahapatra  
(1 April 2006 till 29 September 2006)  
(on deputation to SGPGIMS, Lucknow as Director)

Bhawani Shankar Sharma  
(Since 30 September 2006)

#### Emeritus Professors

Prakash Narayan Tandon

Ajit Kumar Banerji

#### Associate Professors

Shashank Sharad Kale Poodipedi Sharad Chandra  
Aditya Gupta

Ashish Suri

#### Assistant Professors

Manmohan Singh

Rajinder Kumar

Manish Singh Sharma  
(Gamma Knife)

Deepak Gupta  
(Trauma Centre)

Deepak Agrawal  
(Trauma Centre)

Sumit Sinha  
(Trauma Centre)

Gurudutta Satyarthee  
(Trauma Centre)

Srinivas Dwarakanath

(Trauma Centre, resigned on 15 April 2007)

### Neurology

#### Professor and Head

Madhuri Behari

#### Professors

Kameshwar Prasad  
(Director, Clinical Epidemiology Unit)

M.V. Padma

#### Associate Professors

M. Tripathi  
Vinay Goyal

Sumit Singh

Achal Srivastava

#### Assistant Professors

Garima Shukla

Rohit Bhatia

Mamta Bhushan Singh

### Neuroanaesthesiology

#### Professor and Head

Hari Hara Dash

**Professor**

Parmod K. Bithal

**Additional Professor**

Arvind Chaturvedi

(on deputation to Dharan, Nepal)

**Associate Professor**

Rajendra Singh Chouhan

**Assistant Professors**

Mihir Prakash Pandia

Girija Prasad Rath

Hemanshu Prabhakar

**NEURORADIOLOGY**

**Professor and Head**

N.K. Mishra

**Additional Professor**

Shailesh B. Gaikwad

**Assistant Professor**

Ajay Garg

**NEUROPATHOLOGY LABORATORY**

**Professor**

Chitra Sarkar

**Associate Professor**

M.C. Sharma

(on assignment from December 2006 to Oman)

**Assistant Professor**

Vaishali Suri

**NEUROBIOCHEMISTRY**

**Associate Professor**

S. Vivekanandhan

**CLINICAL PSYCHOLOGY (NEUROSCIENCES CENTRE)**

**Assistant Professor**

Ashima Nehra

## **EDUCATION**

### **Neurosurgery**

#### **Undergraduate/postgraduate teaching**

The departmental faculty participated in undergraduate teaching in the form of scheduled lectures and seminars. There is continuous postgraduate teaching of MCh junior and senior residents. The academic programme consists of weekly journal club meetings, seminars, morbidity/mortality meetings, neurological case discussions, neuroradiology and neuropathology meetings.

#### **Short-term training**

The department offered short-term training (2–8 weeks) to 6 neurosurgical trainees from various parts of India. The training included clinical observership and training in the Experimental Microneurosurgery Laboratory.

#### **Long-term training**

The department has postdoctoral teaching course of MCh Neurosurgery. MCh course includes three years (after MS General Surgery) and five years (after MB,BS) stream.

## **Neuroanaesthesia**

### **Postgraduate Teaching**

- Seven MD Anaesthesiology students from Anaesthesiology department, AIIMS and two MD Anaesthesiology students and one DA student from Lady Hardinge Medical College, came to the department for Neuroanaesthesiology training.
- A total of eleven DM Neuroanaesthesiology students and 19 Non-academic Senior Residents were part of the department at various times during the year. Three DM students and 2 Non-academic Senior Residents left the department after completion of their term during the year.
- Nine senior residents (6 from Department of Anaesthesiology, AIIMS and 3 from BRAIRCH) received training in Neuroanaesthesiology for 3 months each, as a part of interdepartmental rotation on mutual exchange basis.
- Thrice a week seminars, journal club and case presentations organized as a part of departmental teaching programme.
- Three lectures (in national conferences) delivered by faculty members and 13 (1 international + 12 national) research papers presented by faculty members and senior residents in conferences. One symposium attended by the faculty members and Senior Residents.

#### **Short-term training**

Six national and international doctors have undergone short term training in the department.



## **Neuroradiology**

### **Undergraduate teaching**

- The faculty of the department took 10 didactic lectures as part of undergraduate teaching.
- The DM Neuroradiology course started in July 2001. Two candidates are registered for this course at present.

### **Short-term training**

Three doctors including two foreign nationals attended short-term training in the department during the year. 6 postgraduate students registered for MD (Radiology) received training in Neuroradiology for two months each on rotation basis. Three BSc (Radiography) students received training in Neuroradiology for one month each on rotation basis.

## **Neuropathology Laboratory**

### **Short- and long-term training**

- Deepali Jain worked as Pool Officer in Neuropathology Laboratory, Department of Pathology, 6 October 2005–21 June 2006.
- Ms Prerana joined Neuropathology Laboratory as a PhD student, August 2006.

## **Clinical Psychology**

### **Teaching**

Includes classes, lectures, clinical assignments, group discussions and OPD sessions.

## **Neurobiochemistry Laboratory**

PhD students: Five

## **Continuing Medical Education**

### **Neurology**

#### **Conferences, workshops, seminars organized by the department**

- Professor K. Prasad organized 'Cochrane review protocol development and research methodology workshop', CEU, AIIMS; 15–18 February 2007 for undergraduates and postgraduates.
- Manjari Tripathi and Mamta Singh organized an International Symposium on Epilepsy, November 2006.
- Sumit Singh was a faculty in the Annual Clinical methods workshop, AIIMS; 18 March 2007 for the training of neurological clinical methods for medicine postgraduates from all over Delhi.

### **Lectures delivered**

- 'Stem cells in neurology', Symposium on 'Stem cells: Futuristic medicine', October 2006.
- 'Neuro-degenerative disorders', JNU; June 2006.

- ‘Impaired balance and freezing’, Symposium on ‘Medical management of advanced Parkinson’s disease’, Indian Academy of Neurology Annual Congress, Bangalore; October 2006.
- ‘Stem cells in neurological disorders: Challenges’, National Conference on ‘Putting clinical evidence before practice’, BPKIHS, Dharan, Nepal.
- ‘Multiple sclerosis in India’, Indo–UK seminar on ‘Research and management of MS’, Delhi; February 2007.
- ‘Management of dystonia’, International Congress on Neurology and Rehabilitation, Delhi; March 2007.
- ‘Evidence-based neurology’, Mid-term CME Programme, Indian Subsection of Tropical Neurology, Guwahati; 13–14 May 2006.
- ‘Stem cell’, Neuro CME-2006, Neuroscience Association of Kanpur, GSVM Medical College, Kanpur; 15 October 2006.
- ‘Evidence-based medicine’, MS Ramaiah Medical College, Bangalore; 3 January 2007.
- ‘Evidence-based medicine’, Kasturba Medical College, Manipal; 24 January 2007.
- ‘Evidence-based medicine: An introduction’, workshop on ‘Evidence-based Medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘How to do critical appraisal of therapy, diagnostic, meta-analysis papers’, Workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Research methodology: An introduction to clinical research’, workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Study designs’, workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Sample size estimation’, workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Designing a randomized clinical trial’, workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Diagnostic test study’, Workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Design and analysis of prognostic factor study’, Workshop on ‘Evidence-based medicine’, Hamad Medical Corporation, Doha, Qatar; 16–21 January 2007.
- ‘Evidence-based medicine: An introduction’, Workshops on ‘Evidence-based medicine’ at College of Medicine, University of Sharjah; 27–28 January 2007.
- ‘Critical appraisal of meta-analysis paper’, Workshops on ‘Evidence-based medicine’ at College of Medicine, University of Sharjah; 27–28 January 2007.
- ‘Evidence-based medicine: Past, present and future’, Workshops on ‘Evidence-based medicine’ at College of Medicine and Health Sciences, Sultan Qaboos University, Oman; 29 January–1 February 2007.
- ‘Meta-analysis: An Introduction’, Workshops on ‘Evidence-based medicine’ at College

- of Medicine and Health Sciences, Sultan Qaboos University, Oman; 29 January–1 February 2007.
- ‘NAED limitations: Based on evidence and cost for developing countries’, Current Trends in Epilepsy: An international symposium, New Delhi; 3–5 November 2006.
  - ‘Evidence-based interventions for acute stroke’, Sir Ganga Ram Hospital, New Delhi; 22 September 2006.
  - ‘Management of migraine’, Neurology update, Indian Medical Association, South Delhi Chapter, New Delhi; 30 July 2006.
  - ‘Case of epilepsy: Interactive discussion’, Mid-term CME 2006, Association of Physicians of India, Delhi State Chapter, New Delhi; 30 July 2006.
  - ‘Concept of ischaemic penumbra and management’, DMA Chapter of IMA, Delhi; February 2006.
  - ‘Stem cell therapy in static encephalopathies with special reference to cerebral palsy’, First Indo–US Symposium on ‘Pediatric interventions and stem cell therapies’, Varanasi, February 2006.
  - ‘Cardio-embolic strokes and the Indian scenario’, First Indian Association of Stroke Annual Conference, Chennai; January 2006.
  - ‘Interventional therapies and current treatment strategies in acute ischaemic stroke’, Invited speaker in the International Update on Diabetes, Stroke, and Cardiovascular Disorders, Delhi; February 2006.
  - ‘Management of acute ischemic stroke’, Guest Speaker for the World Stroke Day celebrations, IHBAS, Delhi; June 2006.
  - ‘Pregnancy and epilepsy’, IMA/DMA Chapter Annual conference, Delhi; August 2006.
  - Speaker for the International Conference of Medical Therapeutics, AIIMS; September 2006.
  - ‘Treatment of salvageable penumbra. Annual National Conference of Neurosciences, RR Hospital by the Armed Forces, Delhi; November 2006.
  - ‘Thrombolysis—expansion of therapeutic time window in AIS’, CME of the IANCON 2006, Bangalore; October 2006.
- Beyond
- ‘Physical aspect of disabling epilepsy’, Disabling Epilepsy Workshop for ‘Delineation of guidelines for establishing a disability status in epilepsy’, Chennai; December 2006.
  - Keynote address on ‘Stroke in young’, AFMC, 2006.
  - ‘Hyper-acute thrombolysis in AIS’, Annual Conference of Neurosciences Meet, Kanpur; September 2006.
  - ‘Stroke and seizures’, International Conference on ‘Current trends in epilepsy’, Delhi; November 2006.
  - Workshop on developing guidelines for thrombolysis programme for AIS in the Indian context, held under the aegis of Indian Stroke Association, June 2006. Invited to be in the ‘Core-Group’ of strokologists involved with thrombolytic programme in India.

- synthesizing the programme in the ICMR Stroke Surveillance Workshop, ICMR, Delhi; November 2006
- ‘Hyperacute thrombolysis for acute ischemic stroke in the developing countries’, First American Science Academy conference, Indo–US Science and Technology Forum, Government of India, Irvine, California; January 2007.
- ‘Diagnosis of brain death’, National symposium on ‘Brain death’, AIIMS; February 2007.
- ‘Management of haemorrhagic stroke’, First Indo–Pak Colloquium on Neurosciences, PGIMER, Chandigarh; February 2007.
- ‘Secondary prevention of ischaemic stroke’, APICON, Goa; February 2007.
- ‘Management issues in acute stroke’, Physicians Forum of Kanpur under the aegis of Kanpur Medical College; February 2007.
- ‘Stem cell therapy in stroke: Hope or hype’, National Conference of Haematology and Satellite CME on Stem Cell Therapy, AIIMS; March 2007.
- ‘Presurgical evaluation in epilepsy’, The Annual Delhi Neurological Association meeting, Delhi; February 2007.
- ‘Patients undergoing evaluation for intractable epilepsy’, First Indo–Pak Colloquium on Neurosciences, PGIMER, Chandigarh; February 2007.
- ‘Progressive myoclonic epilepsies’, EEG basics to advanced training course, Hyderabad; March 2007.
- ‘Extra-temporal epilepsies’, EEG Basics to advanced training course, Hyderabad; March 2007.
- EEG teaching on ‘Ictal VEEG in patients with intractable epilepsies’, EEG basics to advanced training course, Hyderabad; March 2007.
- EEG teaching CME to technicians on the role of CEEG in epilepsy. EEG basics to advanced training course, Hyderabad; March 2007.
- EEG teaching CME to technicians on the role of VEEG in epilepsy. EEG basics to advanced training course, Hyderabad; March 2007.
- CME teaching on special epilepsy syndromes and EEG findings, Hyderabad; March 2007.
- ‘Disabling epilepsy workshop for delineation of guidelines for establishing a disability status in epilepsy’, Chennai; December 2006.
- ‘Role of electrocorticography’, International Symposium of Epilepsy, Delhi; November 2006.
- ‘Management of headache using botulinum toxin’, update organized by Neurology, Kanpur Medical College; April 2006.
- ‘Acute ischaemic stroke: How to manage’, East Delhi Medical association, Delhi; April 2006.
- ‘Recent advances in management of epilepsy’, update organized by the API UP Chapter, Aligarh; April 2006.
- ‘Recent advances in the management of refractory epilepsy’, Association of Pediatricians of India; April 2006.

- ‘Approach to a patient with cognitive disorders’, MLB Medical College, Jhansi; June 2006.
- ‘Approach to a patient with movement disorders’, MLB Medical College, Jhansi; June 2006.
- ‘Newer antiepileptic drugs in management of epilepsy’, MLB Medical College, Jhansi; June 2006.
- ‘Recent advances in the management of headache’, Neurology update, GSVM Medical College, Kanpur; September 2007.
- ‘Management of acute ischaemic stroke: Role of thrombolysis’, API UP Chapter Annual Conference, Orcha, Madhya Pradesh; October 2006.
- ‘Antiepileptic drugs in migraine prophylaxis’, CME on headache at NIMHANS, Bangalore; January 2007.
- ‘Management of neuropathic pain’, Delhi Neurological Association Annual meeting, New Delhi; February 2007.
- ‘Management of neuropathic pain—recent trends’, Dehradun; October 2006. Annual Conference of Medical Practitioners.
- ‘Laboratory-based approach to the diagnosis of peripheral neuropathy’, International Congress on Neurology and Rehabilitation; March 2007.
- ‘Sleep disorders: Recognition and management’, CME organized by the Delhi Medical Association, Central Pahargunj Branch; September 2006.
- ‘Sleep disorders: Early recognition’, CME organized for the Delhi Medical Association, South Delhi Chapter; March 2007.
- ‘Sleep and epilepsy’, Indo–US Symposium ‘Sleep Medicine 2006’, Chennai; 1–2 December 2006.
- ‘Sleep disorders for the neurologist: Obstructive sleep apnea and beyond’, UP and Uttaranchal Neurocon 2007, Mussourie, Dehradun; 20–21 January 2007.
- ‘Circadian sleep disturbances in neuro-infections’, Symposium on ‘Primary and secondary disorders of circadian sleep rhythm’, World Association of Sleep Medicine Congress, Bangkok, Thailand; February 2007.

### **Neuroanaesthesiology**

- 2nd International Symposium and 8th Annual conference of Indian Society of Neuroanaesthesiology and Critical Care–ISNACC 2007 was organized by the Department, India Habitat Centre, New Delhi; 9–11 February 2007.

### **Neuropathology laboratory**

#### **Lectures delivered**

#### **Professor Chitra Sarkar**

- ‘Genetic prognostication in gliomas’, Annual Conference of the Neurological Society of India, Madurai; 18–20 December 2006.

- ‘Genomic analysis and immunohistochemistry in clinical decision-making of CNS tumours’, Workshop on IMRT in Brain Tumours, Kolkata; 15–16 July 2006.
- ‘Myopathies’, ICMR Sponsored workshop on Human Genetics for Students, Gwalior; 2 August 2006.
- ‘Glioneuronal tumours of the CNS’, Sri Ramchandra Medical College and Research Institute, Chennai; 19 December 2006.
- ‘Slide seminar: Some interesting cases of myopathy’, 9th Summer School of Myology, Institute de Myologie, Hospital de la Salpetriere, Paris, France; 14–23 June 2006.
- ‘Histopathologic spectrum of lesions in intractable epilepsy’, Current Trends in Epilepsy: An international symposium, New Delhi; 3–5 November 2006.
- ‘Update on pathology of CNS and neuromuscular diseases’, Faculty of Laboratory Medicine, Ministry of Health, Kuwait; 5–7 February 2007. Delivered the following lectures:
  - (i) Embryonal tumours: Recent perspectives
  - (ii) Muscular dystrophies: Classification and approach to diagnosis
  - (iii) Meningeal tumours: Approach to diagnosis
  - (iv) Pathology of viral encephalitis
  - (v) Case presentations/slide seminars on CNS and muscle pathology

## Clinical Psychology

### Conferences Seminars, Workshops

- 5th International Congress on Geriatric Care, New Delhi; 14–15 October 2006.
- ‘Current trends in epilepsy’, Department of Neurology, AIIMS; 3–5 November 2006.
- 59th Annual Conference of Indian Psychiatric Society (ANCIPS), Saveetha Institute of Medical and Technical Sciences, Chennai, India; 4–7 January 2007.
- XXXIII National Annual Conference, Indian Association of Clinical Psychologists, NACIACP, Sona School of Management, Salem, Tamil Nadu; 7–9 January 2007.
- ‘Improving mental health care in developing countries’, WPA Section on Psychiatry in Developing Countries, 1st International Conference, Lahore, Pakistan; 15–19 February, 2007).

## National and International Conferences

### Neurosurgery

#### Organized by the department

- 17th Sarveshwari Memorial Oration, Professor Arnold Menezes, Iowa City, Iowa, USA was the Orator; 14 February 2006.
- 9th Microneurosurgery workshop, 14–15 February 2006. Over 200 delegates participated.

## Lectures delivered

### Professor B.S. Sharma

- "Management of giant pituitary Adenoma" South Asian Neurosurgery

**Professor A.K. Mahapatra**

- Attended two international and four national conferences, presented 8 guest lectures and chaired six sessions.

**Dr S.S. Kale**

- Lumbar PVD controversies, TB of Spine Indian Experience - AO Spine Comprehensive course in Guadalajara, Mexico; October 2006.
- Rheumatoid AA Dislocation, Posterior from Stroke in CVJ Anomaly - AO Spine Interactive and Masters Course in Davos, Switzerland; December 2006.
- Vertebrobasilar Insufficiency of CVJ Anomalies - Association of Spine Surgeons of India Annual Conference, Ahmedabad; January 2007.
- Craniovertebral function Anomalies : Surgical Strategies - ASSI-European Spine Society Joint Instructional course, Hyderabad; August 2006.
- Gamma Knife for Acoustic Nerve Tumours - Annual Conference of Stereotactic and Functional Neurosurgery; Hyderabad, August 2006.
- Faculty in AO Spine Stratplan meeting, Breckenridge Colorado, USA; March 2007.

**Dr A. Suri**

- 'Approach to intra/juxta—cavernous lesions and tumours', 2nd International Symposium on Cavernous Sinus. Ljubljana, Slovenia; September 2006.
- 'Anterior transpetrous posterior transcavernous approach to petroclival region', 2nd International Symposium on Cavernous Sinus, Ljubljana, Slovenia; September 2006.
- 'Infantile hydrocephalus: ETV v/s shunt', CME Neurocon 2006 (NSI), Madurai; December 2006.
- 'Neuroendoscopy in intraventricular tumours', NEUROCON 2006 (NSI), Madurai; December 2006.

**Dr Aditya Gupta**

- 'Gamma knife radiosurgery for secreting and non-secreting pituitary adenomas', International Leksell Gamma Knife Society meeting in Seoul, South Korea; May 2006.
- 'How to treat pituitary adenomas using gamma knife', Annual meeting of Indian Society for Stereotactic and Functional Neurosurgery; Hyderabad August 2006.
- 'Emerging therapies in neurological disorders: Gamma knife radiosurgery and deep brain stimulation for Parkinson's disease'. Indian Medical Association, Dehradun, Uttaranchal, India; November 2006.

**Dr Manmohan Singh**

- 'Childhood vermian tumours', NEUROPEDICON 2006, Goa; September 2006.

**Dr Sumit Sinha**

- ‘Prognostic variables in head injury-associated deaths: A 2-year retrospective study at AIIMS’, 15th Annual Conference of Neurotrauma Society of India, New Delhi; August 2006.
- ‘Giant pituitary adenomas—A series of 177 cases’, 56th Annual Conference of Neurosurgical society of India, Madurai; December 2006.

**Dr Deepak Kumar Gupta**

- ‘Neuroimaging in spinal tumours’, In NEUROPEDICON (17th Annual conference of the Indian Society of Pediatric Neurosurgery, Goa, India; 2006.

**Dr Srinivas Dwarakanath**

- ‘Paediatric supratentorial tumours-spectrum and management strategies’, 34th Annual Conference of the International society for Pediatric Neurosurgery. Taiwan; 9–14 September 2006.

***Neuroanaesthesiology*****Professor H.H. Dash**

- Brain protection: Recent advances and modern strategies. Annual Conference of Indian Society of Anaesthesiologists; Delhi, 15-16 April 2006.
- Sevoflurane and neuroanaesthesia. Symposium on Sevoflurane; New Delhi, 8 July 2006.
- Newer trends in monitoring in patients with head trauma. Annual Conference of Neurotrauma Society of India; New Delhi, 18-20 August 2006.
- Evaluation of an Indigenous ICU Ventilator. East Zone Annual Conference of Indian Society of Anaesthesiologists; Jamshedpur, Jharkhand, 15-17 September 2006.
- Trigeminal neuralgia: An anaesthesiologist's view point. Neuro Sciences Update, R.R. Hospital; Delhi, 8 October 2006.
- Neuronal protection. Annual Conference of Research Society of Anaesthesiologists and Clinical Pharmacologists; Pune, 10-12 November 2006.
- Brain death and donor rules. 54<sup>th</sup> Annual Conference of Indian Society of Anaesthetists; Mysore, 26-29 December 2006.
- Neuroanaesthesiology as a super speciality : An Indian perspective. 2<sup>nd</sup> International Symposium and 8<sup>th</sup> National Conference of ISNACC.
- Recent trends in the management of intracerebral vasospasm. Annual Conference of South Asian Neurosurgeons; New Delhi, 15-18 February 2007.
- Trigeminal Neuralgia. 8<sup>th</sup> Indonesian Conference Society of Neuroanaesthesia Joint Symposium; Singapore, 9-10 March 2007.



**Dr. P.K. Bithal**

Newer monitoring techniques in Neuroanaesthesia. Annual Conference of Indian Society of Anaesthesiologists; Mysore, 26-29 December 2006.

**Neuroradiology****Professor N.K. Mishra**

- 'Functional MRI', AIIMS Golden Jubilee Celebrations. Professor Baldev Singh Symposium on Consciousness, Department of Physiology, AIIMS; 2 April 2006.
- 'Management of cerebral AVMs: Moderated and participated in the panel discussion', 6th annual conference of the Indian Society of Cerebrovascular Surgery, Max Institute of Neurosciences, New Delhi; 8–10 September 2006.
- 'Pediatric neurointervention: Chaired the symposium', 7th meeting of the Asian-Australasian federation of Interventional and Therapeutic Neuroradiology, Taj Exotica, Goa; 21–24 September 2006.
- 'Spinal vascular malformations—Endovascular management', 9th Annual Congress of Indian Society of Vascular and Interventional Radiology (ISVIR), Chennai; 10–12 November 2006.
- 'Difficult aneurysms', 60th annual congress of the Indian Radiological and Imaging Association (IR&IA), Renaissance Hotel and Convention Centre, Powai, Mumbai; 4–7 January 2007.
- 'Musings of the master—gazing into the crystal ball', 60th annual congress of the Indian Radiological and Imaging Association (IR&IA), Renaissance Hotel and Convention Centre, Powai, Mumbai; 4–7 January 2007.

**Dr S.B. Gaikwad**

- 'Guiding reperfusion in acute ischemic stroke', 9th Annual Congress of Indian Society of Vascular and Interventional Radiology, Chennai; 10–12 November 2006.
- 'Carotid angioplasty and stenting: AIIMS experience', 9th Annual Congress of Indian Society of Neuroradiology, Guwahati; 17–19 November 2006.
- 'Advanced MR studies and its clinical applications in clinical practice', 9th Annual Congress of Indian Society of Neuroradiology, Guwahati; 17–19 November 2006.
- 'Current trends in imaging of adult epilepsy', during Epilepsy symposium, India Habitat Centre, Delhi; 3–5 November 2006.
- 'Imaging of neurological disorders', NMR foundation day, NMR Department seminar room, AIIMS; 22 March 2007.
- 'MRA of intracranial vessels', 4th Asia Pacific Congress against Stroke (APCAS), India Habitat Centre, Delhi; 29 March 2007.
- Attended 9th Annual Registry meet of ISVIR, Mumbai; 28–29 April 2006.
- Attended 7th meeting of the Asian-Australasian federation of Interventional and Therapeutic Neuroradiology, Taj Exotica, Goa; 21–24 September 2006.

- Attended 1st Anatolian International Workshop on Interventional Neuroradiology, Swiss hotel, Istanbul, Turkey; 11–13 May 2006.
- Paper on ‘Reconstruction of post traumatic ICA pseudoaneurysm using endoprosthesis’, ABC-WIN-2007 Congress on Neurointervention, Val’d Isere, France; 14–19 January 2007.

## Neuropathology Laboratory

### Lectures delivered

#### National conferences

- **Sarkar C.** ‘Risk factors and genetics of stroke’, Gaya Prasad symposium on ‘Pathology of stroke’. Annual conference of Indian association of pathologists and microbiologists, Bangalore; December 2006.
- **Sarkar C.** ‘Pituitary adenoma: Pathological aspects’, Symposium on ‘Pituitary Tumours’ in annual conference of neurological society of India, Madurai; December 2006.
- **Sharma MC.** Mitochondrial myopathies. Annual conference of Indian association of pathologists and microbiologists, Bangalore; December 2006.
- **Sharma MC, Sarkar C.** Slide seminar on Paediatric Tumours. Annual conference of Indian association of pathologists and microbiologists, Bangalore; December 2006.
- **Rishi A, Sarkar C, Suri V, Sharma MC.** Histopathological Spectrum of Fungal Infections of the Central Nervous System: A Clinicopathological Study of 40 Cases. 9th annual meeting of Delhi neurological association, Delhi; 3–4 February 2007.
- **Jain A, Sharma MC, Suri V, Singh S, Bhatia R, Handa R, et al.** Role of major histocompatibility complex (MHC-I and II), cell adhesion molecules and membrane attack complex in inflammatory muscle diseases. 9th annual meeting of Delhi Neurological Association, Delhi; 3–4 February 2007.
- **Jain A, Sharma MC, Suri V, Singh S, Bhatia R, Handa R, et al.** MHC Class-I and II, and NAC detection as a detection tool and role of cell adhesion molecules in the pathogenesis of idiopathic inflammatory myopathies. Annual Conference of IAPM, Bangalore; December 2006.
- **Rishi A, Sharma MC, Sarkar C.** Inclusion body myositis: A rare form of inflammatory myopathy. Annual conference of Delhi Chapter IAPM, New Delhi; April 2006.
- **Rishi A, Sharma MC.** Subcutaneous panniculitis like T cell lymphoma with hemophagocytosis: An unusual case of long-term survival. Annual Conference of Indian Association of Pathologist and Microbiologist, 2006.
- **Mridha AR, Sarkar C, Sharma MC, Suri V.** Role of histochemistry and electron microscopy in the diagnosis of mitochondrial myopathies. Annual Conference of Delhi Chapter IAPM, New Delhi; April 2006.
- **Jain D, Epari S, Sarkar C, Sharma MC.** Chordoid glioma: A newly described entity. Annual Conference of Delhi Chapter IAPM, New Delhi; April 2006.

- **Suri V, Sarkar C, Sharma MC.** Intraventricular myelolipoma: A rare entity. Annual Conference of Delhi Chapter IAPM, New Delhi; April 2006.

#### International conferences

- **Sharma MC.** Inflammatory myopathies. World Federation of Neurology XI International Congress on Neuromuscular Diseases, Istanbul, Turkey; 2–7 July 2006.
- **Sarkar C.** Impact of molecular genetics on management of gliomas. South Asian Neurosciences Conference, Delhi; February 2007.

#### Clinical Psychology

##### Organized by the department

- Workshop on ‘Pain management’, Department of Psychiatry, AIIMS; 21 January 2006. Lectures delivered
- Presentation of paper on ‘Psychiatry in developing countries’, World Psychiatric Association (WPA) Section, 1st International Conference on ‘Improving mental health care in developing countries’, Lahore, Pakistan; 15–19 February 2007.

## RESEARCH

### Neurosurgery

#### Funded Projects

1. A phase II multi-national, multi-centre, open-label, active-controlled, randomized parallel-group dose-finding study to evaluate the efficacy and safety of two doses of AP 12009 in adult patients with recurrent high-grade glioma, administered intra-tumorally as continuous high-flow micro-perfusion over a 7-day period every other week. A.K. Mahapatra, A. Suri, P.K. Julka, S.S. Kale, Manmohan Singh. Funded by Antisense Pharma Gmb Josef-Engert-StraBe9D-93053 Regensburg Germany for 2 years. Funds: Rs 100 lakh.
2. Phase II open label, dose confirmation study of interstitial I<sup>131</sup>-ch TNT-A/B MAb(COTARA<sup>R</sup>) for the treatment of recurrent glioblastoma multiforme (GBM) at first relapse. A.K. Mahapatra, D. Gupta, A. Suri, C.S. Bal. Funded by Peregrine Pharmaceuticals, Inc. 14272 Franklin Avenue Suite 100, Tustin, CA 92780-7017, 714-508-6000 for 3 years. Funds: Rs 100 lakh.
3. The International Infant Hydrocephalus Study (IIHS) is an international multi-centre, prospective, controlled, randomized study of the treatment of newly diagnosed obstructive hydrocephalus in infants below 2 years of age. Data will be centrally collected prospectively and contemporaneously over the course of at least 5 years of follow-up. A.K. Mahapatra, A. Suri, D. Gupta. Funded by International Society of Pediatric Neurosurgery (ISPN) and International Study Group on Neuro-endoscopy (ISGNE). Funds: Rs 70,000.
4. Randomized double blind placebo controlled, multicentric, dose estimation study to evaluate the safety and preliminary efficiency of recombinant factor VIIa (Novo-Seven/Nia Stase) in subjects with brain contusion (Trial ID: F7CBI-1600). V.S. Mehta, Rajender Kumar,

- Aditya Gupta, Ajay Garg. 2005. Funds: Rs 3.67 lakh.
5. International Multicentric Multinational Trial: CRASH-2 (A large randomized placebo controlled trial among trauma patients with or at risk of significant hemorrhage, of the effect of antifibrinolytic treatment on death and transfusion requirement). A.K. Mahapatra, Manmohan Singh, Ashish Suri, S.S. Kale, Deepak Gupta. Funded by London School of Hygiene and Tropical Medicine, London, UK.
  6. Multinational study: A Registry for Comparing Catheter-Related Infection Rates among Various Shunt Systems in the Treatment of Hydrocephalus. A.K. Mahapatra, Deepak Agrawal, Ashish Suri, G.D. Satyarthee.
  7. Role of thalamus in diffuse axonal injury: an autopsy study with histopathological correlation. Deepak Agrawal. Funded by AIIMS Intramural Research for 3 years (2006-2008). Funds: Rs 2 lakh.

### **Funded Infrastructure Project**

Experimental Microneurosurgery Laboratory: Cadaver Microneurosurgery/ Neuroendoscopy Training Facility. Funded by DST-FIST 2006 grant. Funds: Rs 85 lakh.

### **Departmental Projects**

1. Retrospective analysis of diffuse axonal injury and evaluation of factors influencing outcome in DAI
2. Acute thalamic involvement in severe head injury: An autopsy study with histopathological correlation
3. Efficacy of Amikacin Sulphate bladder washes in preventing UTI in patients with prolonged catheterization
4. Efficacy of early high protein feeds in severe head injury
5. VHL gene analysis in aneurysm domes
6. PET scan integration into gamma knife radiosurgery for pituitary adenomas
7. Neurotization for brachial plexus injuries
8. Endoscopic third ventriculostomy in hydrocephalus
9. Moya Moya disease
10. Bone marrow pluripotent cells in nerve injury
11. Intracranial cysts/tumours: Endoscopic treatment
12. Animal ethics committee permission: Training of residents and visiting neurosurgeons: Microvascular and microneural anastomosis
13. Analysis of C2 fracture
14. Prognostic factors of neurological recovery in cauda equina syndrome due to PIVD
15. Decompressive craniectomy in head injury
16. Craniotomy v/s craniectomy in posterior fossa lesions
17. CSF fistula
18. Hypertonic saline in head injury

19. MR perfusion in AVM for GK therapy
20. MR perfusion in brain tumors for GK therapy
21. ICP monitoring, IJV sampling and cerebral oximetry in severe head injury
22. Vertebral body tumour
23. GK in cavernous angioma
24. GK therapy in AVM
25. Quality of life after lumbar disc surgery

### **Collaborative Projects**

1. To study the role of bone marrow derived pluripotent cells in peripheral nerve repair in adult rats (with Neuropathology and Neurosurgery). Funded by ICMR (2006–2009). Funds: Rs 40 lakh.

### **Neurology**

#### **Funded Projects**

##### **Completed**

1. A longitudinal study to estimate proportion of patients with dementia and cognitive decline in Parkinson's disease, its clinical correlates with special reference of Apo E alleles. M. Behari (as PI). Funded by ICMR, for 5 years (2002–2007). Funds: Rs 26.6 lakh.
2. Impact of nutritional strategies and multiple anti-oxidant therapy in progression and management of Parkinson's disease under. M. Behari. Funded by ICMR for 2 years (2004–2006). Funds: Rs 4.1 lakh.

##### **Ongoing**

1. Transplantation of human retinal pigment epithelial (hRPE) cells in the 6-OHDA lesioned rat model of Parkinson's disease. M. Behari. Funded by DBT for 3 years (2006–2008). Funds: Rs 42.97 lakh.
2. Motor responses to noxious and non-noxious stimuli in spinalized humans: Role of electro magnetic stimulation. M. Behari. Funded by DST, for 3 years (2005-2007). Funds: Rs 7.95 lakh.
3. Identification of novel gene(s) in familial Parkinson's disease. M. Behari. Funded by DBT for 3 years (2007–2009). Funds: Rs 2.0 lakh.
4. A phase III, double-blind placebo controlled study to determine the efficacy and safety of a low (50–100 mg/day) and high (150–200 mg/day) dose range of safinamide as add-on therapy, in patients with idiopathic Parkinson's disease with motor fluctuations, treated with a stable dose of levodopa. M. Behari. Funded by Clinirx for 1 year. Funds: Rs 8.0 lakh.
5. A Phase III, double-blind placebo controlled, 12-month extension study to investigate the long term efficacy and safety of a low (50–100 mg/day) and high (150–200 mg/day) dose range of Safinamide, as add-on therapy, in patients with idiopathic parkinson's disease

- with motor fluctuations, treated with a stable dose of Levodopa. M. Behari. Funded by Clinirx for 1½ years. Funds: Rs 8.0 lakh.
6. Protocol OV-1003 Safety and Efficacy of Melperone in the treatment of patients with psychosis associated with Parkinson's disease. M. Behari. Funded by Ovation Pharma for 3 years (2007–2009). Funds: Rs 22.0 lakh.
  7. A randomized double-blind, placebo controlled, parallel-group fixed and flexible SLV308 dose arm study assess efficacy and safety of SLV308 monotherapy in the treatment of patients with early stage Parkinson's disease. M. Behari. Funded by Solvay Pharma for 2 ½ years (2007–2009).
  8. Intravenous autologous bone marrow stromal cells (MSC) or mononuclear cells (MMC) for patients with acute ischemic stroke. K. Prasad. Funded by Department of Biotechnology, Government of India for 1 year. Funds: Rs 20 lakh.
  9. Thrombolysis with intravenous rt-PA for acute ischaemic stroke: The third International Stroke Trial. (IST-3). K. Prasad. Funded by Medical Research Council of United Kingdom.
  10. Autologous intra-arterial infusion of bone marrow mononuclear cells for static encephalopathy with special reference to cerebral palsy. M.V. Padma. Funded by DST.
  11. Normobaric oxygen therapy for acute ischaemic stroke: A pilot study in Indian patients. M.V. Padma. Funded by ICMR.
  12. Psychosocial issues in women with epilepsy and outcome of pregnancies in WWE. M. Tripathi. Funded by WHO for 2 ½ years.
  13. Molecular and clinical correlation of inherited ataxias in Indian Population. Achal K. Srivastava. Funded by DBT.

### **Departmental Projects**

1. Functional MRI of speech disturbance in parkinsonism
2. Sleep disturbance in TBM
3. Treatment of acute ischaemic stroke with transcranial Doppler
4. Parkinson's disease in women
5. Psychological profile in intractable epilepsy patients undergoing surgery
6. Perception of stroke in public, knowledge of risk factors and treatment
7. Risk factor analysis of stroke: A case–control study
8. Knowledge of stroke and risk factors and impact on outcome
9. Awareness of stroke and risk factors in stroke patients
10. Non-epileptic seizures in villagers
11. Evoked responses in hereditary ataxias
12. Nerve conductions in ADCAs
13. Autonomic functions in genetically confirmed ataxias
14. Sleep disorders in tubercular meningitis—an actigraphic study
15. Abnormal sympathetic hyper-reactivity in patients of myasthenia gravis
16. Quantitative thermal sensory testing and sympathetic skin response in restless legs syndrome—a study with 57 Indian patients

17. Ictal speech in intractable complex partial seizures: The most reliable lateralizing sign on clinical description
18. Clinical spectrum and clinicopathological correlation of dysferlinopathies from AIIMS
19. MR spectroscopy in adult myopathies with clinicopathological and electrophysiological correlation
20. Randomized double-blinded placebo-controlled trial of low-dose topiramate and lamotrigine in patients with severe migraine

## Collaborative Projects

### Funded projects

1. High-throughput proteomics and protein marker discovery in tuberculous meningitis (with Biotechnology). H.K. Prasad, M. Tripathi.
2. Use of complimentary therapy of Acupressure as a noninvasive method of Vagal nerve stimulation in patients with intractable epilepsy for seizure control (with Biophysics). K. Dalal, M. Tripathi.
3. Proteomics and protein markers in Alzheimer's dementias (with Biophysics). Srinivasan, M. Tripathi. Funded by DBT.
4. Brain SPECT in MCI, Vascular and Alzheimer's dementia (with Nuclear Medicine). Chetan Patel, M. Tripathi. Funded by IAEA, Vienna.
5. Use of complimentary therapy of acupressure as a method of therapy in patients with painful diabetic neuropathy (with Biophysics). K. Dalal, M. Tripathi. Funded by ICMR.
6. STICH II surgical treatment of intracerebral haemorrhage lobar (with Neurosurgery). P.S. Chandra, M. Tripathi. Funded by Medical Research Council, UK.
7. Comparative evaluation of expression of dystrophin, utrophin and N knots in muscle and skin biopsy in patients with dystrophinopathies (with Pathology). M.C. Sharma, S. Singh.
8. Expression of major histocompatibility complex (CI I and 2) CA mol in patients with idiopathic inflammatory myopathy (with Pathology). M.C. Sharma, S. Singh.
9. Predictors of ventilatory requirement in patients with myasthenic crisis (with Neuroanesthesia). P. Bithal, S. Singh.

### Departmental Projects

1. Stem cells as a therapeutic modality in motor neuron disease. Sumit Singh for 2005.
2. Clinical spectrum of patients with raised intracranial hypertension—an observational study. Sumit Singh for 2006.

## Neuroanaesthesiology

### Departmental Projects

#### Completed

1. ICU management of Gullain–Barre syndrome: A retrospective study
2. Transcranial doppler ultrasonographic study of cerebral haemodynamics, autoregulation and carbon dioxide reactivity in patients with supratentorial tumours

3. Respiratory care of myasthenic crisis in neurointensive care unit: Evaluation of outcome and adverse events
4. Evaluation of propofol as a risk factor for pancreatitis in patients with Cushing's disease

### **Ongoing**

1. Stellate ganglion block as a treatment option for refractory cerebral vasospasm following aneurysmal subarachnoid haemorrhage
2. A comparison of three anaesthetic techniques used for trans-sphenoidal pituitary surgery
3. Evaluation of invasive versus non-invasive haemodynamic monitoring in supratentorial tumour surgery: A cost-effective analysis
4. A comparison of two anaesthetic techniques for paediatric spinal surgery: Sevoflurane versus Isoflurane
5. A comparative study of propofol and thiopentone for cerebral protection during temporary clipping in intracranial aneurysm surgery

### **Neuroradiology**

#### **Funded Projects**

1. Phase imaging and Diffusion tensor imaging-Novel MR Contrasts in the evaluation of cryptogenic focal epilepsy. Ajay Garg. Funded by DST for 4 years (2007–2010). Funds: Rs 8 lakh.

#### **Departmental Projects**

1. Changes in cerebral hemodynamics measured by MRI Perfusion: Pre- and post-carotid stenting:
2. Clinical and radiological profile of patients undergoing carotid artery stenting: A retrospective analysis:

### **Neuropathology Laboratory**

#### **Funded Projects**

#### **Ongoing**

1. Myopathic disorders: A comparative clinico-pathological and *in vitro* proton magnetic resonance spectroscopy (MRS) study on muscle biopsies. Chitra Sarkar. Funded by ICMR for 3 years (2004–2007). Funds: Rs 6 lakh.
2. Ligand based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofoetal) isoenzymes of alkaline phosphatase: characterization and validation in clinical cancer. Chitra Sarkar. Funded by DBT for 3 years (2005–2008). Funds: Rs 25 lakh.
3. Clinical correlation of quantitative analysis and immunohistochemical localization of VEGF and HCG in the serum and placenta at different gestational ages in normal and PIH cases. Chitra Sarkar. Funded by CSIR for 3 years (2004–2007). Funds: Rs 12 lakh.



4. Phase II Multi-Center, Open-Label, Active-Controlled, Randomized Parallel-Group Dose Finding Trial to evaluate the efficacy and safety of two doses of an antisense oligonucleotide in adult patients with recurrent high-grade glioma, administered intratumorally as a continuous high-flow microperfusion over a 7-day period every other week. Chitra Sarkar. Funded by SIRO Clinpharma, Mumbai for 2 years (2006–2008). Funds: Rs 10 lakh.
5. Phase II multicentre, open label dose confirmation study of interstitial I131-chTNT 1bMoAb (COTARA) for the treatment of glioblastoma multiforme (at first relapse) by Peregrine Pharmaceuticals, Texas, USA. Chitra Sarkar. Funded by SIRO Clinpharma, Mumbai for 3 years (2006–2009). Funds: Rs 10 lakh.
6. Acute thalamic involvement in severe head injury-An autopsy study with histopathological correlation. Chitra Sarkar. Funded by AIIMS (2006–2009). Funds: Rs 2.2 lakh.
7. Study of the role of bone marrow derived mononuclear cells in peripheral nerve repair of adult rats. Vaishali Suri. Funded by AIIMS (2006–2009).

