BIOGRAPHICAL SKETCH

Name : DR. SURABHI GUPTA

Designation : Additional Professor

Institute/University : Dept. of Reproductive Biology, All India Institute of Medical Sciences, New Delhi – 110029, INDIA.

Email address : surabhi72@rediffmail.com / surabhi@aiims.edu

Education (Post-Graduation onwards & Professional Career)

Sl No.	Institution Place	Degree Awarded	Year	Field of Study
1.	Banaras Hindu University, Varanasi, India	M.Sc.	1995	Biotechnology
2.	All India Institute of Medical Sciences, New Delhi, India	Ph.D.	2002	Biochemistry Thesis Title: Expression of Cell Adhesion Molecules & Integrins in Trophoblast Cells

Position and Employment (Starting with the most recent employment)

Sl No.	Institution Place	Position	From (Date)	To (date)
1.	Dept of Reproductive Biology, AIIMS, New Delhi, India.	Additional Professsor	July, 2020	Till date
2.	Dept of Reproductive Biology, AIIMS, New Delhi, India.	Associate Professor	2017	2020
3.	Dept of Reproductive Biology, AIIMS, New Delhi, India.	Assistant Professor	2014	2017
4.	Dept of Gastroenterology, AIIMS, New Delhi, India.	Senior Research Officer	2013	2014
5.	Dept of Gastroenterology, AIIMS, New Delhi, India.	Research Associate	2011	2013
6.	Molecular & Cellular Biology, College of Biological Sciences, University of California Davis, Davis, CA, USA.	Post-Doctoral Researcher	2002	2009
7.	Department of Cell Biology, University of Texas Southwestern Medical Center, Dallas, TX, USA.	Post-Doctoral Research Fellow	2001	2002

Publications

Journal Articles:

1. Jaganmoy Choudhury, Deepak Pandey, Pradeep Kumar Chaturvedi, **Surabhi Gupta***. Epigenetic regulation of epithelial to mesenchymal transition: a trophoblast perspective. Molecular Human Reproduction. 2022 May; 28(5): gaac013. doi: 10.1093/molehr/gaac013. [*Corresponding author]

2. Bodhana Dhole, **Surabhi Gupta***, Anand Kumar*.Triiodothyronine stimulates steroid and VEGF production in murine Leydig cells via cAMP-PKA pathway. Andrologia. 2021 Apr; 53(3): e13972. doi: 10.1111/and.13972. [*Co-corresponding authors]

3. Imteyaz Ahmad Khan, Safoora Rashid, Nidhi Singh, Sumaira Rashid, Vishwajeet Singh, Deepak Gunjan, Prasenjit Das, Nihar Ranjan Dash, Ravindra Mohan Pandey, Shyam Singh Chauhan, **Surabhi Gupta***, Anoop Saraya*. Panel of serum miRNAs as potential non-invasive biomarkers for pancreatic ductal adenocarcinoma. Scientific Reports. 2021 Feb; 11: 2824. doi: 10.1038/s41598-021-82266-5[*Co-corresponding authors]

4. Joginder, Ashutosh Halder, JB Sharma, Reeta Mahey, **Surabhi Gupta**, Mona Sharma A preliminary study of human sperm citrate synthase expression in patients with failed ICSI cycles. Journal of Research in Biology. 2020 Nov; 10(7): 2888-2897.

5. Nishant Sharma, Anant Gupta, Makhdoom Killedar, Ashish Bindra, Asmita Patil, **Surabhi Gupta**, Paavan Gopathoti, Parmeshwar Kumar. One for Everyone: A study of user satisfaction among health-care providers regarding extended use of N-95 masks during the COVID-19 pandemic. Disaster Medicine and Public Health Preparedness. 2020 Oct; 12: 1-8. doi: 10.1017/dmp.2020.380.

6. Nidhi Singh, Sumaira Rashid, Safoora Rashid, Nihar Ranjan Dash, **Surabhi Gupta**, Anoop Saraya. Clinical significance of promoter methylation status of tumorsuppressor genes in circulating DNA of pancreatic cancer patients. Journal of Cancer Research and Clinical Oncology. 2020 Apr; 146(4): 897-907. doi: 10.1007/s00432-020-03169-y.

7. Bodhana Dhole, **Surabhi Gupta**, Skand Shekhar, Anand Kumar. A novel antigonadotropic role of Thyroid Stimulating Hormone on Leydig cell – derived Mouse Leydig Tumor Cells – 1 line. Annals of National Academy of Medical Sciences (India). 2020 Jan; 56(1): 30-37.doi: 10.1055/s-0040-1709091.

8. Ankit Roy Choudhury, **Surabhi Gupta**, Pradeep Kumar Chaturvedi, Neeraj Kumar, Deepak Pandey. Mechanobiology of cancer stem cells and their niche. Cancer Microenvironment. 2019 Apr; 12(1): 17-27. doi: 10.1007/s12307-019-00222-4.

