



Name : Dr. ~~Miss/Smt./Shri~~* Uma Kanga
First Name(s) Last Name

Designation : **Scientist II (Grade IV)**

Male / Female : **Female**

Address : **Dept of Transplant Immunology and Immunogenetics
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Date of birth : **24th April, 1964**

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Educational Qualifications : **PhD**
Degrees obtained (Begin with Bachelor's Degree)

Degree	Institution	Field/Subject(s)	Year
1. BSc (Hons)	Punjab University	Biochemistry	1984
2. MSc (Hons)	Punjab University	Biochemistry	1986
3. PhD	AIIMS	Immunogenetics	1996

Research /Training Experience:

Duration	Designation	Institution	Nature of Work
March 2010 – till date	Scientist-II (Grade 4)	AIIMS	<ul style="list-style-type: none">• Research – Immunogenetics, Histocompatibility and Translant Monitoring• Supervision of Patient care Services for Transplant Program of AIIMS• Technology Development• Quality assurance
March 2005-2010	Scientist-II (Grade 3)	AIIMS	<ul style="list-style-type: none">• Research – Immunogenetics, Histocompatibility and Translant Monitoring• Supervision of Patient care Services for Transplant Program of AIIMS

			<ul style="list-style-type: none"> • Technology Development • Quality assurance
March 1997-2005	Scientist-II (Grade 2)	AIIMS	<ul style="list-style-type: none"> • Research – Immunogenetics, Histocompatibility and Translant Monitoring • Patient care Services for Transplant Program of AIIMS
June 1995-1997	Scientist-I	AIIMS	<ul style="list-style-type: none"> • Research – Immunogenetics, Histocompatibility and Translant Monitoring • Patient care Services for Transplant Program of AIIMS

Research Specialization Achieved

Research Experience

I have been working in the area of Histocompatibility, Immunogenetics and transplant Immunology since past 18 years. My job involves supervision of the tissue typing laboratory, which is the national referral center for HLA testing of patients requiring Organs and Bone marrow transplants. My research interests are focused on investigating the genetic diversity of HLA genes in Indian population, understanding association of HLA genes with diseases like type 1 diabetes, autoimmune thyroiditis, spondylitis, epilepsy, vitiligo, etc and investigation genetic and immunological factors influencing outcome of transplants. I have made significant contribution towards development and expansion of the Asian Indian Bone Marrow registry (AIDMR), which is the first and only Indian volunteer donor registry.

Teaching Experience : I have been teaching the undergraduate and post graduate students from AIIMS and those sent from other Indian centres for training. Under my supervision various thesis have been done

Chief Supervisor- 3 ongoing Co-Supervisor 3 (ongoing), 5 (completed)
DM/MD thesis- 3 (completed)

Awards & Fellowships

Nov2014-Jan 2015 : Japanese Science and Promotion Society (JSPS) Selected and invited by as invited fellow to Tokai University, **Japan (US\$ 7900)**

Oct 2008- March 2009: Commonwealth Academic Staff Fellowship, London UK- Selected and nominated by Govt of India. Worked at the Anthony Nolan Research Institute, **Royal Free Hospital, London** Funded by Commonwealth Scholarship Commission, UK and British Council, UK (support 12,500 GBP).

2007 & 2004 : Selected from the Asia Pacific network for participation in Bioinformatics Course- '*Genome Informatics for Type 1 Diabetes Disease gene Mapping*' held at Bethesda, **USA** and at Melbourne, Australia. I was given full financial support for participation (**US\$3000, AU\$ 2500**).

2000 : Selected and invited by Ministry of Education, Science, Sports and Culture, Japan and provided Grant-in-Aid for Scientific Research on Priority area named Medical Genome Science. Visitor ship at the Dept of Molecular Life Sciences, Tokai University, **Japan (US\$ 8,000)**.

2000 : Selected for FIMSA bursary award for participation in the 2nd Congress of the Federation of Immunological Societies of Asia Oceania held at **Bangkok, Thailand**.