## Departmental Projects

### Completed

1. Paediatric astrocytic tumours: Study of cyclin dependent kinases and their inhibitors
2. Comparative study of diagnostic efficacy of Stereotactic, ultrasound guided and image guided biopsies in lesions of CNS
3. Protein aggregating myopathy: A clinicopathological and immunohistochemical study
4. Mitochondrial myopathy: A clinicopathological and ultrastructural study
5. Congenital myopathies: Clinicopathological and ultrastructural evaluation
6. Expression of major histocompatibility complex (MHC-I and II) and cell adhesion molecules in idiopathic inflammatory myopathies

### Ongoing

1. Primary and secondary glioblastomas: A study of EGFR amplification, EGFR vIII mutants and p53 expression
2. GBMs with long term survival: Role of cell cycle regulatory genes.
3. Study of gliomagenesis: Possible involvement of CNS developmental pathway.
4. Comparative evaluation of expression of dystrophin, utrophin and n-NOS in muscle and skin biopsy of patients with dystrophinopathies
5. p53, EGFR and HER2 receptor in osteogenic sarcomas

## Collaborative Projects

### Completed

1. Expression of tumour suppressor gene HIC-1 in human glial tumours and cell lines (with Biochemistry)
2. Mismatch repair genes (Hmlh1 and Hmlh2) in glial tumours (with Biochemistry)
3. Clinicopathological study of Bcl-2 and Bcl-6 expression in non-Hodgkin lymphoma (with IRCH)

### **Ongoing**

1. Study of HIC-1 in tumorigenesis and cell response (with Biochemistry)
2. Effects of administration of human umbilical cord blood cells (HUCBG) in combination with melatonin versus HUCBG alone in rat with stroke (with Neurology)
3. Altered DNA sequences in gliomas: Characterization of changes and context sequences with reference to tumor type (with Biochemistry)
4. Characterization of the properties of an amplified region of DNA in primary meningeal tumors (with Biochemistry)
5. Prevalence of alteration at microsatellite loci in 1p and 19q in primary human gliomas (with Biochemistry)
6. Invasive versus non-invasive meningiomas: Comparative study of proliferation index, and expression of VEGF, p53 and cathepsin (with Neurosurgery)

### **Neurobiochemistry**

#### **Ongoing**

1. Genetic polymorphisms of drug metabolizing enzymes CYP2C19 and CYP2C9 genes in patients developing toxicity to specific antiepileptic drug phenytoin. M. Vivekanand Funded by ICMR for 3 years (2005-2008). Funds: Rs 6 lakh.
2. Impact of nutritional strategies and multiple antioxidant therapy of progression and management of Parkinson's disease. M. Vivekanand Funded by ICMR for 3 years (2004-2007). Funds: Rs 4.5 lakh.

### **Departmental projects**

1. Pharmacogenetics of drug metabolizing enzymes in patients developing drug toxicity to specific antiepileptic drugs (Phenytoin, carbamazepine, valproic acid and lamotrigine) of epileptic patients.
2. Analysis of expression and regulation of classical HLA-A,B,C, nonclassical HLA-G and transforming growth factor- $\beta$ 2 in glioblastoma and their relevance in immunotherapy.
3. Mitochondrial dysfunction and its role in genesis of Programmed Cell Death Pathway in Amyotrophic lateral Sclerosis Patients.
4. Validation of gel dosimetry as 3D verification tool for highly conformal radiotherapy techniques.
5. Mitochondrial dysfunction in patients with Wilson's disease.

### **Clinical Psychology**

#### **Collaborative Projects**

##### **Ongoing**

- A study of psychosocial developments in children and adolescents undergoing congenital heart surgery. (with CTVS)
- A phase IIb/III randomized, placebo-controlled clinical trial to study the safety and efficacy

- of MK-0364 in overweight and obese patients with type 2 diabetes mellitus (T2DM). (with Endocrinology)
- Cognitive activation studies of language and memory as pre-operative evaluation in patients with intractable epilepsy—A novel noninvasive method of investigation. (with Neurology)
  - ‘To assess the effects of antiretroviral therapy on neurocognitive functions in AIDS patients’, (with Medicine)

## PUBLICATIONS

### Neurosurgery

#### *Journals*

1. Agrawal D, Durity FA. Seizure as a manifestation of intracranial hypotension in a shunted patient. *Pediatr Neurosurg* 2006;**42**:165–7.
2. Agrawal D, Steinbok P, Cochrane DD. Pseudo-closure of anterior fontanelle by wormian bone in isolated sagittal craniosynostosis. *Pediatr Neurosurg* 2006;**42**:135–7.
3. Agrawal D, Gowda NK, Bal CS, Kale SS, Mahapatra AK. Have cranio-vertebral junction anomalies been overlooked as a cause of vertebro-basilar insufficiency? *Spine* 2006;**31**:846–50.
4. Agrawal D, Singhal A, Hendson G, Durity FA. Gyriform differentiation in medulloblastoma: A radiological predictor of histology. *Pediatr Neurosurg* 2007;**43**:142–5.
5. Agrawal D, Steinbok P, Cochrane DD. Long-term anthropometric outcomes following surgery for isolated sagittal craniosynostosis. *J Neurosurg* 2006;**105** (Suppl. 5):357–60.
6. Agrawal D, Steinbok P. Simple technique of head fixation for image-guided neurosurgery in infants. *Childs Nerv Syst* 2006;**22**:1473–4.
7. Agrawal D, Steinbok P, Cochrane DD. Reformation of the sagittal suture following surgery for isolated sagittal craniosynostosis. *J Neurosurg* 2006;**105** (Suppl. 2):115–7.
8. Agrawal D, Mahapatra AK. Levodopa treatment in severe head injury. *Indian J Neurotrauma* 2006;**3**:73–5.
9. Agrawal D, Cochrane DD. Traumatic retroclival epidural hematoma: A pediatric entity? *Childs Nerv Syst* 2006;**22**:670–3.
10. Ahmad FU, Gupta A, Sharma MC, Shukla G, Mehta VS. The enigmatic origin of subfrontal schwannomas: Report of a case without hyposmia. *Acta Neurochir (Wien)* 2006;**148**:671–2.
11. Ahmad FU, Sharma BS. Treatment of intramedullary spinal cysticercosis: Report of 2 cases and review of literature. *Surg Neurol* 2007;**67**:74–7.
12. Ahmad FU, Pandey P, Sharma BS, Garg A. Foot drop after spinal anaesthesia in a patient with a low-lying cord. *Int J Obstet Anaesth* 2006;**15**:233–6.
13. Ahmad FU, Mahajan H, Mahapatra AK, Suri A. Mycotic aneurysm—an unusual cause of pyrexia of unknown origin in an immunodeficient Infant. *Pediatric Neurosurg* 2006;**42**:237–9.

14. Ahmad FU, Mahapatra AK, Mahajan H. Craniofacial surgery for Craniometaphyseal dysplasia. *Neurol India* 2006;**54**:97–9.
15. Ahmad FU, Mahapatra AK, Mehta VS. Outcome of ‘Unknown’ head injury patients at a tertiary care neurosurgical centre. *Neurol India* 2006;**54**:73–4.
16. Ahmad FU, Mahapatra AK, Sharma BS. Posttraumatic basal ganglia haematoma: Seven years experience at a tertiary care centre. *Indian J Neurotrauma* 2006;**3**:103–6.
17. Ahmad FU, Mahapatra AK, Sharma BS. Care of the unknown: Appraisal of a problem. *Natl Med J India* 2006.
18. Ahmed FU, Gupta DK, Mahapatra AK. Archnoiditis mimicking recurrent spinal ependymoma: A case report. *Pan Arab J Neurosurg* 2006.
19. Ahmad FU, Mahapatra AK. Spinal dysraphism with lower limb giant epidermal. neuroimages. *Pediatr Neurosurg* 2007;**43**.
20. Atri S, Sharma MC, Sarkar C, Garg A, Suri A. Papillary glioneuronal tumour: A report of a rare case and review of literature. *Childs Nerv Syst* 2007;**23**: 349–53
21. Chandra PS, Salamon N, Huang J, Wu JY, Koh S, Vinters HV, *et al.* FDG-PET/MRI coregistration and diffusion-tensor imaging distinguish epileptogenic tubers and cortex in patients with tuberous sclerosis complex: a preliminary report. *Epilepsia* 2006;**47**:1543–9.
22. Chandra PS, Salamon N, Nguyen ST, Chang JW, Huynh MN, Cepeda C, *et al.* Infantile spasm-associated microencephaly in tuberous sclerosis complex and cortical dysplasia. *Neurology* 2007;**68**:438–45.
23. Chouhan MS, Sharma MS, Sharma BS. Of a crash helmet and a cranial bolt: A design change recommendation. *Neurol India* 2007;**55**:84–85.
24. Dhandapani SS, Manju D, Agrawal M, Chutani A, Sharma BS, Mahapatra AK. Mid arm muscle circumference monitoring in severe head injury. *Indian J Neurotrauma* 2006;**3**:107–11.
25. Deb P, Sharma MC, Tripathi M, Sarat CP, Gupta A, Sarkar C. Expression of CD34 as a novel marker for glioneuronal lesions associated with chronic intractable epilepsy. *Neuropathol Appl Neurobiol* 2006;**32**:461–8.
26. Deb P, Sarkar C, Garg A, Singh VP, Kale SS, Sharma MC. Intracranial gliofibroma mimicking a meningioma: A case report and review of literature. *Clin Neurol Neurosurg* 2006;**108**:178–86.
27. Dwarakanath S, Suri A, Mahapatra AK, Mehta VS, Gaikwad S, Sarkar C. Endoscopic assisted excision of a retroclival arachnoid cyst presenting as hysterical breathlessness. *Childs Nerv Syst* 2006;**22**:424–7.
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29. Dwarakanath S, Shivakumar KR, Venkataramana NK. Aplasia cutis congenita of the scalp: Therapeutic modalities. *Neurol India* 2006;**54**:312–3.
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- hemangioblastomas: An institutional experience. *Neurol India* 2006;**54**:276–8.
31. Epari S, Sharma MC, Sarkar C, Garg A, Gupta A, Mehta VS. Chordoid Meningioma, an uncommon variant of meningioma: A clinicopathologic study of 12 cases. *J Neurooncol* 2006; 78 : 263-9
  32. Giri PJ, Sharma MS, Jaiswal AK, Behari S, Jain VK. Extruded lumbar disc associated with epidural hematoma: A case report. *J Neurosurg* 2006;**104**(Suppl. 4):282–4.
  33. Gupta A, Ahmad FU, Kumar A, Gaikwad S, Vaishya S. Umbilical CSF Fistula: A rare complication of ventriculoperitoneal shunt. *Acta Neurochir (Wien)* 2006;**148**:1205–7.
  34. Gupta A, Kasliwal MK. Unusual MR features of adult cerebellar medulloblastoma. *J Neurooncol* 2006;**78**:47–8.
  35. Gupta DK, Suri A, Mahapatra AK, Mehta VS, Sarkar C, Garg A, Ahmad FU. Intracranial Rosai-Dorfman disease in a child mimicking bilateral giant petroclival meningiomas: A case report and review of literature. *Childs Nerv Syst* 2006;**22**:1194–200.
  36. Gupta DK, Satyarthee GD, Sharma MC, Mahapatra AK. Hypothalamic glioma presenting with seizures: A case report and review of literature. *Pediatr Neurosurg* 2006; 42:249–53.
  37. Gupta DK, Kumar H, Mahapatra AK. Role of ICP monitoring in patients with Traumatic brain injury: An experience of 98 cases. *Indian J Neurotrauma* 2006;3:31–6.
  38. Gupta DK, Ojha BK, Mahapatra AK, Sarkar Chitra, Sharma BS, Mehta VS. Recurrence in pediatric craniopharyngiomas: A study of clinical and histological factors. *Childs Nerv Syst* 2006;22:50–5.
  39. Gupta DK, Mahapatra AK. Post traumatic intradiploic pseudomeningocele. *Pediatr Neurosurg* 2006;**42**:200–1.
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  46. Gupta SK, Mohendra S, Sharma BS, *et al*. Tuberculosis of the craniovertebral junction:

- Is surgery necessary? *Neurosurg* 2006;**58**:1144–50.
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  52. Kasliwal M, Mahapatra AK. Double calvarial fibrous dysplasia. *Neurol India* 2006;**54**:455–6.
  53. Kasliwal MK, Mahapatra AK. A symptomatic posterior fossa subdural effusion: A case Review. *Pan Arab J Neurosurg* 2007.
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  56. Kasliwal M, Gupta DK, Mahapatra AK. Quadrigeminal cistern herniating into an occipital encephalocele. Neuroimaging. *J Pediatric neurosci* 2006;**1**:72.
  57. Nayak PK, Mahapatra AK. Frontal Bone Agenesis in a Patient of Spinal Dysraphism. *Pediatric Neurosurg* 2006;**42**:171–3.
  58. Ravi D, Dwarakanath S, Swaroop GR, Venkataramana NK. Spontaneous spinal extradural hematomas. *J Clin Neurosci* 2006;**13**:269–72.
  59. Rath GP, Mukta, Prabhakar H, Dash HH, Suri A. Haemodynamic changes after intracisternal papaverine instillation during intracranial aneurysmal surgery. *Br J Anaesth* 2006;**97**:848–50.
  60. Sharma S, Sharma MC, Gupta DK, Sarkar C. Angiogenic patterns and their quantitation in high grade astrocytic tumours. *J Neurooncol* 2006;**79**:19–30.
  61. Salamon N, Andres M, Chute DJ, Nguyen ST, Chang JW, Huynh MN, *et al*. Contralateral hemimicrencephaly and clinical-pathological correlations in children with hemimegalencephaly. *Brain* 2006;**129**:352–65.
  62. Sarkar C, Sharma MC, Deb P, Singh VP, Chandra PS, Gupta A, *et al*. Neuropathological spectrum of lesions associated with intractable epilepsies: A 10-year experience with a series of 153 resections. *Neurol India* 2006;**54**:144–50, discussion 150–1.

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64. Sharma MS, Jha AN. Spinal clearance after isolated craniocerebral trauma: A management algorithm. *IJNT* 2006;**3**:125–34.
65. Sinha S, Agrawal D, Mahapatra AK. Split cord malformations: An experience of 203 cases. *Child's Nerv Syst* 2006;**22**:3–7.
66. Sethi KS, Garg A, Sharma MC, Ahmad FU, Sharma BS. Cervicomedullary compression secondary to massive calcium pyrophosphate crystal deposition in the atlantoaxial joint with intradural extension and vertebral artery encasement. *Surg Neurol* 2007;**67**:200–3.
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### Chapters in Books or Proceedings

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2. Suri A, Garg AK, Chandra PS, Kumar R, Sharma BS, Mahapatra AK. Endoscopic Third Ventriculostomy in Infantile Hydrocephalus. *Progress in clinical neurosciences*; 2006.
3. Garg A, Suri A, Gulati S. CNS Tumours. In: Mathur GP, Mathur S (eds). *Current trends in pediatrics*. Academia Publishers. 2006;**2**:382–403.

### Neurology

#### Journals

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3. Singh S, Behari M. Verbal and visual memory in patients with early Parkinson's disease: Effect of levodopa. *Neurol India* 2006;**54**:33–7.
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## Clinical Psychology

### Journal

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## PATIENT CARE

### Neurosurgery

Clinical workload	Numbers
Total no. of admissions	4,248
Total no. of operations	3,314
Major	2,812
Minor	502
<b>Total number of neurosurgery OPD patients</b>	<b>31,841</b>
New cases	10,060
Old cases	21,781
<b>Total number of Gamma Knife OPD patients</b>	<b>764</b>
New cases	238
Old cases	526

### Neurology

Indoor	2,865
Outdoor	
Data provided by the record section till March 2007	
<b>Total old and new patients</b>	<b>57,752</b>

## Procedures done in EMG/EP/EEG Labs

### Electrophysiology Lab:

EEG	2,359
Long and short term VEEG	180
Evoked Potentials	74
NCV-EMG	1,979
QST	20

All faculty participated in patient awareness camps and commemorative days organized by the department in the field of Parkinson's disease, Epilepsy, Stroke, Dementia, etc.

All participated in AIR and TV shows on public awareness programmes on Brain diseases.

### Academic, Administration, Finance, Engineering, Library, Central facilities, etc.

1. Professor K. Prasad is appointed as Director, Clinical Epidemiology Unit, AIIMS.
2. Professor K. Prasad is appointed as Chairman of Neurosciences OPD Committee of Neurosciences Centre, AIIMS.



## Neuroanaesthesiology

### Perioperative Anaesthetic Care

1. Anaesthetic management of a total of 2,967 operations (2,006 routine and 961 emergency) was performed.
2. Anaesthetic management for 350 neuroradiological procedures (270 diagnostic and 80 therapeutic) was performed.

### Neurointensive Care Unit

Intensive care of more than 2,520 patients (including neurosurgical, trauma victims and critically ill neurological patients) was performed.

### Pain Clinic

A total of 722 patients (113 New and 609 Old) were seen in the OPD; 148 of them were treated with various nerve blocks in the operation theatre.

## Neuroradiology

### Procedures

	Number of investigations
Digital subtraction angiography	616
Gamma knife angiogram	60
Myelo/ventric	5
CT Head	8,973
Chest	297
Abdomen	221
Spine	593
Angio	56
Image guided/CT guided study	49
Routine CT	7,138
Emergency CT	10,113
Ultrasound	1,427
MRI/MR angiography	1,771
MR (Gamma Knife and X-Knife)	250
Plain X-rays OPD/indoor	16,800
Private case reporting	3,938
Interventional procedures	116
<b>Total</b>	<b>52,539</b>

### Neuropathology Laboratory

Neuropathology surgical specimens	2,280
Frozen sections	220
Diagnostic immunohistochemistry for tumours	2,457

### **Muscle Biopsies**

Total number received	403
Muscle enzyme histochemistry	1,698
Muscle immunohistochemistry	1,937

### **Electron Microscopy**

Total specimens received	1,203
Specimens processed for EM	650
Nerve biopsies—Myelin stain	123

### **Neurobiochemistry**

The number of laboratory investigations carried out for the neurology patients in the year ending, 1 April 2006–31 March 2007 in the various disciplines in as follows:

#### **Clinical chemistry**

<b>Name of the investigations</b>	<b>Number of samples/ year</b>
Glucose (fasting, postprandial/random)	36,400
Urea	36,400
Creatinine	36,400
Calcium	23,150
Phosphorus	23,150
Total/direct/indirect bilirubin	23,150
Total protein	23,150
Albumin	23,150
AST	23,150
ALT	23,150
Alkaline phosphatase	23,150

#### **Haemogram**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
Haemoglobin	28,225
PCV	15,120
RBC	15,120
Retics	15,120
Platelets	28,746
WBC	28,746
WBC-differential	28,746
ESR	18,123

**Coagulation profile**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
PT	3,127
APTT	3,127
Fibrinogen	728

**Other enzymes**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
CK	1,798
CK-MB	1,798
LDH	1,798

**Lipid profile**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
Cholesterol-total	3,275
Cholesterol-HDL	3,275
Cholesterol-LDL	3,275
Cholesterol-VLDL	3,275
Triglycerides	3,275

**Antiepileptic drugs**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
Phenytoin	2,134
Carbamezapine	1,812
Valproic acid	2,123
Barbiturates	287

**Hormone profile**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
T3	5,400
T4	5,400
TSH	5,700
GH	1,860
Cortisol	1,500
Prolactin	2,500
LH	540
FSH	540
Beta-endorphin	400

Melatonin	192
Serotonin	492

### **Other investigations**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
Neurocysticercosis	220
<i>M. Tuberculosis</i> IgA	15
<i>M. Tuberculosis</i> IgG	15
<i>M. Tuberculosis</i> IgM	15
Myelin basic protein	124
Oligoclonal bands of CSF IgG	124
ANA	450
ANCA	450
RA Factor	550
Vitamin B12	636
Folic Acid	128
Homocysteine	720
Ferritin	324
Co-enzyme Q	220

### **Catecholamines**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
Adrenaline	272
Nor adrenaline	272
VMA	48
ADA	248
Total iron	158
TIBC	158
Orexin	96
Protein electrophoresis	48
Magnesium	142

### **Copper metabolism**

<b>Name of the investigation</b>	<b>Number of samples/ year</b>
Serum copper	256
Urinary copper	185
Ceruloplasmin	546

## **Myasthenia gravis**

### **Name of the investigation**

### **Number of samples/ year**

Acetylcholine receptor antibody  
Musk antibody

129  
56

## **Clinical Psychology**

### **April 2006–March 2007**

#### **Patients seen patient/sitting**

#### **Total no. of patient**

#### **Time taken/**

No. of consultations

320

–

Ward patients  
hours

141

45 minutes to 3

OPD patients  
hours

140

45 minutes to 3

Counselling patients/relatives  
minutes

278

10 minutes to 45

Therapy  
hour

5 patients (4 to 7 sessions each)

45 minutes to 1

Research  
3½ hours

40

45 minutes to

## **AWARDS, HONOURS AND SIGNIFICANT EVENTS**

### **Neurosurgery**

#### **Professor A.K. Mahapatra**

- President: Neurotrauma Society of India. 2006–2007
- Vice President:
  - Skull Base Surgery Society of India, 2006–2007
  - Indian Society for Pediatric Neurosurgery
  - Executive Member, International Society for Pediatric Neurosurgery
  - Chairman, Liaison Committee, ISPN
- Associate Editor: *Child's Nervous System*

**Dr P.S. Chandra** Penry Minifellowship award, Wakeforest University, USA; March 2006; Tadokaro best paper award, Asiano-oceanic Congress, Kuala Lumpur, Malaysia; March 2006. He was visiting faculty and participant, Venice Summer School on Epilepsy Surgery, Venice International Neurosciences Institute, Venice, Italy [supported by Marie Curie foundation], April 2006. Virat Vaibhav: Educational article on epilepsy surgery, November 2006;

**Dr Manish Singh Sharma** Herbert Krause Best paper for Neuro-oncology at the 55th Neurological Society of India's Annual Conference, Madurai, 2006.

**Dr Deepak Agrawal** ISPN scholarship for presenting research titled ‘Complex split-cord malformations: The untold story’, Annual ISPN Meeting, Taipei, Taiwan; September 2006.

**Dr Deepak Gupta** was awarded the Best paper award on paper entitled Intratumoral immunotherapy in recurrent high grade gliomas in 4th South Asian Neurosurgery Congress, India Habitat Centre, New Delhi, February 2007; best poster award (co-author) for the poster entitled ‘Clinicoradiological analysis of traumatic basal ganglion hematomas: A study of 94 cases’, 15th Neurotrauma Conference, New Delhi, 18–20 August 2006.

**Professor B.S. Sharma**, Secretary, Neurological Society of India.

**Dr S.S. Kale**, Elected Chairman of AO Spine India Chapter. A worldwide organization of Spine surgeons with an Indian membership of 738 spine surgeons in India for a term of 3 years; Organized AO Spine Spring Seminars in Lucknow, Pune and Trivandrum; Organized 9th Micro neurosurgery workshop at AIIMS; Nominated, Course Chairman for AO Spine Davos Courses for year 2007.

**Dr A. Suri**, Executive Member, SBSSI, Skull Base Surgery Society of India, 2006/2007.

### **Neurology**

**Professor M. Behari** is Member, Governing Council, National Institute of Mental Health and Neurological Sciences, Banglore, 2005; elected as vice-president (president-elect), Delhi Neurological Association; elected as vice-president (president-elect), Indian Academy of Neurology; is Executive member of Asian Oceanian section of Movement Disorders Society; invited to host the Asian-Oceanian Parkinson and Movement Disorders congress in 2009; nominated for General Amir Chand Oration of National Academy of Medical Sciences, 2007; Task Force member of designing of web site of Movement Disorders Society; member, Task Force on Stem Cells and Regenerative Medicine of DBT.

**Professor K. Prasad**, awarded the UK India Research Initiative Project Formulation Travel Grant’; nominated as an Editor of the Edinburgh-based Cochrane Stroke Review Group; nominated as a Member of Editorial Board of *Practical Neurology*, a BMJ publication; nominated as a National Coordinator in India for International Stroke Trial-3 (IST-3) being coordinated by the Neurosciences Trial Unit, University of Edinburgh, UK; nominated as a National Coordinator in India for Efficacy of Nitric Oxide in Stroke (ENOS) Trial being coordinated by the University of Nottingham, UK.

**Professor M.V. Padma**, awarded the Achanta Laxmipathi Oration, NAMS, 2006; selected to be the National Co-ordinator for the SITS-MOST-NEW, INDIA Registry for ‘Thrombolysis programme in AIS’ for India.

**Dr M. Tripathi**, completed a UCLA fellowship in Epilepsy and Neurophysiology, UCLA, USA, 2005–2006; completed 3 months course in Introduction and principles of Clinical Research, NIH, 2006; has completed PENRY Minifellowship at Wake Forest University, North Carolina USA In Epilepsy; completed Sleep disorders training rotation during the fellowship in Epilepsy, UCLA Santa Monica Sleep Disorders centre, UCLA, USA; observed at the Veterans Affairs Dementia disorders clinic, West LA, USA; received Young Investigator awards for the Aceano oceano epilepsy congress Kuala Lumpur Malaysia; awarded Travel Fellowship awards for the World Association of Sleep Disorders, Bangkok.

**Dr S. Singh**, awarded International Headache Society travel fellowship to attend the Migraine trust international symposium, London, September 2007; awarded Japan Amyotrophic Lateral Sclerosis Association travel bursary and India Trust Travel fellowship for the JALSAMND meeting, Yokohama, Japan, November 2007.

**Dr V. Goyal**, elected as Joint Secretary of Tropical Neurology section of Indian Academy of Neurology, IAN, September 2006; awarded Boehringer-Ingelheim, Japan travel Bursary, to attend 10th Congress of Parkinson's Disease and Movement Disorders, Kyoto, Japan, 28 October–3 November 2006.

**Dr G. Shukla**, awarded the prestigious President's Research Initiative Award of the American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM), Washington DC, USA; October 2006 for research work entitled 'Abnormal sympathetic hyper-reactivity in patients of Myasthenia gravis'; has received the International Federation of Clinical Neurophysiology fellowship for papers presented at the AANEM meeting, Washington DC, USA, October 2006; has received a travel bursary award for paper entitled 'Ictal speech in intractable complex partial seizures: The most reliable lateralizing sign on clinical description' presented at the 6th Asia-Oceanian Epilepsy Congress, Kuala Lumpur, November 2006; received the 'Young Investigator Award' for research work entitled 'Quantitative thermal sensory testing and sympathetic skin response in Restless legs syndrome 'a study with 57 Indian patients', World Association of Sleep Medicine Congress, Bangkok, Thailand, February 2007.

**Dr R. Bhatia**, selected as to attend the 'Summer School of Myology', Institute de Myology, Paris, France, 14–23 June 2006.

### **Neuroanesthesia**

**Professor H.H. Dash** was appointed chief of Neurosciences Centre; awarded Y.G. Bhojraj Award during National Conference of Indian Society of Anaesthesiologists held at Mysore for the best Review article published in Indian Journal of Anaesthesia, December 2006; delivered Professor Harivir Singh oration at the 2nd International Symposium and 8th Annual conference of Indian Society of Neuroanaesthesiology and Critical Care (ISNACC 2007, the India Habitat Centre,

New Delhi, 9–11 February 2007.

Organizing chairman of 2nd International Symposium and 8th ISNACC, 9–11 February 2007.

### **Neuroradiology**

**Dr N.K. Mishra** nominated to the Task Force on ‘Basic research in modern biology’, DBT, Ministry of Science and Technology, Government of India; nominated to the subcommittee for formulation of the 11th Five-Year Plan (2007–2012) for ‘Basic research in modern biology’, DBT, Ministry of Science and Technology, Government of India; chaired a scientific session at the XVIII Symposium Neuroradiologicum, the quadrennial scientific meeting of the World Federation of Neuroradiological Societies (WFNRS), Adelaide Convention Centre, Adelaide, Australia, 19–24 March 2006. Also participated in the business meeting of the WFNRS representing the Indian Society; co-editor-in-chief, *Journal of Neuroradiology*; 1st Prashant Shetty Memorial Oration; ‘Evolution of spinal angiography, AIIMS’; delivered at the 9th Annual Conference of Indian Society of Neuroradiology, Guwahati, 17–19 November 2006.

**Dr S.B. Gaikwad** Visiting fellowship for advanced training in neurointerventional techniques, Department of Neuroradiology, Hacettepe University, Ankara, Turkey; 15–30 May 2006.

### **Neuropathology Laboratory**

**Dr Chitra Sarkar** invited to participate in the 9th Summer School of Myology, Institute de Myologie, Hospital de la Salpetriere, Paris, France, 14–23 June 2006; invited as a Guest Faculty in CME on ‘Update on pathology of CNS and neuromuscular diseases’; Faculty of Laboratory Medicine, Ministry of Health, Kuwait, 5–7 February 2007; invited to contribute to a chapter entitled ‘CNS primitive neuroectodermal tumours’ in the revised edition of the *WHO Textbook on pathology and genetics of CNS tumours*, 2007.

She was nominated as member of the NBRC Research Advisory Committee; Member of the Management Advisory Committee, Department of Science and Technology for Young Scientists for selection for BOYCAST Fellowship; member, Research Review Committee, Tata Memorial Hospital, Mumbai; expert in Himachal Public Service Commission; Executive Member, Neurological Society of India (NSI).

**Dr M.C. Sharma** invited to contribute to a chapter entitled ‘Subependymal giant cell astrocytomas’ in the revised edition of the *WHO textbook on pathology and genetics of CNS tumours*, 2007.

**Dr Ayushi Jain**, Junior Resident, awarded the Second Prize for her paper entitled ‘Role of major histocompatibility complex (MHC-I and II), cell adhesion molecules and membrane attack complex in the pathogenesis of inflammatory muscle diseases’, presented at the 9th Annual Meeting of Delhi Neurological Association, 3–4 February 2007; awarded the Ramalingaswami Best Paper Award for her paper entitled ‘MHC class-I and II detection as a diagnostic tool in inflammatory myopathies’



at the Annual Conference of the Delhi Chapter of IAPM, April 2006.

### **Neurobiochemistry**

**Dr M. Murali**, PhD student, won the best poster presentation award for ‘Genetic polymorphisms of drug metabolizing enzymes CYP2C9 and CYP2C19 in patients showing toxicity to phenytoin’, Indo-Australian Conference, Manipal; 17–19 March 2007.

### **Clinical Psychology**

#### **Dr Ashima Nehra**

- Fellow, Geriatric Society of India; since 2006
- Editor, *Indian Journal of Clinical Psychology*, An official publication of the Indian Association of Clinical Psychologists; July 2006.
- Reviewer of articles:
  - *Journal of Child and Adolescent Mental Health*
  - Evaluator of research project of PGI, Chandigarh
  - Journal committee of Indian Journal of Clinical Psychology, 2005–6.
- Officiating general secretary, Indian Association of Clinical Psychologists for election 2006.
- Member, Journal Committee of Indian Association of Clinical Psychology; 2006.
- Chairperson of a free paper Child and Adolescent session on 8 June 2007 at XXXIII National Annual Conference of Indian Association of Clinical Psychologists. NACIAP, Sona School of Management, Salem, Tamil Nadu; 7–9 January 2007.

## **VISITING SCIENTISTS**

### **Neuroanaesthesia**

1. Sulpicio G. Soriano, Consultant Anesthesiologist at the Children’s Hospital, Boston, MA, USA visited the department and delivered a lecture.
2. Dennis Roy, Consultant Anesthesiologist from Australia visited the department and delivered a lecture.

### **Neuropathology**

Professor KT Wong, Professor of Pathology University of Malaya, Kuala Lumpur, Malaysia visited the Department of Pathology and delivered a lecture entitled ‘Pathogenesis of henipavirus encephalitis’, AIIMS; 16 November 2006.

### **Clinical Psychology**

Presented a paper at WPA Section on ‘Psychiatry in developing countries’, 1st International Conference on ‘Improving mental health care in developing countries’, Lahore, Pakistan; 15–19 February 2007.

## 10.6 Dr Rajendra Prasad Centre for Ophthalmic Sciences

### Professor and Chief

Supriyo Ghose

### Professors

Raj Vardhan Azad

Sat Pal Garg

Atul Kumar

Gita Satpathy

(Ocular Microbiology)

Rasik Behari Vajpayee

Anita Panda

Pradeep Sharma

Jeewan Singh Titiyal

Sudarshan Khokhar

Vimla Menon

Yog Raj Sharma

Ramanjit Sihota

Radhika Tandon

Mahesh Chandra

### Medical Superintendent

Shakti Kumar Gupta

### Additional Professors

Dilip R. Shende  
(Ocular Anaesthesiology)

Rajpal

G.V. Satyanarayana Murthy  
(Community Ophthalmology)

Mandeep Singh Bajaj

Niranjan Nayak  
(Ocular Microbiology)

### Associate Professors

Seema Sen  
(Ocular Pathology)

Namrata Sharma

Tanuj Dada

Sanjay Sharma  
(Ocular Radiology)

Pradeep Venkatesh

Seema Kashyap  
(Ocular Pathology)

Neelam Pushker

### Assistant Professors

T. Velpandian  
(Ocular Pharmacology)

Viney Gupta

M. Vanathi

Medha R.

(Ocular Biochemistry)

Praveen Vashist  
(Community Ophthalmology)

Rohit Saxena

Rajesh Sinha

Renu Sinha

(Ocular Anaesthesiology)

Jasbir Kaur  
(Ocular Biochemistry)

Tushar Agarwal

Bhavna Chawla

Parijat Chandra

## EDUCATION

Undergraduates	Postgraduates	Paraclinical	Scientists/ Pool Officers/ Sr. Research Associates
MB,BS 40	MD (16 passed) PhD 11  SRs: Ophthalmology 34 Ocular Anaesthesia 2 Radiodiagnosis 1	BSc (Hons) Ophthalmology Course 34 (08 students passed)	Scientists/ Pool Officers 8

### Short- and long-term training

Thirty-seven ophthalmologists from various parts of the country including 3 WHO Fellows and 12 in training of trainers programme (Extra Capsular Cataract Extraction/Intraocular Lens) were trained in different fields of specialization.

### Continuing Medical Education

#### Organized by the departments

- 1-day Dissemination workshop on mapping of resources for control of childhood and corneal blindness in India and services for low vision and refractive errors; 30 April 2006
- Golden Jubilee CME on 'Ophthalmic surgery: Current concepts'; 22–23 July 2006.
- Advanced Glaucoma workshop on 'Exploring the glaucoma paradigm in India'; 4–5 August 2006
- 3rd manpower and management training workshop supported by the Lions Club International; 21–26 August 2006.
- Workshop and training on 'Rapid assessment of trachoma in India' in collaboration with Ophthalmology/Blindness Control Section, Ministry of Health and Family Welfare and supported by WHO; 24–28 August 2006
- Midterm review meeting for ORBIS-sponsored comprehensive Management Training project; 30 August 2006.
- Workshop and training on Rapid Assessment of Avoidable Blindness (RAAB) in India in collaboration with Ophthalmology/Blindness Control Section, Ministry of Health and Family Welfare; 4–5 September 2006.
- Glaucoma awareness programme for patients; 23 September 2006.
- Review workshop of sentinel surveillance units in collaboration with Ophthalmology/Blindness Control Section, Ministry of Health and Family Welfare; 3 November 2006.
- Workshop on 'Operational research studies', supported by ORBIS India; 8–9 November 2006.

- Workshop on 'Strategic planning in eye care', supported by ORBIS India; 10–11 November 2006.
- Dissemination workshop for 'Rapid assessment of trachoma in India' in collaboration with Ophthalmology/Blindness Control Section, Ministry of Health and Family Welfare; 9 December 2006.
- Workshop for district-level ophthalmologists on 'Outreach services for childhood blindness', supported by ORBIS India; 14–16 December 2006.
- ORBIS–Dr. Rajendra Prasad Centre workshop on 'Strategic planning on eye care'; 7–10 February 2007.
- Review meeting for the project 'Epidemiology of age-related eye disease in India (INDEYE)', supported by London School of Hygiene and Tropical Medicine; 14–15 February 2007.

### **Lectures delivered**

- The faculty of the centre participated in various scientific forums, delivered 130 lectures including keynote addresses, and chaired 76 scientific sessions.

## **RESEARCH**

### **Funded Projects**

#### **Completed**

1. Retinoblastoma protein (pRB) expression in human eyes and ocular tumours. Seema Sen. Funded by Institute Research Grant (2005–2006). Funds: Rs 60,000.
2. Role of radio-frequency ablation in early breast cancers. Sanjay Sharma. Funded by Institute Research Grant (2005–2006). Funds: Rs 1 lakh.
3. UBM study of angle closure glaucoma families. Professor Ramanjit Sihota. Funded by ICMR (2004–2006). Funds: 2,79,720.

#### **Ongoing**

1. Evaluation of the role of retinal P-glycoprotein drug transporters in the ocular disposition of drugs
2. Evaluation of calcium dobesilate for various ocular conditions
3. Evaluation of the bio-disposition of xanthophylls in Indian donor eyes and detection of their content in commonly available fruits and vegetables
4. Evaluation of the anti-cataract activity of herbal isolates and their topical ocular formulations
5. Expression of p53 and mdm2 in human malignant eyelid tumours
6. Culture of human adult retinal pigment epithelial cells on human amniotic membrane
7. Transplantation of human retinal pigment epithelial cells in the 6-OHDA lesioned rat model of Parkinson disease
8. Novel molecular diagnostics for eye disease and low vision enhancement devices
9. Developments and validation of sensitive high performance liquid chromatography method

- and evaluation of taxanes in various taxus species found in Himalayan region
10. Standardization of antifungal susceptibility testing for filamentous fungi and characterization of drug-sensitive and drug-resistant fungal isolates in mycotic keratitis
  11. Clinical evaluation of multifocal intraocular lens 'Technis Z900'
  12. Clinical evaluation of blind and clean contact lens solution
  13. Clinical evaluation of Restasis® in dry eye patients
  14. Mutation analysis in congenital and developmental glaucoma in North Indian population
  15. Comparative genome hybridization in primary angle closure glaucoma families: A pilot study in Indian patients
  16. Evaluation of tear-fluid constituents in various ocular pathological conditions using tandem mass spectrometry

## Departmental Projects

### Completed

1. To evaluate demographic profile and clinical and microbiological spectrum of donor corneas
2. The role of percutaneous vertebroplasty in the management of painful vertebral lesions
3. Evaluation of the role of multi-detector computerized tomography, computerized tomography angiography and bronchial artery embolization in the management of haemoptysis
4. Whole globe retrieval versus corneo scleral button excision: A prospective comparative study for the development of strategies to increase donor cornea procurement
5. Outcome of optical penetrating keratoplasty in bilaterally blind patients
6. Epidemiological study on pterygium in a rural population
7. Comparative evaluation of oral angiography by scanning laser ophthalmoscope and digital camera
8. Optical coherence tomography hole form factor as a predictor of surgical outcome in indocyanine green stained inner limiting membrane peeling in the treatment of full thickness macular holes
9. Scleral buckling versus pars-plana vitrectomy, in patients with rhegmatogenous retinal detachment in phakic eyes, which are not complicated by proliferative vitreoretinopathy grade C or greater (polymerase chain reaction study)
10. A prospective clinical trial comparing transpupillary thermotherapy and photodynamic therapy in treatment of occult subfoveal choroidal neovascularization in age-related macular degeneration with moderate visual loss (<6/18)
11. Prospective randomized evaluation of triamcinolone, trypan blue and conventional induced posterior vitreous detachment during pars-plana vitrectomy
12. Prospective randomized evaluation of optical coherence tomography-guided laser photocoagulation in diabetic macular oedema
13. Ofloxacin levels in vitreous of pars plana vitrectomy
14. Retinal detachment surgery versus pars-plana vitrectomy in feckey
15. Optical coherence tomography in the management in diabetic maculoadema

16. Indocyanine green-assisted ILM peeling in macular hole : Role of optical coherence tomography
17. Surgical outcomes: Diabetic vitrectomy haemorrhage
18. Evaluation of visual status and corneal topography in simple congenital ptosis and its changes after surgery
19. Evaluation of plasma levels of chemotherapeutic agents in responding and resistant cases of retinoblastoma
20. Comparison of full-time and part-time occlusion in moderate amblyopia
21. Comparative study of single muscle surgery versus two-muscle surgery in exotropia
22. Effect of acupuncture on waveform characteristics and visual acuity in idiopathic infantile nystagmus
23. Evaluation of stereopsis in patients with strabismus
24. Traumatic glaucoma evaluation
26. Juvenile glaucoma evaluation
27. Evaluation of optic nerve head topography in normal and glaucoma patients using optical coherence tomography
28. Assessment of retinal nerve fiber layer using scanning laser polarimeter and optical coherence tomography in primary open angle glaucoma
29. Efficacy of chemotherapy on adding cyclosporine to our four-drug regimen in the management of retinoblastoma
30. Evaluation of mitomycin-C application in conjunctival mucosal graft beds in the reconstruction of contracted socket.
31. Clinico-aetiological profile and follow up of children with optic atrophy
32. Ocular changes in patients with hydrocephalus and craniosynostosis
33. Comparison of ocular vision tests in the normal population and colour-deficient individuals
34. Intravitreal drug level assay in retinoblastoma patients undergoing chemoreduction
35. Role of paclitaxel in the management of retinoblastoma
36. Correlation of visual evoked potential with clinical features and severity of ventriculomegaly in hydrocephalus
37. Evaluation of amniotic membrane graft and mucous membrane graft in the reconstruction of contracted socket
38. Comparison of polymerase chain reaction and standard microbiological techniques in diagnosis of bacterial corneal ulcers
39. Comparison of polymerase chain reaction and standard microbiological techniques in diagnosis of fungal corneal ulcers
40. To compare and evaluate the surgically induced astigmatism in 3.2 mm and 5.2 mm clear corneal temporal sutureless incision phacoemulsification
41. Study of effect of photochromatic lenses on colour vision using Ishihara Charts and Farnsworth–Munsell 100 Hue test
42. Polymerase chain reaction for bacterial ulcers

43. Photo therapeutic keratectomy for corneal disorders

**Ongoing**

1. Role of directional vacuum-assisted biopsy in patients with previously equivocal biopsies for breast masses suspicious for cancer
2. Imaging evaluation of intra-orbital masses causing proptosis
3. Imaging evaluation of locally advanced squamous cell carcinoma of oral cavity
4. Role of magnetic resonance imaging in management of soft tissue sarcomas
5. Evaluation of autologous bone marrow stem cell transplant in idiopathic macular hole surgery
6. Correlation of multi focal electro retino gram and optical coherence tomography in normal population and in refractive errors
7. To compare the safety and efficacy of intravitreal injections of 0.3, 0.03, 0.003 mg Pegaptanib Sodium (Macugen®), in subjects with Diabetic Macular Edema (DME) involving the centre of the macula
8. Double-masked, placebo-controlled, multi-centre, dose ranging study to assess the efficacy and safety of LX211 as therapy in subjects with active sight threatening, non-infectious uveitis (01 and 03) and clinically quiescent sight threatening, non-infectious uveitis (02)
9. Genetic polymorphisms of vascular endothelial growth factor and risk of ‘threshold’ retinopathy of prematurity
10. Vitreous levels of gatifloxacin after systemic administration in inflamed and non-inflamed eyes
11. Functional and anatomical outcomes of vitrectomy for diabetic vitreous haemorrhage with or without retinal detachment
12. Use of autologous bone marrow derived stem cells for rehabilitation of patients with dry age related macular degeneration and retinitis pigmentosa
13. Triamcinolone-assisted macular hole surgery
14. Triamcinolone versus indocyanine green assisted macular hole surgery
15. Comparative study of combination therapies using photodynamic therapy with intra-vitreous triamcinolone vis a vis PDT with intravitreal bevacizumab in treatment of neovascular age related macular degeneration
16. Prospective comparative randomized evaluation of intra-vitreous avastin, intravitreal triamcinolone, and laser treatment in persistent diffuse diabetic macular edema
17. Single nucleotide polymorphisms associated with diabetic retinopathy, PA #/RLS/MDL/DR-01
18. Multifocal electroretinogram in emmetropes, myopes and hypermetropes and its correlation with optical coherence tomography
19. Prevalence of vitamin A deficiency in children and nursing mothers correlated with corneal pathology : A hospital-based study
20. Ulcerative eyelid lesions: Role of impression cytology and a clinicopathological correlation