9. Bodhana Dhole, **Surabhi Gupta**, Senthil Kumar Venugopal, Anand Kumar. Triiodothyronine stimulates VEGF expression and secretion via steroids and HIF-1α in murine Leydig cells. Systems Biology in Reproductive Medicine. 2018 Jun; 64(3): 191-201. doi: 10.1080/19396368.2018.1433248.

10. Sumaira Rashid*, Nidhi Singh*, **Surabhi Gupta***, Safoora Rashid, Nandini Nalika, Vikas Sachdev, Chandra Sekhar Bal, Siddhartha Datta Gupta, Shyam S. Chauhan, Anoop Saraya. Progression of Chronic Pancreatitis to Pancreatic Cancer: Is There a Role of Gene Mutations as a Screening Tool? Pancreas. 2018 Feb;47(2):227-232.[*Co-first authors]

11. Nidhi Singh, **Surabhi Gupta**, Ravindra M. Pandey, Peush Sahni, Shyam S. Chauhan, Anoop Saraya. Prognostic significance of plasma matrix metalloprotease-2 in pancreatic cancer patients. Indian Journal of Medical Research. 2017 Sep; 146: 334-340.

12. Nidhi Singh, **Surabhi Gupta**, R M Pandey, Shyam S Chauhan and Anoop Saraya. High levels of cell-free circulating nucleic acids in pancreatic cancer are associated with vascular encasement, metastasis and poor survival. Cancer Investigation. 2015 Mar; 33(3): 78-85.

13. Nidhi Singh, Prasenjit Das, **Surabhi Gupta**, Vikas Sachdev, Siddhartha Srivasatava, Siddhartha Datta Gupta, R. M. Pandey, Shyam S. Chauhan, Anoop Saraya. Plasma Cathepsin L: A Prognostic Marker for Pancreatic Ductal Adenocarcinoma. World J Gastroenterol. 2014 Dec; 20(46): 17532-40.

14. Nidhi Singh, Prasenjit Das, **Surabhi Gupta**, Siddhartha Datta Gupta, Peush Sahni, R M Pandey, Shyam S Chauhan and Anoop Saraya. Prognostic significance of extracellular matrix degrading enzymes – Cathepsin L and matrix metalloproteases-2 [MMP-2] in human pancreatic cancer. Cancer Investigation. 2013 Aug; 31(7): 461-71.

15. Hitoshi Nishimura, **Surabhi Gupta**, Diana G Myles and Paul Primakoff. Characterization of mouse sperm TMEM190, a small transmembrane protein with the trefoil domain: evidence for co-localization with IZUMO1 and complex formation with other sperm proteins. Reproduction. 2011 Apr; 141(4): 437-51.

16. Diego A Ellerman, Jimin Pei, **Surabhi Gupta**, William J Snell, Diana G Myles, Paul Primakoff. Izumo is part of a multiprotein family whose members form large complexes on mammalian sperm. Mol Reprod Dev. 2009 Dec; 76(12): 1188-99.

17. Guo Z Zhu, **Surabhi Gupta**, Diana G Myles, Paul Primakoff. Testase 1 (ADAM 24) a sperm surface metalloprotease is required for normal fertility in mice. Mol Reprod Dev. 2009 Nov; 76(11): 1106-14.

18. **Surabhi Gupta**, Paul Primakoff, Diana G Myles. Can the presence of wild-type oocytes during insemination rescue the fusion defect of CD9 null oocytes? Mol Reprod Dev. 2009 Jul; 76(7): 602.

19. Zhiyong He, **Surabhi Gupta**, Diana G. Myles, Paul Primakoff. Loss of EWI-2 on the surface of CD9 null oocytes. Mol Reprod Dev. 2009 Jul; 76(7): 629-36.

20. Kathryn E. Runge, James E. Evans, Zhiyong He, **Surabhi Gupta**, Kent L. McDonald, Henning Stahlberg, Paul Primakoff, Diana G. Myles. Oocyte CD9 is enriched on the microvillar membrane and required for normal microvillar shape and distribution. Developmental Biology. 2007 Apr; 304(1): 317-25.

21. Michael J. Misamore, **Surabhi Gupta**, William J. Snell. The *Chlamydomonas* Fus1 protein is present on the mating type plus fusion organelle and required for a critical membrane adhesion event during fusion with minus gametes. Molecular Biology of Cell. 2003 Jun; 14(6): 2530-42.

22. Chandana Das, V. Senthil Kumar, **Surabhi Gupta**, Sunesh Kumar. Network of cytokines, integrins and hormones in human trophoblast cells. Journal of Reproductive Immunology. 2002 Jan; 53(1-2): 257-68.