1996 : Selected by the Federation of Immunological Societies of Asia Oceania (FIMSA) and Indian Immunology Society for participation in ASI/FIMSA/AMRAD 'Advanced Course in Immunology' at **Canberra, Australia** , awarded travel bursary (**US\$ 1250**).

Trainings (National and International)

- 22/11/14- 02/01/15 : Next Generation Sequencing for HLA diversity study, Tokai University, Japan
- 05/10/08-31/03/09 : Hematopoietic stem cell transplantation at ANRI, Royal Free Hospital, London, UK
- 26/02/07 – 03/03/07 : Bioinformatics course – Type 1 Diabetes disease gene mapping- Melbourne, Australia.
- 28th Nov. 2005 : HLA Technology transfer workshop, T1DGC, Royal Melbourne Hospital, Melbourne, Australia
- 10/10/05 – 27/10/05 : Immunogenetic and humoral aspects of Type 1 diabetes, St Vincent Hospital, Paris.
- 05/12/04 – 24/12/04 : Polymorphism of non-MHC markers (ICAM1 and CTLA4) in the Type 1 Diabetes at the Dept. of Immunology, St. Vincent Hospital, Paris.
- 04/04/04 – 08/04/04 : Genome Informatics for Type 1 Diabetes Disease gene Mapping – Training course in Bioinformatics, Bethesda Maryland, USA.
- 01/08/03 – 10/09/03 : Autoantibodies (anti GAD and IA-2) analysis in Type 1 diabetes and high resolution HLA testing, Dept. of Immunology, Hopital Necker, Paris, France with Dr. Sophie C Zucmann.
- 05/03/00 – 09/03/00 : FIMSA-IIS Advanced course in Basic and Molecular Immunology, New Delhi, India.
- 15/11/00 – 14/12/00 : Training in Sequence Based Typing (SBT) of HLA genes, microsatellite analysis using automated DNA sequencer, Tokai University, Japan with Prof H Inoko.
- 07/11/98 : International workshop on Flow Cytometry at AIIMS, New Delhi, India.
- 01/12/97 – 04/12/97 : The FACS Calibur key operator training held at Becton Dickinson Immunocytometry Systems, Singapore.
- 22/09/96 – 27/09/96 : ASI/FIMSA/AMRAD Advanced course of Postgraduates in Immunology held at John Curtin School of Medical Research, Canberra, Australia.

- 05/02/96 – 17/02/96 : National Workshop on Techniques in Donor Selection during Transplantation. AIIMS, New Delhi, India (teaching Faculty).
- 09/93 – 10/93 : Isoelectric focusing for the determination of HLA-B27 variants, Dept. of transplantation Immunology, Central Laboratory of the Netherlands red Cross Blood Transfusion Service, Amsterdam, The Netherlands with Prof. TEW Feltkamp, Dr. Leo de Waal.
- 31/12/89 – 13/1/90 : Training workshop on HLA-DNA Technology (sponsored by DBT & NIH) HLA Laboratory, AIIMS, New Delhi, India.

POSITIONS OF SCIENTIFIC BODIES

Councilor from India	Australasian and South East Asian Tissue Typing Association (ASEATTA) since 2001-2010
Councillor –Asia Pacific region	Asia Pacific Histocompatibility and Immunogenetics Association (APHIA) 2010-2014
Founder secretary	Indian Society for Histocompatibility and Immunogenetics (ISHI)
Member of the International Advisory Board	7 th Asia Oceania Histocompatibility Workshop, Japan
Executive committee member	Indian Immunology Society (IIS) in 2002
Life member	<ul style="list-style-type: none"> • Indian Immunology Society • Indian Society for Organ Transplantation • Indian Society for Histocompatibility and Immunogenetics (ISHI) • Indian Rheumatology Society • Australasian & South East Asian Tissue Typing Association (ASEATTA) • Delhi Nephrology Society • National Thalassemia Society • Asia Pacific Histocompatibility and Immunogenetics Association (APHIA)

Academic Responsibility

Journal Reviewer: I regularly review articles for journals several scientific journals like

- Blood
- Human Immunology
- Tissue Antigens
- International Journal of Immunogenetics
- Case Reports in Immunology
- Indian Journal of Hematology and Blood Transfusion

Research Grant review Committee

Task Force member- 'Chronic Disease Biology' Task Force, Department of Biotechnology, Govt of India. The committee reviews the research proposals in the area of autoimmune diseases, renal biology and cancer.

