

Name : Dr Serena J. D'Souza
Designation : Scientist 'C'
Date of Birth : 17/07/1959
Email Address : sdsouza@nariindia.org
Educational Qualifications :



Degree	Year	Institute / University
Ph. D. (Applied Biology)	2003	National Institute for Research in Reproductive Health (ICMR), Parel, Mumbai
M. Sc. (Applied Biology)	1992	Seth GS Medical College, Parel, Mumbai
DMLT	1982	Grant Medical College & Sir JJ Group of Hospitals, Byculla, Mumbai
B. Sc. (Life Sciences)	1981	Ramnarain Ruia College, Matunga, Mumbai

Award

Recipient of the **late Peter and late Aramita Castello Scholarship** for the **Ph. D. (Science) degree** at the **13th Annual Academic Awards Presentation** of the **All Bombay Catholic Sabha** held on 9th November, 2003 at St Michael's Church Auditorium, Mahim, Mumbai-400 016.

Research Experience

Institution	Year	Designation
NIRRH (ICMR), Mumbai	1984	Laboratory Technician (EM Central Facility)
NIRRH (ICMR), Mumbai	1994	Research Assistant (Neuroendocrinology / EM Central Facility)
NIRRH (ICMR), Mumbai	2007	Technical Officer (EM Central Facility)
NARI (ICMR), Pune	2012	Scientist B
NARI (ICMR), Pune	2015	Scientist C

Participant at National / International Training Programs

- Participant at the **Tecnai Basic and Advanced Life Science Cryo Course** at the FEI Applications Laboratory in Eindhoven, the Netherlands from June 7- 18, 2004.
- Participant at a workshop entitled ***Virus morphodiagnosis and cryo electron microscopy applications in infectious diseases (April 12-16, 2006)*** organized at NIV, Pune hosted by ICON Analytical Pvt Ltd.
- Participant at a workshop entitled ***Applications of Transmission and Scanning Electron Microscopy in Life Sciences (Dec 5-6, 2007)*** hosted by and M/s FEI Europe B.V. & ICON Analytical Pvt Ltd at NICED, Kolkata.
- Participant at the ***XXXI Annual Meeting of Electron Microscopy Society of India-2010***

International Conference on Advances in Electron Microscopy and Related Techniques (Mar 8-10, 2010) held at BARC, Mumbai.

- Participant at the **XXVI Training in Electron Microscopy for Scientific Investigators Nov. 8-20, 2010** held at AIIMS, New Delhi.
- Participant at the Symposia entitled **Advances in Electron Microscopy in Virology Research and 3D Imaging : The Road Ahead (October 20-21, 2011)** held at NIV, Pune
- 'Basic Molecular Biology Techniques relevant to Cancer Research-Hands on Training' at National Institute for Cancer Prevention and Research (ICMR), Noida from 6th-9th December 2016

Faculty Member of Training Courses held at the National Institute for Research in Reproductive Health

- Training Course in Basic Electron Microscope Techniques, April 2-18, 1990.
- Advanced Training Course in Sperm Biology, July 19-30, 1993.
- Techniques in Neuroendocrine Research, April 24-May 5, 2000.
- Training workshop on Human Semenology for the Indo US Project entitled 'A Randomized Controlled Trial with 3 vasectomy techniques May 4-5, 2010 venue NIRRH (**Delivered a lecture 'Sperm Dysfunctions & Sperm function tests)**)

No. of Publications: 24.

