



Durva. Ashok. Panchal (she/her)

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Career Objective

A motivated and dedicated PhD research scholar at ICMR – National Institute for Research in Reproductive Health, with extensive experience in reproductive biology, specializing in sperm biology and high-throughput metabolomics. Building on a solid foundation in microbiology and analytical techniques from my advanced studies, I aim to leverage my expertise in advanced analytical methods to advance research in reproductive health. My goal is to contribute to the field through innovative research, impactful clinical applications, and the development of solutions that address complex challenges in reproductive health.

Education

❖ Ph.D. in Biochemistry

ICMR – National Institute for Research in Reproductive and Child Health (NIRRCH)

Current Status: November 2019 – Present

- Thesis: *Investigation of Potential Chemotactic Metabolites in the Follicular Fluid*
- Supervisor: Dr. Priyanka Parte, Scientist 'F' and Head, Department of Gamete Immunobiology
- Funding:
 - ICMR – NIRRCH Intramural Funding (November 2019 – Present)
 - Senior Research Scholarship awarded by Lady Tata Memorial Trust (Aug 2022 – Present)
 - Junior Research Scholarship awarded by Lady Tata Memorial Trust (Aug 2020 – July 2022)

❖ M.Sc. in Microbiology

University of Mumbai, St. Xavier's College (Autonomous)

Duration: 2017 – 2018

- C.G.P.A: 3.83/4.00
- Percentage: 84.91%
- Research Projects:
 - M.Sc. Thesis: Preparation of Banana Wine and Evaluating its Antioxidant, Antibacterial, and Anticancer Properties (2018); Submitted at St. Xavier's College, Mumbai
 - Dissertation: Radiolabeling of Lung Epithelial Cell Proteins and Studying their Interaction with Mycobacterium tuberculosis (2017); Submitted at Radiation Medicine Centre (B.A.R.C), Mumbai

❖ B.Sc. in Microbiology

University of Mumbai, Bhavans College

Duration: 2013 – 2016

- C.G.P.A: 7.00/7.00
- Percentage: 92.16%
- Research Projects:
 - Biofertilizers Kit Development:
Description: Designed a low-cost biofertilizers kit enabling farmers to prepare their own biofertilizers and mitigate the adverse effects of chemical fertilizers; Presentation: 'Summer School for Innovation-2016,' University of Mumbai (2016).
 - Food Adulteration Detection Kit:
Description: Developed a detection kit for household use to identify food adulteration and ensure safety from harmful effects; Presentation: 'Summer School for Innovation-2016,' University of Mumbai (2016).
 - Fungal Biodiversity Screening:
Description: Characterized and screened fungal biodiversity in the remote areas of Sanjay Gandhi National Park, Mumbai;
Institution: Bhavan's College, Mumbai (2013-2014).

❖ **Higher Secondary Certificate (HSC)**

Bhavan's College, Mumbai

Board: Maharashtra State Board

Duration: 2010 – 2012

- Percentage: 67.33%

❖ **Secondary School Certificate (SSC)**

Vivek Vidyalyaya, Mumbai

Board: Maharashtra State Board

Year of Completion: 2010

- Percentage: 90.36%

Competitive Exam Achievements

- ❖ CSIR-NET (Council of Scientific and Industrial Research - National Eligibility Test) in Life Sciences: Dec 2018, AIR: 64
- ❖ GATE (Graduate Aptitude Test in Engineering) in Life Sciences: Feb 2019, GATE Score: 338
- ❖ MU-PET (Mumbai University - Ph.D. Entrance Test) in Life Sciences: Dec 2018, PET Score: 51

Awards and Honors

❖ **Ph.D.**

- Best Paper Award, NIRRH Foundation Day: Recognized among the top five papers for "N-formyl-L-aspartate mediates chemotaxis in sperm via the beta-2-adrenergic receptor," published in *Frontiers in Cell and Developmental Biology* (February 2023). Research conducted under the supervision of Dr. Priyanka Parte.
- Recipient of the prestigious Lady Tata Memorial Fellowship, awarded in 2020

❖ **M.Sc.**

- Secured 3rd position in the merit list, St. Xavier's College, March 2018.

❖ B.Sc.