21. Evaluation of modified levator plication as compared to levator resection for correction of congenital ptosis
22. Evaluation of olopatadine in allergic conjunctivitis
23. Clinical and genetic analysis of the congenital eyelid anomalies in a tertiary care hospital
24. A study to evaluate various parameters for early detection of ethambutol induced optic neuropathy
25. Evaluation of waveform characteristics and visual acuity in infantile nystagmus and the changes induced by its management
26. Evaluation of convergence exercises in cases with convergence insufficiency
27. Evaluation of the role of acupuncture in idiopathic infantile nystagmus
28. Evaluation of stereopsis in cases of strabismus
29. Evaluation of peripapillary nerve fibre layer in pituitary tumours by optical coherence tomography
30. Long term evaluation of heidelberg-retinal tomogram
31. Evaluating trabeculectomy
32. Nerve fiber layer analysis in amblyopia
33. Study on the prevalence, therapeutic options and outcome measures of amblyopia
34. Evaluation of various techniques for early detection of ethambutol induced optic neuropathy and correlating them with serum levels of ethambutol
35. Prospective evaluation of trabeculectomy bleb characteristics using ultrasound biomicroscopy and anterior segment fluorescein angiography
36. Long term changes in heidelberg-retinal tomogram and visual fields in primary adult glaucoma patients
37. Clinical comparison of matrix frequency doubling technology perimetry, standard automated perimetry and scanning laser polarimetry in primary open angle glaucoma
38. Evaluation of aetiopathogenic factors in eyes with primary angle closure
39. Evaluation of combined trabeculectomy with trabeculotomy with mitomycin versus trabeculectomy with mitomycin alone in primary congenital glaucoma
40. Evaluation of ocular toxicity of festival colours during the celebration of *Holi*
41. Development of animal models for postmenopausal dry eye
42. Development of a poly-herbal formulation for dry eye (computer vision syndrome)
43. Development of topical estrogen or androgen receptor modulator for postmenopausal dry eye using computer-aided drug design
44. Development of microdialysis technique to study intraocular kinetics of drugs
45. Evaluation of cassette dosing technique for the transcorneal penetration of drugs
46. An integrated predictive model for evidence based eye care
47. Rapid assessment of trachoma in a previous hyper endemic rural area of North India
48. Ulcerative eyelid lesions: Role of impression cytology and clinicopathological correlation
49. Assessment of validity of vision screening of school children
50. Drug trial for dry eye patients: A randomized comparative study



51. Role of auto serum in management of dry eye
52. Role of cyclosporin in the management of dry eye
53. Temporal small incision cataract surgery
54. Endothelial evaluation after small incision cataract surgery (both phaco and manual)
55. Prognostic factors for bilateral paediatric cataracts
56. Visual outcome with secondary intra-ocular lens implantation in paediatric bilateral aphakic patients
57. Retinal nerve fibre analysis in normal individuals and optic neuritis cases
58. Tear analysis in optic neuritis cases
59. Assessment of visual acuity in toddlers by behavioural vision tests
60. Oblique muscle weakening procedures
61. Nerve fibre analysis in cases of pituitary tumours
62. Comparative evaluation of visual acuity tests in preschool children
63. Mitomycin-C in restrictive strabismus : A randomized controlled clinical trial
64. Evaluation of visual function recovery following intravenous dexamethasone pulse therapy in optic neuritis with comparative evaluation of early treatment diabetic retinopathy syndrome and Snellen visual acuity charts
65. Evaluation of torsional changes after anterior myectomy of superior oblique
66. Study of psychological aspects of strabismus
67. Medical treatment of amblyopia with levodopa and carbidopa in older children
68. Evaluation of visual outcomes in bilateral congenital cataract
69. Clinical comparison of matrix frequency doubling technology perimetry, standard automated perimetry and scanning laser polarimetry in primary open angle glaucoma
70. Comparative evaluation of Ahmed valve implants and trabeculectomy with mitomycin-C in post-penetrating keratoplasty glaucoma

## Collaborative Projects

### Completed

1. Validation of algorithms proposed by National AIDS Control Organization for syndromic management of urethral and vaginal discharge in a tertiary care centre in northern India (with Dermatology and Venereology)
2. Radio-frequency ablation of small breast tumours (with Surgical Disciplines)
3. Clinical and radiological evaluation of chest infections in patients with haematological malignancies presenting with febrile neutropenia (with Haematology)
4. To assess the utility of resistive index on Doppler ultrasound in predicting chronic allograft nephropathy (with Nephrology)
5. Prediction of the levels of imatinib mesylate in patients with chronic myeloid leukemia (with Dr. Bhim Rao Ambedkar Institute Rotary Cancer Hospital and Pharmacology)
6. Evaluation of the intraocular penetration of timolol in the in situ gel forming formulation (with Institute of Nuclear Medicine and Allied Sciences, Delhi)

7. Situational analysis of human resource and eye care infrastructure for childhood blindness, refractive errors and low vision in India (with ORBIS International)
8. National Program for Control of Blindness Survey on Rapid Assessment of Trachoma in Mewat and Mahendragarh districts, Haryana (with Blindness Control Division of the Ministry of Health and Family Welfare with the support of World Health Organization)
9. Eye care services in slum areas of Delhi (with Sight Savers International)
10. Reach - in programme for cataract surgeries and pediatric ocular surgeries (with Sight Savers International)
11. Project to estimate work capacities of human resources for Vision 2020 in India (with Sight Savers International)

### Ongoing

1. To study the role of core decompression with and without fibular grafting in patients with avascular necrosis of femoral head; and its effects on the disease progression (with Orthopaedics)
2. Determination of plasma levels of morphine and its metabolites and correlation with its pharmacodynamics (with Anesthesia and Dr. Bhim Rao Ambedkar Institute Rotary Cancer Hospital)
3. Epidemiology of age-related eye disease-in India-INDEYE (with the London School of Hygiene and Tropical Medicine, UK)
4. Sentinel Surveillance Unit at Dr Rajendra Prasad Centre, AIIMS, under the National Programme for Control of Blindness (with National Program for Control of Blindness, Government of India)
5. Manpower and management development project Lions Club International Foundation (supported by Lions Club International Foundation Sight First)
6. NPCB survey on rapid assessment of avoidable blindness (with Blindness Control Division of the Ministry of Health and Family Welfare, Government of India)
7. Eye care program management project (supported by ORBIS)
8. An open labeled, prospective study to evaluate the efficacy and safety of ReliNethra (an autologous bio-engineered composite limbal epithelial graft) (with Reliance)
9. Limbal stem cell culture: Establishment and standardization of limbal stem cells culture technique according to standard international norms (with Biochemistry)
10. Outcome of optical penetrating keratoplasty in bilaterally blind patients (with Psychiatry)
11. IndEYE study: A collaborative Indo-UK study on the epidemiology of age-related macular degeneration in Indian population (with the London School of Hygiene and Tropical Medicine, UK)
12. Ruboxistaurin mesylate study in diabetic macular edema: A multicentric study to evaluate efficacy of Protein Kinase C inhibitor in diabetic macular edema
13. Flucinolone acetonide intravitreal implant study in uveitic patients: A multicentric, international study to assess the safety and efficacy of two doses of flucinolone acetonide in patients

- with posterior uveitis
14. AdREM (Advance Retinopathy Measurement) study: A sub-study of the multicentric, international advance study
  15. A randomized double masked, parallel group, multicentre, dose-finding comparison of the safety and efficacy of ASI-001A 0.5 µg/day and ASI-001B 0.2 µg/day flucinolone acetonide intravitreal inserts to sham injections in subjects with diabetic macular edema (with ALIMERA Sciences)

## PUBLICATIONS

### Journals

1. Agarwal HC, Poovali S, Sihota R, Dada T. Comparative evaluation of diode laser trabeculoplasty vs. frequency doubled Nd: YAG laser trabeculoplasty in primary open angle glaucoma. *Eye* 2006;**20**:1352–6.
2. Azad RV, Baishya B, Pal N, Sharma YR, Vohra R. Comparative evaluation of oral fluorescein angiography using the confocal scanning laser ophthalmoscope and digital fundus camera with intravenous fluorescein angiography using the digital fundus camera. *Clin Exp Ophthalmol* 2006;**34**:425–9.
3. Azad RV, Manjunatha NP, Pal N, Deorari AK. Retinopathy of prematurity: screening by non-retinologists. *Indian J Pediatr* 2006;**73**:515–8.
4. Azad RV, Pal N, Chandra P. Enhanced mydriasis during indirect diode laser therapy for threshold retinopathy of prematurity. *J Pediatr Ophthalmol Strabismus* 2006;**43**:54–5.
5. Bajaj MS, Pushker N, Chaturvedi A, Betharia SM, Kashyap S, Balasubramanya R, *et al.* Orbital space-occupying lesions in Indian children. *J Pediatr Ophthalmol Strabismus* 2007;**44**:106–11.
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## **PATIENT CARE**

### **Hospital services**

<b>New case</b>	<b>Old cases</b>	<b>Total</b>	
General OPD	1,04,790	1,18,592	2,23,382
Emergency	44,045	–	44,045
Total cases	1,48,835	1,18,592	2,67,427

**Specialty clinics**

Cornea	5,047	8,143	13,190
Lens	574	373	947
Uvea		677	1,724
	2,401		
Contact lens	561	566	1,127
Glaucoma	2,321	5,746	8,067
Ophthalmoplasty	2,664	1,223	3,887
Paediatric ophthalmology	919	445	1,364
Trauma	817	619	1,436
Retina	2,094	1,891	3,985
Neuro-ophthalmology	1,333	866	2,199
Medical ophthalmology	1,205	1,657	2,862
Vitreo retinal	2,258	1,363	3,621
Ocular surface disorder	45	50	95
Orthoptic	4,980	31,075	36,055
Squint clinic	5,515	33,159	38,674
Refraction	–	47,706	47,706
Total specialty clinic cases	31,010	1,36,606	1,67,616
<b>Grand total of cases</b>	<b>1,79,845</b>	<b>25,51,98</b>	<b>4,35,043</b>

**Indoor admissions**

	No. of cases
General ward	15,181
Casualty	1,541
Private ward	993
Short admissions	3,196
Day care admissions	5,075
<b>Total</b>	<b>25,986</b>

**Operations**

Major	13,724
Day care	4,180
<b>Total major</b>	<b>18,444</b>
Minor	5,193
<b>Grand total</b>	<b>23,637</b>

**Yearly other figures**

Average bed occupancy ratio	81%
Average length of stay	4.8 days
Average OPD attendance per working day	1,465
Average number of indoor admission per working day	71
Average number of surgeries per working day	65

<b>Investigative laboratories test</b>	<b>Numbers</b>
Fluorescein angiography + ICG	5,540
Ultrasonography	15,538
EOG	67
ECG	1,556
PRP	3,531
Focimetry (POG)	8,924
Applanation tonometry	14,156
Goldmann perimetry	2,454
Low vision aid	2,066
Automated perimetry	4,573
ERG	680
EUA	80
VER	4,065
Keratometry	22,933
Colour vision	1,645
LI	6,077
Ultrasonic pachymetry	6,200
Non contact tonometry	20,846
Indirect ophthalmoscopy	4,738
Nd-YAG laser	1,256
Laser	1,025
PDT	362
TTT	60
Auto refraction	31,016
Corneal topography (Orbscan)	2,238
Axial length	15,586
Excimer workup (Lasik)	
Lasik (operated) eyes	265
Lasik (unoperated) eyes	222
PTK (operated) eyes	75
PTK (unoperated) eyes	116
Phakic IOL (operated) eyes	17
Phakic IOL (unoperated) eyes	30
Glare	1,012
Contrast (FACTS)	1,908
Shirmer	4,100
BUT	3,225
Lasik counseling	3,229
Clinical photograph	1,760
Orthoptic work-up	250
Refraction	66,063
Contact lenses (old + new)	13,077
Artificial eye	410

Fundus photography	3,632
ENG	4
VNG	119
OCT	6,641
Retinal Camera (Ret. CAM)	310
Cornea service lab (total no. of investigations)	14,427
Cornea Rresearch lab (total no. of investigations)	7,072
Glaucoma service lab (total no. of investigations)	30,822
<b>Ocular Radiology</b>	
Total number of X-rays	11,863
Total number of CTs	141
(Done in the main Department of Radiodiagnosis)	
Total number of special investigations (DCG)	12
Total number of MRIs	51
(Done in the Department of NMR)	
<b>Ocular Microbiology</b>	
Total specimens processed in 2006	12,429
Specimens processed for bacterial culture sensitivity	9,370
Specimens processed for fungal culture	1,675
Specimens processed for acanthamoeba culture	46
Specimens processed for cytology	498
Specimens processed for viral antigen detection	104
Specimens processed for Chlamydia tissue culture	222
Specimens processed for Chlamydia antigen detection by DFA	384
Samples processed for PCR (Chlamydia)	82
Samples processed for PCR (Corneal ulcer and endophthalmitis)	10
Specimens processed for Chlamydia serology	8
Samples processed for PCR (HSV)	4
Samples processed for conjunctivitis	26
<b>Ocular Pathology</b>	
Total number of investigations	33,679
Blood TLC, DLC, PBS, ESR, BT/ CT	15,706
Urine	6,707
Histopathology, cytopathology and research	11,266
Ocular Biochemistry (Clinical Chemistry)	
Total samples	9,969
Indoor	8,207
Outdoor	1,762
<b>Ocular Pharmacology and Pharmacy</b>	
Eye drop vials dispensed	62541
MK media vials	80

**Eye Bank**

Total eyes	827
Surgery performed	422
Unsuitable for clinical Transplantation	367
Preserved in glycerine	21
Histopathology/stem cell Culture	17

**Community Ophthalmology**

Eye care services in slums	
Number of slums covered for comprehensive eye care services	10
Number of attendees at PEC clinics in slum clusters	7,342
Number of refractions carried out in PEC clinics in slum clusters	3,045
Number of patients referred to R.P. Centre	783
Number of subsidized spectacles issued in slums	1,503

**Reach-in programme**

Adult screening camps organized	18
Patients examined	6,601
Patients referred at R.P. Centre	2,065
Patients operated at R.P. Centre	1,462
Follow up camps organized	1
Follow up patients examined	1,272*
Pediatric screening camps organized	1
Children examined	310
Children referred at R.P. Centre	55
Children operated at R.P. Centre	9

**School eye screening programme**

Schools covered	20
Teachers trained	30
Students examined	1580
Spectacles prescribed	449
Spectacles issued	449

\*This figure also includes patients who have been operated in the previous year.

**AWARDS AND HONORS**

**Professor S. Ghose** invited by the DGHS to be a member of the Expert Committee at the central level to prepare guidelines for states regarding examination of children admitted to blind schools

and treatment of those who can be restored vision; Coordinated Eye Camps by Dr R.P. Centre for eye screening, cataract and other specialty eye surgeries, under the National Programme for Control of Blindness (NPCB), Ministry of Health and Family Welfare, Government of India, together with the National Rural Health Mission (NRHM), April 2006; International Reviewer for the Journal of the College of Physicians and Surgeons, Pakistan, (JCPSP); Expert Member, Selection Committee of PGIMS, Rohtak for the posts of Professors in the Department of Ophthalmology, April 2006; Resource Person, National Forum of Vision 2020: The Right to Sight—India for LRSP Workshop, Goa, April 2006; External Examiner for MD Ophthalmology Clinical and Practical Examinations, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal, May 2006; Expert Member, Personality Testing Board, Union Public Service Commission (UPSC), New Delhi, July 2006; Member, Dean's Committee constituted for review and revision of the guidelines for evaluation of thesis for PhD degree, AIIMS; Resource Person, International Conference on Planning and Designing of Healthcare Facilities Conference, Goa, September 2006; Member, Inspection Board of the Medical Council of India for Era's Lucknow Medical College and Hospital, Lucknow, October 2006; Resource Person, XXXVII Annual Conference and Scientific Programme of the Ophthalmological Society of West Bengal, Haldia, November 2006; Chief Guest and Chairman of the Symposium on Childhood Blindness at the Regional Institute of Ophthalmology (RIO), Sitapur, UP, February 2007; Reviewer for *Indian Pediatrics*, *Indian Journal of Pediatrics* and *Indian Journal of Ophthalmology*; Reviewer for Projects submitted to Indian Council of Medical Research, Department of Science and Technology and Council for Scientific and Industrial Research 2005–2006; Expert Member of the Technical Advisory Group for Projects submitted to District Rehabilitation Centre Scheme, Ministry of Social Justice and Empowerment, Government of India; Expert Member to help the Sectional Committee of Ophthalmic Instruments and Appliances, MHD 5, Bureau of Indian Standards.

**Professor Rajvardhan Azad** WHO Consultant for Government of Maldives for policy making and preparing plan of action for Vision 2020 in Maldives, 2006; WHO Consultant for a workshop on Toxoplasmosis at Indira Gandhi Memorial Hospital in Maldives, organized jointly by World Health Organization and Government of Maldives; Appointed WHO short term consultant for Government of Maldives for policy making and preparing plan of action, December 2006; Expert Standing Selection Committee, Postgraduate Institute of Medical education and Research, Chandigarh, 2006; Member, Selection Committee, UPSC, New Delhi, 2006; Member Selection Committee, Rajendra Institute of Medical Sciences (RIMS), Ranchi, Jharkhand, 2006; Trainer, National Programme for Control of Blindness, Vitreo-retinal Surgery and Medical Retinal treatment, 2006; appointed Consultant to Sight Savers International to evaluate ROP Project in LV Prasad Eye Institute, Hyderabad, November 2006; Member of the Executive Council of X Asia Pacific Academy of Ophthalmology (APAO) 2006-2007; Regional Secretary of Asia Pacific Academy of Ophthalmology (APAO) 2006-2007; Secretary General, All India Ophthalmological Society, 2006-2007; Member Reviewers Committee, Indian Council of Medical Research (ICMR), August 2006-2007; Resource Person, ORBIS Dissemination workshop on mapping of human resources

and infrastructure for specialty eye care services in India, AIIMS, New Delhi, 2006; Secretary General of SAARC Ophthalmic Congress, 2006-2007; Special Guest to deliver SAARC Oration in inauguration of SAARC Ophthalmic Congress, Sri Lanka, 2006; Guest Faculty in 8th Ophthalmological SAARC Countries 15th Annual session of the College of Ophthalmologists, Sri Lanka, September 2006; Chief Guest and Faculty: Live surgical demonstration at Drishti Eye Care and Research Centre, 2006; Awarded M.M. Joshi Oration Medal at the 6th Deccan Ophthalmic Association, Mahableshwar, 2006; delivered 'NEOS-ORATION' on Retinopathy of Prematurity during the first convention of North Eastern Ophthalmic Society, Shillong, October 2006; Guest Faculty, South East Asia Novartis Advisory group meeting in Kuala Lumpur, Malaysia, March, 2006; Guest Faculty, Inaugural meeting of APVRS and VI International Symposium of Ophthalmology, Hong Kong, August 2006; Reviewer *Indian Journal of Ophthalmology*, *Clinical and Experimental Ophthalmology*, *Journal of American Academy of Pediatric Surgery* (JAAPOS) and *Archives of Medicine*, 2006; Chairman, Ophthalmology Section, Bureau of Indian Standards (BIS) Ministry of Agriculture Food and Civil Supplies, Consumer Affairs and Public distribution, March 2007; delivered 'De O'Campo Oration' during the 22nd Congress of Asia Pacific Academy of Ophthalmology at Lahore, Pakistan, 24–28 February 2007; Honorary Advisor/Consultant to Armed Forces Medical Services in Ophthalmology; Member, Staff Council, AIIMS; Member, Dean's Committee, AIIMS.

**Professor S.P. Garg** co-author of 'S. NATARAJAN' Award for best free paper in retina session at AIOS 2007; co-author of 'Certificate of Merit' Award for best free paper presentation at DOS 2007.

**Professor Anita Panda** Editorial Board Member, Journal Expert Ophthalmology; elected as Executive member EBAI; Reviewer for *Cornea* and *Indian Journal of Ophthalmology*.

**Professor Yog Raj Sharma** Member, Staff Council, AIIMS, 2006–2007; Expert- Sher-I-Kashmer Institute of Medical Sciences, Apical Selection Committee; Peer Reviewer: *Ophthalmology* (*Journal of American Academy of Ophthalmology*), 2006; Reviewer, Trauma abstracts submitted for paper/poster presentation at AIOS '07, Hyderabad;

**Professor Atul Kumar** awarded 'Padma Shri', January 2007; Awarded Fellowship of National Academy of Medical Sciences, India, October 2006; Reviewer *Indian Journal of Ophthalmology* 2006 and *Journal of Ocular Pharmacology and Therapeutics*, USA, 2006; Member Selection Committee Union Public Service Commission, 2006; Member of Stem Cells Committee, AIIMS, September 2006; Member, Indo-US Joint Working Group on the Expansion of Vision Research—a joint collaboration with Department of Biotechnology, 2006.

**Professor Pradeep Sharma** awarded ORBIS faculty post at Lions NAB Eye Hospital, Miraj, Maharashtra for Pediatric Ophthalmology and Strabismus, April 2006; Awarded Dr Ishwar Chandra



Golden Jubilee Oration for outstanding work in the fields of Strabismus, Neuro-Ophthalmology and Pediatric Ophthalmology by the Vidarbha Ophthalmological Society, Nagpur, 2006.

**Professor Ramanjit Sihota** awarded American Academy of Ophthalmology Achievement award, 2006; Reviewer for (i) *Indian Journal of Ophthalmology*, 2006 (ii) *Ophthalmic Epidemiology*; 2006 (iii) *Archives of Ophthalmology*, 2006 (iv) *Ophthalmic and Physiological Optics*; 2006 (v) *British Journal of Ophthalmology*, 2006 (vi) *Eye*, 2006 (vii) *Acta Ophthalmologica*, 2006.

**Professor J.S. Titiyal** best of show award for scientific video entitled: 'Keratoplasty : The bonds strengthened' by the American Academy of Ophthalmology at the Annual meeting of AAO, Las Vegas, USA, November 2006; Awarded Distinguished Resource Teacher of the Society by Delhi Ophthalmological Society, New Delhi, April 2006; Member, Selection Committee of the Council of Scientific and Industrial Research (CSIR) for selection of SRA (Pool Scientists), August 2006; Advisor for medical board guidelines for A1 category Indian Railway employees, New Delhi, August–September 2006; Expert committee member for ESI hospital Phacoemulsification unit at Basaidarapur, New Delhi, August 2006; Chief advisor for guidelines for management of corneal trauma and infections for World Health Organization and Ministry of Health and Welfare, Government of India, August–September 2006; Reviewer for: *Indian Journal of Ophthalmology*, and *The National Medical Journal of India*; Editorial board member, *Delhi Journal of Ophthalmology* and *Journal of Uttranchal Ophthalmological Society*.

**Professor Radhika Tandon** nominated as International Health Professional of the Year International Biographical Centre, Cambridge, England; Member of Task force in the priority areas of the Blindness Programme in All India Ophthalmological Society; Moderator in Annual Conference organized by Syntho Pharmaceuticals Pvt. Ltd., 1–3 September 2006; Co-convenor VIIIth Ophthalmological Conference SAARC countries in Colombo, Sri Lanka, 20–24 September 2006; Co-chairperson Phacoemulsification and Refractive surgery, overcoming Intraoperative challenges, 19 November 2006; Panel member in workshop Cornea 2006 on focus – Paediatric Cornea and Keratorefractive Surgery', 10 December 2006; Moderator in AIIMS Golden Jubilee Celebration on 23rd July 2006; Co-instructor in 'Keratoprosthesis: Looking Beyond Corneal Transplantation' for AIOS 2007, 2 February 2007; continued to be: Member of the core group for introduction of OSCE-style examination by the National Board of Examination; Chairperson of North Zone of Eye Bank Association of India; Member, panel of examiners in Ophthalmology of Royal College of Surgeons, Edinburgh.

**Professor S. Khokhar** selected as surgeon in-charge for RIO Calcutta live surgery session under the project ORBIS for Pediatric cataract surgeries, 23 November 2006; elected as General Secretary for the SSI (Strabismological Society of India) 2006-2008.

**Dr Shakti Kumar Gupta** Member, Project Management Committee constituted by Ministry of

External Affairs, Government of India, for establishing 200 bedded Trauma Centre at Kathmandu Nepal; Member, expert committee for upgradation of National Referral Hospital at Thimpu and Regional Referral Hospital, Monger, Bhutan; Member of the committee for preparation of training module/curriculum for in-service training of Hospital Managers and Professionals; Resource Person for research activities conducted by Centre for Management of Health Services, Indian Institute of Management, Ahmedabad; Member, Bureau of Indian Standards for developing Indian standards for hospital equipment management and quality assurance standards for patient care services; Member of the Expert Committee constituted by Ministry of Health and Family Welfare, Government of India regarding establishing six AIIMS like Institutions and Upgradation of 13 Medical colleges under Pradhan Mantri Swasthya Suraksha Yojna; Member, Working group on Clinical establishments, Professionals services, Regulations and Accreditation of Health Care Infrastructure by Planning Commission for the XI Five-Year Plan (2007–2012).

**Dr G.V.S. Murthy** technical consultant for the National Nigeria Blindness and Low Vision Survey; Technical Advisor on the ORBIS POLTC Project and RIO Project; Member of the Editorial Board of the Journal of Community Eye Health (2006–2007); Reviewer for *Indian Journal of Ophthalmology*, *International Ophthalmology*, *The National Medical Journal of India*, *Journal of Community Eye Health*; *Acta Ophthalmologica International Ophthalmology* and *Visual Science*; Member of Reviewer's panel of *British Journal of Ophthalmology*; and *Lancet*; President, Indian Alumni Group of ICEH, London; Member, Academic Resources Advisory Committee of the National Programme for Control of Blindness; Member, Editorial Board of National Programme for Control of Blindness Bulletin; Member, Editorial Board of the *Journal of Community Eye Health* (Indian Edition) and *Journal of Ophthalmology*, Uttar Pradesh; Secretary, Eye Care Initiative, a forum for public health ophthalmologists in India; Member of India Clinical Epidemiology Network; Member of the Operational Research Advisory Group of Vision 2020 India; Member of the WHO Global Monitoring Committee of Implementation of Vision 2020 Initiative (2005); and invited faculty for the Community Eye Health Diploma course at the L.V. Prasad Eye Institute, Hyderabad since 2005.

**Dr Rajpal** co-author of 'S. NATARAJAN' Award for best free paper in retina session, AIOS, 2007; co-author of 'Certificate of merit' Award for best free paper presentation, DOS, 2007; Co-author of AC AGARWAL Trophy, DOS, 2006; Executive member of Ocular Trauma Society, North Zone; Appreciation award for Mega Blood Donation Camp during Dengue outbreak in association with Dera Saccha Sauda volunteers, AIIMS; appreciation award from DOS; Editor *Delhi Journal of Ophthalmology*; Advisor on Stem cell research in NCRM in collaboration with Japan.

**Dr Namrata Sharma** best of show award for scientific video entitled: Keratoplasty: The bonds strengthened by the American Academy of Ophthalmology at the Annual meeting of AAO, Las Vegas, USA, November 2006.

**Dr Tanuj Dada** distinguished Resource Teacher award by the Delhi Ophthalmological Society; Global Editor–Glaucoma section of *Ophthalmology World Report*; Reviewer for (i) *Journal of Cataract and Refractive Surgery*; (ii) *Acta Ophthalmologica*; (iii) *Clinical and Experimental Ophthalmology*; and (iv) *Indian Journal of Ophthalmology*.

**Dr T. Velpandian** selected as Secretary of Indian Pharmacological Society (Delhi Branch); nominated as Chief Editor of *Indian Journal of Hospital Pharmacy*.

**Dr Praveen Vashist** invited faculty for the Community Eye Health Diploma course at the L.V. Prasad Eye Institute, Hyderabad since 2005; Reviewer for the *Indian Journal of Ophthalmology*, 2006.

**Dr Jasbir Kaur** Expert Member, Task Force, Central Council for Research in Ayurveda and Siddha, New Delhi.

**Dr Viney Gupta** Member, International Section American Academy of Ophthalmology, 2007; Awarded Research Fellowship Grant by Asia ARVO in Vision Research, Singapore, 2007.

**Dr Tushar Agarwal** awarded Best of Show Award for scientific video entitled Keratoplasty: The bands strengthened by the American Academy of Ophthalmology at the Annual meeting of AAO, Las Vegas, USA, November 2006.

**Dr Parijat Chandra** Reviewer, *Indian Journal of Ophthalmology*; and *Journal of Post Graduate Medicine*.

## **SIGNIFICANT EVENTS**

The Centre has taken big strides in improving the quality of services delivered to patients.

The Centre has almost completed the formalities and process of reaccreditation with the WHO to continue as their Collaborating Centre for Prevention of Blindness (PBL) for another 4 years.

World Health Organization recognizes Dr Rajendra Prasad Centre for Ophthalmic Sciences as a member of International Sun Monitoring project (INTERSUN).

DST-FIST Grant at Level I to support the Dr Rajendra Prasad Centre for Ophthalmic Sciences with major infrastructure for an advanced bioanalytical facility with LC-MS/MS to further upgrade facilities at the Ocular Pharmacology Division.

Stem cell culture/Tissue and cell culture facility has been established at Ocular Biochemistry.

Proteomics and Genomics laboratory is being established in Ocular Biochemistry,

Harvesting and culture of limbal epithelial stem cell has been started (Eye Bank).

National Eye Donation Fortnight, 25 August–8 September 2006. During this period 34 eyes were received and 15 pledges were made for eye donation.

Extended studies on *Holi*, the colours used and their toxicities to educate the public.

The World Health Organization (Head Quarters) evaluation team visited the Dr. Rajendra Prasad Centre for Ophthalmic Sciences for global evaluation of WHO's work

### **VISITING SCIENTISTS**

1. Amakelech Altaye Gebrehana, Medical Equipment Technician, Ethiopia
2. Clare Gilbert, Medical Advisor Sight Savers International and Reader International Centre, 'Eye Health', London
3. Daniel Singh, Technician, Guyana
4. Dwayne Adams, Electrical Technician, Guyana
5. Gordon Johnson, former In-charge of International Centre for Eye Health, London
6. Kiphu Gado, Bio-Medical Technician, Bhutan
7. Mutasim Khalil Md Hassan, Training Supervisor, Sudan
8. Md Yagoub Ibrahim Esmail, Engineer, Sudan
9. Sandeep Kaushal, Indian National Science Academy (INSA) Fellow
10. Tianasoa Heriniaina, Laboratory Technician (IMRA), Madagascar
11. Titya Ngeth, Medical Technician, Cambodia

## 10.7 Jai Prakash Narain Apex Trauma Centre

### Chief

M.C. Misra

### Additional Medical Superintendent

Sanjay Arya

### Assistant Professors

Babita Gupta (Anaesthesia)	Chhavi Shawney (Anaesthesia)	Sanjeev Bhoi (Emergency Medicine)
Shefali K. Sharma (Emergency Medicine)	Vinay Gulati (Emergency Medicine)	Adarsh Kumar (Forensic Medicine)
Sanjeev Lalwani (Forensic Medicine)	Purva Mathur (Laboratory Medicine)	S. Arul Selvi (Laboratory Medicine)
Deepak Agrawal (Neurosurgery)	Deepak K. Gupta (Neurosurgery)	G.D. Satyarthee (Neurosurgery)
Sumit Sinha (Neurosurgery)	S. Dwarkanath (Neurosurgery)	Buddhadev Chaudhary (Orthopaedics)
John R. Bera (Orthopaedics)	Kamran Farooque (Orthopaedics)	Vijay Sharma (Orthopaedics)
Vivek Trikha (Orthopaedics)	Atin Kumar (Radiodiagnosis)	Shivanand G. (Radiodiagnosis)
Amit Gupta (Surgery)	Biplab Mishra (Surgery)	Maneesh Singhal (Surgery)
Subodh Kumar (Surgery)	Sushma (Surgery)	

## EDUCATION

The centre started functioning on 27 November 2006. The faculty, residents, nursing and other staff members selected for the centre, have started working at the center. The faculty members have been actively involved in the teaching and training programmes of the center which started with orientation of all the residents, nursing and other staff members to work in a trauma center. The faculty has developed modules for the basic/advanced life support, and initial emergency management of trauma patients and the same is being imparted to all the clinical and paraclinical staff of the center.

The faculty is involved in undergraduate and postgraduate teaching.

### **Pre-Hospital Safe Transportation Workshop for Delhi Police**

Continuing the tradition of community education, the faculty of the JPN Apex Trauma Center organized a one-day workshop for the Delhi Police personnel stationed in the PCR vans of Delhi. Since it was observed that in most of the roadside accident cases, the police PCR vans were the first to respond and transport the patient to hospitals, there was an urgent need to educate the police personnel in basic skills of patient transfer.

The workshop was aimed at imparting practical skills to the police personnel to safely transport trauma victims to the nearest medical facility. A total of 55 policemen were trained in the workshop. The centre has taken steps to make this workshop a regular feature and also to extend the basic life support skills to school students and general public through various agencies.

### **Continuing Medical Education**

#### **Lectures delivered**

#### **Professor M.C. Misra**

- ‘Value of relaparoscopy in an unsettled abdomen following laparoscopic surgery’, Department of Surgery, Government Medical College, Srinagar; 18 March 2007.
- ‘Strategies in peritonitis—Laparoscopy technology’, Department of Surgery, Postgraduate Institute of Medical Education and Research, Intra Abdominal Infections: Facing the Challenge, Chandigarh; 10–11 March 2007.
- ‘Laparoscopic vs. open colorectal surgery for cancer’, CME under ASICON Foundation of Delhi State Chapter of Association of Surgeons of India; 25 February 2007.
- Professor B.B. Ohri Memorial Oration of the M.P. Chapter of Association of Surgeons of India at its 25th Annual Conference, the Sri Aurobindo Institute of Medical Sciences, Indore; 16–18 February 2007.
- ‘Basics in laparoscopy and live demonstration of laparoscopic cholecystectomy and laparoscopic repair of ventral hernia’, 5th Live Endolaparoscopic Workshop, Under the Association of Endolaparoscopic Surgeons of Agra, Agra; 27–28 January 2007.
- ‘Experience of total extraperitoneal (TEP) repair of groin hernia; live demonstration of laparoscopic repair of recurrent incisional hernia’, Conference President, Mid-term Conference of Indian Hernia Society and Live Workshop, Hernia Update 2007, Hotel Centre Point, Nagpur; 20–21 January 2007.
- ‘Laparoscopic repair of ventral hernia; live demonstration of laparoscopic repair of ventral hernia’, The Laparoscopy Update 2007. Chairman, Scientific session during Live demonstration of Thoracoscopic removal of a mediastinal tumour and Laparoscopic pyeloplasty, SMS Medical College & Hospital, Jaipur in association with Rajasthan Chapter of Association of Surgeons of India and Surgical Society of Jaipur, Jaipur; 12–13 January 2007.
- ‘Breast conservation surgery: Indian perspective’, 2nd SGPGI Breast Course. Department of Endocrine and Breast Surgery, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India; 25–26 November 2006.

- ‘Newer developments in minimal access surgery’, 32nd Annual Conference of Association of Surgeons of India (UPASICON 2006) and Live Workshop, the MLN Medical College and S.R.N. Hospital, Allahabad; 3–5 November 2006. Performed Live demonstration of ‘Difficult laparoscopic cholecystectomy and laparoscopic incisional hernia repair’.
- ‘Role of MAS in Colo-rectal cancer’, Symposium on ‘Colorectal Surgery’, SURGICON 2006, Annual Conference, Delhi State Chapter, Association of Surgeons of India, Dr R.M.L. Hospital, New Delhi; 27–29 October 2006.
- ‘Laparoscopic vs. open repair of incisional and primary ventral hernia: Results of a prospective randomized study’, Faculty research presentation meeting on Tuesday, 17 October 2006.
- ‘Newer horizons in minimally invasive surgery’, Dr H. Lalmohan Singh Memorial Oration, 11th Annual Conference of the Association of Surgeons of India, Manipur State Chapter, Regional Institute of Medical Sciences, Imphal; 7–8 October 2006. Panel discussion on Laparoscopic Surgery.
- ‘Triage’, INDO–US Emergency Summit, AIIMS; 27 September–1 October 2006.
- Faculty at the International integrated meeting of Indian Association of Surgical Oncology (IASO) with World Federation of Surgical Oncologic Societies (WFSOS), IMS, BHU, Varanasi; 21–24 September 2006.
- Paper on ‘Laparoscopic vs. open repair of incisional and primary ventral hernia: Results of a prospective randomized study’ and ‘Total extra-peritoneal (TEP) repair of groin hernia: Prospective evaluation at a tertiary centre’, 10th World Congress of Endoscopic Surgery and 14th International Congress of the European Association for Endoscopic Surgery (EAES), Hotel Estrel, Berlin, Germany; 13–16 September 2006.
- ‘Evaluation of blunt abdominal trauma’, 10th International Conference of ITACCS (Indian Chapter), Trauma Criticare–2006, Hotel Mughal Sheraton; 8–10 September 2006.
- Invited guest faculty during CME and Live Workshop on Minimal Access Surgery Organized by the UP Chapter of Association of Surgeons of India, M.L.B. Medical College and hospital, Jhansi; 20–21 August 2006.
- ‘TRIAGE’, Meeting of National Disaster Management Authority, Hotel Centaur, New Delhi; 18 August 2006.
- ‘Newer strategies in the management of soft tissue sarcoma’, CME, ASICON Surgical Foundation, Jaipur Golden Hospital, Delhi; 28 May 2006.
- ‘Advanced laparoscopic procedures’, Surgery Update 2006, Dr STM Forest Hospital, Haldwani, Nainital; 9 April 2006.

#### **Dr Sheffali K. Sharma**

- ‘Churg strauss syndrome—an unusual presentation’, Delhi Rheumatology Association meeting; December 2006.
- ‘Emergency management of headache’, Indo–US Emergency Medicine Summit 2006, AIIMS, New Delhi; 27 September–1 October 2006.

**Dr Vinay Gulati**

- ‘Pulmonary Thrombo-embolism: prophylaxis and management issues’, Annual Conference of the Association of Physicians of India (APICON 2007), Goa; 15–18 February 2007.
- ‘Approach to Dyspnea in ER’, Indo–US Emergency Medicine Summit 2006, AIIMS, New Delhi; 27 September–1 October 2006.
- ‘Viral infections in HIV’, AIIMS–UCLA Collaborative Project on ‘Recent advances in the management of HIV/AIDS’, AIIMS under the directorship of John L. Fahey from UCLA, USA; 7 October 2006.

**Dr Adarsh Kumar**

- Delivered guest lectures to Police Officers from India as well as abroad during Advance Course on Scientific Investigations through Central Detective Training School, Chandigarh; 10–11 January 2007.

**Dr Sanjiv Lalwani**

- ‘Toxidromes’, INDO–US Conference of Emergency Medicine, AIIMS; 27 September–1 October 2006.
- ‘Atypical toxidromes’, Symposium on ‘Medical toxicology’, 39th Annual conference of Indian Pharmacology Society, SMS Medical College Jaipur, Rajasthan; 21–23 December 2006.

**Dr Deepak Gupta**

- ‘Neuroimaging in spinal tumours’, NEUROPEDICON, 17th Annual conference, Indian Society of Pediatric Neurosurgery, Goa, India; 16–18 September 2006.

**Dr Kamran Farooque**

- ‘Thoraco—lumbar fractures’, Spine Symposium, A.O., Synthes, India, Maharaja Agarsen Hospital, New Delhi; June 2006.
- ‘Anterior reconstruction of burst fractures’, Neurotrauma Conference, Fortis and G.B. Pant Hospital; 19 August 2006.
- Scoliosis at Deformity Workshop, Johnson and Johnson and Depuy spine; 9 September 2006.
- Kyphosis at ‘Deformity Workshop’, Johnson & Johnson and Depuy Spine; 10 September 2006.
- Spine trauma at INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.

**Dr Vijay Sharma**

- ‘Management of shock’, Indo–US Emergency Medicine Summit 2006, AIIMS, New Delhi; 27 September – 1 October 2006.



**Dr Vivek Trikha**

- ‘Tuberculosis of Patella’, 4th OASAC 2006, Orthopaedic Association of SAARC Countries, Kathmandu, Nepal; 8–10 December 2006.
- ‘Tuberculosis of coccyx’, First musculoskeletal infection section conference of Asia Pacific Orthopaedic Association, Khajuraho, India; 25–27 August 2006.
- ‘Soft tissue tuberculosis’, First Musculoskeletal Infection Section Conference of Asia Pacific Orthopaedic Association, Khajuraho, India; 25–27 August 2006.

**Dr Atin Kumar**

- ‘Imaging of mediastinal masses’, Annual conference of IRIA Haryana State Branch, Rohtak; 31 March 2007.

**Dr Shivanand Gamanagatti**

- ‘Non-vascular abdominal interventions’, Annual conference of IRIA Delhi Branch on ‘Body imaging: Recent advances and interventions’, AIIMS; 11 March 2007.

**Dr Amit Gupta**

- ‘Model guidelines for Hospital Emergency Contingency Planning’, Workshop on Hospital Emergency Preparedness Planning, Disaster Risk Management Programme, Government of NCT Delhi; 16 March 2007.
- Course faculty: National Trauma Management Course, Department of Medical Health Services and State Disaster Management Authority, Government of Uttar Pradesh, Ghaziabad; 30 November–3 December 2006.
- ‘Trauma shock’, TREAT–India, Central Railway Hospital, Byculla, Mumbai; 4–5 October 2006.
- ‘ABCD of trauma care’, Trauma Alert Assembly, INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘Emergency management of head injuries’, National Trauma Management Course, Department of Medical Health Services and State Disaster Management Authority, Government of Uttar Pradesh, Lucknow; 13–14 September 2006.
- ‘Management of long-term effects of disaster’, National Conference on ‘Medical Preparedness and Mass Casualties Management’, National Disaster Management Authority, Government of India, New Delhi; 22–23 August 2006.
- ‘Recent trends in trauma management’, Surgery Update 2006, Department of Surgery, Dr S.T.M. Forest Hospital, Haldwani, Uttarnchal, India; 9 April 2006.

**Dr Maneesh Singhal**

- ‘Maxillofacial trauma’, Trauma Alert Assembly, INDO–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- Live lectures on ‘Gyan Vani’, National Board of Examination.

### **Dr Subodh Kumar**

- ‘Emergency room management of thoracic trauma’, Trauma Alert Assembly, Indo–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘Management of pancreatic duodenal stump after pancreaticoduodenectomy’, NATCON–IASO, Varanasi; 20 September 2006.
- ‘Colo-rectal cancer—Role of minimally access surgery’, Colo-rectal cancer, Max Devki Devi Hospital, New Delhi; 18 November 2006.
- ‘Surgical emergencies’, CME, AIIMS; 10 January 2007.
- ‘Groin hernia surgery-an enlightening story’, Mid-term conference cum workshop, Indian Hernia Society, Nagpur; 20-21 January 2007.

### **Dr Sushma**

- ‘Trauma in special scenario: Pediatric/Geriatric/Pregnancy’, Trauma Alert Assembly, Indo–US Emergency Medicine Summit 2006, New Delhi; 27 September–1 October 2006.
- ‘Newer strategies in the management of soft tissue tumour’, Surgicon 2006, RML Hospital, New Delhi; 26 October 2006.
- ‘Blast injuries—Triage to psychosocial care’ and ‘Crime and mental illness’, Annual Academic Sessions, Sri Lanka College of Psychiatrists, Colombo; 22–24 February 2007.

## **RESEARCH**

### **Funded Projects**

#### **Ongoing**

1. Feasibility study on injury and road traffic injury surveillance. M.C. Misra, Amit Gupta (Surgery). Funded by MoHFW–WHO–ICMR for 6 months. Funds: Rs 2.5 lakh
2. To study the sensitivity and specificity of parasite LDH versus conventional microscopy in evaluation of bedside diagnosis of Malaria. Sanjeev Bhoi (Emergency Medicine). Funded by AIIMS for 1 year. Funds: Rs 50,000.
3. Incidence of deep venous thrombosis (DVT) among patients admitted in medical wards and intensive care unit (ICU) of a tertiary care hospital. Vinay Gulati, Atin Kumar (Emergency Medicine) Funded by Pfizer India for 1 year. Funds: Rs 5 lakh.
4. A study of HIV seroprevalence among tuberculosis patients presenting to a DOTS center, and an assessment of the impact of voluntary HIV testing on the Delhi TB and HIV epidemics. Vinay Gulati (Emergency Medicine). Funded by Central TB Division, Government of India.
5. A population based study of prevalence and risk factors in sleep disordered breathing in South Delhi. Vinay Gulati (Emergency Medicine). Funded by Pfizer India.
6. Programme support for immuno-proteomics based diagnostics of infectious diseases. Vinay Gulati (Emergency Medicine). Funded by Department of Biotechnology, Government of India.
7. Role of thalamus in diffuse Axonal injury. A Histopathological correlation and autopsy study. Deepak Aggarwal, Sanjeev Lalwani. Funded by AIIMS for 1 year. Funds: Rs 40,000.