Administrative Responsibility : Coordinator of Departmental Academic Committee, General Coordination Committee, Purchase and Finance Committee

Social Service :Donor Recruitment In-charge and Donor Search Coordinator for 'Asian Indian Donor Marrow Registry' Awareness programs for Marrow Donation at Gargi College, Railway Hospital, AIIMS, Friends Colony Club, Corporates in NOIDA.

RESEARCH PROJECTS

as Principal Investigator, ** as Co-Principal Investigator * as Co-Investigator

SN o	Title of Project	Funding Agency	Duration	Funds (lacs)	Status
1*	A study of genetic profile of chronic ITP patients at a North Indian Tertiary care centre	CSIR	2013-15	10.0	Ongoing
2*	Establishment of a Centre for Molecular Medicine at AIIMS	ICMR	2012-14	218.0	Ongoing
3#	Clinical significance of HLA-G in Hematopoietic Stem cell Transplantation	AIIMS	2012-14	10.0	Completed
4#	Impact of HLA-G on host immune response in human tuberculosis	ICMR	2012-15	54.2	Ongoing
5*	Asian Indian Donor Marrow Registry: Novel technologies, Genome Diversity & Transplant Immunology	DBT	2010-13	86.0	Completed
6*	Genomic analysis of MHC genes (HLA and non HLA) in Type 1 diabetes in the Indian population	ICMR	2007-10	68.0	Completed
7**	HLA profile of Raika community of Rajasthan	ICMR	2007-10	32.40	Completed
8*	Type 1 Diabetes Genetics Consortium-an international effort	NIH-JDRF	2005 -12	22.0	Completed
9*	Advance Program in Histocompatibility and Transplant Immunology	DBT	2005-09	86.0	Completed
10*	Evaluation of immunological and cytopathological characteristics of first-degree relatives of patients of Juvenile autoimmune thyroiditis	INMAS	2005-06	3.0	Completed
11*	Humoral and Immunogenetic profile of Type 1 Diabetes in North Indians	ICMR-INSERM	2003-06	25.0	Completed

		(Indo-French)			
12#	Heterogeneity of HLA-B27 gene in the Indian population	DBT	2000-03	16.8	Completed

Manuscript submitted

1. Srivastva A, **Kanga U**, Behari M, Mourya M. Stevens – Johnson syndrome (SJS) caused by addition of Levetiracetam to Carbamazepine, which drug is the villain of case? Seizure. 2014

Publications (total 39)