- P.D.D Trophy Recipient: Awarded for Overall Best Performance and Conduct, Bhavan's College, 2016.
- Kumari P.V. Ananta Laxmi Scholarship: Awarded for achieving 1st position in Microbiology, including Applied Component, Bhavan's College, 2016.
- Shri D.L. Modi Scholarship: Awarded for obtaining the highest marks in Microbiology, Bhavan's College, 2016.
- 3rd Prize for Poster Presentation: Awarded for "Biodiversity of Fungi in SGNP" at the National Conference on New and Emerging Trends in Bioinformatics and Taxonomy, B.N. Bandodkar College, Thane, 2015.
- D.G. Damini Scholarship: Awarded for securing 3rd position in Chemistry, Bhavan's College, 2014.

Research Publications

1. **D. Panchal**, A. Bose, P. Parte; "Unraveling the Molecular Mechanisms Underlying N-formyl-L-aspartate-mediated Sperm Chemotaxis"; *Indian Journal of Medical and Pediatric Oncology*, 45 (S 01), Abstract A004 (2024).
2. **D. Panchal**, S. Bhagwat, P. Parte; "N-Formyl-L-aspartate mediates chemotaxis in sperm via the beta-2-adrenergic receptor"; *Frontiers in Cell and Developmental Biology*, 10, 959094 (2022).
3. S. Bhagwat, S. Sontakke, S. Desai, **D. Panchal**, S. Jadhav, P. Parte; "N-formyl-l-aspartate: A novel sperm chemoattractant identified in ovulatory phase oviductal fluid using a microfluidic chip"; *Andrology*, 9 (4), 1214-1226 (2021).
4. **D. Panchal**, A. Aakifa, P. Apoorva, G. Anila, F. Neil, P. Pooja, S. Miriam, C. Pampi; "Antioxidant and Antibacterial properties of wine prepared from bananas"; *Research Journal of Biotechnology*, 15 (6) (2020).

Conferences and Presentations

❖ Oral Presentations

- 19th National Research Scholars Meet, Advance Center for Treatment, Research, and Education in Cancer (ACTREC), Navi Mumbai, December 7-8, 2023.

❖ Poster Presentations

- 93rd Annual Session of the National Academy of Sciences (NASI) and Bhabha Atomic Research Centre (BARC), DAE Convention Centre, Mumbai, December 3-5, 2023.
- International Conference on Reproductive Health with Emphasis on "Innovation in Reproductive Sciences and Technologies: Hope, Risk and Responsibilities" & 33rd Annual Meeting of the Indian Society for the Study of Reproduction and Fertility (ISSRF), February 2023.
- International Conference on 'Kaleidoscopic Insights into Reproductive and Child Health', ICMR-National Institute for Research in Reproductive and Child Health (NIRRCH), January 2023.
- International Conference on 'Reproductive Biology Comparative Endocrinology and Development', CSIR-Centre for Cellular and Molecular Biology (CCMB) and University of Hyderabad, September 2022.

- Avishkar School of Research (College Level) at Mumbai, 2014
- Biodiversity Exhibition, Ramnarain Ruia College, Mumbai, 2014

Extracurricular Achievements

- 1st Prize for Best Model Presentation at Bio-entrepreneurship Competition, CHM College, Ulhasnagar, 2018
- Participated in Cancer Awareness Program: Facts and Fiction, 2018
- Participated in Bioentrepreneur Competition 'Palindrome,' St. Xavier's College, Mumbai, 2017
- Certified in Green Revolution Global Certification Program, supported by NASA, 2017
- 2nd Prize in Labathon, S.I.E.S College, 2016

Skills and Interest

- Technical Skills: Rat Dissection, Oviductal Fluid Collection, Oocyte Collection, Semen Analysis, Sperm Handling, Confocal Microscopy, Inverted Microscopy, Follicular Fluid Processing, HILIC-MS/MS, RPLC-MS/MS, Microfluidics, Direct and Indirect Immunofluorescence, Western Blotting, Chemotaxis Assays, Fura-2AM based calcium assays, Measurement of sperm membrane potential using DiSC3, competitive ELISA (cCAMP and cGMP), LC-MS, M-PLEX
- Software Proficiency: MetaboAnalyst, XCMS Online, MZmine, MS Convert, COMSOL, HCIMAGE, ImageJ, Zeiss- ZEN pro, Olympus - CellSens, MATLAB, Origin, GraphPad Prism, EndNote, Zotero, Mendeley, Microsoft Office Suite (Word, Excel, PowerPoint).
- Research Skills: Sample collection, Experimental Design, Data Analysis, Scientific Writing, Metabolomics, Statistical Analysis, Research Presentation, Literature Review.

I hereby affirm that the details presented in this CV accurately represent my qualifications and experiences

Thankyou for reviewing my application
Durva Panchal