8. 'Phase II multi-centre, open-label, active-controlled, randomized parallel-group dose finding trial' to evaluate the efficacy and safety of two doses of an antisense oligonucleotide in adult patients with recurrent high-grade glioma, administered intratumorally as a continuous high-flow microperfusion over a 7-day period every other week. Deepak Gupta. Funded by SIRO Clinpharma, Mumbai (Antisense Pharmac GmbH, Germany) for 2 years. Funds: Rs 20 lakh.
9. Phase II multicentre, open label dose confirmation study of interstitial I<sup>131</sup>-chTNT 1bMoAb (COTARA) for the treatment of glioblastoma multiforme (at first relapse) by Peregrine Pharmaceuticals, Texas, USA. Deepak Gupta. Funded by Siro clin pharma, Mumbai (Peregrine Pharmaceuticals, Texas, USA) for 3 years. Funds: Rs 5 lakh.
10. Evaluation of peripheral blood Polymerase chain reaction for diagnosis and prognosis of visceral leishmaniasis. P. Mathur, S. Singh, J.C. Samantaray, R. Sood. Funded by AIIMS for 1 year. Funds: Rs 1.08 lakh
11. Developing a multiplex PCR for Detection of *E histolytica*, *Giardia Spp.*, hepatitis A, hepatitis E and *Salmonella Spp.* in drinking water. S, Singh, P Mathur, *et al.* Funded by the DBT for 3 years. Funds: Rs 10 lakh.
12. A Registry for Comparing Catheter-Related Infection Rates among Various Shunt Systems in the Treatment of Hydrocephalus. Deepak Agrawal. Funded by Codman Corp for 3 years. Funds: Rs 5 lakh.
13. A randomized controlled trial of laparoscopic inguinal hernia repair: Trans-abdominal pre peritoneal versus totally extra peritoneal approach. Subodh Kumar, M.C. Misra (Surgery). Funded by AIIMS for 2 years. Funds: Rs 3.25 lakh.
14. Role of *H. Pylori* in benign and malignant gall bladder diseases. Sushma, V.K. Bansal (Surgery). Funded by AIIMS for 1 year. Funds: Rs 60,000.

### Completed

1. Factors affecting incidence of early postoperative complications. M.C. Misra.
2. Three port vs. four port laparoscopic cholecystectomy: A prospective randomized controlled study. M.C. Misra.
3. Focused abdominal sonography in trauma (FAST) in patients with blunt trauma abdomen: A prospective study. M.C. Misra.
4. Post-cholecystectomy symptoms following laparoscopic cholecystectomy. M.C. Misra.
5. A double-blind, placebo-controlled, parallel, multicenter study on extended VTE prophylaxis in acutely ill medical patients with prolonged immobilization. (Exclaim Study). S.K. Sharma, Vinay Gulati, Atin Kumar. Funded by Sanofi-Aventis India.

### Departmental Projects

#### Dr Vinay Gulati

1. Study of neurocognitive impairment and atherogenesis in Indian subjects with Obstructive Sleep Apnea

2. Study the efficacy of DMARDs on lipid profile in rheumatoid arthritis patients with special reference to Lipoprotein (a) and Oxidized LDL
3. Treatment efficacy, clinical characteristics, laboratory features and outcome in ART Clinic, AIIMS
4. Molecular and Immunological studies in patients with obstructive sleep apnea syndrome
5. Molecular studies of differentially expressed hypoxia sensitive proteins in patients with obstructive sleep apnea
6. Role of vitamin D receptor genetic variants in susceptibility to development and severity of pulmonary tuberculosis
7. Role of mitochondria in an experimental atopic asthma in mice

#### **Dr Amit Gupta**

1. A study of quality of life of live related renal donors
2. Protocol biopsy in live related renal transplant recipients: tacrolimus versus cyclosporine

#### **Dr Biplab Mishra**

Feasibility of fast track discharge in breast cancer patients undergoing definitive surgery and impact on quality of life

#### **Dr Maneesh Singhal**

Fast tract Thyroidectomy

#### **Dr Subodh Kumar**

Post-cholecystectomy symptoms following laparoscopic cholecystectomy: A prospective study

#### **Dr Sushma**

Expression of beta hCG in benign and malignant breast diseases.

## **PUBLICATIONS**

### **Journals**

1. Gupta A, Kumar Surendra, Kumar Shailendra, Mishra MC, Kumar Sandeep. Surgical residency programme: Training, teaching and evaluation in general surgery—A peer opinion poll in five medical colleges in Northern India. *Indian J Surg* 2006;**68**:310–15.
2. Misra MC, Bansal VK, Kulkarni MP, Pawar DK. Comparison of laparoscopic and open repair of incisional and primary ventral hernia: Results of a prospective randomized study. *Surg Endosc* 2006;**20**:1839–45.
3. Misra MC, Guleria S. Management of cancer gallbladder found as a surprise on a resected gallbladder specimen. *J Surg Oncol* 2006;**93**:690–8.
4. Aggarwal S, Guleria S, Misra MC, Goswami R, Seth A, Kumar S. Transperitoneal, transmesocolic approach for laparoscopic excision of an extra-adrenal pheochromocytoma.

- J Laparoendosc Adv Surg Tech A* 2006;**16**:261–3.
5. Gupta B, Mitra JK. Anaesthetic management of chemodectoma excision. *Indian Anaesthetists' Forum* (Online Journal) 2007;**1**.
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  7. Bhoi S, Verma S, Gupta V, Goel A. Enalapril-Induced Idiosyncratic angioneurotic edema in a patient with renal amyloidosis. *J IACM* 2006;**7**:47–8.
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  9. Vaid S, Bhardwaj S, Bhoi S. To study the clinical profile of Poisoning and overdose in a tertiary care emergency department. *J Gen Med* 2006;**18**:3.
  10. Vohra A, Bhoi S. Study of the predictors of mortality in stroke in a tertiary care emergency Department. *J Gen Med* 2006;**18**:4.
  11. Gupta V, Goel A, Bhoi S. Medical Research in India. *Lancet* 2006;**368**:644.
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  13. Gupta V, Goel A, Bhoi S. Violence against women and children. *Lancet* 2007;**369**:24.
  14. Goel A, Kaushik PN, Bhoi S. Profile of Health care workers with dengue fever Virus infection, presenting to the emergency department of an urban teaching hospital in a tropical country. *J Gen Med* 2007;**19**:9–12.
  15. Sharma A, Sharma SK, Wanchu A, Kumar M, Singh S, Bamberg B. 'Lower-back pain, intervertebral-disc calcification and scleral pigmentation' Medical. *J Australia* 2006;**184**:643.
  16. Gulati V. Review of safety and efficacy of S-Amlodipine in the management of Angina. *Indian Med Gazette* 2007:70–73.
  17. Kumar A, Vij K. The quality of citation in JIAFM: Where do we stand? *J Indian Acad Foren Med* 2006;**28**:1–4.
  18. Kumar A, Chavali KH, Vij K. Medical profession under the garb of CPA-A decades reviewal. *Int J Med Toxicol Legal Med* 2005;**8**:6–9.
  19. Kumath M, Kumar A, Lalwani S, Murty OP. Legal immunity in accidents (From victim's perspective). *Int J Med Toxicol Legal Med* 2006;**9**:9–11.
  20. Singh D, Kumar A, Vij K, Gargi J. A Comparative study of deaths due to hanging and strangulation in the North West region of Punjab. *Indian Internet J Foren Med Toxicol* 2006;**4**:106–15.
  21. Bhardwaj DN, Millo T, Lalwani S. Skeleton used for anatomical study brought for medicolegal autopsy: A Case report. *Med Sci Law* 2007;**47**:86–7.
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- perspective). *Int J Med Toxicol Legal Med* 2006;**9**:9–11.
25. Rautji R, Behera C, Lalwani S, Dogra TD. Epidemiological Study of Fatal Road Traffic Accident Cases: A Study from South Delhi. *Indian Med Gazettee* 2006;**CXL**:375–9.
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  28. Gupta S, Mathur P, Singh S. Multiple opportunistic intestinal infections in a patient co-infected with human immunodeficiency virus and Hepatitis B virus: A case report. *Trop Gastroenterol* 2006;**27**:97–8.
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- surgeon failure. Letter to the editor. *J Bone Joint Surg (Am)* online. (30 October 2006).
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  59. Garg B, Sharma V, Gupta V, Jayaswal A. Cold welding in locking screw-is it really possible? Letter to the editor. *J Bone Joint Surg (Am)* online. (27 November 2006).
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- pseudocysts. *Eur J Radiol Extra* 2006;**60**:29–31.
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## Abstracts

1. Vashisht S, Gamangatti S, Kapoor A, Chumber S, Bal S. Role of graded compression sonography and unenhanced helical CT in patients with suspected acute appendicitis. *AJR* 2006;**186** (Suppl.): A52.
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4. Kumar S, Misra MC, Bansal VK, Hemanga B, Prashant B. TEP repair of Groin hernia: Prospective evaluation at a tertiary care center. In proceedings of Surgicon 2006.
5. Hemanga B, Misra MC, Bansal VK, Kumar S, Kulkarni MP, Pawar DK. Laparoscopic versus open repair of incisional and primary ventral hernia: Results of a prospective randomized study. In Proceedings of Surgicon 2006.
6. Badhal SS, Mukhopadhyay AK, Sharma S, Saraiya A, Arulselvi S. Coagulation Profile in acute pancreatitis. *Indian Soc Gastroenterol* 2006;**25** (Suppl. 2):A12.
7. Gulati V. Pulmonary thromboembolism-prophylaxis and management issues. In Medicine Update. Goa: Association of Physicians of India 2007.
8. Gupta A. Organizing trauma care services in India. In *Proceedings of the first AIIMS surgical week, International CME cum live workshop*, Endosurg, AIIMS; 2007:18–21.

## Chapter in Book

1. Aggarwal P, Bhoi S. Common poisonings in medical practice. In: R.K. Singhal. Ed, API Medicine Update. API, 2007;17:342-48.

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Professor M.C. Misra** established Minimally Invasive Surgery training Centre at the Department of Surgical Disciplines, AIIMS in collaboration with University of Tuebingen, Germany. The centre was inaugurated, 26 March 2007; Course Director, Training Course in Operative laparoscopy–Basic and Advance, the Department of Surgical Disciplines, AIIMS, New Delhi, 26–30 March 2007; Organizing Chairman, First AIIMS Surgical Week, International Conference, CME and Live Workshop, AIIMS, 26–31 March 2007; Organized Joint Meeting between Department of Surgical Disciplines and The Surgical Section of Royal Society of Medicine, UK, Dr V. Ramalingaswami Board Room, AIIMS, 3 March 2007; Organized CME under ASICON Foundation of Delhi State Chapter of Association of Surgeons of India; 25 February 2007; Organized Monthly Meeting, Delhi State Chapter, Association of Surgeons of India, AIIMS, 17 February 2007; Conference President: Mid-Term Conference of Indian Hernia Society and Live Workshop, Hernia Update 2007, Hotel Centre Point, Nagpur, 20–21 January 2007; IMRCS Examiners' Training Course, the AIIMS; 20–21 May 2006.

**Dr Chhavi Shawney** member organizing committee, International Conference on Pediatrics Anesthesia. Organized by Department of Anesthesiology, AIIMS, November 2006.

**Dr Sanjeev K. Bhoi** invited as a Chairperson for Emergency Medicine Section at the Association Physicians of India Conference, Goa, February 2007; Invited as a National Expert on Snake bite at the National Snakebite Conference, Cochin; Summit Secretary: Indo-US Emergency Medicine Summit 2006, held as a joint venture between AIIMS and University of South Florida USA, AIIMS, India, 27 September and 1 October 2006; Actively involved in the formation of National Academic Council of Emergency Medicine; Workshop Director: ECG workshop: An Emergency Physician perspective at the Indo-US Emergency Medicine Summit, 29 September–1 October 2006; Workshop Director: Fast Track Symposia at the Indo-US Emergency Medicine Summit, 29 September–1 October 2006; Workshop Director: ECG workshop: An Emergency Physician perspective, 3 March 2006; Co-convenor: New Delhi Round table discussion on Hospital transfer policy during Disaster and Peace.

**Dr Vinay Gulati** successfully completed Basic Life Support Provider Course and Advanced Cardiac Life Support Provider Course recognized by American Heart Association, Pune, 27–29 September 2006.

**Dr Adarsh Kumar** joint Secretary, Indian Congress of Forensic Medicine and Toxicology; Joint Secretary (North Zone), Indian Academy of Forensic Medicine (2006–2008); Deputy Executive Editor (Scientific), International Journal of Medical Toxicology and Legal Medicine; Associate Editor, Journal of Forensic Medicine and Toxicology; Assistant Editor, Indian Internet Journal of Forensic Medicine and Toxicology; Member, Organizing Committee for 7th International Conference of ICFMT, i.e. SAFCON-2007 which was organized, JLN Medical College, Aligarh, 24–25 March; Joint Organizing Secretary for Symposium on ‘Emerging Trends in Medical Toxicology’, AIIMS, 27–28 January 2007.

**Dr Sanjiv Lalwani** participated in training programmes organized by CBI Academy, Ghaziabad, LNIN National Institute of Criminology and Forensic Sciences, Haryana Institute of Rural Development, Nilokheri, Karnal (HR) and Amity Institute; Organizing Secretary, Symposium on Emerging Trends in Medical Toxicology, AIIMS, 27–28 January 2007; Executive Secretary (Liaison), South Asian and Annual Conference of ICFMT was organized at JLN Medical College, Aligarh, UP, 24–25 March 2007; Executive Member-Indian Congress of Forensic Medicine and Toxicology; Deputy Executive Editor-Journal of Forensic Medicine and Toxicology Associate Editor-International Journal of Medical Toxicology and Legal Medicine; Reviewer-Journal of Forensic Medicine and Toxicology, International Journal of Medical Toxicology and Legal Medicine.

**Dr Deepak Agrawal** awarded the prestigious ISPN scholarship for presenting research titled ‘Complex split-cord malformations—the untold story’ at the annual ISPN meeting, Taipei, Taiwan,

September 2006; Co-author for the study titled 'Safety and feasibility of convention enhanced intratumoral immunotherapy in recurrent high grade gliomas: Initial experience in 17 cases' which won the best paper award at the 4th South Asian Neurosurgical Congress (SANC), New Delhi, India, 15–18 February 2007; Co-author of the study titled 'Role of Gamma-Knife in Glomus Jugulare Tumours' which won the 'Herbert Krause Gold Medal in Neuro-oncology' at the annual conference of NSI, Madurai, India, 20–24 December 2006; was also instrumental in getting a development grant of more than a crore rupees from DST under the 'FIST' scheme for the department of Neurosurgery; Founder Member: Indian Society for Trauma and Acute Care.

**Dr Deepak Gupta** best paper award on paper entitled Intratumoral immunotherapy in recurrent high-grade gliomas in 4th south asian neurosurgery congress, India habitat centre, New Delhi, February 2007. Best poster award (co-author) for the poster entitled: Clinicoradiological analysis of traumatic basal ganglion hematomas: A study of 94 cases. In 15th Neurotrauma conference, New Delhi, 18–20 August 2006; Karl Storz Fellowship award for attending 8th ESBS congress, Prague, Czech Republic, 2–6 May 2007.

**Dr Kamran Farooque** convener of Souvenir committee in IOACON 2006, annual conference of Indian Orthopedic Association; Convener of Poster committee in IOACON 2006, annual conference of Indian Orthopedic Association; Joint secretary of organization committee of Indo-US Emergency Medicine Summit-2006; Executive member of 'Spine Workshop' in IOACON 2006.

**Dr Vijay Sharma** awarded MRCSed after passing the final exam in November 2006 by The Royal College of Surgeons of Edinburgh UK; Member Organizing Committee IOACON-2006, AIIMS, New Delhi; Member Organizing Committee Indo-US Emergency Medicine Summit-2006; Successfully completed AO basic course, Pune, 2006; Successfully completed Microsurgery Course, Coimbatore, 25–30 March 2007.

**Dr Vivek Trikha** executive member of Organizing Committee IOACON 2006 (Annual conference of Indian Orthopedic Association) organized by the Department of Orthopedics, 9–15 November 2006.

**Dr Amit Gupta** nominated as Member Core Committee: National Disaster Management Guidelines–Medical Preparedness and Mass Casualties Management (NDMG-MPMCM). National Disaster Management Authority, Government of India; Visiting Faculty: National Trauma Management Course. (Academy of Traumatology- IATSIC); Founder Secretary-Treasurer: Indian Society of Trauma and Acute Care; Executive Member: Indian Hernia Society; Instructor: BLS/ ACLS Course of American Heart Association. Indian Node, Ahmedabad, India; Instructor: ITLS Course of the American College of Emergency Physicians. Indian Node, Pune, India; Workshop Director: Trauma Alert Assembly, Indo-US Emergency Medicine Summit 2006; Workshop

Director: Laerdal Workshop on Simulation as an Educational Tool, Indo-US Emergency Medicine Summit 2006, AIIMS, India; Summit Secretary: INDO-US Emergency Medicine Summit 2006, held as a joint venture between AIIMS and University of South Florida USA, AIIMS, India, 27 September and 1 October 2006; Actively involved in the formation of National Academic Council Of Emergency Medicine; Co-convenor: New Delhi Round table discussion on Hospital transfer policy during Disaster and Peace; Joint Secretary: First AIIMS Surgical week and Endosurg-2007, International CME cum Live Workshop, 26–31 March 2007.

**Dr Biplab Mishra** faculty in CME for examination of DNB candidates, organized by NBE, Safdarjung Hospital; 16 February 2007; Attended Microsurgery Training Course, Ganga Medical Center and Hospital, Coimbatore, 26–30 March 2007.

**Dr Maneesh Singhal** appraiser for Diplomate of National Board, National Board of Examinations; Involved in formation of training module for general practitioners made by National board of examinations.

**Dr Subodh Kumar** founder member and Joint Secretary: Indian Society for Trauma and Acute Care; Joint Secretary: Indian Hernia Society; Joint Secretary, First AIIMS Surgical week and Endosurg-2007, International CME cum Live Workshop; 26–31 March 2007.

**Dr Sushma** founder member: Indian Society for Trauma and Acute Care; Joint Secretary: First AIIMS Surgical week and Endosurg-2007, International CME cum Live Workshop; 26–31 March 2007.

## **VOLUNTARY COMMUNITY SERVICE**

Dr Babita Gupta provided voluntary medical community services, Mahavir Samaj Sangh, New Delhi for 3 days.

## **CENTRAL FACILITIES**

### **Emergency Room**

State of the art emergency room with eight resuscitation bays, Observation and Triage area. Facility for managing more than 20 critically injured patients at a time and many more relatively stable patients.

### **Operation Rooms**

Presently 2 operating rooms are fully functional. Both major and minor cases are being performed. The remaining 3 operating rooms are nearly ready to be started.

### **In-patient**

Two wards (each 30 bedded) are functional at present.

### **Imaging Centre**

Multislice CT scanner (Somatom sensation 40)	1
Mobile X-ray units	2
Heavy duty automatic processors for radiography	2
MRI (1.5 Tesla)	1
C-Arm X-ray unit with 3-D facility for OT	1
Digital flat panel	1
Colour Doppler ultrasound unit	2

### **Laboratory Medicine**

Hematology  
Biochemistry  
Microbiology and infection control

### **Blood Bank**

Physiotherapy  
Seven physiotherapists  
Inpatient and outpatient facilities

### **PATIENT CARE**

<b>Total number of Patients</b>	<b>Numbers</b>
Attended J.P.N.A. trauma centre	1,700
Admitted in J.P.N.A. trauma centre	625
Operated in J.P.N.A. trauma centre	442

### **Emergency**

<b>attendance</b>	<b>Admissions</b>			<b>Operation</b>			
1700	Neurosurgery	Orthopaedics	Surgery	Total	Orthopaedics	Surgery	Total
	87	391	147	625	263	92	355

### **Imaging Center JPN Apex Trauma Centre**

Details of investigations performed (November 2006–31 March 2006) X-rays	
Digital	3,786
Portable	99
C-arm studies	146
Ultrasound	470

### **Computed Tomography (CT)**

Trauma centre patients	461
------------------------	-----

Main hospital patients	535
<b>MRI</b>	
Trauma centre patients	218
Main hospital patients	49
<b>Grand total</b>	<b>5,764</b>
<b>Blood Bank</b>	
Total samples received	182
Total blood cross-matched	266
Total blood issued	122
Components issued	23
<b>Laboratory Medicine</b>	
Tests conducted (November 2006–31 March 2006)	
<b>Hematology</b>	
Total tests conducted	10,190
<b>Biochemistry</b>	
Total tests conducted	4,863
<b>Microbiology</b>	
Culture: Total samples	263
Bacterial identification	185
Antibiotic sensitivity	185
HIV serology	33
Hepatitis B serology	33
Hepatitis C serology	31
Hospital infection surveillance cultures	105
Miscellaneous	12
Routine and microscopic examination of urine	62
<b>Physiotherapy</b>	
Number of physiotherapy sessions for indoor patients:	
Orthopaedics	1,907
Surgery	931
Neurosurgery	268
<b>Number of physiotherapy sessions for outdoor patients:</b>	
New cases + old cases	583

## 11.1 B.B. Dikshit Library

**Professor-in-charge**

Rani Kumar

**Chief Librarian**

R.P. Kumar

Education

**Continuing Medical Education**

**Timings and membership**

The library is being kept open round the clock (24 hours) on all days of the week including Sundays and holidays w.e.f. 1 August 2003. It has 2,300 regular members and an average of 800 readers visit the library every day.

**Services**

The library continued to extend the following services to the users. These services are not only modernized and updated but also further strengthened.

### **1. Books alert service**

This is a monthly service, listing of new books, monographs and pamphlets added to the library in a particular month.

### **2. Periodical alert service**

This is a fortnightly service, listing of new periodicals received in the library during the previous fortnight.

### **3. Bibliographies on demand**

The staff of the library compiled bibliographies on various topics as and when demanded by the readers.

### **4. Interlibrary loan services**

Interlibrary loan services with several local libraries are being maintained to help users to procure documents that are not available in the library.

### **5. Reprographic services**

The library has five machines to meet the demands of the readers, viz. two Modi Xerox 1025, Two 5834 and one Duplax Digital Copier Model WCPR0-35. During the year 2,36,814 pages were xeroxed on a payment basis, as a service to the readers.



## **6. CD-ROM printout services**

During the year 3,884 computer printout pages containing abstracts of articles were made available to the readers on a payment basis.

### **Book bank**

The Book Bank continues to serve the undergraduates and interns. The total membership of the Book Bank is 67. The Book Bank has more than 2,600 books, which are issued on a long-term basis to the students.

### **Microforms section**

The library is equipped with two microfilm readers and one microfilm/microfiche reader-cum-printer. The library has 1,627 microforms in its collection.

### **Audiovisual section**

The library has four colour television sets and four video cassette recorders. The number of video cassettes available in the library is 308. This section also has four audio cassettes playback decks and 109 audio cassettes.

### **CD-based service**

The library has different databases or CD-ROM, i.e. MEDLINE, POPLINE, ONCO DISC and LISA, etc. Different encyclopedias and dictionaries have also been acquired on CD-ROM. The number of CD-Disc is presently 701.

### **CD-NET**

A CD-NET workstation has been operational in the library since January 1993. Fifteen users at a time can search different databases loaded in a CD-NET tower. Printing facility is also available. The library has expanded this facility by adding one more CD-Tower with 28 drives.

### **Library automation**

The library has an ALPHA Digital Personal Workstation (DPW) 433 AU with 16 terminals, one laser printer, one line printer and three local dot-matrix printers. The housekeeping operation of the library (viz. acquisition, cataloguing, serious control and circulation) has been automated. The library is using a commercially available software package named LIBSYS.

### **Computerized thesis search**

About 5,059 theses received so far in the library can be retrieved through a computer search. Information about each thesis such as author, title, department, guide's name, co-guides and other bibliographical details have been fed into the computer.

### **Online journals**

The library is receiving 189 online journals for the current year, made available to it through their publishers along with print versions.

### **OPAC (Online Public Access Catalogue)**

All the records from 1985 onwards can be retrieved through computer; 5,059 theses received so far in the library can also be retrieved through Online Public Access Catalogue (OPAC). The searchable databases (through OPAC) include video cassettes, audio cassettes and compact discs. Six online public access terminals are placed in the lobby at the entrance of the library where users can search bibliographic databases and find specific information online. Information about the journals and its recent arrivals can also be retrieved through OPAC.

### **Multimedia**

The library has two multimedia sets. Few multimedia titles are also available.

### **E-mail**

The library actively participates in DELNET (Developing Library Network). An e-mail modem has been provided by DELNET for communicating with others libraries. Besides this, the library also has an e-mail connection provided by the Institute.

### **Internet**

The internet facility is available in the library from 10:00 am to 10:00 pm from Monday to Friday and till 8:30 pm on Saturdays. Eighteen nodes are available to the users.

### **New addition**

The library added 538 new books to its collection, and now has a total of 70,112 books. Also 846 bound volumes of journals and 157 pamphlets/reports were added to the collection. The total number of bound volumes of journals and reports/pamphlets increased to 16,496 and 16,649, respectively. The library is annually subscribing to 451 journals in various field of health sciences, 185 of them are also received online along with their printed version; 28 journals, subscribed to on behalf of the National Drug Dependence Treatment Centre, are also being received in the library.

### **New ventures**

1. A documentation centre containing the publications of the faculty was set up.
2. A library containing Hindi Books mostly published in health sciences was set up. During the year 82 titles in Hindi were added.

### **Awards and Honours**

**Dr R.P. Kumar** was awarded certificate of Honour by the Indian Association of Special Libraries and Information Centres (IASLIC) in recognition to his admirable initiative, imagination, creativity

and interest for the development and modernization of library and information services in the country. He was also awarded the Satkal's Punjab National Librarian Award by the SATKAL TRUST (Satinder Kaur Ramdev Memorial Trust for Advancement of Librarianship) during the annual function, Panjab University, Chandigarh; 18 November 2006. He was conferred with the Fellowship of Medical Library Association of India for his contribution to Medical Librarianship during the annual convention of MLAI, Postgraduate Institute Medical Education and research, Chandigarh, 18–20 December 2006. He was elected as Vice President of the Medical Library Association of India (MLAI) for the year 2006–08. He also continued as Chief Editor of *MLAI News*, a quarterly publication of the MLAI.

### **Significant Events**

**Dr R.P. Kumar** attended the convention on Digital Preservation, Management and access to information (PLANNER-2006), Aizawal, Mizoram; 9 November 2006 and chaired a Scientific session. He was invited to deliver a keynote address and to act as the Director of the annual convention of the MLAI, Postgraduate Institute of Medical Education and Research, Chandigarh; 18–20 December 2006. He attended the 4th International Conference on 'Professional knowledge management: Experience and visions', Potsdam, Germany; 28–30 March 2007 and coordinated a technical session.

## 11.2 Cafeteria

### **Chairman**

Deputy Director (Administration)

### **Faculty-in-charge**

O.P. Kharbanda

### **Accounts Officer**

N.K. Bajaj

### **General Manager**

S.K. Kaushik

### **Deputy General Manager**

K.K. Sharma

## **AIMS AND OBJECTIVES**

The AIIMS Cafeteria, established in 1972, provides wholesome food at reasonable prices to AIIMS employees. In 1983, it was registered with the Director of Canteen, Department of Personnel and Training, Government of India. In October 1991, the Cafeteria was taken over by the Institute and since then all employees are treated at par with AIIMS employees. Since then, the Cafeteria is being run on a no-profit, no-loss basis, without any financial assistance from the Institute.

## **MANAGEMENT COMMITTEE**

A management committee is constituted by the Director, AIIMS for taking policy decisions pertaining to the Cafeteria. The current members of the committee are:

<b>1. Deputy Director, Administration</b>	<b>Chairperson</b>
2. Dr S. Rastogi	Member
3. Dr V.K. Paul	Member
4. Dr Bir Singh	Member
5. Smt Rashmi Jain, Sr F.A.	Member
6. Shri R.G. Garg, F.A.	Member
7. Shri Rajesh Kumar, S.E.	Member
8. Shri N.K. Bajaj, Accounts Officer	Member
9. Smt Preeti Ahluwalia, W.O.	Special invitee
10. Smt Rekha Sharma, Chief Dietician	Member
11. Representative of RDA	Member
12. Representative of the Officers' Association	Member
13. Representative of the Nurses' Union	Member
14. Representative of the Karamchari Union	Member

15.	Representative of FAIMS	Member
16.	Dr O. P. Kharbanda	Member Secretary
17.	Shri S.K. Kaushik, General Manager, Cafe	Member

### **SERVICE FACILITIES**

The Cafeteria runs 6 units to provide services to about 9000 employees of the Institute. These are:

1. Main Cafeteria (24-hour service) situated near Jawahar Lal Nehru Auditorium
2. Main Operation Theatre Cafeteria situated on the 9th floor of the main hospital
3. CNC Cafeteria situated on the 2nd floor of the Centre
4. Dr R.P.C. O.T. Cafeteria situated on the 5th floor of the Centre
5. Apex JPN Trauma Centre
6. Faculty Room Cafeteria situated near the Main Cafeteria.

In addition, the Cafeteria provides services to the Director, Deputy Director, Medical Superintendent, Dean and Faculty Members for their day-to-day as well as special requirements for important meetings.

### **STAFF STRENGTH**

Eighty-nine employees (regular/ad hoc/temporary) are on the roll in the Cafeteria Department. Catering services are provided for official meetings, conferences and symposia held at AIIMS.

### **ANNUAL TURNOVER**

The total turnover of the Cafeteria Department is approximately Rs 1 crore 35 lakh.

### **DEVELOPMENT ACTIVITIES**

Several changes were brought in the Cafeteria Department during the financial year.

#### **Extended facility of LPG Tandoor at the Main Cafeteria**

A latest technology LPG tandoor was made available to prepare tandoori dishes hygienically. Many improvements were made to enhance the ambience at the Cafeteria resulting in manifold increase in the number of users. Overall, the Faculty Members appreciated the facilities.

#### **Cafeteria services started at the Apex JPN Trauma Centre**

An extension counter of the Cafeteria was established at the Apex JPN Trauma Centre for the Cafeteria service to Faculty, doctors and other staff members.

#### **Medical checkup of Cafeteria employees**

All the employees of the Cafeteria were medically checked for being fit food handlers.

## 11.3 Central Workshop

### Faculty Coordinator

T.P. Singh (up to 31 August 2006)

### Officer-in-charge

S.K. Kamboj  
(up to 30 March 2007)

Kalu Ram  
(w.e.f. 30 March 2007)

### Technical Officers

Harinder Pal  
(w.e.f. 16 December 2006)

Nitin Srivastava  
(w.e.f. 16 December 2006)

The Central Workshop has been mainly engaged in the repair and maintenance of instruments used for medical education, scientific research and hospital services. In spite of increased load of above-mentioned activities, it has also continued to cater for fabrication and design of new instruments. It has the following sections:

- Electronic Section
- Electrical Section
- Refrigeration Section
- Mechanical Section
- Glass Blowing Section
- Carpentry Section
- Painting Section

### Fabrication and guidance

The Central Workshop has been able to continue to help in the research activities of the institute with modifications of instruments and fabrications of useful gadgets. It has been possible in many cases to design and fabricate some of the items with locally available components, which were previously imported from abroad by the departments. A total of 133 jobs of fabrication were carried out. The Central Workshop also provides support for the repair and maintenance of various new instruments developed by the Central Workshop. Some of the very important specialized fabrication jobs successfully carried out for the various departments in the Institute include:

- The Heart Valve Ring with Handle (Cardiothoracic and Vascular Surgery)
- The Operation Table Hand Rest (Orthopaedic Operation Theatre)
- The Rat Chamber (Pharmacology)
- The Stereotoxic Needle Holder (N.M.R.)

The Central Workshop contributes continuously by fabricating very specialized glass moulds for the Department of Obstetrics and Gynaecology. These moulds, which are extensively used in the Obstetrics and Gynaecology department, are not available in the open market. In addition, glass rods of different shapes (L shape, V shape, U shape), glass capillaries, Pasteur pipettes, and measuring cylinders were fabricated by the Central Workshop for all the departments of the Institute as well as for the hospital.

### **Repair and Maintenance**

The Central Workshop has been carrying out the repair and maintenance of all types of biomedical equipment, which include electrosurgical unit, ECG machine, infusion pump, multipara monitor, defibrillator, patient warmer, OT table, ice machine, cold labs, water chiller, cryostat, deep freezer, UV spectrophotometer, electronic weighing machine, audiometer, ultrasound therapy unit, OT light, tissue processor, cold centrifuge, microscope, etc.

The Central Workshop has economically and successfully repaired many electronic equipments, which were declared irreparable by the manufacturing companies. These equipments include patient monitors, defibrillators, infusion pumps, patient warmers, etc.

The Central Workshop has been undertaking repair and painting jobs of all hospital furniture such as patient beds, patient lockers, IV stand, instrument trolleys, loading trolleys, and fowler beds, etc. During 2006–07, the Central Workshop has attended to a total number of 8,107 repair jobs.

A total of 8,240 repair and fabrication jobs were done during 2006–07.

## **11.4 K.L. Wig Centre for Medical Education and Technology**

**Dean (Examination)**

T.D. Dogra  
(w.e.f. 12 January 2007)

**Professor-in-charge**

Rita Sood

**Coordinator**

O.P. Kharbanda

**Educationist**

B.V. Adkoli

**Education Media Generalist**

Yogesh Kumar

**Adjunct Faculty**

23 faculty members covering all undergraduate disciplines besides  
Dental, Nursing, Hospital Administration and Computer Facility

### **EDUCATION**

**Undergraduate, postgraduate and paramedical**

Twenty sessions were conducted for the MSc Nursing students of College of Nursing, AIIMS on the topics related to Media and Communication. Five sessions were conducted for the residents of Masters in Hospital Administration (MHA) on Computer Applications.

CMET provided inputs to the Examination Section for objectivizing the assessment pattern at AIIMS.

#### **Continuing Medical Education**

**Conferences, seminars, workshops organized**

CMET organized two in-house workshops on 'How to write a paper' for the faculty, junior and senior residents and research scientists of AIIMS.



## National and International Conferences

- ‘Postgraduate dental education’ was jointly organized by KL Wig CMET, Centre for Dental Education and Research, AIIMS and Dental Council of India; 28–29 April 2006. The postgraduate curriculum was discussed in all 9 specialties of dentistry. The recommendations made were approved by the Dental Council of India and are under active consideration by the Ministry of Health and Family Welfare for a nationwide implementation.
- ‘Emerging trends in medical education’, CMET; 23–25 November 2006.

## Lectures delivered

### **Dr Rita Sood**

- ‘Assessment in medical education: An overview’, DCI–AIIMS workshop; April 2007.
- Teaching of ‘Professionalism and ethics’ and ‘Trends in assessment’, National workshop on Emerging Trends in Medical Education, AIIMS; November 2006.
- ‘Role of question banking in standardization of assessments’ (panelist for panel discussion), International Conference in Medical Education at MS Ramaiah Medical College, Bangalore; January 2007.
- ‘Integrated teaching at AIIMS’, Consultation Workshop on Medical Education, MS Ramaiah Medical College; January 2007.
- Moderated a panel discussion on ‘Avenues for higher education in UK’, Royal College of Physicians, UK, APICON 2007, Goa; 16–18 February 2007.

### **Dr O.P. Kharbanda**

- Chairman, Organizing Committee for the Indian Orthodontic Society, 11th Postgraduate Convention (Orthodontics 2007), AIIMS; 24–27 February 2007.

### **Dr B.V. Adkoli**

- Conducted two sessions on ‘Group dynamics’ during workshops organized by College of Nursing on Organizational Behaviour and Management; April 2006 and March 2007, respectively.
- ‘Curriculum designing’, DCI–AIIMS workshop; April 2006.
- ‘Strategies for training’, Workshop organized by the Department of Medicine; October 2006.
- Moderated a panel discussion during the consultative workshop organized by MS Ramaiah Medical College, Bangalore; 26 January 2007.
- ‘Programme evaluation’, International Conference on Medical Education, MS Ramaiah Medical College, Bangalore; 27–28 January 2007.

### **Mr Yogesh Kumar**

- ‘Enrich your presentation skills’ and ‘Introduction to digital photography’, Association of

- Physicians of India Conference, Goa; 16–18 February 2007.
- ‘Effective communication with AIDS patients’, Workshop organized by the Department of Medicine, October 2006.
- ‘Effective presentation’, 55th Annual Conference of Pathologists and Microbiologists (APCON 2006), Bangalore; 7-9 December 2006.
- ‘Digital photography and video editing’, 3rd Skill Course of the Association of Minimal Access Surgeons in India (AMASI), 10-12 March 2007.
- Workshop on Digital Photography during the 11th Postgraduate Convention (Orthodontics 2007), AIIMS, New Delhi; 24–27 February 2007.

## Research

### Completed

Critical appraisal of assessment in key clinical disciplines in undergraduate course, AIIMS.

## Publication

### Journal

1. Kharbanda OP. Global issues with Orthodontic education: A personal viewpoint. *J Orthod* 2006;**33**:237–41.

## Media Production

### Details of Media Production for the year 2006–2007.

Type of media produced	Number of requisitions
Clinical photography	846
X-ray, specimen, gel, etc.	911
Photographic prints (black and white and colour)	582
Scanning of images (slides, documents)	595
Video recording, editing (non-linear) including tape to CD conversion	509
Designing/printing of large format posters	911
Book binding, paper cutting and offset printing approx. prints)	34 (540,000

## Awards, Honours and Significant Events

**Dr Rita Sood** Member of the Association for the Study of Medical Education in Europe; Review board of the *International Journal of Medical Education*.

**Dr Rita Sood and B.V. Adkoli** were the members of the expert committee constituted by DGHS, Ministry of Health and Family Welfare on the revision of curriculum for the MBBS course; were invited as course faculty for the FAIMER Regional Institutes at CMC, Ludhiana and the Seth GS

Medical College, Mumbai, June 2006–January 2007, served as advisors to UPSC.

**Dr O.P. Kharbanda** completed Master's Degree (M.MEd) under the Centre for Medical Education, University of Dundee, UK.

**Mr Yogesh Kumar and A. Shariff** conducted a pre-convention workshop on Digital Photography during Indian Orthodontic Society 11th Postgraduate Convention (Orthodontics 2007), AIIMS; 24–27 February 2007.

### **Visiting Scientist**

Dr Are Holen, Dean of Medical Education at faculty of Medicine in Trondheim, Norway.

## 11.5 Computer Facility

### Deputy Director and Head

R.S. Tyagi

### Systems Analysts

S. Kailash

S.N. Ragu Kumar

Satish Prasad

### Senior Programmers

Sushil Kumar Meher  
V.K. Jindal

Sanjay Gupta

Vinay Pande  
S.P. Singh

### Programmer

Hari Shankar

## EDUCATION

### Postgraduate

Computer programming classes covering both theory and practical aspects were conducted for the postgraduate students of the Department of Biotechnology and Nursing at the College of Nursing. The department also conducted Bioinformatics classes for the students of the Department of Biotechnology. Training was provided to Armed Forces officers deputed to study Medical Informatics for two years.

### Undergraduate

A three-month course on Basics of Computers, internet, Windows applications, computer-aided learning, database and biostatistics was given to the BSc (Hons) final year nursing students of AIIMS. A computer course for BSc Nursing (Post-certificate) was also conducted during the year.

### Continuing Medical Education

The members of the department participated in and delivered lectures in continuing medical education programmes, symposia, international and national conferences. The members of the department also guided various software projects for students of Computer Applications (leading to BCA, BE, BTech, MCA and MCM) from various engineering colleges in and outside Delhi. The department organized lectures by faculty members of the Institute to medical colleges/hospitals in the country through video-conferencing.

### National and International Conferences

**Dr R.S. Tyagi** was elected as the International Representative of the Indian Academy of Medical Informatics (IAMI).

**He has attended/participated in the following events:**

- General Assembly Meeting of International Medical Informatics Association-2006, Washington, DC, USA; November 2006. Conference on Bio-Medical and Health Informatics; November 2006.
- Annual Convention of the Indian Science Congress Association, Chidambaram, Tamil Nadu; January 2007.
- Technology Senate Group Discussion, Mumbai; December 2006.
- National Conference of Tele Society of India, New Delhi; August 2006.
- Consultant/Member of Course Committees at:
  - Sant Baba Bhag Singh Institute of Engineering and Technology, Jalandhar, and
  - Uttaranchal Open University Haldwani, Nainital (Uttaranchal).

**Mr S. Kailash** attended/participated in the following events:

- Chairperson at INDO-US Emergency Medicine Summit 2006 on 'IT and ED' and 'Airline emergencies'; 27 September–1 October 2006.
- Resource person at the 24th Annual National Conference of the Indian Society of Medical Statistics, PSG Institute of Medical Sciences and Research, Coimbatore; 1–3 December 2006.
- Expert to set up a Teleophthalmology Network involving RIOs and District Hospitals, Ministry of Health and Family Welfare, Government of India.
- 'Information technology in health: Telemedicine and its applications in trauma care and disaster management as a part of PG course', Indian Red Cross Society, New Delhi; 27 January 2007.
- 'Enterprise Connect Awards', Mumbai; August 2006.
- Selection Committee expert for engagement of Systems Administrators in ERNET, Ministry of Information Technology, Government of India; July 2006.
- Selection Committee expert for engagement of Systems Administrators through Campus Recruitment for Delhi College of Engineering, Bharati Vidyapeeth College of Engineering, New Delhi; June 2006.

**Mr S.N. Ragu Kumar** attended/participated in the following events:

- 'National Workshop on Postgraduate Dental Education', jointly organized by the KL WIG CMET and CDER, AIIMS and Dental Council of India, AIIMS; 28–29 April 2006. Awarded certificate for the significant contribution to the development of the postgraduate curriculum.
- 'Role of information technology in PG dental education and training', National Workshop on Postgraduate Dental Education, jointly organized by the KL WIG CMET and CDER, AIIMS and Dental Council of India, AIIMS; 28–29 April 2006.
- Organizing committee member for the National Workshop on Emerging Trends in Medical Education, AIIMS, New Delhi; 23–25 November 2006.

- Coordinated and Conducted e-learning demonstration by Tele-Education setup connecting Raipur, Chennai and Jammu, for online interactive classes for 'IT, Media and e-learning in Medical Education' session, National Workshop on Emerging Trends in Medical Education, KL Wig CMET, AIIMS, New Delhi; 23–25 November 2006.
- 'Role of information technology in medical education: e-learning', National Workshop on Emerging Trends in Medical Education, AIIMS, New Delhi; 23–25 November 2006.
- Invited by the organizing committee of the APICON 2007, conducted a workshop on 'Effective information retrieval using internet in health sciences', coordinated by Dr R. Handa, Goa; 15–17 February 2007. Association of Physicians of India annual conference.
- External expert for computerization at National Institute for Health and Family Welfare, New Delhi.
- Attended as technical expert various technical committees for Computers, Network and IT infrastructure and software systems at various departments and centres of AIIMS.
- Indian Red Cross Society, New Delhi invited to deliver lectures on 'DP&R 201 Informatics in Disaster Preparedness and Rehabilitation', as part of the PG diploma course; 22–31 January 2007.
- International Conference on Digital Libraries, TERI, New Delhi; 5–8 December 2006.
- National Workshop on Knowledge Management, Computer Society of India, Chennai; 13–14 October 2006.
- 'Telemedicine and E-health', School of Telemedicine and Biomedical Informatics, SGPGI, Lucknow, New Delhi; 17–22 August 2006.