1. Raina A, Chaudhary G, Dogra TD, Khandelwal D, Balayan A, Jain V, **Kanga U**, Seth T. Benefit of STR-based chimerism analysis to identify TA-GVHD as a cause of death: Utility of various biological specimens. **Med Sci Law**. 2015 Apr 6. pii: 0025802415577457. [Epub ahead of print] PubMed PMID: 25852093.
2. Bhat DK, **Kanga U**, Kumar N, Agrawal RP, Mourya M, Kaur T, Mehra NK. The Raikas – a unique combination of high prevalence of type 1 diabetes susceptibility genes and near zero incidence of the disease. *Journal of Human Immunology*. 2014 Dec; 75(12): 1252-8. PubMed PMID: 25312801.
3. Kumar N, Kaur G, **Kanga U**, Tandon N, Caillat-Zucman S, Mehra NK. Association of PTPN22+1858C/T polymorphism with Type 1 diabetes in the North Indian population. **Int J Immunogenet**. 2014 Aug;41(4):318-23. doi: 10.1111/iji.12129. Epub 2014 Jun 10. PubMed PMID: 24913133.
4. Malaviya AN, Sawhney S, Mehra NK, **Kanga U**. Seronegative arthritis in South Asia: an up-to-date review. **Curr Rheumatol Rep**. 2014 Apr;16(4):413.doi:10.1007/s11926-014-0413-z. Review. PubMed PMID: 24515283.
5. Kumar N, Kaur G, Tandon N, **Kanga U**, Mehra NK. Genomic evaluation of HLA-DR3+ haplotypes associated with type 1 diabetes. *Annals of the New York Academy of Sciences*, 2013, Feb 6. doi: 10.1111/nyas.12019.
6. Riccio ME, Buhler S, Nunes JM, Vangenot C, Cuénod M, Currat M, Di D, Andreani M, Boldyreva M, Chambers G, Chernova M, Chiaroni J, Darke C, Cristofaro JD, Dubois V, Dunn P, Edinur HA, Elamin N, Eliaou JF, Grubic Z, Jaatinen T, **Kanga U**, Kervaire B, Kolesar L, Kunachiwa W, Lokki ML, Mehra N, Nicoloso G, Paakkanen R, Voniatitis DP, Papasteriades C, Poli F, Richard L, Alonso IR, Slavcev A, Sulcebe G, Suslova T, Testi M, Tiercy JM, Varnavidou A, Vidan-Jeras B, Wennerström A, Sanchez-Mazas A. 16(th) IHIW: Analysis of

HLA Population Data, with updated results for 1996 to 2012 workshop data (AHPD project report). *Int J Immunogenet.* 2012 Dec 22. doi: 10.1111/iji.12033. PMID: 23280239

7. **Kanga U**, Mourya M, Seth T, George J, Sood P, Sharma R, Saxena A, Mehra NK. Role of Killer Immunoglobulin-like Receptor (KIR) – Ligand interaction in HLA matched sibling Hematopoietic Stem Cell Transplantation outcome. *Transplant Proceedings*, 2012. Volume 44, Issue 4, 919–21.
8. Seth T, **Kanga U**, Sood P, Sharma V, Mishra P, Mahapatra M. Audit of peripheral stem cell transplant for aplastic anemia in multi-transfused and infected patients. *Transplant Proceedings*, 2012, Volume 44, Issue 4, 922–24.
9. **Kanga U**, McWhinnie AJ, Mourya M, Shaw BE, Madrigal JA, Mehra NK. A novel HLA-DPB1 allele, DPB1*125:01, identified by sequence-based typing in an Indian individual. *Tissue Antigens.* 2011 Jan;77(1):85-7.
10. Malaviya AN, **Kanga U**, Agarwal D, Sharma A, Rawat R, Kapoor S, Garg S, Mehra NK. Routine laboratory testing for HLA-B*27 gene: flowcytometry-based technique gives occasional false negative results. *Indian Journal of Rheumatology*, 2011, 6(3):161-163.
11. Hollenbach JA, Mack SJ, Gourraud PA, Single RM, Maiers M, Middleton D, Thomson G, Marsh SG, Varney MD; Immunogenomics Data Analysis Working Group. Collaborators (Erich HA, Feolo M, Fernandez-Viña M, Gourraud PA, Helmberg W, **Kanga U**, Kupatawintu P, Lancaster AK, Maiers M, Maldonado-Torres H, Marsh GE, Meyer D, Middleton D, Müller CR, Nathalang O, Park MH, Single RM, Tait B, Thomson G, Varney MD). A community standard for immunogenomic data reporting and analysis: proposal for a Strengthening the Reporting of Immunogenomic Studies statement. *Tissue Antigens.* 2011 Nov;78(5):333-44. doi: 10.1111/j.1399-0039.2011.01777.x.
12. Hunt KA, Smyth DJ, Balschun T, Ban M, Mistry V, Ahmad T, Anand V, Barrett JC, Bhaw-Rosun L, Bockett NA, Brand OJ, Brouwer E, Concannon P, Cooper JD, Dias KR, van Diemen CC, Dubois PC, Edkins S, Fölster-Holst R, Fransen K, Glass DN, Heap GA, Hofmann S, Huizinga TW, Hunt S, Langford C, Lee J, Mansfield J, Marrosu MG, Mathew CG, Mein CA, Müller-Quernheim J, Nutland S, Onengut-Gumuscu S, Ouwehand W, Pearce K, Prescott NJ, Posthumus MD, Potter S, Rosati G, Sambrook J, Satsangi J, Schreiber S, Shtir C, Simmonds MJ, Sudman M, Thompson SD, Toes R, Trynka G, Vyse TJ, Walker NM, Weidinger S, Zhernakova A, Zoledziewska M; **Type 1 Diabetes Genetics Consortium (T1DGC)**; UK Inflammatory Bowel Disease (IBD) Genetics Consortium; Wellcome Trust Case Control Consortium, Weersma RK, Gough SC, Sawcer S, Wijmenga C, Parkes M, Cucca F, Franke A, Deloukas P, Rich SS, Todd JA, van Heel DA. Rare and functional SIAE variants are not associated with autoimmune disease risk in up to 66,924 individuals of European ancestry. *Nature Genet.* 2011 Dec 27;44(1):3-5.
* **Kanga U** is T1DGC member
13. Hilner JE, Perdue LH, Sides EG, Pierce JJ, Wägner AM, Aldrich A, Loth A, Albret L, Wagenknecht LE, Nierras C, Akolkar B; T1DGC. Designing and implementing sample and