Publications -

- (2014)** KM Kadam and D'Souza S Whole Mount Immuno Electron Microscopy for Sperm Cytoskeletal Proteins : Translating Dimensions Journal of Advanced Microscopy Research, vol 9(1) pp1-7.
- (2013) Polymeric nanoparticle formulation of Octapeptide (NP-OP): *In vitro* release and *in vivo* effect in common marmosets (*Callithrix jacchus*)** (Manuscript communicated)
- Gill-Sharma MK, Choudhari J, Ansari-Aleem M and D'Souza S **(2012) Putative Molecular Mechanism underlying sperm chromatin remodeling is regulated by reproductive hormones.** Clinical Epigenetics 4: 23
- Parte PP, Rao P, RedijS, Lobo,V, D'Souza SJ, Gajbhije R, Kulkarni V **(2012) Sperm phosphoproteome profiling by ultraperformance liquid chromatography followed by data independent analysis (LC-MS^E) reveals altered proteomic signature in asthenozoospermia.** J of Proteomics, 75 (18) 5861-71
- Sreepoorna Unni, Sandhya Kasiviswanathan, Serena D'Souza, Sushma Khavale, Srabani Mukherji, Sujata Patwardhan and Deepa Bhartiya **(2012) Efficient cryopreservation of testicular tissue : Effect of age, sample state and concentration of cryoprotectant** Fertility & Sterility **2012 Jan: 97(1)200-208**
- Gill-Sharma Manjeet Kaur, Choudhari Jyoti and D'Souza Serena. **(2011) Sperm Chromatin Protamination : An endocrine perspective** Protein and Peptide letters18, 786-801
- Kurundkar S, Sachan N, Kodam K, Kulkarni V, Bodhankar S, D'Souza S Vanage G, Ghole V (2010) **Novel biphenyl compound, VMNS2e, ameliorates streptozotocin-induced diabetic**

nephropathy in rats Journal of Diabetes 2(4) 282-289

8. D'Souza R, Pathak P, Upadhyay R, Gaonkar R, D'Souza S, Sonawane S, Gill-Sharma MK, Balasinor N. **(2009) Disruption of Tubulobulbar Complex By High Intratesticular Estrogen leading to failed spermiation** Endocrinology, 150 no 4:1861-1869
9. Rosario GX, D'Souza SJ, Manjramkar DD, Parmar V, Puri CP, Sachdeva G. **(2008) Endometrial modifications during early pregnancy in bonnet monkeys (*Macaca radiata*)** Reprod Fertil Dev 20(2): 281-94
10. Chitnis SS, Navlakhe RM, Shinde GC, Barve SJ, D'Souza SJ, Mahale SD and Nandedkar TD. **(2008) Granulosa cell apoptosis during follicular atresia induced by follicle stimulating hormone binding inhibitor from human ovarian follicular fluid.** J Histochem Cytochem, 56: 961-968
11. Kaushiki Kadam, Serena D'Souza and Usha Natraj. **(2007) Identification of cellular isoform of OGP: Role in oviduct tissue remodeling?** Cell and Tissue Research 2007 Dec 330 (3) 545-556.
12. Nandedkar TD, Dharma SJ, Modi DN & D'Souza SJ. **(2007) Differential Gene Expression in Transition of Primordial to Preantral follicles in mouse ovary.** Gamete Biology vol 63 pp 57-68.
13. Kadam Kaushiki, D'Souza Serena and Natraj Usha. **(2007) Spatial distribution of Actin and Tubulin in human sperm Nuclear Matrix-Intermediate Filament whole mounts - A new paradigm.** Microscopy Research & Technique,70(7) pp589-598.
14. Kadam KM, D'Souza SJ, Bandivdekar AH and Natraj UN. **(2006) Identification and characterization of oviductal glycoprotein-binding protein partner on gametes: epitopic similarity to non-muscle myosinIIA, MYH9.** Molecular Human Reproduction vol.12, no 4 pp 275-282.
15. Geetanjali Sachdeva, Gracy Rosario, Serena D'Souza, Dhananjay Manjramkar, Ranjendra Katkam, Chander Puri **Structural and molecular alterations induced in the endometrium prior to embryo invasion in bonnet monkeys (*Macaca radiata*). Paper Presented at the 38th Annual Meeting of the Society for Study in Reproduction, Quebec, Canada, July 24 -27, 2005.**
16. Shah C, Modi D. , Sachdeva G. , Gadkar S., D'Souza S. , and Puri C **(2005) N-terminal region of progesterone receptor β isoform in human spermatozoa** International Journal of Andrology, vol 28 pp 360-371.
17. Gill-Sharma MK, D'Souza S, Parte P, Balasinor N, Choudhary J, Manjramkar DD, Aleem M, Juneja HS **(2003) Effect of oral tamoxifen on semen characteristics and serum hormone profile in male bonnet monkeys** Contraception 67(5) : 409 -413
18. Gill-Sharma MK, D'Souza S, Balasinor N, Aleem M, Parte P, Gopalkrishnan K, Juneja HS **(2001) Antifertility effects of estradiol in adult male rats** Journal of Endocrinological Investigation 24, 598-607
19. Gill-Sharma MK, Aleem M, Sethi G, Choudhary J, Padwal V, **D'Souza Serena**, Balasinor N, Parte P & Juneja HS **(2003) Antifertility effects of fluphenazine in adult male rats** Journal of Endocrinological Investigation 26, 316-326
20. Hegde UC, Ranpura S, D'Souza S, Raghavan V **(2001) Immunoregulatory pathways in pregnancy** Indian Journal of Biochemistry and Biophysics 38, 207-219.
21. Gopalkrishnan K, Gill-Sharma MK, Balasinor N, Padwal V, D'Souza S, Parte P, Jayaraman S, Juneja HS **(1998) Tamoxifen induced light and electron microscopic changes in testicular**