**Mr S.K. Meher** attended/participated in the following events:

- 'Regulatory issues in the age of convergence', New Delhi; 28–29 June 2006.
- Meditel 2006, Medical Computer Society of India in Amrita Institute of Medical Sciences, Kochi; 24–26 November 2006.
- 'Rural Healthcare through Telemedicine', 23 December 2006 during the ICWA 2006 (International Conference on Web Engineering and Applications) Bhubaneswar, Orissa; 21–24 December 2006.
- 'Management of Dengue patient through IT', International Workshop on Management of DHF/DSS, AIIMS; 13–14 March 2007.
- Selected for International Organizing Chair for AACCC 2006 (4th International Conference on Bridging the Digital Divide), Kathmandu, Nepal.
- Penal discussion in the Health Infotech 2007, Singapore; 28–30 March 2007.
- 'IT in Emergency Medicine', Indo-US Emergency Summit 2006, AIIMS; 27 September–1 October 2006.
- IT in Health care invited half-day talk in the Department of Computer Science and Application in Utkal University, Bhubaneswar, Orissa; 26 January 2007.
- Coordinated and conducted twice the computerized online counselling for PG MD/MS/MDS and the selection of Junior Residence (non-Academic) 2006–2007.

**Sanjay Gupta** represented/attended/participated in following events:

- Represented AIIMS in the Vth Project Implementation Committee (PIC) Meeting on Telemedicine Programme of the North East including Sikkim, NEC Secretariat, Nongrim Hills, Shillong; 14 February 2007.
- Represented AIIMS in the Expert Group Meeting on setting up of SAARC Telemedicine Network Project organized by the Ministry of External Affairs, GOI, Delhi; 22–23 January 2007.
- Attended Telemedicine System Training programme, Bangalore; 4–6 December 2006.
- Participated in Meditel 2006 organized by the Centre for Digital Health, Amrita Institute of Medical Sciences in association with the Medical Computer Society of India, AIMS, Kochi, India; 24–26 November 2006.
- Participated in the International Conference on Planning and Designing of Healthcare Facilities, Goa, India; 15–17 September 2006.

## **RESEARCH**

1. ‘Study of role and scope of telemedicine services at AIIMS for post-discharge follow-up of patients’: Thesis submitted at AIIMS for the Degree of Masters in Hospital Administration (MHA). S. Kailash.
2. ‘Workflow automation of patient related records at B.R.A Cancer Hospital, AIIMS’, Thesis submitted Bachelor of Technology (Computer Science). S. Kailash.
3. ‘Knowledge management information system’, Design and development of digital archival and knowledge management system for AIIMS publications like research reports, papers, thesis, etc., on a ‘Producer, manager and consumer model for medical/health knowledge management’ guided a group of six students for BTech, (Computer Science) Thesis. S.N. Ragu Kumar and R.S. Tyagi.
4. ‘Bioinformatics file format converter system’, developed and submitted the thesis to Sikkim Manipal, University of Health and Technological Sciences for the Degree of Master of Sciences (Bioinformatics). S.K. Meher and R.S. Tyagi.
5. ‘Dengue DT–DB drug target database for dengue’, developed and submitted the thesis for the Degree of Master of Sciences (Bioinformatics) under the guidance of S.K. Meher and R.S. Tyagi.

## **Patient Care**

Successfully implemented computerized registration of OPD patients in the department of Physical Medicine and Rehabilitation running successfully for the past one year. S. Kailash (Project-in-charge), S.K. Meher and Sanjay Gupta.

Developed a modular software for workflow automation of Patient related records at BRA IRCH. Following modules have been accepted for implementation:

OPD Registration (New, Old and Backlog), inpatient registration and discharge summary, Laboratories, Delhi Cancer Registry, Cashier and billing, Pain Clinic and Anesthesiology, Medical Oncology and Surgical Oncology.

The department also developed software for the main hospital, CN, CT Centre and RP centre and Trauma Centre.

Study, design and demonstration of online reservation system for room/bed allotment for patients of AIIMS, Dharamsala, S.N. Ragu Kumar.

Academic, Administration, Finance, engineering, Library, Central Facilities, etc.

Software development of AIIMS Administration section continued and maintained various modules in them.

**Research Section is fully automated and running successfully.**

1. Administration:
  - (a) Research project management
  - (b) Recruitment management
  - (c) Project employee management
  - (d) Project employee EHS management
  - (e) Research fellowship management
  
2. Accounts:
  - (a) Payroll and tax management
  - (b) Grand register
  - (c) Cashbook
  - (d) Ledger
  - (e) TA/DA reimbursement
  - (f) Balance sheet
  
3. Store:
  - (a) Requisition
  - (b) Supply order
  - (c) Financial transaction

One integrated software on Health Care has been developed for IRCH and is in the process of implementation. The modules are: Registration (OPD/Inpatient/Day care), Cash section, Laboratory, Surgery, Anesthesia, Pain clinic, MRO.



**Computer facility has prepared a proposal for automation of B.B. Dikshit Library at AIIMS.**

Computer facility has prepared a Request for proposal and express of interest for the total computerization of AIIMS.

**Central facilities maintained by computer facility**

**The internet and web applications facility has continued and maintained the following services to AIIMS:**

1. The website of www.aiims.edu, www.aiims.ac.in is being maintained in-house by the department.
2. Remote access internet facility for the faculty on the campus-wide telephone network 24×7×365 days.
3. Creation and maintenance of users accounts for 564 aiims.ac.in domain email users.
4. The total number of visitors to AIIMS official website were 27,67,926 during the year 2006–2007.
5. Maintenance of Web Server, Proxy Server, Messaging Server 24×7×365 round the year.
6. The software modules for the website are developed in-house. Some of the modules developed are:
  - (i) Design, development and hosting of the Specialty Centre's and Departmental web pages: 566 pages for 16 departments
  - (ii) Design Development and Hosting of departmental conferences and workshops web pages: 342 pages for 20 conferences
  - (iii) Design development and hosting of Current Events, Exam and Result What's New and Buttons under main page of website time to time: 545 pages for 39 activities
  - (iv) Main Headings under Main page: 615 pages for 4 departments
  - (v) Recruitment for posts advertisements, results and waiting list: 113 pages for 23 departments
  - (vi) Data Upload on Exam Server for Various Examinations which are conducted by AIIMS: 47 MB for 11 Exams

## **Total number of pages created and hosted on AIIMS website:**

<b>Headings</b>	<b>Number of pages</b>
Total number pages under departments	740
Conferences, workshops and orations	342
Recruitment for faculty and other posts	113
Admission notices and results and others under events	545
Members of Institute body and other bodies	8
Change under main page and buttons (annual report 07)	615
Unknown patient records	20
Central facilities	22
Publication (add and edit)	6
RTI information	3
<b>Total</b>	<b>2,414</b>

As coordinating centre for AIIMS the CF department has hosted various tenders online. The total number of tenders/pages hosted in Government of India Tender portal during 2006–2007 is:

Tender, notices and tender corrigendum	1,515
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### **For the use of students and faculty were continued and maintained.**

Total number of e-mail users at aiims.ac.in	564
Total number student/doctors/faculty visits for accessing the medical and educational information access facility at CF AIIMS	23,642
Total number of laser printouts given	658
Total number of scanning documents	125
Total number of new internet connections provided during this year	128
Total number of computer nodes maintained for internet access	995 (approx.)
Data transfer through internet (approx.)	5168461 MB
<b>Total e-mails sent and received (aiims.ac.in) (approx.)</b>	<b>63,000</b>

### **Others Central Facilities**

1. e-mail and FTP facility
2. Medical and educational information access facility
3. Laser printing and scanning
4. Consultancy for software and hardware

### **Telemedicine Facility**

The existing telemedicine facility was upgraded by ISRO which now supports high quality transmission simultaneously with 5 different remote locations. Three more ISDN lines were added to the existing three lines.

The following programs were organized:

1. Case consultation/patients care: 64

Most of the case consultations were from SCB Medical College Cuttack, GB Pant Portblair, SKIMS Srinagar, GMC Srinagar, District Hospital Nellore, CRHS Ballabgarh, RIMS Ranchi, Mokokchung Hospital Nagaland, Guwahati Medical College, and GMC Jammu, and related to Obstetrics and Gynaecology, Neurology, Neurosurgery, Orthopedics, Radiology, Cardiology, Dermatology, Pediatrics, Gastroenterology and Urology.

**Consultations/CME/training course/international interaction:**

Patient care (consultations)	84
Education (CME/training courses)	34
National and international interaction/live surgeries	40

**International interaction/live surgeries**

- Emergency-medicine for 3 days with USA
- Cardiology with Toronto for 2 days, and
- Surgery with Italy for 2 days, Abu Dhabi for 1 day, USA and France for 6 days.

National interaction/live surgeries for cumulative 30 days to SRMC Chennai, RIMS Ranchi, and SCB Cuttack, GMC Srinagar, Coimbatore, INC Delhi, Narayan Hridalya Bangalore and Vellore SGPGI Lucknow and Arbindo Medical College, Indore.

**Continuing Medical Education**

**Monthly case discussions are held with**

- SGPGI, Lucknow and PGI Chandigarh in Urology (case discussions by each centre)
- SCB Medical College, Cuttack in Radiotherapy, Anesthesiology, Microbiology, Medicine, Neuro-Radiology, Nursing Skills Development, Pathology
- SGPGI Lucknow in Nuclear Medicine, and
- MKCGMC Behrampur (Orissa) in Dermatology.

## 11.6 Electron Microscope Facility (Department of Anatomy)

**Officer-in-charge**

Shashi Wadhwa

**Associate Professors**

Taposh K. Das

T.C. Nag

**Senior Technical Officer**

S.C.P. Sharma

(superannuated on 31 December 2006)

**Technical Officer**

Rajesh Pathania

**Technical Assistant**

Sandeep Arya

### EDUCATION

Eleven MBiotech students of the Department of Biotechnology, AIIMS were given two weeks' training; 17–30 August 2006.

### Continuing Medical Education

1. The 22nd National Training Programme for Scientific Investigators in Electron Microscopy, 30 October–18 November 2006. The training programme was conducted in two parts:
  - a) **Basic course (30 October–11 November 2006)**  
Eighteen Scientific Investigators, selected from 48 applicants from various parts of the country, participated in this course, which consisted of two weeks' hand-on training on techniques of biological sample preparation and operation of SEM and TEM for viewing self-prepared samples.
  - b) **Advanced course (13–18 November 2006)**  
Twelve Scientific Investigators, selected from 44 applicants, from various parts of the country took part in this course. The course consisted of hands-on training-cum-demonstration of special techniques in electron microscopy, viz. Microwave technique for sample preparation, Immunoelectron microscopy, Cryo-electron microscopy, Stereology, image analysis, and Digital imaging in electron microscopy.

2. The 18th National Training Programme in Electron Microscopy for Technical Personnel; 12–24 February 2007. Twelve technical personnel, selected from 96 applicants from different parts of the country, participated in this course.  
In all, 20 lectures were delivered by Professor Shashi Wadhwa, Taposh K. Das and T.C. Nag for the participants of the above courses.
3. Summer Training Course for Technical Personnel in Electron Microscopy; 5 May–30 June 2006. B. Sudhakar from Rotary Nagar, District Khammam, Andhra Pradesh, was trained in sample processing, microtomy, CPD, sputter coating, TEM and SEM viewing, photography and routine maintenance.

## **RESEARCH**

### **Funded Research**

#### **Ongoing**

1. Role of free radical scavengers and the effect of antioxidants on their levels in patients with ankylosing spondylitis—to investigate the possible role of antioxidants as therapeutic agents in ankylosing spondylitis. Taposh K. Das. Funded by ICMR for 3 Years (2005–2008). Funds: Rs 14.23 lakh.
2. Ultrastructural localization of proteins modified by fluoride-induced lipid peroxidation and to study the preventive role of dietary antioxidants. Taposh K. Das. Funded by AIIMS for 1 year (2006–2007). Funds: Rs 1 lakh.
3. Localization of markers of oxidative phosphorylation in the aging human retina. T.C. Nag. Funded by AIIMS for 2 Years (2005–2007). Funds: Rs 1 lakh.

### **Departmental Projects**

#### **Completed**

1. Synaptic development in chick hippocampus and changes in synaptic density following prenatal auditory stimulation.

#### **Ongoing**

##### **Dr Taposh K. Das**

- i) Effect of infused  $\alpha$ -Amyloid  $\beta$ -Beta (A $\beta$ 1-42) on hippocampus and cerebellum of rat: Ultrastructural and proteomic study.

##### **Dr T.C. Nag**

- i) Müller cell changes in the ageing human retina.

### **Collaborative Projects**

#### **Ongoing**

1. Effects of certain plant extracts on experimentally induced myocardial infarction in rat (with Pharmacology, AIIMS).

## PUBLICATIONS

### Journals

1. Chatterjee T, Panigrahi I, Agrawal N, Naithani R, Mahapatra M, Pati HP, *et al.* Cytochemical, immunophenotypic and ultrastructural characterization of acute leukemias: A prospective study of fifty cases: Haematological malignancy. *Hematology* 2006; **11**:147–555.
2. Sharma D, Bose A, Shakila H, Das TK, Tyagi JS, Ramanathan VD. Expression of mycobacterial cell division protein, FtsZ, and dormancy proteins, DevR and Acr, within lung granulomas throughout guinea pig infection. *FEMS Immunol Med Microbiol* 2006;**48**:329–36.
3. Sharma MC, Gulati S, Atri S, Seth R, Kalra V, Das TK, *et al.* Nemaline rod myopathy: A rare form of myopathy. *Neurol India* 2007;**55**:70–4.
4. Raje M, Dhiman R, Majumdar S, Das TK, Dikshit KL, Kaur R. Charged nylon membrane substrate for convenient and versatile high resolution microscopic analysis of E. coli and mammalian cells in suspension culture. *Cytotechnol* 2006;**51**:111–17.
5. Bashir S, Sharma Y, Irshad M, Nag TC, Tiwari M, Kabra M, *et al.* Arsenic-induced apoptosis in rat liver following repeated 60 days exposure. *Toxicology* 2006; **217**:63–70.
6. Nag, TC, Wadhwa, S. Vascular changes of the retina and choroid in systemic lupus erythematosus: Pathology and pathogenesis (Review). *Curr Neurovasc Res* 2006; **3**:159–68.
7. Velpandian T, Narayanan K, Nag TC, Ravi AK, Gupta SK. Retinal toxicity of intravitreally injected plain and liposome formulation of fluconazole in rabbit eye. *Indian J Ophthalmol* 2006;**54**:237–40.
8. Khaki AA, Tubbs RS, Shoja MM, Rad JS, Khaki A, Farahani RM, *et al.* The effects of an electromagnetic field on the boundary tissue of the seminiferous tubules of the rat: A light and transmission electron microscope study. *Folia Morphol (Warsz)* 2006; **65**:188–94.
9. Dasgupta R, Saha I, Pal S, Bhattacharyya A, Sa G, Nag TC, *et al.* Immunosuppression, hepatotoxicity and depression of antioxidant status by arecoline in albino mice. *Toxicology* 2006;**227**:94–104.
10. Nag TC, Wadhwa S, Chaudhury S. The occurrence of cone inclusions in the aging human retina and their consequence upon vision: An electron microscope study. *Brain Res Bull* 2006;**71**:224–32.
11. Nag TC, Wadhwa S. Localisation of markers of oxidative phosphorylation in the aging human retina. *Neurosci Res* 2006;**55** (Suppl.):S223.
12. Nag TC, Wadhwa S, Chaudhury S. Photoreceptor changes in the aging human retina and their possible consequences. *Annals Neurosci* 2006;**13**:48.
13. Chaudhury S, Nag TC, Wadhwa S. Prenatal acoustic stimulation influences neuronal size and the expression of calcium-binding proteins (calbindin D-28K and parvalbumin) in chick hippocampus. *J Chem Neuroanat* 2006;**32**:117–26.

14. Aggarwal P, Nag TC, Wadhwa S. Age related decrease in rod bipolar cell density of the human retina: An immunohistochemical study. *J Biosci* 2007;**32**:293–8.
15. Loh HK, Sahoo KC, Kishore K, Ray R, Nag TC, Kumari S, *et al.* Effects of thalidomide on isoprenaline-induced acute myocardial injury: A haemodynamic, histopathological and ultrastructural study. *Basic Clin Pharmacol Toxicol* 2007;**100**:233–9.
16. Nandave M, Mohanty I, Nag TC, Ojha SK, Mittal R, Kumari S, *et al.* Cardioprotective response to chronic administration of vitamin E in isoproterenol induced myocardial necrosis: Hemodynamic, biochemical and ultrastructural studies. *Indian J Clin Biochem* 2007;**22**:22–8.

## PATIENT CARE

### Special Laboratory Facilities

During the year, special laboratory facilities provided for research and patient care are as follows:

Facility	Users (n)	Specimens analyzed
Transmission electron microscope	377	2,099
Scanning electron microscope	232	1,719
Immuno-electron microscope	38	72

## AWARDS, HONOURS AND SIGNIFICANT EVENTS

**Dr T.C. Nag** received the Japan Neuroscience Society travel award and attended the 29th Annual Meeting of the Society, Kyoto; 18–21 July 2006. He was invited to review papers for *Indian J Ophthalmol*, and *Comp Physiol Biochem* (B).

**Dr T.C. Nag** participated at the 28th Annual Meeting of the Electron Microscopy Society of India, held at Trivandrum; 19–21 April 2006; He also attended the 29th Annual Meeting of the Japan Neuroscience Society, Kyoto, 18–21 July 2006; National Symposium on Pain and Neural Plasticity, held at AIIMS, New Delhi; 18–19 October 2006; 25th Annual meeting of Indian Academy of Neurosciences, Varanasi, 17–20 December 2006.

One Centre Management Committee meeting was conducted. The Faculty participated in the SAIF Steering Committee meeting at the Department of Science and Technology, New Mehrauli Road, New Delhi.

**Dr T.K. Das** attended the workshop on ‘Virus Morphodiagnosis and Cryo Electron Microscopy: Application in infectious diseases’, at National Institute of Virology, Pune; 12–15 April 2006. He was invited as an External Expert for the Technical Committee for the purchase of a 200 kV TEM and Environmental SEM for IMTECH, Chandigarh.

## VISITING SCIENTISTS

Dr W.M. Busing from the Netherlands visited the Electron Microscope Facility and delivered a talk on ‘Advanced applications of electron microscope in the life sciences’; 17 January 2007.

## 11.7 Experimental Animal Facility

**Professor-in-charge**

D.N. Rao

**Senior Veterinary Officer**

P.K. Yadav

During the year 2006–2007, animals were maintained in this facility. The various activities of this unit are categorized as follows.

### Small Animal Facility

The following small animals have been maintained through-out the year :

Rats (Wistar)	1,857
Mice (Swiss)	1,180
Rabbits (New Zealand)	230
Guinea Pigs (Dunkin Hartley)	68

A total of 3,666 small animals (rats, mice, rabbits and guinea pigs) were supplied to various departments of the Institute and considerable numbers of animals were also sold to other institutions in Delhi and outside; i.e. rats – 140, mice – 114, rabbits – 97, guinea pigs – 02.

### Large animal facility

This facility housed 13 sheep for research work conducted by the Microbiology dDepartments.

### Experimental surgery

Seventy-nine surgical procedures and radiological investigations were performed by various departments of the Institute. These include the Departments of Surgery, Biomedical Engineering, Neurosurgery, Pediatric Surgery.

### Institutional animal ethics committee

The Institutional Animal Ethics Committee (IAEC) cleared 49 projects of various investigators of the Institute during the year-2006–2007.

### Services provided

A departmental wing has been operational for maintaining the animals belonging to the departments of Microbiology, Biomedical Engineering, Biochemistry, Biotechnology, Pediatrics Surgery, Reproductive Biology, Anatomy, Psychiatry, Pathology, Laboratory Medicine, Neurosurgery, and Endocrinology and Metabolism. This facility housed experimental animals, i.e. rabbits – 62, Hhampsters – 31, Mmice – 994 and rats–247.



The Experimental Animal Facility provided laboratory facilities to various investigators, viz. vacuums drying of sera, microscope facility and storage of serum samples.

### **Educational Programme**

- Dr P.K. Yadav, Senior Veterinary Officer, EAF and Shri Nand Lal, Technical Assistant (Laboratory), Shri R.J. Kamble, Laboratory Technician, Shri Tomar Manjeet Kumar, Laboratory Technician gave orientation lectures to the students of BSc Nursing.
- Shri Manoj Gosain, Laboratory Attendant and Shri Jasbir, Laboratory Attendant gave demonstration to the students of BSc Nursing.
- '33rd Indian Immunology Society Conference', Jawaharlal Nehru Auditorium, AIIMS; 28–31 January 2007. Organized by the Department of Bio-chemistry, AIIMS.
- P.K. Yadav, Senior Veterinary Officer, 'Conference on Recent Advances and challenges in Reproductive Health Research' and 17th Annual Meeting of the Indian Society for the Study of Reproduction and Fertility (ISSRF) New Delhi; 19–21 February 2007.

## 11.8 Hostel Section

### Superintendent of Hostels

G.K. Rath

### Deputy Superintendents of Hostels

S. Datta Gupta  
Minati Choudhary  
Bhupinder Paul

J.S. Titiyal  
Buddhadev Chowdhury

S.S. Kale  
Rachel Andrews

### Senior Warden

Krishna Dhaka

### Warden

Shashi Prakash Pandey

### Dupty Wardens

Mohan Sharma

Remani Thomas

Seema Pruthi

### Assistant Wardens

Satprakash Kalia

Suchita Kumari

Sukhpal Malik

### Junior Wardens

Babulal Meena  
Dinesh Desai  
Sunil Devi

Rani Varghese  
Nirmala

Tripta Sharma  
Rajesh Rawat

### Ministerial Staff

Neelam Rani

Meena Claire

Vimal Thakral

(Assistant [NS])

(Assistant [NS], relieved on 28 Sept 2006)

(UDC, w.e.f. 8 Sept 2006)

Sudhir Thakur (LDC)

D. Poongothai (LDC)

### Subordinate Staff

Thirteen female office attendants and eleven male attendants are posted in the hostel section.

The AIIMS has several halls of residence with a capacity of over 1,204 single/-double rooms and 175 married accommodations and 422 accommodations for Nursing Students. These are spread over different hostels and residence in the AIIMS Main Campus, Masjid Moth, A.V. Nagar, F.T.A. Hostel, JPNATC Hostel (Raj Nagar).

## GENTS HOSTELS

S. No.	H. No.	Location	Single	Double/Three/ Four/Five seater	Guest Rooms (with two beds)	Total strength
1.	I (Charak)	Main campus	63	2		67
2.	II (Jivak)	Main campus	57	--	1	58
3.	III (Sushruta)	Main campus	71	5	1	82
4.	IV (Madhava)	Main campus	53	7	--	67
5.	V (Nagarjuna)	Main campus	54	4	--	62
6.	VI (Vagbhata)	Main campus	69	7	--	83
7.	VII (Ashwini)	Main campus	110	2	1	115
8.	VIII (Bharadwaj)	Main campus	108	1	1	111
9.	RPC-I (Dhanwantri)	Main campus	72	--	1	73
10.	MMRDH (single)	Masjid Moth	154	--	6	160
11.	JPNATC	Raj Nagar	56	--	1	57
12.	NNH	Masjid Moth	200	110	2	422
					<b>Total</b>	<b>1,347</b>

## LADIES HOSTELS

1.	IX (Saraswati)	Main campus	61	16+1+1+0	1	101
2.	X (Parvati)	Main campus	91	0+0+1+1	1	101
3.	RPC-II (Laxmi)	Main campus	20	13+0+0+0	1	47
4.	Ladies Hostel XI	Main campus	–	15+0+0+0	–	30
					<b>Total</b>	<b>279</b>

## MARRIED QUARTERS

1.	F-Type (married)	Ansari Nagar (West)		9 (two seater)	–	17
2.	MMRDH campus	Masjid Moth		42	–	42
3.	Ayurvigyan Nagar	A.V. Nagar		80	–	80
4.	Faculty Transit	Ayurvigyan Nagar		29	–	29
5.	JPNATC Hostel	Raj Nagar		7	–	07
					<b>Total</b>	<b>175</b>
					<b>Grand Total</b>	<b>1,801</b>

## SIGNIFICANT EVENTS

- JPNATC (Trauma Centre) Hostel started with the capacity of 60~~sixty~~ single rooms and 7~~seven~~ married accommodations.
- Ladies Hostel No. XI added with the capacity of 15 double rooms.
- The following have been centralized in the Hostel Section office for all hostels.
  - Room/Sseater Allotments (all the hostels)

- Guest room booking
- Stores and Purchase
- Funds and Accounts
- S.K. Mishra (from 19 January 2007–8 April 2007) was deputed as Administrative Officer to look into all the administration work of the hostels. Presently Shri Sanjay Kumar (from 9 April 2007) has been deputed for this.
- Shri Rakesh Sharma (from 10 November 2007) has been deputed as Assistant Stores Officer to look into all the Stores-concerned work of the hostels.
- Shri Ashok Gupta (from 31 October 2007) has been deputed as Office Superintendent for Accounts of the hostels.
- Hostel Office was renovated with separate cubical and built-in cupboards.
- Internal cable wiring has been started in the Gents' hostel.
- Renovation of R:P:C:-I Hostel, Mess and T.V. Room.
- Car parking space with boundary walls constructed in the Masjid Moth Resident Doctors' Hostel for the benefit of the Resident Doctors in Masjid Moth.

## **FUTURE PLANS**

1. Construction of new hostel for resident doctors with modern amenities to accommodate 1,000 students and residents.
2. Modification in window grills for fixing desert coolers in all the hostels.
3. Renovation of shops and establishments in the Hostel Campus.
4. Construction of two big stores to keep the furniture items of the Hostel Section.
5. Provision of R.O. plant system for all the hostels.
6. Construction of boundary wall in between the newly constructed Dental College and Gents Hostel.
7. Internet connection for all the rooms in the hostels.

## 11.9 Primate Research Facility

**Professor-in-charge**

D.N. Rao

**Senior Veterinary Officer**

P.K. Yadav

The Primate Research Facility (PRF) maintained the non-human of primates for research purposes during the year 2006–2007. The PRF also handled all the work connected with the Institutional Animal Ethics Committee for the use of animals in research.

### Census Report

Total number of monkeys	90
Number of deaths	12
(TB+ve) sacrificed after getting the permission from IAEC	04
Born	11
Total number of monkeys in March 2007	85

### Indoor Runs

The Department of Primate Research Facility has increased more 3 indoor runs during the year 2006–2007. These runs are utilized for providing exercises to all the monkeys which are in the cages in this facility. The process of exercise is 24 hours for each monkey within a week.

### BREEDING (in cage and open run)

Breeding of monkeys were carried out. A total of 13 females were left in the run for mating. Additional 14 female monkeys were mated by cage-breeding. Out of 27 female monkeys, 10 have conceived and the pregnancies are in progress.

### Institutional Animal Ethics Committee (IAEC)

The Institutional Animal Ethics Committee has increased 2 projects on large animals for investigators of AIIMS; 2006–2007.

### Rehabilitation Facility

A programme for the rehabilitation of monkeys has been started in the year 2000. All monkeys, which were used for a period of 3 years of experiment, were put on rehabilitation in an open run. In addition, the old monkeys were also put in this open run. Most of these monkeys were permanently issued to local animal welfare organizations as per the instructions form the CPCSEA.

## Clinical Procedures conducted

Blood sample collected	103
Physical examination, testing for TB and weight	134
Haematology	309
Blood chemistry (urea and sugar)	515
X-ray	134
Rectal palpation	25
Parasitology (stool examination)	309
Others procedures	134
(Management of trauma, obstetrics procedures, etc.)	

## 12.1 Finance Division

### Senior Financial Advisor

Rashmi Jain (w.e.f. 25 September 2006)

### Financial Advisor

R.G. Garg (up to 30 November 2006)

### Financial Advisor/F&CAO

Basanti Dalal (w.e.f. 1 December 2006)

### F&CAO

S.P. Mahla

### Account Officers

S.K. Gulati  
(up to 16 January 2007)  
Sunil Kumar Kedia  
R.K. Juneja

Kishan Gopal

N.K. Bajaj

C.L. Raina

O.P. Saini

The Institute gets grants under the Heads 'Plan' and 'Non-Plan' from the Government of India, Ministry of Health and Family Welfare. In addition, Plan grants are received for National Drug Dependence Treatment, VVIP care and College of Nursing, etc. Besides, extramural grants are also received from various external funding agencies such as ICMR, DST, CSIR, WHO, UNICEF, DBT, etc. for various research projects. Plan and Non-Plan grant received from the Government of India and other agencies are further allocated to Superspecialities Centres/Departments/Research Projects as per their projections/ requirements.

Finance Division of the Institute monitor/control the expenditure against the above funds/budget by obtaining monthly expenditure from the respective centers/units/departments and also administers day to day financial matters, payment of salaries to faculty and staff, payment of personal claims, pension and GPF in respect of the employees of the Institute. At the time of making the payment, all the checks which have been prescribed by the Government of India are being exercised by the respective DDOs. Apart from this Finance Division do the internal audit.

All the above works are executed by the Financial Advisor, Finance and Chief Accounts Officers (F&CAOs)/Accounts Officer under the overall control of Senior Financial Advisor.

**GRANTS RECEIVED DURING (2006-2007)**

<b>S.NO.</b>	<b>HEAD</b>	<b>PLAN</b>	<b>NON-PLAN</b>
<b>1</b>	AIIMS	1603300000.00	2967294730.00
<b>2</b>	DE-Addiction Centre	40000000.00	-
	<b>TOTAL</b>	<b>1643300000.00</b>	<b>2967294730.00</b>



**FIGURES OF ACTUAL EXPENDITURE FOR THE YEAR 2005-2006 AND 2006-2007 (UNAUDITED) AND FINAL BUDGET ESTIMATES FOR 2006-2007 AND BUDGET ESTIMATES FOR 2007-2008 IN RESPECT OF ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI.**

HEAD/SUB HEAD	ACTUAL EXPENDITURE							SANCTIONED BUDGET ESTIMATES	
	2005-2006		2006-2007		2007-2008			2007-2008	
	PLAN	NON-PLAN	PLAN	NON-PLAN	NON-PLAN (Main)	PLAN	NON-PLAN	PLAN	NON-PLAN
1	2	3	4	5	6	7	8	9	10
<b>A. (Main Instt.)</b>									
Pay & Allow. Incl.	-	107.58	-	-	115.82	-	-	-	100.00
LS & PC, stipend etc.									
Rep. & Maint. of Mach. & Equip.	23.02	2.21	22.49	-	3.11	46.12	-	2.25	2.25
Rep. & Maint. of Mat. & Supply	-	84.24	-	-	83.99	-	-	83.00	83.00
Maintenance of Bldg.	4.63	-	-	-	4.79	-	-	4.75	4.75
Pension & other pensionary benefits	-	18.07	-	-	18.63	-	-	19.00	19.00
Recoverable Advances	0.09	-	-	-	0.19	-	-	0.50	0.50
House Building Adv.	0.20	-	-	-	0.08	-	-	0.50	0.50
Instt. Research Grant	0.50	-	-	-	0.50	-	-	0.50	0.50
Books & Publication (M.&S.)		1.48	-	-	1.63	-	-	2.75	2.75
Conference/Symposia	0.50	-	-	-	0.50	-	-	0.50	0.50
Capital Building		19.56	-	-	13.79	-	-	90.00	90.00
P.E.T. Facility		1.75	-	-	1.55	-	-	-	-
Robotic Surgical System		9.00	-	-	-	-	-	-	-
Covering of Nallah		15.34	-	-	-	-	-	6.66	6.66
Computerisation		-	-	-	-	8.00	-	-	-
<b>TOTAL A</b>	<b>70.15</b>	<b>218.02</b>	<b>39.46</b>	<b>227.61</b>	<b>153.53</b>	<b>211.00</b>	<b>211.00</b>	<b>211.00</b>	<b>211.00</b>
<b>B. SUPERSPECIALITIES</b>									
C.N.Centre	46.39	22.58	33.37	47.33	15.00	45.00	15.00	45.00	45.00
Dr. R.P. Centre	23.48	6.00	6.75	25.40	9.00	17.00	9.00	17.00	17.00
Dr.B.R.A. I.R.C.H.	12.13	25.30	9.73	11.90	5.00	12.00	5.00	12.00	12.00
i/c Linear Accelerator			0.63						
J.P.N. Apex Trauma Centre		24.43	50.80	-	12.32	4.00	12.32	4.00	4.00
Centre for Dental Edu. & Res.	15.09	-	13.69	-	5.15	1.00	5.15	1.00	1.00
<b>TOTAL (A &amp; B)</b>	<b>163.55</b>	<b>300.02</b>	<b>154.43</b>	<b>312.24</b>	<b>200.00</b>	<b>290.00</b>	<b>200.00</b>	<b>290.00</b>	<b>290.00</b>
C. DE-Addiction Centre	3.44	-	4.05	-	5.00	-	5.00	-	-
D. N.A.C.O. (Dr. Ashok Kumar)	0.01	-	-	-	-	-	-	-	-
<b>GRAND TOTAL(A to D)</b>	<b>167.00</b>	<b>300.02</b>	<b>158.48</b>	<b>312.24</b>	<b>205.00</b>	<b>290.00</b>	<b>205.00</b>	<b>290.00</b>	<b>290.00</b>

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES**  
**STATEMENT SHOWING REVENUE RECEIPT FROM APRIL 2006 TO MARCH 2007**  
**(Rs. in Lakhs)**

HEAD	AIMS(M)	C.N.C.	R.P.C.	IR.C.H.	Trauma	C.D.E.R. TOTAL
Hospital Receipts	1149.63	69.81	52.41	92.31	-	1364.16
Interest	284.71	38.65	13.17	14.31	-	360.33
Rent & Water Charges	156.59	8.29	-	-	-	164.88
Fee	11.74	-	-	-	-	11.74
E.H.S.	94.40	14.18	40.94	-	-	149.52
Private Ward	-	136.63	68.91	-	-	205.54
X-Ray	-	7.86	0.53	-	-	8.39
Ultra Sound	-	1.17	149.24	-	-	150.41
C.T. Scan	-	11.09	-	-	-	11.09
Levy Charges	-	3.76	-	-	-	3.76
Thallium Test	-	31.13	-	-	-	31.13
Blood Test/Lab. Test	-	37.85	-	-	-	37.85
Cardiac Test Collection	-	35.05	-	-	-	35.05
Recoverable Advances	97.44	23.54	3.95	0.23	-	125.16
Revolving Fund	527.63	-	-	34.58	-	562.21
Others, if any	-	-	461.71	3.75	2.73	468.19
<b>TOTAL</b>	<b>2322.14</b>	<b>419.01</b>	<b>790.86</b>	<b>145.18</b>	<b>2.73</b>	<b>3689.41</b>
					<b>9.49</b>	

**REVENUE RECEIPT**  
**BREAK UP OF BUDGET RECEIPTS FOR 2006-2007 AND ESTIMATE FOR 2007-2008 FOR AIIMS,**  
**INCLUDING SUPERSPECIALITY, DR. R.P. CENTRE AND I.R.C.H.**  
**(RS.IN CRORES)**

S.NO.	HEAD/SUB HEAD	ACTUAL RECEIPT DURING 2006-2007	ESTIMATED RECEIPT 2007-2008
1	COLLEGE/HOSTEL	0.12	0.12
2	RENT & WATER CHARGES	1.65	1.70
3	HOSPITAL RECEIPT(USER CHARGES)	23.16	25.00
4	RECOVERABLE ADVANCES	1.25	1.30
5	INTEREST	3.60	3.68
6	EHS	1.49	1.50
7	REVOLVING FUND	5.62	5.70
	<b>TOTAL</b>	<b>36.89</b>	<b>39.00</b>

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES**  
**RECEIPTS & PAYMENT ACCOUNT FOR THE YEAR 2006-2007**

<b>RECEIPTS</b>		<b>2006-07</b>	<b>2005-06</b>	<b>PAYMENTS</b>		<b>2006-07</b>	<b>2005-06</b>
<b>1</b>	<b>OPENING BALANCES</b>			<b>1</b>	<b>Grants transferred to the Centres/Schemes Cell</b>		
A	Cash at bank			<b>A</b>	<b>Dr. R.P. Centre</b>		
i)a	AIIMS (MAIN)	382986814	118822691	i)	PLAN	67500000	
b	Unspent Balance of specific grants remained with AIIMS(M)	-	112927426	ii)	Non-Plan	177500000	245000000
							220000000
ii)	Scheme Cell	61200654	74902476	<b>B</b>	<b>C.N. Centre</b>		
iii)	R.P. Centre	24422198	18988109	i)	Plan	356900000	
iv)	C.N. Centre	113473131	88193471	ii)	Non-Plan	450000000	806900000
							660700000
v)	CT Patient A/c			<b>C</b>	<b>N.D.D.T.C.</b>		
a)	Bank	13752622	6267675	i)	Plan	40000000	37000000
b)	FDR	235000000	225000000				b) FDR
vi)	Angiography A/c			<b>D</b>	<b>Scheme Cell</b>		
a)	Bank	12788961	2176746	i)	Grants against receipts	256927932	
b)	FDR	75000000	75000000	II)	National Oral Health Care Programme		263409557
vii)	Gamma Knife patient A/c			iii)	Non Plan grant for National Service Scheme	50000	-
a)	Bank	5330282	946909	<b>E</b>	<b>Dr.B.R.A.I.R.C.H.</b>		
b)	FDR	82500000	67500000	a)	Plan		
viii)	Neuro Surgery patient A/c			i)	Plan EFC	66200000	
a)	Bank	7577574	7387294	ii)	Plan Non-EFC	37400000	
b)	FDR	32000000	22000000	b)	Non-Plan	115000000	218600000
ix)	Dr.B.R.A.I.R.CH.	36218452	8360963				386844000
x)	J.P.N.A.T. Centre	6966601		<b>F</b>	<b>J.P.N.APEX TRAUMA CENTRE</b>		
				i)	Plan	533582000	120000000
xi)	a) N.D.D.T.C.	7389074	3970240	<b>G</b>	<b>CENTRE FOR DENTAL EDUCATION &amp; RESEARCH</b>		
	b) UNDCP	257664	980715	i)	Plan	155000000	

				<b>2</b>	<b>ADMINISTRATIVE EXPENDITURE</b>		
					<b>AIIMS (MAIN)</b>		
xii)	Hostels			a)	i) Pay and allowances	1139148677	1056764567
	a) Cash in hand	7541	8038				
	b) Cash at bank	221318	106431	b)	Travelling Allowances	12989951	13949525
	c) FDR's	1738028	1341563	c)	i) Stipend	5527958	
<b>B</b>	<b>CASH IN HAND (IMPREST)</b>				ii) Add Stipend for the		
i)	AIIMS (Main)	172864	458650		year 2005-2006		
ii)	Dr. R.P. Centre	10000	8000		paid now	500	5528458
iii)	C.N. Centre	40000	40000				5181025
<b>C</b>	<b>AMOUNT LYING UNDISBURSED</b>			d)	Leave salary & Pension	584935	515542
i)	AIIMS (Main)	500	980546		contribution		
ii)	Scheme Cell	28000	121866	e)	Pensionary Benefits	186292072	180701304
iii)	C.N. Centre	-	43103	<b>3</b>	<b>Office Contingency</b>	313716560	373111979
<b>D</b>	<b>POOR PATIENT A/C</b>			<b>4</b>	Mat. & Supply (Non-Plan)	514535989	431131905
i)	AIIMS (Main)			<b>5</b>	Repair and maintenance of	31073733	22128113
	a) Cash/Bank	813303	559517		Mach. & Equip.		
	b) FDRs	327078	327078	<b>6</b>	Furniture & Fixture	26022	472332
ii)	Dr.B.R.A.I.R.C.H.			<b>7</b>	Books & Publications	12377371	14864846
	a) Cash/Bank	1234844	377382	<b>8</b>	Employees Insurance	2979524	2881271
iii)	Dr. R.P. Centre				Scheme		
	a) Cash/Bank	12829	140511	<b>9</b>	GPF.	186224076	178373215
iv)	N.S. Centre			<b>10</b>	Maintenance of buildings	47888085	46317423
	a) Cash/Bank	59004	56793	<b>11</b>	Recoverable Advances		
			-	a)	Car	334600	131700
<b>E</b>	<b>PATIENT TREATMENT A/C</b>			b)	Scooter/Motor Cycle	571400	376690
i)	AIIMS	14236140	12404563	c)	Bicycle	4500	10500
ii)	Dr.B.R.A.I.R.C.H.			d)	House Building Advance	779700	1926000
	a) Cash/Bank	11522423	8620196	e)	Computer	985000	395000
	b) FDR's	6000000	6000000				
<b>2</b>	<b>GRANTS FROM GOVT. OF INDIA</b>						
a)	<b>NON-PLAN</b>						
i)	AIIMS (Main)	2224744730					
ii)	R.P.C	177500000					
iii)	C.N.C.	450000000					
iv)	Dr.B.R.A.I.R.C.H.	115000000					

v)	Scheme Cell	50000	2967294730	2750000000					
b)	<b>PLAN</b>				<b>12</b>	Expenditure out of grant received for specific purpose (Scheme Cell)			
ii)	i) AIIMS (Main)	386718000							
iii)	RPC	67500000			i)	Appendix-A	286108206		
iv)	Dr.B.R.A.I.R.C.H.				ii)	Add undisbursed for 2005-2006 paid now	28000		
	Plan EFC	66200000			iii)	Less undisbursed for 2006-2007	-108000	286028206	
	Plan Non-EFC	37400000						291332738	
v)	J.P.N.A.Trauma Centre	533582000							
vi)	C.D.E.R.	155000000	1603300000	1633600000					
c)	N.D.D.T.C.		40000000	37000000					
d)	CGHS Grant for V.V.I.P.CARE			-	<b>13</b>	Post Partum Programme (Incentive money)		208455	
e)	V.V.I.P.CARE at Parliament House Annexe.	440000		9115671				253775	
f)	College of Nursing	-		700000	<b>14</b>	College of Nursing		213496	
<b>3</b>	Miscellaneous Receipts		88883367	83378676				424677	
<b>4</b>	Hospital Receipts		114963061	97101060	<b>15</b>	<b>PLAN</b>			
<b>5</b>	Interest		28470764	35342226	a)	Mach. & Equip.	86890517	86890517	
<b>6</b>	License Fee		15659351	15270086	b)	Building Construction		113716049	
<b>7</b>	Tution Fee/Exam. Fee		1174242	1995995	c)	V.V.I.P.Care		-	
<b>8</b>	Employees Health Scheme (EHS)		9440192	9831979	d)	V.V.I.P.CARE at Parliament House Annexe.		432400	
<b>9</b>	Pot Fund		281271	236103	<b>16</b>	Purchase of Vehicles		-	
<b>10</b>	Employees Insurance Scheme		2679645	2857390	<b>17</b>	Advance Payments			
<b>11</b>	GPF		186224076	178373215	a)	Mat. & Supply (NP) for foreign purchase		16168532	
					b)	Mach.&Equip.(Plan) for foreign purchase		153487913	
					c)	P. & A.O. etc. for Bldg. material		2059706	
					d)	Ty./Contigent Advances		2235302	
					e)	Private firms for stores		2345757	
					f)	M/s. H.S.C.C. for Trauma Centre		-	