data collection for an international genetics study: **the Type 1 Diabetes Genetics Consortium (T1DGC)***. *Clin Trials*. 2010;7(1 Suppl):S5-S32. Epub 2010 Jul 5. PubMed PMID: 20603248.
* **Kanga U** is T1DGC member

14. Barrett JC, Clayton DG, Concannon P, Akolkar B, Cooper JD, Erlich HA, Julier C, Morahan G, Nerup J, Nierras C, Plagnol V, Pociot F, Schuilenburg H, Smyth DJ, Stevens H, Todd JA, Walker NM, Rich SS; **Type 1 Diabetes Genetics Consortium***. Genome-wide association study and meta-analysis find that over 40 loci affect risk of type 1 diabetes. *Nature Genet*. 2009 Jun;41(6):703-7. Epub 2009 May 10. PubMed PMID: 19430480; PubMed Central PMCID: PMC2889014. * **Kanga U** is T1DGC member
15. **Kanga U**, A Panigrahi, S Kumar, NK Mehra. The Asian Indian Donor Marrow Registry-AIIMS experience. *Transplant Proceedings*, 2007 Apr;39(3):719-20.
16. 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 Journal of Medical Research*, 2007, 125:321-344.
17. Steenkiste A, Valdes AM, Feolo M, Hoffman D, Concannon P, Noble J, Schoch G, Hansen J, Helmberg W, Dorman JS, Thomson G, Pugliese A; **13th IHWS Type 1 Diabetes Component participating investigators***. 14th International HLA and Immunogenetics Workshop: Report on the HLA component of type 1 diabetes. *Tissue Antigens*. 2007 Apr;69(s1):214-225. NK Mehra and **Kanga U** are participating Investigators.
18. **Kanga U**, Tandon N, Marwaha RK, Khanna R, Bhattacharya B, Singh S, Kumar N, Mehra NK. Immunogenetic association and Thyroid autoantibodies in Juvenile Autoimmune Thyroiditis in North India. *Clinical Endocrinology*, 2006,64 (5): 573-579.
19. Concannon P, Erlich HA, Julier C, Morahan G, Nerup J, Pociot F, Todd JA, Rich SS; **Type 1 Diabetes Genetics Consortium***. Type 1 diabetes: evidence for susceptibility loci from four genome-wide linkage scans in 1,435 multiplex families. *Diabetes*. 2005 Oct;54(10):2995-300. ***Kanga U** is a T1DGC.
20. **Kanga U**, Vaidyanathan B, Jaini R, Menon PSN, Mehra NK. HLA haplotypes associated with Type 1 Diabetes mellitus in North Indians. *Human Immunology* 2004 Jan; 65(1): 47-53.
21. Witt CS, Price P, Kaur G, Cheong K, **Kanga U**, Sayer D, Christiansen FC, Mehra NK. The common HLA-B8-DR3 haplotype in North India is different from that found in Europe. *Tissue Antigens* 2002 ;60:474-480.
22. Jaini R, Naruse T, **Kanga U**, Eikkawa E, Kaur G, Inoko H, Mehra NK. Molecular diversity of the HLA-A*19 group of alleles in North Indians: possible oriental influence. *Tissue Antigens*, 59:487-91, 2002.