- morphology and serum hormonal profile of reproductive hormones** Contraception 57, 261-270
22. Gopalkrishnan K, Padwal V, D'Souza S, and Shah R (1995) Severe **asthenozoospermia – A structural & functional study** International Journal of Andrology : 18 suppl 1, 67-74.
 23. D'Souza SJ, Gill-Sharma MK and Hegde UC **Changes of adrenal, ovarian steroid and protein hormones during gestation in tamoxifen treated rats** Reproductive BioMedicine Vol 2. No 1. 66-69. (2000)
 24. Balasrinor N, Gill-Sharma MK, Parte P, D'Souza S, Kedia N and Juneja HS Effect of paternal administration of an antiestrogen, tamoxifen on embryo development in rats Molecular and Cellular Endocrinology vol190, Issue 1-2. (2002)

Intra & Inter Institutional Lectures Delivered

- 1A) **Electron Microscopy and its Applications in Research** at the Workshop on Modern Instrumentation, **19th & 26th December 2003**, held at Western Regional Instrumentation Centre, Mumbai-400 098.
- 1B) **The 100 year Epic of Electron Microscopy Research Applications** at the Workshop on Modern Instrumentation, **31st May 2005**, held at Western Regional Instrumentation Centre, Mumbai-400 098.
- 2) **Sperm Dysfunctions & Sperm function tests** for the Indo US Project "A Randomized Controlled Trial with 3 vasectomy techniques" **May 5, 2010**
- 3) **Electron Microscopy: Searching for beads in a haystack** at the workshop 'Advances in Biotechnology' **March 9, 2011**
- 4) Advances in Biotechnology for University teachers held at NIRRH, Mumbai from Mar 1-16th, 2011 (Delivered a lecture '**Electron Microscopy: Searching for beads in a haystack**' on **March 9, 2011**)

Training Provided

- 1) Faculty member for Training Course in Basic Electron Microscope Techniques, April 2-18, 1990 at NIRRH, Mumbai
- 2) Faculty member for Advanced Training Course in Sperm Biology, July 19-30, 1993 at NIRRH, Mumbai.
- 3) Faculty member for Techniques in Neuroendocrine Research, April 24-May 5, 2000 at NIRRH, Mumbai
- 4) Faculty member for Training workshop on Human Semenology , May 4-5, 2010 at NIRRH, Mumbai.

Posters Presented

1. A functional test for the evaluation of human sperm nuclear chromatin decondensation *at the 24th Meeting of the Endocrine Society*, held at Bombay Hospital, Mumbai, Nov 6-9, 1992.
2. Does tamoxifen modify genomic imprinting ? *at the Young Scientists Symposium* held at the Indian Institute of Chemical Biology, Calcutta, Jan 28-30, 1994.
3. National Symposium on Asthma, Allergy and Environment *at the H.N. Hospital, Mumbai*,

Mar.26,1995

4. Think Global *at the Taj Hotel, Mumbai*, Jan 21,1996.
5. Effect of estrogens/antiestrogens on progeny in rodents at the Young Scientists Symposium held at University of Hyderabad, Mar 17-20,1996.
6. Effect of antiestrogens on implantation in rats at the International Congress on Reproductive Immunology held at the National Institute of Immunology, New Delhi, Oct.27-30,1998.
7. Tamoxifen alters immunoreactive expression of TNF- α , VEGF and HSP 70 in the male rat testis at National Conference on Recent Advances in Reproductive Health, Dept. of Zoology, held at University of Rajasthan, Jaipur, February 6-8, 2003.