<b>12</b>	Out side recoveries	112233314	102151162	g)	M/s. H.S.C.C. for Dental College	-	150000000
<b>13</b>	Security Deposits/ Earnest Money	25368343	13018817	h)	P&PAO for procurement of Stores	900000	300000
<b>14</b>	Caution Money	47400	44500	i)	NDMC for Covering of Nallah	-	153383000
<b>15</b>	Leave Salary & Pension contribution	156056	607166	j)	Custom Duty for Mach. & Equip.	-	2148754
<b>16</b>	Recoverable Advances			k)	CPWD for Surgical Ward	-	1711770
a)	Car	833838	1024420	l)	CPWD for lift	-	14000000
b)	Scooter/Motor Cycle	1261348	1877214	m)	For Books & Journals	3903205	
c)	Bicycle	9350	12493	n)	For cochelar Implant Pt. Treatment	12519000	
d)	H.B.A.	7322281	8988583	o)	Caryair Equip. India Pvt. Ltd. for Building Construction	192602	
e)	Computer	317591	508720	p)	Indian Oil Corporation for Building Construction	3194680	
<b>17</b>	NACO Generated from test charges	323950	68500	q)	NDMC for Building Construction	18723000	
<b>18</b>	Post Partum Programme (Incentive money)	250000	300000	r)	CAD Studio for upgration Architectral cell of ESD AIIMS	45132	
<b>19</b>	Encashment of Short Term Deposit	981800000	-	<b>18</b>	Security Deposit/ Earnest Money		
<b>20</b>	Grants received for specific purpose Appendix-A (Scheme Cell)	314036193	274963754	(i)	Payment made against the receipts upto the year 2005-06	18952395	
<b>21</b>	Schemes			(ii)	During 2006-07	1441000	20393395
i)	Grants against receipt	255967525	263009557	<b>19</b>	Outside recoveries	109395426	103154719
ii)	Grants transfer from AIIMS (Plan)	400000		<b>20</b>	Investment of short term deposit	981800000	-
iii)	Grants transfer from A.I.I.M.S. Non-Plan	50000		<b>21</b>	NACO		
iv)	Direct received	12532679	14127493	i)Salary		-	71500
				ii)	Mat. & Supply	20000	-
				iii)	Transfer to Scheme Cell	351865	-

<b>22</b>	Misc. Donations (Appendix-D)	1118481	20310427	
<b>23</b>	Revolving Funds	52763213	49074610	
<b>24</b>	New Pension Scheme	3190277	1037872	
<b>25</b>	Donation			
(i)	Dr.V.Ramalingaswami		100000	
(ii)	Dr.N.G.Nayak		100000	
(iii)	Dr. H.D. Tandon		100000	
(iv)	Prof. N. Gopinath (CTVS)		1200000	
(v)	Dr. L. K. Bhutani Oration		500000	
(vi)	Major General Amir Chand	100000		
<b>26</b>	Recovery of excess which was paid by the Cashier			
(i)	Salary	10852		
(ii)	Contingency	7078	17930	
<b>27</b>	Cochelar Inplant Patient Treatment A/c	25492000		
<b>1</b>	GRANT-IN-AID			
i)	Plan	67500000		
ii)	Non-Plan	177500000	245000000	220000000

**DR. RAJENDER PRASAD CENTRE FOR  
OPHTHALMIC SCIENCES**

<b>22</b>	Misc. Donations (Appendix-D)	864595	20108160	
<b>23</b>	Investment			
(i)	Dr.V.Ramalingaswami	-	100000	
(ii)	Dr.N.G.Nayak	-	100000	
(iii)	Dr. H.D. Tandon	-	100000	
(iv)	Prof. N. Gopinath (CTVS)	-	1200000	
(v)	Dr. L. K. Bhutani Oration	-	500000	
(vi)	Major General Amir Chand	100000		
<b>24</b>	Pot Fund	29000	36327	
<b>25</b>	P.M.R. ADIP Scheme	16837	335153	
<b>26</b>	Revolving Funds	36630413	26792404	
<b>27</b>	New Pension Scheme	10914500	3590251	
<b>28</b>	J.P.N. Apex Trauma Centre			
I)	Salary	-	9422199	
<b>29</b>	Centre for Dental Education & Research			
I)	Salary	-	928457	
<b>30</b>	Excess paid by the Cashier			
i)	Salary head			
ii)	Officer contingency	19070	306286	
<b>32</b>	Cochelar Inplant Patient A/c	12845576		
<b>1.A</b>	Pay & allowances	149746943	146815820	
<b>B</b>	Daily Wages	6102052		

**DR. RAJENDER PRASAD CENTRE FOR  
OPHTHALMIC SCIENCES**



<b>2</b>	<b>GRANT-IN-AID (SCHEMES)</b>			<b>2</b>	Travelling Expenses		1443346	825723
i)	ICMR	626838	220983					
ii)	USP	937150	50886	<b>3</b>	Office Expenses		6810590	2942512
iii)	Savers	136165	679900					
iv)	Surgeries	522275	675000	<b>4</b>	Capital Works		6442341	2430067
v)	Indeye	-	6215566					
vi)	ORBIS	-	878865	<b>5</b>	Maintenance of Buildings		3339892	2036691
vii)	Manage	870000	-					
viii)	CODBIL	-	-	<b>6</b>	Mat. & Supply(NP)		82196022	73691315
ix)	NAB	1517545	1116700					
x)	LCIF	540000	586770					
xi)	NPCB-RAAB	502500	-	<b>7</b>	Repair & Maintenance of Mach. & Equip. (Non-Plan)		4388669	8132182
xii)	NPCB-SSU	29272	50000					
xiii)	RIP	-	-					
xiv)	AEH	-	-					
xv)	MBDL	152599	86359					
xvi)	DOS	900000	135000	<b>8</b>	Refund of Security		165000	345000
xvii)	CSIR	1065939	1538353					
xviii)	NIAF	350000	430000	<b>9</b>	Mach. & Equip. (Plan)			
xix)	CRP	98000	166300	i)	Actual Payment	31972691		
xx)	DSBC	245000	1019400	ii)	Advance Payment made to Foreign Purchase	28619997	60592688	56895456
xxi)	Phakie IOL	-	-					
xxii)	Allergan	-	193910					
xiii)	Neema-Pilot Study	-	50027	<b>10</b>	Furniture & Fixtures		455367	667853
xxiv)	Workshop	1307091	72700					
xxv)	DST/DBT (Stem)	853300	1603500	<b>11</b>	<b>PAYMENT TOWARDS NON RPC SCHEMES</b>			
xxvi)	ORP Vision 2020	50000	145000	i)	ICMR		322789	573594
xxvii)	Multifocal IOL	437323	100000	ii)	USP -Pay/Conty. M&E	610388 1897245	2507633	793458 285441
xxviii)	Evaluation Study- anti Cataract	230000	130000	iii)	Savers		630690	838445
				iv)	Surgeries		813475	1262502
xxix)	DST (Cyclo)		250000	v)	ORBIS		925396	405778
xxx)	Reliance Clinical Research	245978	78000	vi)	Manage		678613	133455
				vii)	NAB		1280809	715504
xxxi)	NPCB RIO	3000000	435000	viii)	LCIF		540000	808939
xxxii)	Clinical Evaluation on B&C(AMO)	577450	57000	ix)	NPCB-RAAB		308574	84954
				x)	NPCB-SSU		63373	163083

xxxiii)	National Survey on Cataract (NPCB)	280000	379375	xi)	WHO Child blindness	1935	11222
xxxiv)	RAST	194000		xii)	MBDL	141710	62294
	-	-	-	xiii)	DOS TRAINING	675797	475244
xxxv)	who-Child blindness	64500		xiv)	CSIR	1065939	1538353
	-	-	-	xv)	NIAF	162629	156990
xxxvi)	DBT-MA	1801000		xvi)	CRP	153934	119166
xxxvii)	ORBIS PECP	2059048		xvii)	<b>DBCS/NPCB</b>		29900
xxxviii)	Fame Study	1007800		a)	Vehicle	455574	
xxxix)	Baush & Lomb Akro Soft		200000	b)	M&E	522294	
xxxx)	DME	319150		c)	Conty.	24632	1002500
xxxxi)	DST/Specific grant	14000000		xviii)	<b>ORBIS-PECP</b>		86320
xxxxii)	CGD in primary angel Glaucoma	500267		a)	M&E	899311	
xxxxiii)	Clinical study of ketro conjectivities (Allergen India Pvt. Ltd.)	182496		b)	Pay & Conty.	445617	1344928
xxxxv)	FTG	118000		xix)	Allergan International	145600	165079
<b>3</b>	Hospital Receipts	75863819	75087078	xx)	Neema-Pilot Study	14175	1509
<b>4</b>	Security Deposits	165000	125000	xxi)	Workshop	1180991	56375
<b>5</b>	Interest on Recoverable Advance	394708	136219	xxii)	DST/DBT (Stem)	254861	
<b>6</b>	Misc. Receipts	1522068	1810195	(a)	Pay & Conty.		695057
<b>7</b>	AIIMS Recovery Received	43010222	38779138	(b)	M&E		805264
<b>8</b>	Outside Recovery	7138389	6192170	xxiii)	ORP Vision 2020	136966	47567
<b>9</b>	Interest on CLTD	1316721	1356776	xxiv)	Multifocal IOL	143000	11000
<b>10</b>	Recoverable Advance			xxv)	Evaluation of anit cataract Study- anti Cataract	280346	78419
a)	Car	26004	24816	xxvi)	Indeye		
b)	Scooter	-	196352	a)	Pay & Conty.	1154240	4784218
				b)	M&E	-	116663
				xxvii)	DST (Cyclo)	125705	38196
				xxviii)	Reliance Clinical Research	248767	3120
				xxix)	NPCB-RIO(M&E)	1778240	435000
				xxx)	Clinical Evaluation on B&C(AMO)	570060	54457
				xxxi)	Cataract Surery (NPCB)	321981	57394
				xxxii)	RAST	-	194000
				xxxiii)	<b>DBT(MA)</b>		
				a)	Pay & Conty.	172172	
				b)	M&E	935076	1107248
				xxxiv)	FTG	-	118000

c)	Cycle	-	13616
d)	HBA	410680	399522

xxxv)	CGD in primary angle closure of glaucoma	-	15008
xxxvi)	<b>DME</b>		
a)	M& E	49269	
b)	Pay & Conty.	173575	222844
xxxvii)	Bausch & Lomb acro soft		122472
xxxviii)	FAME Study	-	249225
xxxiv)	Clinical study of ketro conjuncivities( Allergen India Pvt. Ltd.)	-	141475

<b>12</b>	Cash Withdrawl Tax	563	2073
<b>13</b>	AIIMS Recoveries remitted	43010222	38779138
<b>14</b>	Outside recoveries remitted	7138962	6191597
<b>15</b>	Recoverable Advance		
a)	Scooter	-	30000
b)	H.B.A.	-	350000
<b>16</b>	Cheque Book Charges	6000	

#### CARDIO-THORACIC & NEURO SCIENCES CENTRE

<b>1</b>	GRANT-IN-AID		
a)	Plan	130000000	
(i)	For C.N. Tower	23900000	225000000
(ii)	Intra operative MR(EFC)	200000000	
(iii)	For Stem Cell Facility	3000000	-
b)	Non-Plan	450000000	435700000
<b>2 a)</b>	Misc. Receipts	6980937	3513364
b)	Private Ward	13663460	14885978
c)	X-Ray	786420	887165
d)	C.T.Scan charges	1108800	1199610
e)	Ultra sound	117000	137200
<b>3</b>	Interest	3864798	1528858
<b>4</b>	Security Deposit/	3418000	4902000

#### CARDIO-THORACIC & NEURO SCIENCES CENTRE

<b>1</b>	ADMINISTRATIVE EXPENDITURE		
a) i)	Pay & Allowances (Non-Plan)	311075036	296208519
b)	Payment of un-disbursed salary for 2005-2006		39170
c)	Wages	15933501	15554415
d)	Travelling Allowance	1590543	1574607
<b>2</b>	Stores (Non-Plan)		
a)	Repair & Maintenance of Mach. & Equip.	5605477	5084453
b)	Material & Supply	127418912	116308886
c)	ORBO	70883	36825

<b>5</b>	Earnest Deposit Donations	21500	162830	<b>3</b>	d) Stem Cell Stores (PLAN)	1448577	93600
<b>6</b>	Refund and Recoveries	897867	1552663	<b>a)</b>	C.N. Tower	16131565	
<b>7</b>	Receipt from NDMC against CN Tower	6242000	-	<b>b)</b>	Mach. & Equipment	124586624	162707558
<b>8</b>	Neurology Patient A/c	3125800	12376948	<b>c)</b>	M&E against EFC	183495873	
<b>9</b>	Thallium Test	3112750	3776000	<b>d)</b>	Stem Cell	2335979	826461
<b>10</b>	Levy charges	375760	384670	<b>c)</b>	Furniture & Fixtures	218168	460483
<b>11</b>	Rent Charges	829261	758546	<b>4</b>	Building maintenance	7762997	6134191
<b>12</b>	GPF	52583845	50550367	<b>5</b>	Building construction (Plan) Advance payment C.N. Tower	5070172	61790063
<b>13</b>	New Pension Schemes	2732461	1153840			1851852	-
<b>14</b>	Recoverable Advances a) Bicycle b) Scooter c) Car d) House Building e) Computer	2100 373555 64392 2001312 12600	13950 485210 289406 1860454 48580	<b>6 i)</b>	Office Contigencies	1893041	1982676
<b>15</b>	Transport	-	294	<b>ii)</b>	Payment of un-disbursed amount for 2005-2006	-	3933
<b>16</b>	Cardio Test	3505250	3808255	<b>7</b>	Recoverable Advance (Non-Plan)		
<b>17</b>	Blood Test	3785055	4144055	<b>a)</b>	Scooter/Motor Cycle	510000	300000
<b>18</b>	EHS	1418090	1430603	<b>b)</b>	Bi-Cycle		3000
<b>19</b>	Outside Recovery	24633393	20841958	<b>c)</b>	House Building Advance		1261380
<b>20</b>	Institute Recovery	-	9820	<b>8</b>	Institute Recovery	-	9820
<b>21</b>	Water Charges	37387	36806	<b>9</b>	Refund of Security Deposit	3170000	2441000
<b>22</b>	Pot Fund	49866	27935	<b>10</b>	Donation	-	2657
<b>23</b>	P.M. Relief Fund	-	429906	<b>11</b>	Heart Transplant	1077	153692
				<b>12</b>	Neurology Patient A/c	3668031	6846787
				<b>13</b>	Blood Test	2224412	4703307
				<b>14</b>	Cardio Test	3368822	3385189
				<b>15</b>	Thallium Test	3771984	4276687
				<b>16</b>	Amt. sent to P.A.O.	132600	109800
				<b>17</b>	GPF	52451245	50440567
				<b>18</b>	New Pension Schemes	2732461	1153840
				<b>19</b>	EHS	1418090	1430603
				<b>20</b>	Outside Recovery	24635015	20840998

**C.T.PATIENZA/C**

1a)	Patient's Receipts during 2006-2007	229550682		
b)	Patient's Refunds 2006-2007	-55303052		
c)	Poor Patient's treatment out of interest earned during 2006-07	1818071	176065701	187617020
2	Interest during 2006-2007	2966953		
	Poor Patient's treatment expenditure 06-07	-1818071	1148882	11865254
3	Cancelled Cheques		1668918	

**ANGIOGRAPHY PATIENTA/C**

1a)	Patient's Receipts 2006-2007	198194436		
b)	Patients refunds	-32178133		
c)	Poor Patient's treatment out of interest earned during 2006-07	208000	166224303	174190474
2a)	Interest during 2006-2007	2536289		
b)	Poor Patient's treatment expenditure 06-07	-208000	2328289	4300646
3	Cancelled Cheques		311084	342279

**GAMMA KNIFE PATIENTA/C**

1	Patient Receipts 2006-2007	18723478		
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21	Amt. Sent to PAO	1080	900
22	Pot Fund	49866	27935
23	Water charges	37387	36806
24	P.M. Relief Fund	-	429906

**C.T.PATIENZA/C**

1	Purchase of Stores	143340334	181984863
2	Mach. & Equip.	49025000	
3	Bank Charges	9660	12464
4	Fresh Cheque	64502	-

**ANGIOGRAPHY PATIENTA/C**

1	Purchase for stores	168224014	168217044
2	Bank Charges	4450	4140
3	Fresh Cheque	266586	-

**GAMMA KNIFE PATIENTA/C**

1	Purchase for Stores	1150477	2055168
2	MRI Charges	638000	590100

	Refund to Patients	-2109028	16614450	18042639
2	Interest		6598183	3986002
3	Cancelled Cheque		69900	-
<b>NEUROSURGERY PATIENTA/C</b>				
1	Patient Receipts 2006-2007	34922847		
	Patient Refund 2006-2007 treatment expenditure 06-07	-4441024	30481823	38039620
2	Fixed/CLTD Interest		504215	102632
<b>NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.)</b>				
1	Grant-in-Aid (DAC)		40000000	37000000
2	Hosp. Receipt		387437	477320
3	Interest on FDR		104546	73973
4	Security Deposit		40000	55000
5	WHO Fund			121622
6	Car Adv. Recovery		34560	34560
7	Misc. Receipt		12342	-
i)	Water Charges			
ii)	Licence fee			
iii)	Imprest Refund			
iv)	TA/LTC Refund			
v)	Advance Refund			
vi)	Income Tax Cash Deposit			
vii)	Misc. Receipt			
viii)	Adj. of totalling error			
ix)	in June 2003 C/B			99074
<b>Institute Recovery</b>				
	GPF Sub. & Adv.		3548330	3275610
	Conveyance		104479	72051
	HBA		130392	113725
	Licence fee		325729	49936
	Officer Association		2120	2020
	EIS		38310	38840

3	Bank Charges			755
<b>NEUROSURGERY PATIENT A/C</b>				
1	Purchase for Stores		23486986	27951759
2	Contingency		47010	
3	Bank charges		219	213
<b>NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.)</b>				
1	Pay & Allowances		19165168	18347041
2	Mat. & Supply		15195875	9592922
3	Wages		1314737	2120786
4	Books & Pub.		1841503	1764017
5	Furniture		638117	71286
6	Build. Const.			109502
7	Motar Vehicle		507973	561616
8	Mach. & Equip.		1485128	1867951
9	Security Refund		20000	5000
10	Temp. Advance		300000	-
<b>Institute Recovery Remitted</b>				
	GPF Sub. & Adv.		3548330	3275610
	Conveyance		104479	72051
	HBA		130392	113725
	Licence fee		325729	49936
	Officer Association		2120	2020
	EIS		38310	38840

EHS	80730	80600
Society	820039	637660
Comp. Rec.	8004	8004
Faculty	800	700
New Pension Scheme	89182	27871
Misc. Recovery	500	
<b>Outside Recovery</b>		
GIS	60	720
Income Tax	879591	738243
GPF	10000	120000
LIC	37164	27035
Court Rec.	26000	24000
Earth quake Relief Fund		29753

**NATIONAL DRUG DEPENDENCE TREATMENT  
CENTRE (N.D.D.T.C.)  
(UNDCP PROJECT)**

1	Grant-in-Aid	1167928	857371
2	Misc. Receipt	26400	

**Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL**

1	Grant in Aid
a)	Plan

EHS	80730	80600
Society	820039	637660
Comp. Rec.	8004	8004
Faculty	800	700
New Pension Scheme	89182	27871
Misc. Recovery	500	
<b>Outside Recovery</b>		
GIS	60	720
Income Tax	879591	738243
GPF	10000	120000
LIC	37164	27035
Court Rec.	26000	24000
Earth quake Relief Fund		29753
Bank/Draft Charges		2594

**NATIONAL DRUG DEPENDENCE TREATMENT  
CENTRE (N.D.D.T.C.)  
(UNDCP PROJECT)**

1	TA/DA	378411	551514
		124600	
2	Misc./Office Contingency		
	Office contingency	63960	64379
	Honorarium	6500	64515
	Refreshment	84929	72810
	Hiring accom.	8700	13742
	Postage & courier		15463
	Printing material		310500
	Stationary	46241	14606
	Correspondence	143124	
	Salary	184262	
	Transportation	23250	
3	Bank Charge	625	550
4	Refund to WHO	71237	195721
5	Transfer to NDDTC	-	121622
6	Advance Payment		155000

**Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL**

1	Pay & Allowances	73005967	68383729
2	TA/DA	1183072	1185241

	i) Non-EFC	37400000	174344000
	ii) EFC	66200000	92500000
b)	Non-Plan	115000000	120000000
2	Hospital Receipts	9230774	6502311
3	Revolving Funds	2942250	3373500
4	Medical Oncology Receipts	516075	320340
5	ICMR (DCR)	375000	375000
6	Receipts on account of L/c Adjustment by Bank		4716486
7	AIIMS Recoveries remitted	14048491	14599085
8	Outside Recoveries remitted	6620442	2767412
9	Scooter Advance	4620	22710
10	Car Advance	18000	-
11	Interest Receipts	1430666	-
12	Computer Advance	200	-
<b>J.P.N.APEX TRAUMA CENTRE</b>			
1	GRANT-IN-AID Plan	533582000	120000000
	Other Receipts	273031	
<b>CENTRE FOR DENTAL EDUCATION &amp; RESEARCH</b>			
1	Grant in aid Plan	155000000	

3	Contingency	1290753	802449
4	Custom Duty		2544974
5	Medical Oncology		366077
6	Revolving Fund	4858671	1731713
7	Sulabh Services		470489
8	Security Services		1143856
9	Maintenance of Building	2946967	4780108
10	Mat. & Supp. (Non-Plan)	40443173	42377227
11	Capital Works		4064201
12	PLAN (EFC)		90835902
13	HSCC		1477371
14	PLAN (NON-EFC)		154133521
15	AIIMS Recoveries Remitted		14599085
16	Out Side Recoveries Remitted		2767412
17	Computer Advance	132000	-
18	<b>PLAN (EFC)</b>		
i)	Man Power	2557620	-
ii)	Mach. & Equipments	60555969	
iii)	Outsourcing (Security & Sanitation)	2376026	-
iv)	Recurring & consumables	21503773	
	Custom Duty & PDA	10300000	
19	<b>PLAN</b>		
i)	Capital Works	1474343	
ii)	AIIMS Recoveries Remitted	14048491	-
iii)	Outside Recoveries Remitted	6620442	-

**J.P.N.APEX TRAUMA CENTRE**

1	Construction of Bldg.	29000000	
2	Machinery & Equipment	333217199	112932400
3	Material & Supply		100999
4	Manpowers	30885699	
5	Recurring & Outsourcing	114932007	
<b>CENTRE FOR DENTAL EDUCATION &amp; RESEARCH</b>			
1	Pay & Allowances	1628773	
2	Material & Supply	6243	



2	Security Deposit	260000	
3	Interest on CLTD by bank	948734	
4	Misc. Receipt	163500	

#### POOR PATIENT ACCOUNTS

i)	a) AIIMS	142407	392478
	b) Interest	73148	
ii)	R.P. Centre		
	a) Interest	600	2540
	b) Donation	58725	
	c) Wrongly credited by bank		30000
iii)	(a) I.R.C.H.	149069	793351
	(b) Interest on FDR's	394411	440968
iv)	N.S. Centre Donation	37518	16676

#### PATIENT TREATMENT ACCOUNTS

1	(a) AIIMS	34370806	28722510
	(b) Interest	627135	488516
2	a) Dr.B.R.A.I.R.C.H.	33738008	30926652
	b) Cheque Cancelled	467987	
	c) Interest	479430	

#### HOSTELS

a)	Receipts during 2006-07		
	I) Security Deposits	719500	616676
	ii) Misc. Receipts	54050	43380
	iii) Interest earned	140351	92402

3	Manpower & consumables for Engg. maintenances on contract		66051
4	Machinery & Equipment		
(i)	Actual Payment	29724246	
(ii)	Advance payments made to Foreign purchases	17134994	46859240
5	Advance paid to HSCC		88300000

#### POOR PATIENT ACCOUNTS

i)	AIIMS	93902	138692
ii)	R.P. Centre amount wrongly credited by bank in 2005-06 rectified in 2006-07	17102 30000	160222
iii)	I.R.C.H.	384413	376857
iv)	N.S. Centre	12716	14465

#### PATIENT TREATMENT ACCOUNTS

i)	AIIMS	30333618	27379449
ii)	Dr.B.R.A.I.R.C.H.	31013665	27605041
iii)	Institute A/c after reconciliation with the Bank as per Audit para 2.2.1.9 of 2005-06		419384
a)	Security refunds	316846	195350
b)	Misc. Expenditure	50671	46253

**CLOSING BALANCES**

A	CASH AT BANK			
i)	a) AIIMS(Main)	483714326		382986814
	b) Unspent Balance of Specific Grants remained with AIIMS (Main)	181989884	665704210	
ii)	Schemes Cell		43642652	61200654
iii)	Dr. R.P. Centre		42205910	24422198
iv)	C.N. Centre		151455520	113473131
v)	C.T. Patient A/c			
(a)	Bank		14403127	13752622
(b)	FDRs		220000000	235000000
vi)	N.D.D.T.C.		7499458	7389074
vii)	Angiography A/c			
	a) Bank		12358587	12788961
	b) FDRs		75000000	75000000
viii)	UNDCP		316153	257664
ix)	I.R.C.H.		46707703	36218452
x)	J.P.N.Apex Trauma Centre		32786727	6966601
xi)	Gamma Knife Pt. A/c			
	a) Bank		66823583	5330282
	b) FDRs		42500000	82500000
xii)	Neuro Surgery Pt. A/c			
	a) Bank		4985397	7577574
	b) FDRs		42000000	32000000
xiii)	Centre for Dental Education and Research		19511927	
<b>B</b>	<b>CASH IN HAND (IMPREST)</b>			
i)	AIIMS (Main)			
a)	Balance as per cash book of the cashier	498650		
b)	Excess paid by the cashier	-307426	191224	172864
ii)	Dr. R.P. Centre		10000	10000
iii)	C.N. Centre		40000	40000
iv)	CT Patient A/c		793500	
v)	Angiography A/c		799000	

	vi)	Neurosurgery Pt. A/c	44000	
	<b>C</b>	<b>AMOUNT LYING UNDISBURSED</b>		
	i)	AIIMS (Main)		500
	ii)	Scheme Cell	108000	28000
	<b>D</b>	<b>POOR PATIENT ACCOUNT</b>		
	i)	AIIMS (Main)		
	(a)	Cash/Bank	861808	813303
	(b)	FDR's	400226	327078
	ii)	IRCH		1234844
		Cash/Bank	1393911	
	iii)	Dr. R.P. Centre	25052	
		Cash/Bank		12829
	iv)	N.S. Centre		
		Cash at Bank	83806	59004
	<b>E</b>	<b>PATIENT TREATMENT A/C</b>		
	I)	AIIMS	18900463	14236140
	ii)	IRCH		
	a)	Cash/Bank	5194183	11522423
	b)	FDRs	10000000	6000000
			6000000	
	<b>F</b>	<b>HOSTELS</b>		
	I)	Cash in hand	23806	7541
	ii)	Cash at Bank	318341	221318
	iii)	FDR's	2171124	1738028
	<b>TOTAL</b>	<b>10806059642</b>	<b>8711248635</b>	<b>TOTAL</b>
			<b>10806059642</b>	<b>8711248635</b>

(MRS. BASANTI DALAL)  
FINANCE & CHIEF ACCOUNTS OFFICER

(P. VENUGOPAL)  
DIRECTOR

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
INCOME AND EXPENDITURE ACCOUNT  
FOR THE YEAR 2006-2007**

EXPENDITURE	2006-07	2005-06	INCOME	2006-07	2005-06
<b>AIIMS (MAIN)</b>			<b>AIIMS (MAIN)</b>		
<b>A NON-PLAN</b>			<b>GRANT-IN-AID</b>		
			(a) Non-Plan	2220938132	2031571017
			(b) Plan		10350656
			<b>REVENUE RECEIPTS</b>		
<b>1</b> Pay & Allowances	1139148677	1056239333	<b>1</b> Hospital Receipts	115958381	99041194
<b>2</b> Stipend	5527958	5142170	<b>2</b> Tution Fee and	1174242	1995995
<b>3</b> Travelling Allowances	12989951	13949525	<b>3</b> Employees Health Scheme	9440192	9831979
<b>4</b> Pensionery Benefits	186292072	180701304	<b>4</b> License fee	15659351	15270086
<b>5</b> Mat.& Supply	536702644	447442184	<b>5</b> Interest	28470764	35342226
<b>6</b> Office Contingency	316647167	375130054	<b>6</b> Miscellaneous Receipts	88883367	83378676
<b>7</b> Repair & Maintenance of Mach. & Equip.	31073733	22128113	<b>7</b> L.S.P.C.		
<b>8</b> Maintenance of Buildings	47888085	46317423	Less payments during		
<b>9</b> New Pension Scheme	10914500		2006-07	-	91624
i) Less Receipts	-3190277	7724223			
<b>10</b> L.S.P.C.	584935				
i) Less Receipts	-156056	428879			
<b>B PLAN</b>					
<b>11</b> Pay & Allowances - J.P.N. Apex Trauma Centre		9422199			
<b>12</b> Pay & Allowances - Centre for Dental Education & Research		928457			
<b>DR. RAJENDER PRASAD CENTRE FOR OPHTHALMIC SCIENCES</b>			<b>DR. RAJENDER PRASAD CENTRE FOR OPHTHALMIC SCIENCES</b>		
			Grant-in-Aid		
<b>1</b> Pay & Allowances	149746943	146815820	<b>1</b> Non-Plan	177500000	160000000
Daily Wages	6102052		<b>2</b> Hospital Receipts	75863819	75087078
<b>2</b> Travelling Allowances	1443346	825723	<b>3</b> Interest on Recoverable	394708	136219
<b>3</b> Material & Supply	82196022	73691315	<b>4</b> Misc. Receipts	1522068	1810195
<b>4</b> Office Expenses	6810590	2942512	<b>5</b> Interest on CLTD	1316721	1356776
<b>5</b> Maintenance of Buildings	3339892	2036691			
<b>6</b> Repair & Maintenance	4388669	8132182			

7	Cash withdrawal Tax	563	2073
8	Cheque Book Charges	6000	

**CARDIO-THORACIC & NEURO SCIENCES CENTRE**

Non-Plan

1	Pay & Allowances & Wages	327008537	311762934
2	Travelling Exp.	1590543	1574607
3	Material & Supply	128938372	116439311
4	Office Contingency	1893041	1982676
5	Repair & maintainance of Mach. & Equip.	5605477	5084453
6	Maint. of Buildings	7762997	6134191
7	Mat. & Supply Stores(Plan)	16131565	

**C.T.PATIENTA/C**

1	Purchase for Stores	143340334	181984863
2	Mach. & Equip. (Transferred to CNC)	49025000	
3	Bank Charges	9660	12464

**ANGIOGRAPHYPATIENTA/C**

1	Purchase for Stores	168224014	168217044
2	Bank Charges	4450	4140

**GAMMAKNIFE PATIENTA/C**

1	Purchase of Stores	1150477	2055168
2	MRI Charges	638000	590100
3	Bank Charges	755	-

**NEUROSURGERYPATIENTA/C**

1	Purchase of Stores	23486986	27951759
2	Contingency	47010	
3	Bank Charges	219	213

**CARDIO-THORACIC & NEURO SCIENCES CENTRE**

1	Grant-in-Aid Plan		16150000	
	Non-Plan		450000000	435700000

**2 Revenue Receipts**

a)	Hosp. Receipts	15675680		
b)	Amount received from outside patients 2006-2007	-64912		
c)	Amount due 2006-07	249662	15860430	16584490
3	Misc. Receipts		6980937	3513364
4	Licence Fee		829261	758546
5	Refund & Recoveries		897867	1552663
6	Interest earned		3864798	1528858
7	Levy Charges		375760	384670
8	Transport		-	294

**C.T.PATIENTA/C**

1	Patient's Receipts		176065701	187617020
2	Interest during 2006-2007		1148882	11865254
3	Cancelled Cheque		1668918	

**ANGIOGRAPHYPATIENTA/C**

1	Patient's Receipts		166224303	174190474
2	Interest during the year 2006-2007		2328289	4300646
3	Cancelled Cheques		311084	342279

**GAMMAKNIFE PATIENTA/C**

1	Patient Receipts		16614450	18042639
2	Interest		6598183	3986002

**NEUROSURGERYPATIENTA/C**

1	Patient Receipts		30481823	38039620
2	Fixed/CLTD Interest		504215	102632

**NATIONAL DRUG DEPENDENCE TREATMENT  
CENTRE (N.D.D.T.C.)**

1	Pay & Allowances	19165168	18347041
2	Wages	1314737	2120786
3 i)	Material & Supply		
	2006-07	15195875	
ii)	2005-06		10714601
4	Misc. Expenditure		2594

**NATIONAL DRUG DEPENDENCE TREATMENT  
CENTRE (N.D.D.T.C.)  
(UNDCP PROJECT)**

1	TA/DA	378411	551514
		124600	
2	Printing Work/Stationary		310500
3	Misc./Office Contingency	233580	245515
4	Transfer to NDDTC a/c		121622
5	Refund to WHO	71237	195721
6	Bank Charges	625	550
7	Pay & Allowances	184262	
8	Correspondences	143124	

**Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL**

1	Pay & Allowances	73005967	68383729
	Manpower(Pay and allowances EFC)	2557620	
2	Travelling expenses/DA	1183072	1185241
3	Material & Supply	40443173	42377227
4	Maintenance of Building	2946967	4780108
5	Security Services		1143856
6	Sulabh Services	2376026	470489
7	Contingency Expenditure	1290753	802449
8	Recurring & Consumables	21503773	

**NATIONAL DRUG DEPENDENCE TREATMENT  
CENTRE (N.D.D.T.C.)**

1	Grant-in-aid (Plan)	40000000	37000000
	Mach. & Equip.	-1485128	-1867951
	Motar Vehicle	-507973	-561616
	Bldg. & Const.		-109502
	Furniture	-638117	-71286
	Books & Pub.	-1841503	-1764017
		35527279	
2	Hospital Receipt	387437	477320
3	Miscellaneous Receipt	12342	99074
4	FDR's Interest	104546	73973
5	WHO Fund		121622

**NATIONAL DRUG DEPENDENCE TREATMENT  
CENTRE (N.D.D.T.C.)  
(UNDCP PROJECT)**

1	Grant-in-aid (Plan)	1167928	857371
2	Misc. Receipt	26400	

**Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL**

1	Grant-in-aid	115000000	120000000
2	Hospital Receipts	9230774	6502311
3	ICMR (DCR)	375000	375000
4	Interest Receipts	1430666	
5	Interest on Scooter Advance	4620	
6	Manpoer + Outsourcing Recurring & consumables(EFC)	26600000	

**J.P.N.APEX TRAUMA CENTRE**

1	Material & Supply (Plan)		100999
2	Manpower	30885699	
3	Recurring & Outsourcing	68889836	

**CENTRE FOR DENTAL EDUCATION & RESEARCH**

1	Pay & Allowances (Plan)	1628773	
2	Material & Supply (Plan)	6243	
3	Manpower & consumable(plan) For Engineering maintenance on contract	66051	

**HOSTELS**

1	Misc. Expenditure	50671	46253
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**EXCESS OF INCOME OVER EXPENDITURE**

1	AIIMS (Main)	196101040	126920312
2	DR. R.P. CENTRE	2563239	3943952
3	C.N. CENTRE	6028521	17044713
4	CT PATIENT A/C		17484947
5	ANGIO PATIENT A/C	635212	10612215
6	NEURO SURGERY A/C	7451823	10190280
7	GAMMA KNIFE PATIENT A/C	21423401	19383373
8	N.D.D.T.C.	355824	2212595
9	I.R.C.H.	7333709	7734212
10	Hostel	143730	89529
11	UNDCP Project	58489	
12	J.P.N. APEX TRAUMA CENTRE	1004114	
13	CENTRE FOR DENTAL EDUCATION & RESEARCH	1112234	

**J.P.N.APEX TRAUMA CENTRE****Grant-in-aid**

1	Plan		100999
2	Recurring & Outsourcing Grant	69906618	
3	Manpower	30600000	
4	Miscellaneous	273031	

**CENTRE FOR DENTAL EDUCATION & RESEARCH**

1	Grant in Aid (Plan)	1701067	
2	Interest on CLTD by Bank	948734	
3	Misc. Receipts	163500	

**HOSTELS**

1	Misc. Receipts	54050	43380
2	Interest	140351	92402

**EXCESS OF EXPENDITURE OVER INCOME**

1	N.D.D.T.C.(UNDCP)		568051
2	AIIMS		-
3	CNC		-
4	CT PATIENT A/C	13491493	-
5	GAMMA KNIFE PATIENT A/C		-
6	NDDTC		-
7	DR. BRAIRCH		-

<b>TOTAL</b>	<b>3941172482</b>	<b>3585710303</b>	<b>TOTAL</b>	<b>3941172482</b>	<b>3585710303</b>
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(MRS. BASANTI DALAL)  
FINANCE & CHIEF ACCOUNTS OFFICER

(P. VENUGOPAL)  
DIRECTOR

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
BALANCE SHEET AS ON 31.3.2007**

<b>LIABILITIES</b>		<b>2006-07</b>	<b>2005-06</b>	<b>ASSETS</b>		<b>2006-07</b>	<b>2005-06</b>
<b>AIIMS (MAIN)</b>				<b>AIIMS (MAIN)</b>			
<b>1</b>	<b>BALANCE</b>			<b>1</b>	<b>CASH IN HAND</b>		
a)	Amount due but not paid (AIIMS CASHIER)		500	a)	Imprest (AIIMS CASHIER)	191224	172864
b)	Amount due but not paid (Scheme Cell)	108000	28000	b)	Amount due but not paid with (AIIMS CASHIER)	-	500
<b>2</b>	<b>CAPITAL GRANTS FROM GOVT. OF INDIA</b>			c)	Amount due but not paid (Scheme Cell)	108000	28000
i)	Upto 2005-2006 6064952516			<b>2</b>	<b>Cash at Bank</b>		
ii)	During 2006-07 (AIIMS) 386718000			a)	(i) AIIMS (Main) 483714326		
iii)	Non-Plan Capitalisation 3806598				(ii) Unspent Balance of Specific Grants remained with AIIMS (Main) 181989884	665704210	382986814
iv)	Less on account of Mach. & Equip. condemned during 2006-07 -56036431			b)	Scheme Cell	43642652	61200654
v)	Less Books weeded out during 2006-07 -41502			<b>3</b>	<b>GPF BANK ACCOUNT</b>	42023283	15032985
vi)	Less on account of furniture condemned during 2006-07 -689749			<b>4</b>	<b>NPS Account</b>	5795530	
vii)	Transfer to Trauma Centre on a/c of advance payment to M/s HSCC -87912064		7	<b>5</b>	<b>Investment</b>		
viii)	Transfer to Land Account Trauma Centre -9900000			i)	(Appendix-C)	1585368899	1456588127
ix)	Transfer to Trauma Bldg. consruction on a/c of advance payment to M/s HSCC -449825743			<b>6</b>	<b>Silver Jublee Fund on account of advance</b>	200000	200000
x)	Transfer to Centre for Dental Education & Research -158393676				<b>Sundry Debtors</b>		
xi)	Transfer to Centre for Dental Education & Research -45557811	5647120138	6064952516		Scheme Cell (Appendix-B)	3255838	7417446
				<b>8</b>	<b>Misc. Deposits (Appendix-E)</b>	330986	330986
				<b>9</b>	<b>Recoverable Advances</b>		
				i)	Car	2350282	2849520
				ii)	Motor Cycle-Scooter	1001407	1691355
				iii)	Bicycle	127755	132605
				iv)	Computer Advance	2363482	1696073







b) Mach. & Equipment	-	1932605	1932605	Western Campus		12755500	12755500
<b>19</b> Revolving funds			-	<b>I</b> Delhi Vidyut Board			
a) Upto 2005-06	36078490			for Installation of 11			
i) Receipt	52763213			K.V.A. Sub-Station		3362787	3362787
ii) Expenditure	-36630413	52211290	36078490	<b>J</b> NDMC for HT Transformer			
<b>20</b> P.P. Programme				and laying of cable		7463500	7463500
a) Upto 2005-06	162095			<b>K</b> Custom duty			
b) Receipts during	250000			Upto 2005-06	2148754		
2006-07				Adjust. of Custom Duty	-1955671	193083	2148754
c) Expenditure	-208455	203640	162095	<b>L</b> Covering of Nallah		153383000	153383000
during 2006-07				<b>M</b> CPWD for Lift		14000000	14000000
<b>21</b> V.V.I.P.		1207055	1207055	<b>N</b> CPWD for Surgical Ward		1711770	1711770
<b>22</b> College of Nursing				<b>O</b> For Books & Journals		3903205	
Upto 2005-06	275323			<b>P</b> For Cochelar Implant Patient		12519000	
a) Receipt	-			Treatment A/c			
b) Expenditure	-213496	61827	275323	<b>Q</b> Caryair Equip. India Pvt. Ltd.		192602	
<b>23</b> VVIP Care at Parliament				<b>R</b> Indian Oil Corporation for			
House Annexe				LDO		3194680	
a) Receipt	440000			<b>S</b> NDMC for electric work		18723000	
b) Expenditure	-432400	7600		<b>T</b> Upgrading Architectural cell			
<b>24</b> Cochelar Patient treatment				of ESD at AIIMS		45132	
A/c				<b>13</b> i) Books & Publications			
Upto 2005-06	327102			a) Upto 2005-2006	158314865		
a) Receipt	25492000			b) During 2006-2007	12377371		
b) Expenditure	-12845576	12973526		c) Less books			
				weeded out dg.2006-07	-41502	170650734	158314865
				ii) Books donated			
				a) Upto 2005-2006	142723		
				b) During 2006-2007	950	143673	142723
				<b>14</b> Building Construction			
				(A) AIIMS (Main)			
				a) Upto 2005-2006	1782858014		
				b) during 2006-2007	113716049		

c)	Add Adjustment during 06-07	791120		
d)	Adjustemnt of para 2.5.1 of SAR for the year 2005-06	-1111948	1896253235	1782858014
	<b>(B) J.P.N. Apex Trauma Centre</b>			
(a)	Upto 2005-06	449825743		
(b)	During 2006-07			
(c)	Transfer to Trauma Centre	-449825743	0	449825743
	<b>15 Centre for Dental Education &amp; Research</b>			
	During 2006-07	45557811		
	Transfer to CDER	-45557811	0	45557811
	<b>16 Advance Payment</b>			
i)	Indian Iron & Steel Co.		572139	572139
ii)	Tata Iron & Steel Co.		654154	654154
iii)	Hindustan Steel Ltd.		520295	520295
iv)	Indian Iron & Steel Co.		594000	594000
	<b>17 Land Account</b>			
(a)	Upto 2005-06		112832263	112832263
	<b>18 Land Account Trauma Centre</b>	9900000		
	Transfer to Land Account Trauma Centre	-9900000	0	9900000
	<b>19 Vehicles</b>			
i)	Vehicle (purchsed for AIIMS)			
a)	Up to 2006-2007		31344165	31344165
ii)	Vehicles donated for AIIMS			
a)	Upto 2006-07		3036507	3036507
	<b>20 Advance payment to P&amp;AO for purchase of Building Material</b>			
a)	Upto 2005-2006	32814014		
b)	During 2006-2007	2059706		
c)	Less Adjustment in 2006-2007	-791120	34082600	32814014
	<b>21 Hospital receipts recoverable from outside patients</b>			