23. Panigrahi A, Agarwal SK, **Kanga U**, Guleria S, Bhowmik D, Dash SC, Gupta S, Tiwari SC, Mehta SN, Mehra NK. HLA Compatibility and Renal Graft Survival using unrelated donors: single centres experience in India. *Indian J Med Res*, 115:158-164, 2002.
24. Mehra NK and **Kanga U**. Molecular Diversity of the HLA-B27 gene and its association with disease. *Modern Rheumatology* 11; 275-285, 2001.
25. Mehra NK, Kaur G, **Kanga U**, Tandon N. Immunogenetics of autoimmune diseases in Asian Indians. *Annals N.Y. Acad Sciences*, 958:333-336, 2001.
26. J Martinez-Borra, Segundo Gonzalez, A Lopez-Vazquez, MA Gelaz, J Bruges Armas, **Kanga U**, NK Mehra, C Lopez Larrea. HLA-B27 alone rather than B27-related haplotypes contributes to ankylosing spondylitis susceptibility. *Human Immunology* 2000, 61:131-139.
27. Jain S, Padma MV, **Kanga U**, Puri A, Mehra NK, Maheshwari MC. Family studies and Human Leukocyte Antigen class II typing in Indian probands with seizures and single small enhancing Computed Tomography lesions. *Epilepsia* , 1999 ,40(2) : 232-238.
28. Mehra NK, Jaini R, Balamurgum A, **Kanga U**, Prabhakaran D, Jain S, Talwar KK, Sharma BK. Immunogenetic analysis of Takayasu arteritis in India. *International Journal of Cardiology* 1998 , 66(SUPPL 1): S127-S132.
29. Jain S, Padma MV, **Kanga U**, Puri A, Mehra NK, Maheshwari MC. Occurrence of seizure types and HLA studies in Indian probands with seizures and single small enhancing CT lesions. *Journal of Epilepsy* 1997,10:55-61.
30. **Kanga U**, Mehra NK, Larrea CL, Lardy NM, Kumar A, Feltkemp TEW. Seronegative spondyloarthropathies and HLA-B27 subtypes: A study in Asian Indians. *Clinical Rheumatology*, 1996,15:13-18.
31. C.Lopez Larrea, K.Sujirachato, NK Mehra, P Chewsilp, D Isarangkura, **U Kanga**, O. Dominiguez,E.Coto, M Pena, F.Setien, S.Gonzalez-Roces. HLA B27 subtypes in Asian patients with Ankylosing Spondylitis, Evidence for new associations. *Tissue Antigens*,1995;45:169-176.

PUBLICATIONS (other journals - 8)

32. G Kaur, N Kumar, **U Kanga**, N Tandon, NK Mehra. Immunogenetic aspects of Autoimmune diseases. *Proceedings of the 11th Annual Symposium, Ranbaxy Science Foundation*, 2006, page 45-52.
33. Mehra NK, Kaur G, Kaur J, Kalia R, **Kanga U**. Hematopoietic stem cell transplantation: strategies for expansion of HLA compatible donor pool. *Proceedings of the 11th Annual Symposium, Ranbaxy Science Foundation*, 2005, page 111-118.