23. Chandana Das, V. Senthil Kumar, Sayantani Basak, **Surabhi Gupta**, Sunesh Kumar. Immunobiology of trophoblast cells. Indian Journal of Clinical Biochemistry. 2000; 15(suppl.): 60-64.

24. **Surabhi Gupta**, V. Senthil Kumar and Chandana Das. Expression and modulation of cell adhesion molecules in trophoblast cells. The Immunologist. 1998; Suppl. 1: 68.

25. V. Senthil Kumar, **Surabhi Gupta** and Chandana Das. Interleukins in maternal-fetal interaction. The Immunologist. 1998; Suppl. 1: 69.

26. V. Senthil Kumar, **Surabhi Gupta** and Chandana Das. Endotoxin regulated expression of interleukins in human trophoblast cells. American Journal of Reproductive Immunology. 1998; 40: 263.

Book Chapters:

1. Kanika, **Surabhi Gupta**. Exosomes in pregnancy. 24th Issue of the ISSRF Newsletter on 'Translational Research in Reproductive Health', Editor: Dr. Rupesh K. Srivastava. 2019; pp 41-44.

2. **Surabhi Gupta**, Mona Sharma, Anand Kumar. Seminal Vesicles. In: Basics of Human Andrology: A Textbook. Eds: Anand Kumar &Mona Sharma. Publisher: Springer (2017) ISBN: 978-981-10-3694-1.

3. **Surabhi Gupta**, Anand Kumar. Genital Ducts and Other Accessory Sex Glands. In: Basics of Human Andrology: A Textbook. Eds: Anand Kumar &Mona Sharma. Publisher: Springer (2017) ISBN: 978-981-10-3694-1.

4. **Surabhi Gupta**, Anand Kumar. The Human Semen. In: Basics of Human Andrology: A Textbook. Eds: Anand Kumar &Mona Sharma. Publisher: Springer (2017) ISBN: 978-981-10-3694-1.

5. **Surabhi Gupta**, Anand Kumar. Systemic Influences on Male Reproduction - Immune System. In: Basics of Human Andrology: A Textbook. Eds: Anand Kumar &Mona Sharma. Publisher: Springer (2017) ISBN: 978-981-10-3694-1.

6. Mona Sharma, **Surabhi Gupta**, Bodhana Dhole, Anand Kumar. The Prostate Gland. In: Basics of Human Andrology: A Textbook. Eds: Anand Kumar &Mona Sharma. Publisher: Springer (2017) ISBN: 978-981-10-3694-1.

Research Grants

Ongoing:

1. Surabhi Gupta (PI): "To Study the Mechanisms Underlying the Pathogenesis of Pre-eclampsia." Funded by ICMR (2021 – 2024).

2. Surabhi Gupta (PI): “Development of diagnostics and experimental therapeutics using CRISPR-based technologies.” Multi-institutional, multi-investigator project: Funded by DBT (2020 – 2023).

3. Surabhi Gupta (PI): “Therapeutic targeting of ER Chaperones exploiting Small Molecules: A Virtual Screening Approach to alleviate ER stress in Preeclampsia.” Collaborative project: Funded by DBT (2019 – 2022).

Completed:

1. Surabhi Gupta (PI): “Embryo-uterine cross-talk for implantation & beyond: Role for exosomal microRNAs.” Funded by DST (2018 – 2022).

2. Surabhi Gupta (PI): “Generation of genome-edited mice using CRISPR/Cas-9 based knock-out/knock-in technology to study mammalian sperm-egg fusion.” Funded by DBT (2017 – 2020).

3. Surabhi Gupta (PI): “Role of 3,5,3’-L-triiodothyronine (T3) in the modulation of VEGF expression and Leydig cell function.” Funded by DBT (2016 – 2019).

4. Surabhi Gupta (PI): “Circulating microRNAs as biomarkers for testicular germ cell tumors: A pilot study.” Funded by AIIMS under Intramural Research Grant (2015 – 2016).

<u>Thesis Supervised (as Chief Guide)</u>

Ongoing:

1. Epigenetic regulation of epithelial to mesenchymal transition (EMT) in trophoblast cells

2. Role of placenta derived exosomes in decidualization in recurrent pregnancy loss patients

3. Characterization of testis-enriched proteins with potential role in mammalian fertilization

4. Role of DNA methylation in modulating trophoblast functions

Completed:

1. Role of miRNAs in modulating trophoblast cell invasion

2. Effect of pregnancy hormones on HLA-G expression in trophoblast cells

3. Role of microRNAs in regulation of angiogenic factors in trophoblast cells

4. Role of Indoleamine 2,3-dioxygenase in trophoblast biology

5. Effect of circulating exosomes isolated from normal pregnant and RPL women, on trophoblast cells