				a) Up to 2005-06	5587372		
				b) During 2006-07	5039057		
				c) Amount recd. 2006-07	-4043737	6582692	5587372
				<b>22</b> Amount recoverable from the cashier			
				Upto 2005-06	306286		
				During 2006-07	19070		
				Recovery	-10852 -7078	307426	306286
				<b>DR. RAJENDER PRASAD CENTRE FOR OPHTHALMIC SCIENCES</b>			
<b>1</b>	Balances			<b>1</b> CASH IN HAND			
	Amount due but not paid	-	-	a) Imprest		10000	10000
<b>2</b>	Capital Grant from Govt. of India			<b>2</b> Cash at Bank		42205910	24422198
a)	Upto 2005-2006	567648730		<b>3</b> RECOVERABLE ADVANCE			
b)	During 2006-2007	67500000		a) Car			
c)	Furniture condemned during 2006-07	-85525		i) Upto 2005-06	40669		
d)	M&E condemned During 2006-2007	-20041325	615021880	ii) Paid during 2006-07	-		
			567648730	iii) Recovery received during 2006-07	-26004	14665	40669
<b>3</b>	NPCB as per last year Balance Sheet		25629000	b) Scooter			
			25629000	i) Upto 2005-06	-104981		
<b>4</b>	Donated vehicle	896357	896357	ii) Paid during 2006-07			
<b>5</b>	Vehicle purchase under DBCS/NPCB	455574		iii) Correction of previous years misclassification of Interest as recovery	104981	0	-104981
				c) Cycle			
	<b>Non-RPC Scheme ICMR</b>			i) Upto 2005-06	-7168		
<b>5</b>	ICMR			ii) Correction of previous years misclassification of Interest as recovery	7168	0	-7168
a)	Upto 2005-2006	1471491		d) H.B.A.			
b)	During 2006-2007	626838		i) Upto 2005-06	2607795		
c)	Expenditure during 2006-2007	-322789	1775540	ii) Paid during 2006-07			
			1471491				
<b>6</b>	USP						

a) Upto 2005-2006	5305825			iii) Recovery received			
b) During 2006-2007	937150			during 2006-07	-410680	2197115	2607795
c) Expenditure				<b>4</b> Machinery & Equipment (Plan)			
during 2006-2007	-2507633	3735342	5305825	i) Upto 2005-06	455353505		
<b>7</b> Savers International				ii) During 2006-07	59835615		
a) Upto 2005-2006	494525			iii) M&E condemned during			
b) During 2006-2007	136165			2006-07	-20041325	495147795	455353505
c) Expenditure				<b>5</b> Machinery & Equipment (Non-Plan)			
during 2006-2007	-630690	0	494525	Upto 2005-06		5872266	5872266
<b>8</b> Sight international-Surgeries				<b>6</b> Building Construction			
a) Upto 2005-2006	291200			i) Upto 2005-06	78296505		
b) During 2006-2007	522275			ii) During 2006-07	6442341	84738846	78296505
c) Expenditure				<b>7</b> NPCB (M & E)		7002852	7002852
during 2006-2007	-813475	0	291200	<b>8</b> ICMR (M&E)		605150	605150
<b>9</b> Indeye				<b>9</b> Vehicles			
a) Upto 2005-2006	2038268			i) RPC Vehicle			
b) During 2006-2007	-			Upto 2005-06	2722763		
c) Expenditure				During 2006-07	456005	3178768	2722763
during 2006-2007	-1154240	884028	2038268	ii) Donated Vehicles			
<b>10</b> ORBIS				Upto 2005-06	896357		
a) Upto 2005-2006	997268			During 2006-07	455574	1351931	896357
b) During 2006-2007	-			<b>10</b> Hospital Furniture & Fixture			
c) Expenditure				i) Upto 2005-06	1755985		
during 2006-2007	-925396	71872	997268	ii) During 2006-07	455367		
<b>11</b> Manage				iii) Furniture condemned			
a) Upto 2005-2006	-			During 2006-07	-85525	2125827	1755985
b) During 2006-2007	870000			<b>11</b> Sundry debtors		76253	76253
c) Expenditure							
during 2006-2007	-678613	191387	0				
<b>12</b> RAST							
a) Upto 2005-2006	-						
b) During 2006-2007	194000						

c) Expenditure during 2006-2007	-194000	0	-	<b>12</b> Advance Payment made to Foreign Purchase			
<b>13</b> NAB				i) Upto 2005-06	41956368		
a) Upto 2005-2006	1005787			ii) Advance during 2006-07	28619997		
b) During 2006-2007	1517545			iii) Equip. received during 2006-07	-28318929	42257436	41956368
c) Expenditure during 2006-2007	-1280809	1242523	1005787	<b>13</b> Material & Supply			
<b>14</b> LCIF				i) Upto 2005-06	76352		
a) Upto 2005-2006	-			ii) Advance payment made to foreign purchase 2006-07	12608258		
b) During 2006-2007	540000			iii) Material received during 2006-07	-12608258	76352	76352
c) Expenditure during 2006-2007	-540000	0	-	<b>14</b> Non-RPC			
<b>15</b> NPCB-RAAB				<b>A. USP</b>			
a) Upto 2005-2006	-			i) Upto 2005-06	-		
b) During 2006-2007	502500			ii) Advance payment for foreign purchases 2006-07	1897245		
c) Expenditure during 2006-2007	-308574	193926	0	iii) Material received during 2006-07	-1897245	0	-
<b>16</b> NPCB-SSU				<b>B. DST/DBT(M.A.)</b>			
a) Upto 2005-2006	35774			i) Upto 2005-06	-		
b) During 2006-2007	29272			ii) Advance payment for foreign purchases 2006-07	935076		
c) Expenditure during 2006-2007	-63373	1673	35774	iii) M&E received during 2006-07	-935076	0	-
<b>17</b> WHO-Child blindness				<b>C. ORBIS(PECP)</b>			
a) Upto 2005-2006	-			i) Upto 2005-06	-		
b) During 2006-2007	64500			ii) Advance payment made during 2006-07	899311		
c) Expenditure during 2006-2007	-1935	62565	-	iii) Material received during 2006-07	-899311	0	-
<b>18</b> DBT-MUTIONAL(M.A.)							
a) Upto 2005-2006	-						
b) During 2006-2007	1801000						
c) Expenditure during 2006-2007	-1107248	693752	0				





a)	Upto 2005-2006	147443				
b)	During 2006-2007	-				
c)	Expenditure during 2006-2007	-145600	1843	147443		
<b>27</b>	Neema-International Pilot study					
a)	Upto 2005-2006	48518				
b)	During 2006-2007	-				
c)	Expenditure during 2006-2007	-14175	34343	48518		
<b>28</b>	Workshop					
a)	Upto 2005-2006	37344				
b)	During 2006-2007	1307091				
c)	Expenditure during 2006-2007	-1180991	163444	37344		
<b>29</b>	DST/DBT (Stem)					
a)	Upto 2005-2006	103179				
b)	During 2006-2007	853300				
c)	Expenditure during 2006-2007	-254861	701618	103179		
<b>30</b>	WHO Short term Training Programme					
a)	Upto 2005-2006	41191				
b)	During 2006-2007	-				
c)	Expenditure during 2006-2007	-	41191	41191		
<b>31</b>	Evaluation Study on glaucoma					
a)	Upto 2005-2006	65800				
b)	During 2006-2007	-				
c)	Expenditure during 2006-2007	-	65800	65800		
<b>32</b>	ORP-VISION 2020					
a)	Upto 2005-2006	97433				
b)	During 2006-2007					
c)	Expenditure during 2006-2007	50000	10467	97433		
<b>33</b>	Multifocal IOL					
a)	Upto 2005-2006	89000				
b)	During 2006-2007	437323				
c)	Expenditure					

	during 2006-2007	-143000	383323	89000			
<b>34</b>	Evaluation of Anti Cat						
a)	Upto 2005-2006	51581					
b)	During 2006-2007	230000					
c)	Expenditure						
	during 2006-2007	-280346	1235	51581			
<b>35</b>	DST(CYCLO)						
a)	Upto 2005-2006	211804					
b)	During 2006-2007	-					
c)	Expenditure						
	during 2006-2007	-125705	86099	211804			
<b>37</b>	Reliance/Clinical Research						
a)	Upto 2005-2006	74880					
b)	During 2006-2007	245978					
c)	Expenditure						
	during 2006-2007	-248767	72091	74880			
<b>38</b>	NPCBRIO						
a)	Upto 2005-2006	-					
b)	During 2006-2007	3000000					
c)	Expenditure						
	during 2006-2007	-1778240	1221760	0			
<b>39</b>	Clinical Evaluation B&C(AM0)						
a)	Upto 2005-2006	2543					
b)	During 2006-2007	577450					
c)	Expenditure						
	during 2006-2007	-570060	9933	2543			
<b>40</b>	Cataract Surgery (NPCB)						
a)	Upto 2005-2006	321981					
b)	During 2006-2007	280000					
c)	Expenditure						
	during 2006-2007	-321981	280000	321981			
<b>41</b>	CGD In Primary Angle Closure Glucoma						
a)	Upto 2005-2006	-					
b)	During 2006-2007	500267					
c)	Expenditure						
	during 2006-2007	-15008	485259	-			
<b>42</b>	FAME Study						

a)	Upto 2005-2006	-				
b)	During 2006-2007	1007800				
c)	Expenditure					
	during 2006-2007	-249225	758575	-		
<b>43</b>	<b>CLINICAL STUDY ON KRECTRO CONJECTIVITIES(Allergan India Ltd.)</b>					
a)	Upto 2005-2006	-				
b)	During 2006-2007	182496				
c)	Expenditure					
	during 2006-2007	-141475	41021	-		
<b>44</b>	<b>FTG</b>					
a)	Upto 2005-2006	-				
b)	During 2006-2007	118000				
c)	Expenditure					
	during 2006-2007	-118000	0	-		
<b>45</b>	<b>DST/Specific Grant</b>					
a)	Upto 2005-2006	-				
b)	During 2006-2007	14000000				
c)	Expenditure					
	during 2006-2007	-	14000000	-		
<b>46</b>	<b>AKROSOFT (BAUCH &amp; LOMB)</b>					
a)	Upto 2005-2006	-				
b)	During 2006-2007	200000				
c)	Expenditure					
	during 2006-2007	-122472	77528	-		
<b>47</b>	<b>DME</b>					
a)	Upto 2005-2006	-				
b)	During 2006-2007	319150				
c)	Expenditure					
	during 2006-2007	-222844	96306	-		
<b>48</b>	<b>Refund of Security Deposits</b>					
a)	Upto 2005-2006	1916000				
b)	During 2006-2007	165000				
c)	Expenditure					
	during 2006-2007	-165000	1916000	1916000		
<b>49</b>	<b>A.I.I.M.S. Remittance</b>					
	As per last year	214410	214410	214410		
	<b>Outside Recoveries</b>					

	Upto 2005-06	12496		
	Remitted 2006-07	-573	11923	12496
<b>CARDIO-THORACIC &amp; NEURO SCIENCES CENTRE</b>				
<b>1</b>	Capital Grant from Govt. of India			
i)	Upto 2005-2006	2309883530		
ii)	During 2006-2007	133000000		
		200000000		
		7750000	2650633530	2309883530
<b>2</b>	Cost of the vehicle donated by Sai Bhakta Samaj			
			613384	613384
<b>3</b>	CT Patient A/c Mach. & Equip. Transfer Sai Bhakta Samaj			
			49025000	-
<b>4</b>	Neurology Patient A/c			
i)	Upto 2005-2006	17530792		
ii)	Receipt during 2006-2007	3125800		
iii)	Less refund/Exp. 2006-2007	-3668031	16988561	17530792
<b>5</b>	Outside recoveries			
i)	Upto 2005-2006	304668		
ii)	2006-2007 (+)	-2702	301966	304668
<b>6</b>	Donations			
i)	Upto 2005-2006	1973786		
ii)	Receipt during 2006-2007	21500	1995286	1973786
<b>7</b>	Security Deposits			
i)	Upto 2005-2006	17744964		
ii)	During 2006-2007	3418000		
iii)	Less refund	-3170000	17992964	17744964
<b>8</b>	Thallium			

**CARDIO-THORACIC & NEURO SCIENCES CENTRE**

<b>1</b>	Cash in hand			
a)	Imprest (CTNS-Cashier) 2006-2007		40000	40000
<b>2</b>	Cash at Bank			
<b>3</b>	Recoverable Advance			
a)	Computer		160800	173400
b)	Car		680940	746188
c)	Cycle		-	2100
d)	Scooter		1055484	918183
e)	House Building Advance		8568940	10570252
<b>4</b>	Mach. & Equip.			
i)	Upto 2005-2006	1745357896		
ii)	During 2006-2007	152063333	1897421229	1745357896
<b>5</b>	Mach. & Equip. Transfer From CT Patient A/C			
			49025000	
<b>6</b>	Advance payment for Foreign purchase			
a)	Mach. & Equip.			
i)	Upto 2005-2006	112019520		
ii)	During 2006-2007	342739524		
iii)	Less Equip. received	-184384381	270374663	112019520
<b>7</b>	Building construction			
i)	Upto 2005-2006	186421710		
ii)	During 2006-2007	5070172	191491882	186421710
<b>8</b>	Advance Agt. works			
	2005-06	178986910		
	2006-07	1851852		

i) Upto 2005-2006	3077653				(-) 2006-07 less received	-6242000	174596762	178986910
ii) During 2006-2007	3112750							
iii) Less Expenditure 2006-2007	-3771984	2418419	3077653		<b>8</b> Amount due from outside patients			
<b>9</b> Heart Transplant Donation					i) Upto 2005-2006	1453960		
i) Upto 2005-2006	386887				ii) During 2006-2007	249662		
ii) During 2006-2007	-				iii) Less amount Recd.	-64912	1638710	1453960
iii) Less Expenditure	-1077	385810	386887		<b>9</b> Vehicles		2025954	2025954
<b>10</b> Lab Test					i) Ambulance ORBO		-	
i) Upto 2005-2006	1326706				<b>10</b> Furniture & Fixture during 2005-06	637000		
ii) During 2006-2007	3785055				2006-07	218168	855168	637000
iii) Less Expenditure 2006-2007	-2224412	2887349	1326706					
<b>11</b> Cardiac Test								
i) Upto 2005-2006	5083830				<b>C.T. PATIENT A/C</b>			
ii) During 2006-2007	3505250				<b>1</b> Fixed Deposits		220000000	235000000
iii) Less Expenditure 2006-2007	-3368822	5220258	5083830		<b>2</b> Cash in hand		793500	-
<b>C.T. PATIENT A/C</b>					<b>3</b> Cash at Bank		14403127	13752622
					<b>ANGIOGRAPHY PATIENT A/C</b>			
					<b>1</b> Cash recoverable from Sh. Dal Chand Verma, Cashier		3245441	3245441
<b>ANGIOGRAPHY PATIENT A/C</b>					<b>2</b> Fixed Deposits		75000000	75000000
					<b>3</b> Cash in hand		799000	
					<b>4</b> Cash at bank		12358587	12788961
<b>GAMMA KNIFE PATIENT A/C</b>					<b>GAMMA KNIFE PATIENT A/C</b>			
					<b>1</b> Fixed Deposit			

**NEUROSURGERY PATIENTA/C**

**NATIONAL DRUG DEPENDENCE  
TREATMENT CENTRE (N.D.D.T.C.)**

<b>1</b>	Capital fund of DAC			
a)	Upto 2005-2006	124865718		
b)	Mach. & Equip.	1485128		
c)	Motar Vehicle	507973		
d)	Furniture	638117		
e)	Building Const.			
f)	Books & Pub.	1841503		
g)	Adj. of para-2.21 fund of land	10000000	139338439	124865718
<b>2</b>	Institute Recovery			
i)	Upto 2005-06			
l)	During 2006-07	-	113215	113215
<b>3</b>	Security Deposit			
a)	Upto 2005-06	115000		
b)	During 2006-07	40000		
c)	Refund 2006-07	-20000	135000	115000

2006-2007	42500000	82500000
<b>2</b> Cash at Bank	66823583	5330282

**NEUROSURGERY PATIENTA/C**

<b>1</b>	Fixed Deposits		
a)	2005-06	32000000	
b)	2006-07	10000000	42000000
<b>2</b>	Cash in hand	44000	32000000
<b>3</b>	Cash at bank	4985397	7577574

**NATIONAL DRUG DEPENDENCE  
TREATMENT CENTRE (N.D.D.T.C.)**

<b>1</b>	Cash at Bank		7499458	7389074
<b>2</b>	Mach. & Equip.			
a)	Upto 2005-2006	20561768		
b)	During 2006-2007	1485188	22046956	20561768
<b>3</b>	Books & Publication			
a)	Upto 2005-06	7214235		
b)	During 2006-07	1841503	9055738	7214235
<b>4</b>	Furniture & Fixture			
a)	Upto 2005-06	2106255		
b)	During 2006-07	638117	2744372	2106255
<b>5</b>	Building Construction			
a)	Upto 2005-06	91953715		
	During 2006-07	10000000		
b)	Adj. para 2.21		101953715	91953715
<b>6</b>	Vehicle			
a)	Upto 2005-06	3393371		
b)	During 2006-07	507913	3901284	3393371
<b>7</b>	Outside recovery			
a)	Upto 2005-06	40708		
b)	During 2006-07	-	40708	40708
<b>8</b>	Car Advance			
a)	2005-06	120960		
b)	Recovery	-34560	86400	120960
<b>9</b>	Mat. & Supply			
a)	2005-06			

<b>NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.) (UNDCP PROJECT)</b>				<b>NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.) (UNDCP PROJECT)</b>			
Opening balance		257664	980715	Cash in hand		316153	257664
				Cash at Bank		-	-
				Advance Payment			
				2006-07 Mat. & Sup.			155000
<b>Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL</b>				<b>Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL</b>			
1 During 2005-2006	1067369232			1 Cash at Bank		46707703	36218452
(a) Plan (Non EFC)	37400000			2 Furniture & Fixtures			
(b) Plan (EFC)	39600000			a) Upto 2005-2006	10359311	10359311	10359311
(c) Less condemnation of M&E As per CSD/Store Section letter No.X-1-4/04-05	-90000			3 Computer Advance	132000		
Budget/V-III dt. 25.5.07		1144279232	1067369232	Less	-200	131800	
2 Interest Accrued		-	2710	4 Car/HBA Advance	207750		
3 Revolving Fund				Less	-18000	189750	207750
(i) Upto 2005-2006	3506982			5 Mach. & Equip.			
(ii) Add during 2006-2007	2942250			a) Upto 2005-2006	481449188		
(iii) Less payment during 2006-07	-4858671	1590561	3506982	b) Add during 2006-2007	57984763		
4 Medical Oncology Fund				c) Add Custom Duty	7359593		
(i) Upto 2005-2006	62963			d) Less condemnation of M&E as per CSD/Store Section	-90000	546703544	481449188
(ii) Add during 2006-2007	516075	579038	62963	6 Advance Payments			
				a) During 2005-2006	237155554		
				b) Add during 2006-2007(+)	60555969		
				c) Less Advance Adjustments during the year 2006-07	-57984763		
				d) Add Customs duty	2940407	242667167	237155554
				7 Security Deposited with NDMC as per Audit Objection		2626000	

				during 2004-05			
				8 Building Construction			
				a) Upto 2005-2006	298882915		
				b) During 2006-2007			
				HSCC (Manifold)	-		
				c) Less adjustment of Security deposit to NDMC	-2626000	296256915	298882915
				8 Vehicle			
				a) Upto 2005-2006	941321	941321	941321
				9 Capital Works			
				(I) Upto 2005-06	4064201		
				During 2006-07	1474343	5538544	4064201
				<b>J.P.N.APEX TRAUMA CENTRE</b>			
				Cash at Bank		32786727	6966601
				Mach. & Equip.			112932400
				<b>Construction of Building</b>			
				1 Advance paid to M/s HSCC		87912064	
				2 Advance to M/s HSCC during 2006-07 towards construction of buildings		29000000	
				3 Machinery & Equipment			
				(i) L/C Advances on M&E	333217199		
				(ii) Unadjusted advance	28630705	361847904	
				4 Construction of Building transferred from AIIMS(M)		449825743	
				5 Land Account transferred from AIIMS(M) Account		9900000	
				6 (i) Machinery & Equipments Upto 2005-06	112932400		
				(ii) Payment against Bills			
				Customs Duty, PDA paid	15036084	127968484	
				7 Furniture & Fixtures during 2006-07		2375382	
				<b>J.P.N.APEX TRAUMA CENTRE</b>			
				1 Capital Grants	120000000		
				Add capital A/c for the previous year transferred from AIIMS(M)	547637807		
				Add during 2006-07	433075382	1100713189	119899001



**CENTRE FOR DENTAL  
EDUCATION & RESEARCH**

**1 Capital Grant**

(i) Upto 05-06 transferred from AIIMS Main A/c	203951487	
(ii) During 2006-07	155000000	
(iii) Less transferred to Income & Exp. A/c	-1701067	357250420

**2 Security Deposits**

260000

**POOR PATIENT A/C**

**1 AIIMS (Main)**

a) Opening Balance		
i) Cash/Bank	813303	
ii) FDR's	327078	
b) Receipts		
i) Grants	142407	
ii) Interest on FDR's	73148	
iii) Payments	93902	
c) Closing Balance		
i) Cash/Bank		861808
ii) FDR's		400226

**CENTRE FOR DENTAL  
EDUCATION & RESEARCH**

**1 Cash at bank**

19511927

**2 Machinery & Equip.(Plan) during 2006-07**

29724246

**3 Advance Payment made to foreign purchases (06-07)**

17134994

**4 Building**

(i) Upto 05-06 transferred from AIIMS Main A/c

45557811

(ii) During 06-07

165676424

(iii) Correction of 2005-06 as per para 2.5.3(3) of SAR of 2005-06

4520000

215754235

**5 Advance paid to HSCC**

(i) Upto 05-06 transferred from AIIMS Main A/c

158393676

(ii) During 06-07

88300000

(iii) Less adjusted during 06-07

-165676424

(iv) Less correction of 2005-06 as per para 2.5.3(3) of SAR of 2005-06

-4520000

76497252

**POOR PATIENT A/C**

**1 AIIMS (Main)**

a) Cash/Bank

861808

813303

b) FDR's

400226

327078

**2 Dr.B.R.A.I.R.C.H**

Cash/Bank

1393911

1234844

**3 DR. R.P.CENTRE**

a) Cash/Bank

25052

12829

**4 N.S.CENTRE**

a) Cash/Bank

83806

59004

2	Dr.B.R.A.I.R.C.H.				
a)	Cash/Bank	1234844			
b)	Receipts				
	i) Grants	149069			
	ii) Interest on FDR's	394411			
	(iii) Payments	384413			
c)	Closing Balance				
	Cash/Bank		1393911	1234844	
3	DR. R.P.CENTRE				
a)	Cash	12829			
b)	Receipts				
	i) Interest	600			
	ii) Donation	58725			
	iii) Payments	-17102			
	iv) Wrongly credit by bank corrected in 2006-07	-30000			
	v) Closing Balance		25052	12829	
4	N.S. Centre				
a)	Cash/Bank	59004			
c)	Donations	37518			
	i) Payments	12716			
d)	Closing Balance		83806	59004	
<b>PATIENT TREATMENT ACCOUNTS</b>					
<b>1</b>	<b>AIIMS</b>				
a)	Opening Balance	14236140			
b)	Receipts				
	(i) Grants	34370806			
	(ii) Interest	627135			
	(iii) Payments	30333618			
c)	Closing Balance		18900463	14236140	
<b>2</b>	<b>Dr.B.R.A.I.R.C.H.</b>				
a)	Opening Balance	11522423			
b)	FDR	6000000			
b)	Receipts				
<b>PATIENT TREATMENT ACCOUNTS</b>					
<b>1</b>	<b>AIIMS</b>			18900463	14236140
<b>2</b>	<b>Dr.B.R.A.I.R.C.H.</b>				
a)	Cash/Bank			5194183	11522423
b)	FDR's			10000000	6000000
				6000000	

i) Grants	33738008		
ii) Cheque Cancelled	467987		
iii) Interest	479430		
iv) Payments	31013665		
e) Closing Balance			17522423
b) Cash/Bank		5194183	
ii) FDRs		10000000	
		6000000	

**HOSTELS**

Security Deposits			
i) Upto 2005-06	577126		
ii) receipts during 2006-07	719500		
iii) less refunds during 2006-07	-316846	979780	577126

**EXCESS OF INCOME OVER EXPENDITURE**

1 AIIMS (Main)			-
(i) During 2005-06	104620607		
(ii) Excess of expenditure over income 2006-07	196101040		
(iii) Correction due to para 2.5.1 of SAR for 2005-06	-1111948	299609699	104620607
2 <b>R.P. Centre</b>			
a) Upto 2005-2006	10385391		
b) During 2006-2007	2563239		
c) Correction of previous year(Misclassification of Interest as recovery)	112149	13060779	10385391
3 <b>C.N.C.</b>			
a) Upto 2005-2006	6028521		
b) Excess of Income over expenditure during 2006-07	-5099996	928525	
3 C.T. PATIENT A/C			
i) Upto 2005-06	248752622		
ii) Less excess of expdr.			

**HOSTELS**

1 Cash in hand	23806	7541
2 Cash at Bank	318341	221318
3 FDR's	2171124	1738028

**EXCESS OF EXPENDITURE OVER INCOME**

1 AIIMS (M)	-	
2 C.N.C.	-	5099996
3 UNDCP		568051
4 Dr.B.R.A.I.R.C.H.		
i) During 2005-06	-	9397407

over income 2006-07	-13491493		
iii) Less fresh cheques issued against cancelled cheques	-64502	235196627	248752622
<b>4 ANGIOGRAPHY PATIENTA/C</b>			
i) Upto 2005-06	91034402		
ii) Add excess of expdr. over income 2006-07	635212		
iii) Less fresh cheques issued against cancelled cheques	-266586	91403028	91034402
<b>5 GAMMAKNIFE PATIENTA/C</b>			
i) Upto 2005-2006	87830282		
ii) during 2006-07	21423401		
iii) Cancelled Cheque	69900	109323583	87830282
<b>6 NEUROSURGERY PATIENTA/C</b>			
i) Upto 2005-06	39577574		
ii) Excess of income over expenditure during 2006-07	7451823	47029397	39577574
<b>7 NDDTC</b>			
Upto 2005-06	7686153		
During 2006-07	355824	8041977	7686153
<b>8 Dr.B.R.A.I.R.C.H.</b>			
(I) Upto 2005-06	7734212		
(ii) During 2006-07	7333709		
(iii) Correction due to para 2.2 of SAR	2710		
(iv) Excess of Income 04-05	-9397407	5673224	7734212

<b>9 HOSTEL</b>				
i) Upto 2005-06	1389761			
ii) During 2006-07	143730	1533491	1389761	
10 NATIONAL DRUG DEPENDENCE TREATMENT PROJECT (UNDCP)		58489		
11 J.P.N. Apex Trauma Centre				
Upto 2006-07	1004114			
Less(-)	-100999	903115		
12 CENTRE FOR DENTAL EDUCATION & RESEARCH		1112234		
<b>Total</b>		<b>14681235877</b>	<b>12763356910</b>	<b>14681235877</b>
				<b>12763356910</b>

**Note:**

- 1 The accounts have been prepared on actual Receipts and Expenditure basis.
- 2 No depreciation on Mach. & Equipment, vehicles etc. has been provided as the Institute is fully funded by the Govt.
- 3 A statement showing by various project Investigators during 2006-07 is attached at Appendix-A-I. It may be mentioned that on completion of Research Projects, the equipment are either returned to the funding agencies or are used in the Departments.
- 4 Institute is exempted from Income-Tax under Section 8G(5)(vi) of the Income Tax Act, 1961.

(MRS. BASANTI DALAL)  
FINANCE & CHIEF ACCOUNTS OFFICER

(P. VENUGOPAL)  
DIRECTOR

## ALL INDIA INSTITUTE OF MEDICAL SCIENCES

STATEMENT SHOWING THE EXPENDITURE OF THE GRANT RECEIVED FOR THE SPECIFIC  
PURPOSE FOR THE YEAR 2006 2007

S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
1	ICMR	16035900	0	65866207	81902107	46696002		2089989	33116116	0
2	C.S.I.R.	8994311	0	24395010	33389321	23168442			10220879	0
3	DST	30121829	0	50794255	80916084	41631502			39284582	0
4	UNICEF	287450	0	18266791	18554241	17342506			1211735	0
5	D.B.T.	63486156	0	76912517	140398673	83013237			57385436	0
6	CIPLA	69550	0	0	69550	0		69550	0	0
7	W.H.O.	10381559	0	6646371	17027930	3404141			13623789	0
8	CTC/ICDS	0	3951	0	3951	0	3951		0	0
9	U.G.C.	0	266440	5346921	5080481	2421086			2659395	0
10	Indian Council of Agriculture Research	39936	0	0	39936	0		39936	0	0
11	Domain Chemical India Pvt. Ltd.	0	663	0	663	0	663		0	0
12	Ministry of Health and Family welfare	3225020	0	2667156	5892176	3271375			2620801	0
13	Ministry of Environment & Forest	0	108411	227898	119487	542099	422612		0	0
14	Dabur Research Foundation	1281527	0	90755	1372282	555879			816403	0
15	M.R.C. U.K.	260370	0	0	260370	0		260370	0	0
16	DEPTT. OF ELECTRONICS	189154	0	0	189154	74612			114542	0
17	Ministry of H.R.D. (DWCD)	0	4579	0	4579	0	4579		0	0
18	Himalaya Drug Co.	127407	0	453482	580889	385352			195537	0
19	International Atomic Energy Agency	1371346	0	1004634	2375980	1429156			946824	0
20	Deptt. of Atomic Energy	31811	0	0	31811	0		31811	0	0
21	Convatee Sayibb	2328	0	0	2328	0			2328	0
22	Rajiv Gandhi Foundation	21	0	320101	320122	210135			109987	0
23	Hind Chemicals	45072	0	0	45072	0		45072	0	0
24	Directorate of Education (NSS)	32142	0	50000	82142	27459			54683	0
25	Ministry of Welfare	331901	0	0	331901	0		331901	0	0
26	Roussel Sci. Instt.	0	73	0	73	0	73		0	0
27	Serum Instt. Of India	0	236	0	236	0	236		0	0
28	Deptt. Of Ocean Development	0	5644	0	5644	0	5644		0	0

S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
29	Torrent Pharma	0	51312	0	51312	0	51312		0	0
30	INDOUS	764123	0	0	764123	0			764123	0
31	IndoFrench Centre for the Promotion of Advanced Research	31011	0	0	31011	0		31011	0	0
32	Ford Foundation	458594	0	0	458594	0			458594	0
33	Indian Epilepsy Research Association	61798	0	0	61798	0		61798	0	0
34	Prakash Health and Research Foundation	0	120	0	120	0	120		0	0
35	LapraUK	20	0	0	20	0		20	0	0
36	National Institute of Immunology	85662	0	0	85662	0		85662	0	0
37	Fulford India Ltd.	138025	0	800000	938025	386454			551571	0
38	National Institute of Biological	2950	0	0	2950	0		2950	0	0
39	Infar (India) Ltd.	23975	0	0	23975	0		23975	0	0
40	National Thalassaemia Welfare Society	48084	0	48000	96084	54440			41644	0
41	Australian International Development Assistance Bureau	0	1858	0	1858	0	1858		0	0
42	INCLN	0	220421	176023	2028188	295079	2323267		0	0
43	ParkDavis	0	1011	0	1011	0	1011		0	0
44	Institute of Cancer Research UK coordination Committee	685067	0	0	685067	268601			416466	0
45	Hoechst India Ltd.	1194	0	0	1194	0		1194	0	0
	Yoga And Naturopathy									
47	A.S.T.A	0	0	0	0	0		0	0	
48	Ranbaxy /Elililly & company pvt Ltd	162418	0	873398	1035816	631905			403911	0
49	Biomed Pvt. Ltd.	549	0	0	549	0		549	0	0
50	Smithline Beecham Pharma	16291	0	0	16291	0		16291	0	0
51	Rockfeller Fondation	19369	0	0	19369	0		19369	0	0
52	NATIONAL INSTITUTE OF HEALTH, USA	7545663	0	1572202	9117865	3005304			6112561	0
53	Norad, Norway	100183	0	1834898	1935081	1901794			33287	0
54	NIE	16171932	0	8289837	24461769	6947909			17513860	0
55	SAFA	25132	0	0	25132	0		25132	0	0
56	I.E.C.	0	757	0	757	0	757		0	0
57	Family Planning Foundation	1983	0	0	1983	0		1983	0	0
58	Sarabhai Chemicals	1236	0	0	1236	0		1236	0	0

S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
59	INSA	45331	0	0	45331	20000			25331	0
60	TCL Bombay	0	1264	0	1264	0	1264		0	0
61	Hindustan Antibiotic Ltd.	83	0	0	83	0		83	0	0
62	SRBClinical Pharamacology	0	3154100	0	3154100	0		0	3154100	
63	Andaman/Nicobar	4192	0	0	4192	0		4192		0
64	M/S Jagsonpal Pharma	7119	0	0	7119	0		7119		0
65	Panacea biotech Ltd.	25060	0	292471	317531	313344			4187	0
66	The Dr.Willimar Sachwabe Arznezmitte Germany	14489	0	0	14489	0		14489		0
67	RhonePoulence India Ltd.	86	0	0	86	0		86		0
68	Somdutt Builders Ltd.	79	0	0	79	0		79		0
69	Hindustan Lever Ltd.	0	1511	0	1511	0	1511		0	
70	Revolving Funds for Drugs. / SNMC	195710	0	0	195710	0			195710	0
71	Atomic Energy Regulatory Board	331306	0	175730	507036	130828			376208	0
72	Bhart Electrical Ltd.	138	0	0	138	0		138	0	0
73	Sandoz	33	0	0	33	0		33	0	0
74	Pfizer Ltd.	1453532	0	3536446	4989978	3707305			1282673	0
75	Buyer India Ltd.	1648	0	0	1648	0		1648	0	0
76	NATCO Pharma India	13044	0	332175	345219	273171			72048	0
77	University of Maryland	339192	0	604964	944156	734720			209436	0
78	Glaxo India Ltd.	0	0	224100	224100	6723			217377	0
79	Ministry of Defence (D.R.D.O)	68859	0	577000	645859	200294			445565	0
80	Cynamid India Ltd.	27305	0	0	27305	0		27305	0	0
81	Reckitt and Column	6595	0	0	6595	0		6595	0	0
82	MBI Kits.	0	219	0	219	0	219		0	
83	Nova Nordisk India	241532	0	0	241532	58753			182779	0
84	Central Pollution Control Board	4416	0	0	4416	0		4416	0	0
85	Bureau of Police Res. & Development	2147	0	0	2147	0		2147	0	0
86	Office of Salt Commission Jaipur	37114	0	0	37114	0		37114	0	0
87	NAMS	12086	0	0	12086	0		12086	0	0
88	European Union/Commission	41975	0	0	41975	0		41975	0	0
89	Cystic Fibrosis/World Wide, USA	0	0	410525	410525	45716			364809	0
90	CONARD, USA	591	0	0	591	0			591	0
91	The Cancer Foundation	230165	0	0	230165	144810			85355	0
92	Novartis India Ltd.	533848	0	322232	856080	520312			335768	0



S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
93	Duke University Medical Centre	205588	0	0	205588	0		205588	0	0
94	Indian Council for Culture Relation	25944	0	0	25944	0		25944	0	0
95	Lupin Lab	96098	0	0	96098	0		96098	0	0
96	Maharishi Ayurveda	58478	0	116308	174786	168916			5870	0
97	UN International Drug and crime Control Programme	484102	0	2373201	2857303	1194846			1662457	0
98	Dupher Interfrom Ltd	8463	0	0	8463	0		8463	0	0
99	Russan Pharma Ltd Mumbai	5015	0	675000	680015	289239			390776	0
100	Central Council for Research in Ayurveda & Sidha	830123	0	762500	1592623	554370			1038253	0
101	Global Forum for Health and Research	106750	0	0	106750	0		106750	0	0
102	Nucron Pharma Ltd.	66472	0	0	66472	0		66472	0	0
103	Terry Fox Foundation/CANADIAN HIGH COMMISSION	4950	0	0	4950	135018	130068		0	0
104	Ministry of Social Justice and Empowerment	77882	0	0	77882	0			77882	0
105	Quintiles Spectral India	2275838	0	3963890	6239728	2593466			3646262	0
106	United Nation Industrial Development	43857	0	0	43857	0		43857	0	0
107	Mustrad Research And Promotion Center	17436	0	0	17436	0		17436	0	0
108	Ministry of Communication and Information& Technology	2093936	0	910000	3003936	2292181			711755	0
109	University of Bergan, Norway	3747523	0	3986951	7734474	4671126			3063348	0
110	Zydas Healthcare Ltd	0	398	0	398	0			0	398
111	Ferrosan, Denmark	6552	0	0	6552	0		6552	0	0
112	University of Delhi	19218	0	0	19218	0		19218	0	0
113	Oxford University, UK	874163	0	1133640	2007803	741103			1266700	0
114	Federation of Obstetric & Gynaecological	0	376	0	376	100			0	276
115	United Nation Development Programme	37786	0	0	37786	0		37786	0	0
116	Aimil Pharmaceutical India Ltd.	135	0	0	135	0		135	0	0
117	U.S.V. Ltd.	186	0	0	186	0		186	0	0
118	Heinz Nutrition Foundation India	24370	0	0	24370	0		24370	0	0
119	SGPGIMS	28531	0	0	28531	0		28531	0	0
120	Caltaq Laboratories Ltd.(U.S.A)	22058	0	0	22058	0		22058	0	0

S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
121	INCTR USA	246205	0	754547	1000752	948569		0	52183	0
122	Indian Institute of Sciences, Bangalore	5	0	0	5	0		5	0	0
123	Nottingham Health Care	14229	0	0	14229	0		14229	0	0
124	International Consortium for Mental Health Policy	422153	0	0	422153	0		422153	0	0
125	Emcure Pharmaceutical Ltd.	15	0	0	15	6395			0	6380
126	Delhi State Control Society/AIDS	111	0	170870	170981	181126			0	10145
127	Bharat Biotech International Ltd	12241	0	0	12241	0			12241	0
128	L.G. Chemicals India Pvt Ltd.	162	0	0	162	830			0	668
129	Wockhardt, Mumbai	21169	0	0	21169	0			21169	0
130	NSD (Security Deposit)	1863550	0	1880100	3743650	1573000			2170650	0
131	IIM, Ahmedabad	105	0	0	105	0		105	0	0
132	Sanofi Pasteur India Pvt Ltd	16	0	60000	60016	1800			58216	0
133	Endocrina	0	0	0	0	0		0	0	
134	Helpage India	27966	0	0	27966	27966			0	0
135	Johnson & Johnson	0	0	94390	94390	2832			91558	0
136	Beijing Toshiba Pharmaceuticals Co. Ltd.	180235	0	0	180235	0			180235	0
137	Lyon, France	11291	0	0	11291	0		11291	0	0
138	C.P.W.W. Jersulam	6534	0	0	6534	0			6534	0
139	Aventis Pharmaceutical, USA	14344	0	161592	175936	134184		41752	0	
140	Alcon Research Ltd., USA	15744	0	0	15744	0		15744	0	0
141	Dr. Reddy's Lab. Pvt. Ltd.	313598	0	307461	621059	294382		0	326677	0
142	Glenmark Laboratories Pvt. Ltd.	2281	0	0	2281	0		2281	0	0
143	Hindustan Latex Family Planning Promotion	67244	0	0	67244	0		67244	0	0
144	The Population Council	0	1589737	0	1589737	0	1589737		0	
145	SIRO CLIN PHARMA PVT. LTD	1070229	0	151172	1221401	415773			805628	0
146	Charak Pharma (P)Ltd.	147586	0	0	147586	104805			42781	0
147	INCLN & USAID	1580608	0	9722088	11302696	6388557			4914139	0
148	National Institute of Oceanography	0	2918	0	2918	0	2918		0	
149	INST. OF NUCLEAR MEDICNE & ALLIED SCIENC	22569	0	0	22569	22569			0	0
150	SAVING NEWBORN LIVES, USA	8920	0	192404	201324	74484			126840	0
151	DANIDA RESEARCH COUNCIL	173218	0	0	173218	153789			19429	0

S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
152	THE MICRONUTRIENT INITIATIVE, ASIA	15012	0	18645	33657	38359			0	4702
153	Ministry of Health And Family Welfare(N.A.C.O)	2880099	0	8453606	11333705	3853528			7480177	0
154	The University of Albama, USA	2469345	0	1125085	3594430	3343532			250898	0
155	Ministry of External Affairs	212920	0	0	212920	212920			0	0
156	Indian council of Philosophical Research	0	0	69000	69000	61080			7920	0
157	Sterling Synergy System (P) Ltd.	165978	0	62400	228378	114798			113580	0
158	Reliance Clinical Research Services (P) Ltd.	62571	0	5000	67571	20150			47421	0
159	KLPF,USA	1859112	0	0	1859112	1202338			656774	0
160	Vulimini Ramalingaswami Foundation	53802	0	0	53802	60310			0	6508
161	Texas A&M Research Foundation (TAMRF) USA	17653	0	0	17653	1416			16237	0
162	Biomerieux India (P)Ltd.	11206	0	90000	101206	56307			44899	0
163	Media Lab Asia	265181	0	790988	1056169	1007802			48367	0
164	University of Warwick U.K	166220	0	399500	565720	133754			431966	0
165	BHARAT SERUMS AND VACCINES LTD.	16623	0	65000	81623	85511			0	3888
166	D.I.P.A.S	0	0	0	0	0	0	0	0	
167	CENTER FOR BLOOD RESEARCH	0	0	0	0	0	0	0	0	
168	CD PHARMA INDIA PRIVATE LIMITED	218819	0	1168687	1387506	700985			686521	0
169	Khandelwal Laboratories Ltd.	26197	0	0	26197	28718			0	2521
170	Directorate General of Health Services	0	0	718308	718308	158209			560099	0
171	Lajolla Pharmaceutical Company, California	0	0	215662	215662	27270			188392	0
172	BONE & JOINT DECADE INDIA	9000	0	190000	199000	163120			35880	0
173	ANTISENSE PHARMA Gmbh, GERMANY	0	0	71736	71736	2152			69584	0
174	I.S.H.T.M	73637	0	154000	227637	218665			8972	0
175	National Institute of Nutrition (NIN) Hyderabad	0	15264	300000	284736	287307			0	2571
176	Ozone pharmaceuticals ltd.	120857	0	155565	276422	189760			86662	0

S.No	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adjustment		Balance	
		Credit	Debit				Credit	Debit	Credit	Debit
177	Delhi Tapedic Unmulan Samiti	140799	0	248580	389379	240043			149336	0
178	John Hopkins Bloomberg School of Public Health (JHBSPH)	0	0	1119600	1119600	263274			856326	0
179	Clinigene International Pvt. Ltd	0	0	152232	152232	36766			115466	0
180	FREEDOM TRIAL	0	0	88920	88920	2667			86253	0
181	KOBE, JAPAN	211897	0	815050	1026947	994711			32236	0
182	Troikaa Pharmaceutical Ltd	34858	0	100000	134858	98000			36858	0
183	International Paedtrics Nephrology Association	76500	0	399000	475500	376100			99400	0
184	Synergy Network India Pvt Ltd,	5237	0	266000	271237	270686			551	0
185	Ciola Ltd.	0	0	0	0	0		0	0	
186	Solvey Pharma Ltd.	120051	0	0	120051	69386			50665	0
187	IFCPAR, NEW DELHI	0	0	0	0	0		0	0	
188	Relisys Medical Devices Ltd.	0	0	0	0	0		0	0	
189	PPD Pharmaceutical Development India Pvt. Ltd.	70879	0	537036	607915	469219			138696	0
190	Auxilium Technical & Management Services Pvt. Ltd.	0	0	50000	50000	49600			400	0
191	M/S ASPREVA PHARMACEUTICAL CORPORATION, CANADA	0	2393	216310	213917	140650			73267	0
192	CLINIRx RESEARCH PVT. LTD. GURGAON, HARYANA	108846	0	1747846	1856692	341925			1514767	0
193	Central Council for Research in Unani Medicine	0	0	803700	803700	742901			60799	0
194	CLINCYTE, USA	242500	0	250000	492500	245213			247287	0
195	M/S Markansas Research Division	0	0	284700	284700	38344			246356	0
196	Threshold Pharmaceuticals, USA	0	0	294759	294759	258575			36184	0
197	GlaxoSmith Kline Asia Private Ltd	0	0	379315	379315	181058			198257	0
198	AJINOMOTA CO. JAPAN	0	0	445250	445250	318207			127043	0
199	MSD (India) Pvt. Ltd.	0	0	959769	959769	99528			860241	0
200	Solumiks Herbaceuticals Limited	0	0	262700	262700	229289			33411	0
201	C.N. Centre (AIIMS)	0	0	9000	9000	9000			0	0
	<b>Total</b>	<b>193499723</b>	<b>7417446</b>	<b>325658465</b>	<b>525438572</b>	<b>286108406</b>	<b>4541800</b>	<b>4541800</b>	<b>228888374</b>	<b>3255838</b>