34. Jaini R, Kaur G, **Kanga U**, Mehra NK. External Genetic influences on MHC diversity in Asian Indians. *HLA 2002. Handbook of the XIIIth International Histocompatibility Workshop and Congress.*
35. A.Pugliese, J.S. Dorman, A. Steenkiste, H. Li, E. Thorsby, M. Lathrop, G. Schoch, G. Thomson, S. Caillat-Zucman, Z. Awdeh, S. Babu, M. Berrino, B. Bohm, C. Brautbar, B. Calvo, L. Castano, F. Christiansen, L.M. Chuang, G.S. Eisenbarth, F. El Chenawi, P. Fain, I. Fajardy, M. Fasano, D. Fici, K. Gillespie, C. Gorodezky, L. Harrison, M. Honeyman, H. Ikegami, J. Ilonen, S. Israel, **U. Kanga**, B. Koeleman, A. Lernmark, B. Lie, M. Martinetti, N. Mehra, V. Mohan, A. Moine, W. Mynarski, E. Naumova, J. Nerup, F. Pociot, R. Rani, B. Roep, C.B. Sanjeevi, G. Sahuran-Direskeneli, G. Semana, H. Stevens, B. Tait, J. Todd, E. Tuomilehto-Wolf, D. Undlien, P. Vardi, W. Volpini, M. Zarghami. JOINT REPORT OF THE 13th IHWS TYPE 1 DIABETES (T1D) COMPONENT. *HLA 2002. Handbook of the XIIIth International Histocompatibility Workshop and Congress.*
36. Toubert A, Reveille J, Gorodezky C, Mehra NK, Tamouza R, Thomson G, Li H, Akey JM, Lathrop M, Thorsby E and 13th. IHWG spondyloarthropathies component laboratories^{*,**,***,****}. Report from the 13 IHWC spondyloarthropathies component. In: *HLA 2002. Eds. John A Hansen and Bo Dupont, 2003.* **** Studies from India : Dr. NK Mehra and **Dr. U Kanga**
37. **Kanga U**, Ritika Jaini, Rajeev Kalia, NK Mehra. Asian Indian donor marrow registry : an alternate source of HLA matched donors for bone marrow transplantation. *Proceedings of the 8th Annual Symposium, Ranbaxy Science Foundation*, 2002; 65-76.
38. Mehra NK, Rajalingam R, **Kanga U**, McEneny L, Cullen C, Agarwal S, Middleton D, Pollack MS, Amirzargar A, Singal DP. Genetic diversity of HLA in the populations of India, Sri Lanka and Iran. *In: Genetic Diversity of HLA: Functional and Medical Implications, Vol.I. eds. Dominique Charron, EDK Publishers, Paris, 1996, Vol 1: 314-320.*
39. NK Mehra, V Taneja and **U Kanga**. Immunogenetics of Rheumatic Diseases in India. Proceedings of the Fourth Asean Congress of Rheumatology, 31st October-4th November 1993, Singapore, *Communication Consultants*, Singapore 1993.

Indexed Abstracts- 10

Other Abstracts- 70

Book Chapters- Four

1. Mehra NK and **Kanga Uma**. HLA matched donors for Thalassemics requiring Bone Marrow Transplantation. *Thalassemia Bulletin*, New Delhi, Vol 4, No 2, June 1998.
2. Mehra NK, **Kanga U**, Tiwari S. HLA Matched Donors for Thalassaemia Patients: Role of Asian Indian Donor Marrow Registry (AIDMR), *proceedings 4th National Thalassemia Conference, AIIMS, 2003.*

3. **Uma Kanga** and NK Mehra. HLA matching in hematopoietic stem cell transplantation. *Proceeding of the Hematopoietic Stem Cell Transplant Workshop, 2004, AIIMS, New Delhi.*
4. **Kanga Uma, Mehra Narinder K.** Donor selection strategies for hematopoietic stem cell transplantation. In: *The HLA Complex in Biology and Medicine : A Resource book.* Eds. N.K Mehra, G Kaur, McCluskey J, Christiansen F, Claas F. Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, P449-464, **2010.**