(Mrs. Basanti Dalal)  
Finance & Chief Accounts Officer

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
RESEARCH SECTION**

**Statement of Expenditure Made for Purchasing Equipment  
during the Financial Year 2006-2007**

S.NO.	Code No.	Project Investigators	Month	Amount
1	N891	DR. A.K.DINDA	Feb-07	436,445
2	N891	DR. A.K.DINDA	Mar-07	313,955
3	N669	DR. ALKA KRIPLANI	Feb-07	99,799
4	N017	DR. BIR SINGH	Jun-06	5,000
5	N017	DR. BIR SINGH	Jan-07	6,990
6	N469	DR. D.N.SRIVASTAVA	Jul-06	108,990
7	D209	DR. DEBABRATA GHOSH	Sep-06	386,757
8	D209	DR. DEBABRATA GHOSH	Oct-06	63,245
9	N726	DR. DEEPIKA DEKA	Feb-07	30,000
10	I413	DR. H.K.PRASAD	Aug-06	4,049
11	N796	DR. H.K.PRASAD	May-06	766,200
12	N835	DR. H.N MALLICK	Feb-07	55,954
13	C608	DR. J.S.TYAGI	Jan-07	34,680
14	N728	DR. J.S.TYAGI	Aug-06	104,748
15	N823	DR. J.S.TYAGI	Jun-06	50,711
16	N823	DR. J.S.TYAGI	Aug-06	7,243
17	N823	DR. J.S.TYAGI	Oct-06	242,020
18	N823	DR. J.S.TYAGI	Jan-07	43,722
19	N823	DR. J.S.TYAGI	Feb-07	14,230
20	N823	DR. J.S.TYAGI	Mar-07	995,559
21	N707	DR. K.ANAND	Jun-06	105,610
22	N707	DR. K.ANAND	Nov-06	11,804
23	N707	DR. K.ANAND	Mar-07	33,430
24	D175	DR. K.K.DEEPAK	Aug-06	64,896
25	D175	DR. K.K.DEEPAK	Sep-06	208,832
26	D178	DR. K.K.DEEPAK	Jun-06	46,764
27	D178	DR. K.K.DEEPAK	Nov-06	6,990
28	N746	DR. K.K.DEEPAK	Jun-06	49,500
29	N746	DR. K.K.DEEPAK	Jul-06	152,176
30	N746	DR. K.K.DEEPAK	Aug-06	566
31	N746	DR. K.K.DEEPAK	Sep-06	7,090
32	I466	DR. KALPANALUTHRA	Aug-06	221,427

33	I466	DR. KALPANA LUTHRA	Oct-06	28,463
34	N842	DR. KAMESHWAR PRASAD	Mar-07	93,500
35	N766	DR. KRISHNA DALAL	May-06	126,830
36	N727	DR. M.R. RAJESWARI	Feb-07	278,267
37	N888	DR. MADHURI BEHARI	Mar-07	16,536
38	N754	DR. MANJU MEHTA	Jun-06	51,000
39	N754	DR. MANJU MEHTA	Aug-06	8,570
40	D212	DR. N.C. CHANDRA	Mar-07	395,267
41	I486	DR. N.C. CHANDRA	Mar-07	79,605
42	N781	DR. N.K. MEHRA	Aug-06	227,020
43	D185	DR. N.K. SHUKLA	Jul-06	76,874
44	D179	DR. N.R. JAGANNATHAN	Aug-06	3,479
45	D179	DR. N.R. JAGANNATHAN	Sep-06	5,856
46	D179	DR. N.R. JAGANNATHAN	Feb-07	698,558
47	N852	DR. NIKHIL TANDON	Sep-06	8,066
48	N856	DR. NIKHIL TANDON	Mar-07	41,000
49	n612	DR. NAVEET WIG	Feb-07	79,396
50	n756	DR. NEERJA BHATLA	Aug-06	373,928
51	n756	DR. NEERJA BHATLA	Mar-07	8,840
52	N850	DR. NEERJA BHATLA	Aug-06	17,426
53	N731	DR. NEETA SINGH	Jun-06	187,950
54	N731	DR. NEETA SINGH	Nov-06	105,000
55	N731	DR. NEETA SINGH	Dec-06	146,475
56	C614	DR. NIBHRITIDAS	Dec-06	225,677
57	N616	DR. P.K. JULKA	Sep-06	93,563
58	I450	DR. PARTHAPRASAD CHATTOPADHY	May-06	54,476
59	I450	DR. PARTHAPRASAD CHATTOPADHY	Jul-06	13,741
60	I450	DR. PARTHAPRASAD CHATTOPADHY	Mar-07	39,996
61	N698	DR. PEUSH SAHNI	Nov-06	18,200
62	N698	DR. PEUSH SAHNI	Mar-07	13,800
63	D168	DR. PRATIMARAY	Aug-06	580
64	D168	DR. PRATIMARAY	Dec-06	18,002
65	I380	DR. PUNIT KAUR	Jan-07	18,563
66	I380	DR. PUNIT KAUR	Mar-07	92,600
67	N284A	DR. R.M. PANDEY	Jun-06	4,900
68	N284A	DR. R.M. PANDEY	Sep-06	3,700
69	N284A	DR. R.M. PANDEY	Nov-06	89,953
70	N798	DR. RAJESH SAGAR	Jun-06	19,025
71	N798	DR. RAJESH SAGAR	Nov-06	5,800

72	N530	DR. RAKESH KUMAR	Mar-07	140,500
73	N845	DR. RAMA CHAUDHARY	Mar-07	6,920,279
74	N671	DR. RANDEEP GULERIA	Feb-07	104,000
75	N826	DR. RATNA SHARMA	Sep-06	42,050
76	N826	DR. RATNA SHARMA	Oct-06	454,300
77	D160	DR. RENU SAXENA	Aug-06	5,172
78	D184	DR. RENU SAXENA	Jun-06	139,362
79	D184	DR. RENU SAXENA	Aug-06	16,643
80	D199	DR. S.K.ACHARYA	Dec-06	189,170
81	D199	DR. S.K.ACHARYA	Feb-07	4,086,654
82	D199	DR. S.K.ACHARYA	Mar-07	518,896
83	N687	DR. S.K.ACHARYA	Feb-07	121,986
84	N759	DR. S.K.AGARWAL	Sep-06	10,800
85	N813	DR. S.K.AGARWAL	Jun-06	10,500
86	N813	DR. S.K.AGARWAL	Sep-06	75,192
87	n879	DR. S.K.AGARWAL	Mar-07	20,800
88	D198	DR. S.K.MAULIK	Jan-07	294,937
89	D173	DR. S.K.PANDA	Sep-06	111,280
90	D220	DR. S.K.PANDA	Mar-07	1,537,256
91	N724	DR. S.K.PANDA	Aug-06	4,938
92	N820	DR. S.K.SHARMA	Sep-06	44,304
93	N820	DR. S.K.SHARMA	Feb-07	14,490
94	N830	DR. S.K.SHARMA	Aug-06	68,325
95	D181	DR. SARMAN SINGH	Aug-06	17,011
96	N582	DR. SATYA N DAS	Jul-06	1,002
97	D177	DR. SAVITA YADAV	Jul-06	4,252
98	D022A	DR. SHASHI WADHWA	Jun-06	9,048
99	D022A	DR. SHASHI WADHWA	Dec-06	474,864
100	D022A	DR. SHASHI WADHWA	Jan-07	563,853
101	D022A	DR. SHASHI WADHWA	Mar-07	396,392
102	N863	DR. SHASHI WADHWA	Dec-06	211,006
103	N725	DR. SHINJINI BHATNAGAR	May-06	430,216
104	N725	DR. SHINJINI BHATNAGAR	Jul-06	119,835
105	N725	DR. SHINJINI BHATNAGAR	Aug-06	11,303
106	N737	DR. SHINJINI BHATNAGAR	Oct-06	9,000
107	N737	DR. SHINJINI BHATNAGAR	Nov-06	19,800
108	N838	DR. SHINJINI BHATNAGAR	Sep-06	14,456
109	N838	DR. SHINJINI BHATNAGAR	Nov-06	99,800
110	N869	DR. SHINJINI BHATNAGAR	Mar-07	146,640

111	I435	DR. SHOBHA BROOR	Dec-06	490,258
112	I435	DR. SHOBHA BROOR	Mar-07	2,212,098
113	N734	DR. SHOBHA BROOR	Jun-06	2,850,010
114	N734	DR. SHOBHA BROOR	Aug-06	105,310
115	N623	DR. SEEMAMUKHOPADHYAY	Dec-06	170,000
116	D192	DR. SUBRATA SINHA	Mar-07	1,972,500
117	I464	DR. SUBRATA SINHA	Jul-06	891
118	D200	DR. SUJATA SHARMA	Aug-06	109,002
119	D200	DR. SUJATA SHARMA	Sep-06	47,250
120	D200	DR. SUJATA SHARMA	Jan-07	83,114
121	N819	DR. T.VELPANIDAN	Nov-06	48,924
122	D176	DR. TULIKA SETH	Jul-06	4,154
123	N358	DR. V.RAINA	Jan-07	143,900
124	I447	DR. Y.D.SHARMA	Aug-06	70,731
125	N052	DR. Y.D.SHARMA	Mar-07	372,418
126	N672	DR. CHETAND. PATEL	Jun-06	86,270
127	D164	DR. MADHABANANDA KAR/ N.K.SH	Oct-06	19,050
128	N889	DR. SANDEEP GULARIA	Mar-07	44,500
129	N750	DR. ARVIND BAGGA	Jul-06	73,658
130	N750	DR. ARVIND BAGGA	Dec-06	30,988
131	N831	DR. G.KARTHIKEYAN	Sep-06	20,000
132	N000	SH. S.P.MAHLA	Jun-06	159,346
133	N000	SH. S.P.MAHLA	Aug-06	16,120
134	N000	SH. S.P.MAHLA	Sep-06	62,978
135	D180	DR. NAGENDRA SINGH/ T.P.SINGH	Jul-06	17,975
136	D186	Dr. ROHIT SAXENA	Oct-06	16,875
137	N817	DR. V.K.SHARMA	Aug-06	12,500
138	N817	DR. V.K.SHARMA	Jan-07	87,750
139	D194	Dr. Sharmistha Dey	Jul-06	19,387
140	D194	Dr. Sharmistha Dey	Sep-06	47,250
141	C615	DR. SUMAN JAIN	Nov-06	78,771
142	D196	Dr. Rashmi Mathur	Jun-06	898,247
143	N821	DR. RAKESH AGGARWAL	Dec-06	69,605
144	N824	DR. Sanjeev Sinha	Jun-06	10,000
145	N824	DR. Sanjeev Sinha	Aug-06	140,572
146	N824	DR. Sanjeev Sinha	Sep-06	12,700
147	N824	DR. Sanjeev Sinha	Dec-06	1,627
148	N872	DR. Sanjeev Sinha	Mar-07	52,852
149	N790	DR. RAJAT RAY	Sep-06	61,800



150	I485	DR. D. PRABHAKARAN	Mar-07	499,502
151	N372	Dr. Suman Bhasker	Oct-06	15,500
152	N372	Dr. Suman Bhasker	Jan-07	136,074
153	D202	DR. VEENA KALRA	Dec-06	7,666,138
154	D206	Dr. RITU GUPTA	Dec-06	29,904
155	N890	Dr. Ravinder Goswami	Mar-07	431,003
156	N736	Dr. A Srinivasan	Jun-06	2,282,667
157	N736	Dr. A Srinivasan	Sep-06	431,395
158	N736	Dr. A Srinivasan	Nov-06	1,025,282
159	N736	Dr. A Srinivasan	Feb-07	105,000
		<b>GRANDTOTAL</b>		<b>49,254,022</b>

(Mrs. Basanti Dalal)  
Finance & Chief Accounts Officer

ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
LIST OF SUNDRY DEBTORS (SCHEME CELL)

S.No	Funding Agency	Debit
1	Central Council for Research in Yoga And Naturopathy	63681
2	SRBClinical Pharamacology	3154100
3	Zydas Healthcare Ltd	398
4	Federation of Obstetric & Gynaecological	276
5	Emcure Pharmaceutical Ltd.	6380
6	Delhi State Control Society/AIDS	10145
7	L.G. Chemicals India Pvt Ltd.	668
8	THE MICRONUTRIENT INITIATIVE, ASIA	4702
9	Vulimini Ramalingaswami Foundation	6508
10	BHARAT SERUMS AND VACCINES LTD.	3888
11	KHANDELWAL LABORATORIES LTD.	2521
12	National Institute of Nutrition (NIN) Hyderabad	2571
	<b>Total</b>	<b>3255838</b>

(Mrs. Basanti Dalal)  
Finance & Chief Accounts Officer

## ALL INDIA INSTITUTE OF MEDICAL SCIENCES

## STATEMENT SHOWING THE DONATIONS &amp; INVESTMENT AS ON 31-03-07

S.NO.	PARTICULARS & MODE OF INVESTMENT	AMOUNT OF DONATION	AMOUNT OF INVESTMENT
1	AIIMS ROTARY CANCER HOSPITAL	700000	700000
2	MISC. DONATION - HEAMOTOLOGY UNDER Dr. A.K. SARAYA	8000	8000
3	R.S. NANDA (UNIT TRUST)	78274	78274
4	ANNONYMOUS DONORS	70000	70000
5	DR. B.B. DIXIT LIB.	10000	13700
6	CHACHAMA DONORS	150000	199600
7	MJ. GENERAL S.L. BHATIA	10000	9800
8	MJ. GENERAL AMIR CHAND	150000	149660
		100000	100000
9	DR. K.L. WIG (UNIT TRUST)	15000	14910
10	ZENITH FINANCE & CO. (UNIT TRUST) D.C. BHUTNA	6000	6000
11	KAMANI CHARITY TRUST (UNIT TRUST)	5000	5100
12	SARUP CHAND HANS RAJ	20000	19500
13	RAJ KUMARI AMRIT KAUR	25000	25000
14	KATHERINE SORAL FREYMAN	5000	5000
15	DR. S.L. KALRA	6000	5800
16	R.L. RAJGARHIA	850000	850000
17	SMT. PRAKASH WATI DONATION	13800	13800
18	SMT. KRIPAL KAUR (UNIT TRUST)	6000	5908
19	SMT. KAUSHALYA THAPAR (UNIT TRUST)	12000	12017
20	SH. G.D. JHANGINI	25500	25602
21	LALA KHUSHI RAM	247753	247753
22	SMT. BRIJ RANI SAWHENY (UNIT TRUST)	22501	22472
23	S.P. VIRMANI (FIXED DEPOSIT)	1500	1500
24	EAST INDIA COMMERCIAL PVT. LTD CALCUTTA (FIXED DEPOSIT) SRB	3200000	2800000
25	DR. KANTI KAPILA (UNIT TRUST)	10079	10002
26	DR. V. RAMALINGASWAMI (UNIT TRUST)	8000	7996
27	SR. S. SABHARWAL (UNIT TRUST)	10000	9951
28	DR. N.H. KASWANI (UNIT TRUST)	10000	9990
29	DR. B.K. ANAND (UNIT TRUST)	5000	4995
30	DR. V. HINGORANI	15000	15000
31	KUMUDINI KRISHNA MOORTHY	15000	15000
32	G.D. RADHAKRISHNA (SARWESHWARI MEMORIAL ORATION, UNIT TRUST)	20000	19987
33	P.L. TANDON (FIXED DEPOSIT)	15000	15000
34	XV INTERNATIONAL CONGRESS OF PEADIATRICS (UNIT TRUST)	40000	40000
35	RAM LOBHAYA DONATION (FIXED DEPOSIT)	15000	15000
36	SUBHASH MEMORIAL FOUNDATION	10101	10101

(V.L. TELEKAR DONATION)

37	SMT. INDIRA SATYANAND	10000	10000
38	SH. K.V. SUBA RAO	10000	10000
39	NEWZELAND HIGH COMMISSION	10000	10000
40	AKHILESH MITTAL (SUMITH MOHAN SADAN DAYAL TRUST)	20000	20000
41	PREMALATA KAPOOR	10000	10000
42	DWARKA PRASAD TRUST	50000	50000
43	LATE. SH. D.R. BAHRI	15000	15000
44	SEWA RAM	15000	15000
45	FACULTY BENEVELENT FUND	60065	60065
46	V.RANGA MEMORIAL TRUST	50000	50000
47	SH. DORABJI TRUST	10000	10000
48	CORPUS FUND	30000	30000
49	AIIMSONIANS	10000	10000
50	SARLA ATAM PRAKASH	15000	15000
51	K.L. WIG RESEARCH FOUNDATION	100000	100000
52	KAMLA B.K. ANAND	100000	100000
53	V.K. MITTAL	130000	130000
54	SNEH LATA SONI	15000	15000
55	AIIMSONIAN OF AMERICA	129850	129850
		151630	151630
		126471	126471
56	SMT. LEELA WATI SALWAN	15000	15000
57	DR. D.K. GUPTA	100000	100000
58	J.R. CHAWLA	15000	15000
59	URMIL SHARMA IN R/O SHYAM SHARMA	15000	15000
60	SMT. SUSHILA WATI MALHOTRA	500000	500000
61	BASANTI KUMARI	100000	100000
62	ORTHOPAEDICS FUND	250000	250000
63	DR. S.B. ROY	125000	125000
64	MR. R.V. KANDHARI	100000	100000
65	DR. B.K. KAPOOR	125000	125000
66	SMT.SAVITRI UGGARSEAN	100000	100000
67	VIMAL LAUMAS	200000	200000
68	MRS. PRAMADA BAJAJ	200000	200000
69	DR. V. RAMALINGASWAMI	100000	100000
70	DR. N.C. NAYAK	100000	100000
71	DR. H.D. TANDON	100000	100000
72	PROF. N. GOPINATH (CTVS)	1200000	1200000
73	PROF. L.K. BHUTANI ORATION	500000	500000
74	BINEY ROHTAGI & SMT. SHAKUNTALA	36000	-
75	MRS. PRAMIDA BAJAJ (FOR TREATMENT OF BREAST CANCER PATIENT)	200000	200000
76	G.P.F. INVESTMENT		1559693465
75	N.P.S. INVESTMENT		15000000

**TOTAL 11059524**

**1585368899**

(Mrs. Basanti Dalal)  
Finance & Chief Accounts Officer

**ALL INDIA INSTITUTE OF MEDICAL SCINECES**  
**Details of Misc. Donations as on 31.3.2007**

S.NO.	DEPARTMENT	OP. BAL. AS ON 1/4/2006	GRANT	TOTAL	EXPD.	CL. BAL AS ON 31-03-2007
1	R & AL	19475		19475		19475
2	PSYCHIATRY	28495		28495		28495
3	HEAMATOLOGY	59342		59342	632	58710
4	ORTHO	65586		65586		65586
5	IMMUNOLOGY	824		824		824
6	PAED SURGERY	32041		32041		32041
7	INSTT. MISC.	137338		137338		137338
8	DERMATOLOGY	15974		15974		15974
9	IRCH DR. V. KOCHUPILLAI	10460		10460		10460
10	LEPROSY PATIENT	115785		115785		115785
11	IRCH DR. A.K. BASU	17651		17651		17651
12	CN CENTRE	20418		20418		20418
13	BB DIXIT LIB	3324		3324		3324
14	EMP. WELFARE FUND	125139		125139		125139
15	PMR POOR FUND	44199		44199		44199
16	SURGERY	501		501		501
17	K.L. WIG CEMET	12021		12021		12021
18	N/MEDICINE	19571		19571		19571
19	CEU	30000		30000		30000
20	DR. NK MEHRA	50000		50000	24765	25235
21	I.C.G.E.B. DR. T.P SINGH	444630		444630		444630
22	DR. VEENA KALRA	138200		138200		138200
23	LEVER CLINIC - GASTRO	2865		2865		2865
24	DR. N.P. GUPTA -UROLOGY	4982		4982		4982
25	DR. N. KOCHUPILLAI-POOR PT.	120000		120000		120000
26	PEAD. GENETICS	527762	1118481	1646243	839198	807045
	<b>TOTAL</b>	<b>2046583</b>	<b>1118481</b>	<b>3165064</b>	<b>864595</b>	<b>2300469</b>

## ALL INDIA INSTITUTE OF MEDICAL SCIENCES

## Details of Misc. Deposits as on 31.3.2007

2006-2007

S.NO.	NAME OF THE DEPARTMENT	AMOUNT
1	Controller of Printing & Stationary	16076
2	C.P.W.D. Shimla	70432
3	C.P.W.D.	7096
4	Delhi Municipal Corporation	33750
5	Indian Institute of Technology	4250
6	N.D.M.C.	173242
7	P. & T. Circle Division	12796
8	Indian Telephone Industries	13344
	<b>TOTAL</b>	<b>330986</b>

(Mrs. Basanti Dalal)  
Finance & Chief Accounts Officer

## ALL INDIA INSTITUTE OF MEDICAL SCIENCES

## Details of GPF Investment

## 2006-2007

Opening Balance of Investment as on 1.4.2006	1446012693
Investment during 2006-07	365000000
Closing balance as on 31.3.2007	42023283
	<hr/>
	<b>1853035976</b>
Investment matured during 2006-07	-251319228
	<hr/>
	<b>1601716748</b>

## Details of NPS Investment

## 2006-2007

Opening Balance of Investment as on 1.4.2006	—
Investment during 2006-07	15000000
Closing balance as on 31.3.2007	5795530
	<hr/>
	<b>20795530</b>
	<hr/>

(Mrs. Basanti Dalal)  
Finance & Chief Accounts Officer

## **12.1 Audit Report on the accounts of All India Institute of Medical Sciences, New Delhi for the year 2006-2007**

### **1 Introduction**

The All India Institute of Medical Sciences was established in November, 1956 under All India Institute of Medical Sciences Act, 1956. The main objectives of the institute are to provide (i) undergraduate and post graduate teaching in the science of modern medicines and other allied sciences including biological sciences (ii) facilities for research in various branches of such sciences, establish and maintain one or more medical college, dental college, nursing college and well equipped hospital etc. and hold examinations and grant degrees, diplomas and other distinctions and titles.

The audit of the institute was conducted under section 19(2) of the Comptroller and Auditor General's (Duties, Power and conditions of Service) Act, 1971 read with section 18 (2) of the All India Institute of Medical Sciences Act, 1956.

The institute is mainly financed from the grants of Government of India. During the year 2006-07 the institute received grants of Rs. 457.33 crore (Plan Rs. 160.33 crore and Non Plan Rs. 297 crore). It also had its own income from hospital receipts, tuition fee, examination fee, license fee and interest income etc. The total plan expenditure was Rs. 122.68 crore and Rs. 31.75 crore was utilized for giving advances for various purposes. The total non plan expenditure was Rs. 312.24 crore which also include advances given to suppliers etc. The institute received grants for various schemes for Rs. 32.57 crore and incurred an expenditure of Rs. 28.61 crore. It also received Rs.4 crore for NDDTC and Rs. 11,67,928 for NDDTC (UNDCP) and Rs. 4,40,000 for V.I.P. care at Parliament House.

### **2 Comments on accounts**

#### **2.1 Balance Sheet**

##### **2.1.1 Assets**

##### **2.1.1.1 Fixed assets**

No depreciation has been provided on fixed assets resulting in overstatement of assets and under statement of expenditure. Fixed assets for Rs 37.99 crore has been reduced from the assets side and from the capital fund of the respective centres for which sanction of the competent authority was not made available.

The schedule of fixed assets showing the opening balance, additions, deletion, depreciation and closing balance have not been attached.

The fixed assets acquired out of grants received for various schemes were not included in figures in fixed assets.

##### **2.1.1.2 Investments Non adherence to the approved pattern of investment for G. P. Fund accumulations.**



The investment of accumulated funds of General Provident fund balance of Rs. 160.17 crore was not made as per the pattern prescribed by the Ministry of Finance vide notification no. F.5 (53)/2002-ECB & PR dated 24.1.2005.

## **2.2 Income and Expenditure Account**

### **2.2.1 Income**

#### **2.2.1.1 Understatement of income**

An amount of Rs. 26.61 lakh was directly paid by the Ministry of Health and Family Welfare to advocates and booked as expenditure in the Grants in aid (Non plan) of AIIMS which was not accounted for in accounts resulting in understatement of income – Grants in aid (Non plan) by Rs. 26.61 lakh and understatement of current assets–advances Rs. 19.30 lakh and understatement of expenditure by Rs. 7.31 lakh.

## **3 General**

### **3.1 Non adoption of common format of accounts**

The institute had not adopted the common format of accounts prescribed by the Ministry of Finance vide O.M.No. 10(1)/Misc./2005/TA/450-490 dated 23.7.2006 for central autonomous bodies.

### **3.2 Non Consolidation of accounts.**

The different departments of the institute were treated as separate entity and for each department receipt and payment account, income and expenditure account and balance sheet was prepared and excess of income over expenditure, capital fund and investments are worked out but the consolidation of these accounts is not carried out as such the head wise consolidated financial position of the institute is not available.

Significant accounting policy adopted by the Institute in the preparation of annual accounts were not disclosed.

### **3.3 . Non-disclosure of accounting policy about fees and subscription**

The AIIMS had received Rs. 11,74,242/- on account of tuition fees and examination fee. But no accounting policy on fees and subscription was appended with the Annual Accounts, as per the Accounting Principles.

## **4 Net impact on accounts**

The net impact of audit comments on accounts is that income has been understated by Rs. 26.62 lakh, expenditure has been understated by Rs. 7.31 lakh and assets have been understated by Rs. 19.30 lakh

The Institute has noted the audit observations.

5 Deficiencies, warranting attention of management which have not been included in the audit report, have been brought to the notice of the Director, AIIMS through a management letter issued separately for corrective and remedial action.

**Place:- New Delhi**

**Date: - 07.12.2007**

**Director General of Audit  
Central Revenues**

## **Audit Certificate**

I have audited the attached Balance Sheet of All India Institute of Medical Sciences, New Delhi as at 31<sup>st</sup> March, 2007 and the Income and Expenditure Account, Receipts and Payments Account for the year ended as on that date. Preparation of these financial statements is the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on my audit.

I have conducted my audit in accordance with applicable rules and the auditing standards generally accepted in India. These standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. I believe that my audit provides a reasonable basis for my opinion.

Based on our audit, we report that:

1. I have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purposes of our audit.

2. Subject to the observations in the Audit Report annexed herewith. I report that the Balance Sheet and the Income and Expenditure Account. Receipts and Payments Account dealt with by this report are properly drawn up and are in agreement with the books of accounts

3. In my opinion and to the best of my information and according to the explanations given to me:

(i) the accounts give the information required under the earlier prescribed format of accounts.  
(ii) The said Balance Sheet, Income and Expenditure Account/Receipts and Payments Account subject to the matters mentioned in the Audit Report annexed herewith give a true and fair view:

(a) In so far as it relates to the Balance Sheet of the state of affair of the All India Institute of Medical Sciences as at 31<sup>st</sup> March, 2007 and

(b) In so far as it relates to the Income and Expenditure account of the surplus for the year ended on that date.

**Place:- New Delhi**

**Date: - 07.12.2007**

**Director General of Audit**

**Central Revenues**

## **12.2 Parawise Reply Para-wise replies to the Audit Report on the Accounts of the All India Institute of Medical Sciences, New Delhi for the year 2006-2007.**

### **2.1 Balance Sheet**

#### **2.1.1 Assets**

##### **2.1.1.1 Fixed Assets**

- As of date AIIMS is preparing its accounts on actual receipt & expenditure basis. Hence a note regarding non provision of depreciation has been placed below the balance sheet. Moreover, it is also mentioned here that AIIMS is under the process of finalization of the Annual Accounts as per new/common format of accounts. Accordingly depreciation will also be taken into account.
- Regarding reduction of assets as already explained to audit, Stores are declared condemned by Apex Condemnation Board and thereafter on taking approval of the Competent Authority, these are disposed off. One of the minutes of the meeting of the Condemnation Board has already been provided to audit.
- All the receipts and payments in respect of scheme cell are reflected in the item no.12 on payment side of Main A/c. The Appendix A-I mentioned there, enumerates the details of machinery & equipment purchased during the year by Scheme Cell. However, observation is noted.

##### **2.1.1.2 Investments – Non adherence to the approved pattern of investment for G.P.Fund accumulations.**

AIIMS is following all the guidelines issued by the Government vide notification 24.1.2005 in three categories. However, observation is noted.

### **2.1 Income and Expenditure Account**

#### **2.2.1 Income**

##### **2.1.2.1 Understatement of Income**

In this regard it is stated that the entire amount of Non-Plan grant of Rs.296.73 crores, received from the Ministry by the AIIMS has correctly been reflected in the accounts.

### **3 . Gernal**

#### **3.1 Non adoption of common format of accounts**

For the preparation of Annual Accounts as per new format of Accounts, the Institute is in the process of finalizing certain preliminary modalities. Sincere and earnest efforts are being made to adopt the new format of account.

#### **3.2 Non consolidation of accounts**

Audit observation will be taken into consideration at the time of finalisation of next year accounts.

#### **3.3 Non-disclosure of accounting policy about fees and subscription**

As suggested by the Audit, Accounting policy on fees and subscription will be appended with the Annual Accounts for the year 2007-08.

**DIRECTOR**

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# ALL INDIA INSTITUTE OF MEDICAL SCIENCES

## RESEARCH SECTION

### STATEMENT SHOWING THE EXPENDITURE OF THE GRANT RECEIVED FOR THE SPECIFIC PURPOSE FOR THE YEAR 2006 - 2007

		S.No	Funding Agency	Expenditure	Undisbursed E	Total Expenditure (A+B)
Opening Balance	61200654.00	1	ICMR	46693002.00	3000.00	46696002.00
Amount received from AIIMS	250000000.00	2	C.S.I.R.	23168442.00		23168442.00
<b>Received through AIIMS</b>		3	DST	41631502.00		41631502.00
ICMR	85000.00	4	UNICEF	17342506.00		17342506.00
W.H.O.	130500.00	5	D.B.T.	82988237.00	25000.00	83013237.00
DBT	900000.00	6	CIPLA	0.00		0.00
NSS	50000.00	7	W.H.O.	3329141.00	75000.00	3404141.00
Ministry of Defence(DRDO)	427000.00	8	CTC/ICDS	0.00		0.00
International Atomic Energy Agency	203676.00	9	U.G.C.	2421086.00	2421086.00	
DST	2750000.00	10	Indian Council of Agriculture Research.	0.00		0.00
Saving New born lives USA	192404.00	11	Domain Chemical India Pvt. Ltd.	0.00		0.00
Ajinomoto Japan	445250.00	12	Ministry of Health and Family welfare	3271375.00		3271375.00
KOBE, Japan	815050.00	13	Ministry of Environment & Forest	542099.00		542099.00
The Micronutrient Initiative, Asia	18645.00	14	Dabur Research Foundation	555879.00		555879.00
<b>Direct Received</b>		15	M.R.C. - U.K.	0.00		0.00
WHO	234900.00	16	DEPTT. OF ELECTRONICS	74612.00		74612.00
International Atomic Energy Agency	610927.00	17	Ministry of H.R.D. (DWCD)	0.00		0.00
E.M.- Facility( Revenue)	1085867.00	18	Himalaya Drug Co.	385352.00		385352.00
Cystic Fibrosis/World Wide, USA	310525.00	19	International Atomic Energy Agency	1429156.00		1429156.00
INCLEAN	111523.00	20	Deptt. of Atomic Energy	0.00		0.00
Security Deposit (NSD)	1880100.00	21	Convatee Sayibb	0.00		0.00
Establishment Charges+Revenue	8289837.00	22	Rajiv Gandhi Foundation	210135.00		210135.00
C.N. CENTRE	9000.00	23	Hind Chemicals	0.00		0.00
<b>Grand Total:</b>	<b>329750858.00</b>	24	Directorate of Education (NSS)	27459.00		27459.00
		25	Ministry of Welfare	0.00		0.00
		26	Roussel Sci. Instt.	0.00		0.00
		27	Serum Instt. Of India	0.00		0.00
		28	Deptt. Of Ocean Development	0.00		0.00
		29	Torrent Pharma	0.00		0.00
		30	INDO-US	0.00		0.00
		31	Indo—French Centre for the			
			Promotion of Advanced Research	0.00		0.00
		32	Ford Foundation	0.00		0.00

33	Indian Epilepsy Research Association	0.00		0.00
34	Prakash Health and Research Foundation	0.00		0.00
35	Lapra-UK	0.00		0.00
36	National Institute of Immunology	0.00		0.00
37	Fulford India Ltd.	386454.00		386454.00
38	National Institute of Biological	0.00		0.00
39	Infar (India) Ltd.	0.00		0.00
40	National Thalassemia Welfare Society	54440.00		54440.00
41	Australian International Development Assistance Bureau	0.00		0.00
42	INCLEN	295079.00		295079.00
43	Park-Davis	0.00		0.00
44	Institute of Cancer Research UK co-ordination Committee	268601.00		268601.00
45	Hoechst India Ltd.	0.00		0.00
46	Central Council for Research in Yoga And Naturopathy	1873402.00		1873402.00
47	A.S.T.A	0.00		0.00
48	Ranbaxy /Elililly & company pvt Ltd	631905.00		631905.00
49	Biomed Pvt. Ltd.	0.00		0.00
50	Smithline Beecham Pharma	0.00		0.00
51	Rockfeller Fondation	0.00		0.00
52	NATIONAL INSTITUTE OF HEALTH, USA	3000304.00	5000.00	3005304.00
53	Norad, Norway	1901794.00		1901794.00
54	NIE	6947909.00		6947909.00
55	SAFA	0.00		0.00
56	I.E.C.	0.00		0.00
57	Family Planning Foundation	0.00		0.00
58	Sarabhai Chemicals	0.00		0.00
59	INSA	20000.00		20000.00
60	TCL Bombay	0.00		0.00
61	Hindustan Antibiotic Ltd.	0.00		0.00
62	SRB-Clinical Pharamacology	0.00		0.00
63	Andaman/Nicobar	0.00		0.00
64	M/S Jagsonpal Pharma	0.00		0.00
65	Panacea biotech Ltd.	313344.00		313344.00
66	The Dr.Willimar Sachwabe Arzneimittel Germany	0.00		0.00
67	Rhone-Poulence India Ltd.	0.00		0.00
68	Somdutt Builders Ltd.	0.00		0.00
69	Hindustan Lever Ltd.	0.00		0.00
70	Revolving Funds for Drugs. / SNMC	0.00		0.00
71	Atomic Energy Regulatory Board	130828.00		130828.00

72	Bhart Electrical Ltd.	0.00	0.00
73	Sandoz	0.00	0.00
74	Pfizer Ltd.	3707305.00	3707305.00
75	Buyer India Ltd.	0.00	0.00
76	NATCO Pharma India	273171.00	273171.00
77	University of Maryland	734720.00	734720.00
78	Glaxo India Ltd.	6723.00	6723.00
79	Ministry of Defence (D.R.D.O)	200294.00	200294.00
80	Cynamid India Ltd.	0.00	0.00
81	Reckitt and Column	0.00	0.00
82	MBI Kits.	0.00	0.00
83	Nova Nordisk India	58753.00	58753.00
84	Central Pollution Control Board	0.00	0.00
85	Bureau of Police Research and Development	0.00	0.00
86	Office of Salt Commission Jaipur	0.00	0.00
87	NAMS	0.00	0.00
88	European Union/Commission	0.00	0.00
89	Cystic Fibrosis/World Wide, USA	45716.00	45716.00
90	CONARD, USA	0.00	0.00
91	The Cancer Foundation	144810.00	144810.00
92	Novartis India Ltd.	520312.00	520312.00
93	Duke University Medical Centre	0.00	0.00
94	Indian Council for Culture Relation	0.00	0.00
95	Lupin Lab	0.00	0.00
96	Maharishi Ayurveda	168916.00	168916.00
97	UN International Drug and crime Control Programme	1194846.00	1194846.00
98	Dupher Interfrom Ltd	0.00	0.00
99	Russan Pharma Ltd Mumbai	289239.00	289239.00
100	Central Council for Research in Ayurveda & Sidha	554370.00	554370.00
101	Global Forum for Health and Research	0.00	0.00
102	Nucron Pharma Ltd.	0.00	0.00
103	Terry Fox Foundation/CANADIAN HIGH COMMISSION	135018.00	135018.00
104	Ministry of Social Justice and Empowerment	0.00	0.00
105	Quintiles Spectral India	2593466.00	2593466.00
106	United Nation Industrial Development	0.00	0.00
107	Mustrad Research And Promotion Center	0.00	0.00
108	Ministry of Communication and Information& Technology	2292181.00	2292181.00
109	University of Bergan, Norway	4671126.00	4671126.00
110	Zydas Healthcare Ltd	0.00	0.00
111	Ferrosan, Denmark	0.00	0.00



112	University of Delhi	0.00	0.00
113	Oxford University, UK	741103.00	741103.00
114	Federation of Obstetric & Gynaecological	-100.00	-100.00
115	United Nation Development Programme	0.00	0.00
116	Aimil Pharmaceutical India Ltd.	0.00	0.00
117	U.S.V. Ltd.	0.00	0.00
118	Heinz Nutrition Foundation India	0.00	0.00
119	SGPGIMS	0.00	0.00
120	Caltaq Laboratories Ltd.(U.S.A)	0.00	0.00
121	INCTR USA	948569.00	948569.00
122	Indian Institute of Sciences, Banglore	0.00	0.00
123	Nottingham Health Care	0.00	0.00
124	International Consortium for Mental Health Policy	0.00	0.00
125	Emcure Pharmaceutical Ltd.	6395.00	6395.00
126	Delhi State Control Society/AIDS	181126.00	181126.00
127	Bharat Biotech International Ltd	0.00	0.00
128	L.G. Chemicals India Pvt Ltd.	830.00	830.00
129	Wockhardt, Mumbai	0.00	0.00
130	NSD (Security Deposit)	1573000.00	1573000.00
131	INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD	0.00	0.00
132	Sanofi Pasteur India Pvt Ltd	1800.00	1800.00
133	Endocrina	0.00	0.00
134	Helpage India	27966.00	27966.00
135	Johnson & Johnson	2832.00	2832.00
136	Beijing Toshiba Pharmaceuticals Co. Ltd.	0.00	0.00
137	Lyon, France	0.00	0.00
138	C.P.W.W. Jersulam	0.00	0.00
139	AVENTIS PHARMACEUTICALS, USA	134184.00	134184.00
140	Alcon Research Ltd., U.S.A.	0.00	0.00
141	Dr. Reddy's Lab. Pvt. Ltd.	294382.00	294382.00
142	Glenmark Laboratories Pvt. Ltd.	0.00	0.00
143	Hindustan Latex Family Planning Promotion	0.00	0.00
144	The Population Council	0.00	0.00
145	SIRO CLIN PHARMA PVT. LTD	415773.00	415773.00
146	Charak Pharma (P)Ltd.	104805.00	104805.00
147	INCLEN & USAID	6388557.00	6388557.00
148	National Institute of Oceanography	0.00	0.00
149	INST. OF NUCLEAR MEDICNE & ALLIED SCIENC	22569.00	22569.00
150	SAVING NEWBORN LIVES, USA	74484.00	74484.00
151	DANIDA RESEARCH COUNCIL	153789.00	153789.00
152	THE MICRONUTRIENT INITIATIVE, ASIA	38359.00	38359.00

153	Ministry of Health And Family Welfare(N.A.C.O)	3853528.00	3853528.00
154	The University of Albama, USA	3343532.00	3343532.00
155	Ministry of External Affairs	212920.00	212920.00
156	Indian council of Philosophical Research	61080.00	61080.00
157	Sterling Synergy System (P) Ltd.	114798.00	114798.00
158	Reliance Clinical Research Services (P) Ltd.	20150.00	20150.00
159	KLPF,USA	1202338.00	1202338.00
160	Vulimini Ramalingaswami Foundation	60310.00	60310.00
161	Texas A&M Research Foundation (TAMRF) USA	1416.00	1416.00
162	Biomerieux India (P)Ltd.	56307.00	56307.00
163	Media Lab Asia	1007802.00	1007802.00
164	University of Warwick U.K	133754.00	133754.00
165	BHARAT SERUMS AND VACCINES LTD.	85511.00	85511.00
166	D.I.P.A.S	0.00	0.00
167	CENTER FOR BLOOD RESEARCH	0.00	0.00
168	CD PHARMA INDIA PRIVATE LIMITED	700985.00	700985.00
169	KHANDELWAL LABORATORIES LTD.	28718.00	28718.00
170	Directorate General of Health Services	158209.00	158209.00
171	Lajolla Pharmaceutical Company, California	27270.00	27270.00
172	BONE & JOINT DECADE INDIA	163120.00	163120.00
173	ANTISENSE PHARMA Gmbh, GERMANY	2152.00	2152.00
174	I.S.H.T.M	218665.00	218665.00
175	National Institute of Nutrition (NIN) Hyderabad	287307.00	287307.00
176	Ozone pharmaceuticals ltd.	189760.00	189760.00
177	DELHI TAPEDIK UNMULAN SAMITI	240043.00	240043.00
178	JOHN HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH	263274.00	263274.00
179	Clinigene International Pvt. Ltd	36766.00	36766.00
180	FREEDOM TRIAL	2667.00	2667.00
181	KOBE, JAPAN	994711.00	994711.00
182	Troikaa Pharmaceutical Ltd	98000.00	98000.00
183	International Paedtrics Nephrology Association	376100.00	376100.00
184	Synergy Network India Pvt Ltd,	270686.00	270686.00
185	Ciola Ltd.	0.00	0.00
186	Solvey Pharma Ltd.	69386.00	69386.00
187	IFCPAR, NEW DELHI	0.00	0.00
188	Relisys Medical Devices Ltd.	0.00	0.00
189	PPD Pharmaceutical Development India Pvt. Ltd.	469219.00	469219.00
190	Auxilium Technical & Management Services Pvt. Ltd.	49600.00	49600.00

191	M/S ASPREVA PHARMACEUTICAL CORPORATION, CANADA	140650.00		140650.00
192	CLINIRx RESEARCH PVT. LTD. GURGAON, HARYANA	341925.00		341925.00
193	Central Council for Research in Unani Medicine	742901.00		742901.00
194	CLINCYTE, USA	245213.00		245213.00
195	M/S Markansas Research Division	38344.00		38344.00
196	THRESHOLD PHARMACEUTICALS, USA	258575.00		258575.00
197	GlaxoSmith Kline Asia Private Ltd	181058.00		181058.00
198	AJINOMOTA CO. JAPAN	318207.00		318207.00
199	MSD (India) Pvt. Ltd.	99528.00		99528.00
200	Solumiks Herbaceuticals Limited	229289.00		229289.00
201	C.N. Centre (AIIMS)	9000.00		9000.00
	Grand Total:-	286000206.00	108000.00	286108206.00
			Expenditure Disbursed:-	286000206.00
			Closing Balance:-	43642652.00
			Undisbursed:-	108000.00
			Grand Total:-	329750858.00

(S.P MAHLA)  
Finance & Chief Accounts Officer  
Research Section

\*\*Note: Equipment purchased during the financial year 2006 - 2007 Rs. 49254022/= (List Enclosed)