Dr.V. Deepa Parvathi

Associate Professor (Biomedical Sciences)

Faculty of Biomedical Sciences and Technology

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PhD/Post Doc supervision slots available: 0

Personal Profile

With a passion to teaching and student affairs, Dr. Deepa has been an academician since 2006, contributing to innovative teaching methods for undergraduate and postgraduates across various disciplines of the university. She has 18+years of undergraduate and postgraduate teaching experience in the field of Human Genetics and Biomedical Sciences. She is the proud recipient of Young Scientist Award in 2019, Teaching Excellence Award 2020 and Shri K Das Memorial Best Faculty Award(Senior Category – Biosciences) 2023.

She has to her credit several publications in journals of national and international repute. She has also authored five full length textbooks and three monographs published by renowned publishers.Her clinical focus to the diagnostic division of Department of Human Genetics included handling Prenatal diagnosis, Cancer cytogenetics and FISH cases from 2014-2019.

Currently Associate Professor in the department of Biomedical Sciences. She additionally holds the positions of Managing editor; of the university newsletter and Treasurer of the Alumni Association of SRIHER apart from her contributions to the Education Unit, and Website Development Committee.

Research Areas

Her areas of research interests and expertise include Cancer Biology(gastric cancer and oral squamous cell carcinoma), Human Genetics(modeling neurodegenerative genetic disorders), Nutrigenomics(aging studies) and Nanogenotoxicology on animal models including Drosophila and Zebra Fish.

Human Genetics

- Nutrigenomics
- Modelling Parkinson's Disease in fly model
- Genetics of PCOS
- Molecular Genetics of Oral Cancer and Gastric Cancer

Nanobiotechnology

- Microplastics and environment
- Nanoemulsions for vector control
- Nanobiodosimetry

Summer Research Fellowships

- Kavya M.2024. Investigating the neuroprotective role of Calcium Channel Blockers for Parkinson's disease using the fly model.
- Viraaj V. 2021. Understanding the potential of nanocurcuminin anti-cancer treatment: an *in vitro* approach.
- Manasvini Satish Sharma. 2021. Significance of Wnt Gatekeeper Secreted Frizzled Related Protein 4 (SFRP4) and Deadbox Protein DP103 in Triple Negative Breast Cancer.
- Vedhalakshmi Rajasankar. 2021. Study of anticancer properties of silver nanoparticles (AgNP) synthesized from *Coleus amboinicus* lour.
- Sneha Sriram, Nalini R.2021. Impact of phytoestrogen rich supplement on gut micro biome composition in *Drosophila melanogaster.*
- Sharmishta R. 2020. Study of genotoxicity of HCQ.
- Thanujay Suthahar.2015 Genotoxicity testing of Cerium oxide nanoparticles on *Macrobrachium resenbergii.*
- MZ Fahira Reshman. 2012.Genotoxic effect of lead acetate on *Drosophila Melanogaster.*

- **Team – Lab Members**

1. Ms. Indhuja J: Research Scholar; Nutrigenomics studies in fly model
Indhuja completed her graduate and masters in Clinical Nutrition and her interest in genetics and genomics motivated to pursue her doctoral research in the interdisciplinary field of Nutrigenomics. She is a team player, manages lab resources effectively, and works diligently towards lab experimentation.

2. Mr. Sudharsan S: Research Scholar; Impact of Microplastics on environment
Sudharsan S has strong fundamentals in Biochemistry and he has completed undergraduate studies at DG Vaishnav College and his postgraduate studies at the University of Madras. His research is focused on the impact of microplastics, utilising model organisms to unravel their effects. His adaptability and strong analytical skills are his strengths and helps him excel in diverse research settings and tackle complex scientific challenges effectively.

3. Ms. Jennifer Sally Samson: Research Scholar; Modelling of neurodegenerative disease using transgenic fly model.
Jennifer Sally is a graduate student in Perfusion Technology from Christian Medical College, Vellore. She is a gold medalist in Master's in Human Genetics at SRIHER. She is currently working on exploring the genetic mechanisms that drive the progression of Parkinson's disease by using transgenic fly models. Her research aims to identify appropriate therapeutic targets that could pave the way for future drug-discovery and analysis. She has published in journals of repute.

4. Ms. Kavitha Sri A: Research Scholar; Essential oil nanoemulsions for biomedical applications
Kavitha Sri completed her graduate and masters' degrees in Medical Bio nanotechnology from the Chettinad Academy of Research and Education. She is currently investigating the biomedical applications of nano-sized emulsions made from essential oils. She has several publications to her credit.

5. Ms. Girrijha Sambath: Research Scholar; Genetics of Polycystic Ovary Syndrome and microRNA studies
Girrijha graduated with a bachelor's degree in Biotechnology and a master's degree in Biomedical Genetics from the University of Madras, she is an avid, persistent, curious learner, and a resilient individual. Her PhD work specialises in the Genetics of Polycystic Ovary Syndrome, with the primary aim of devising an efficient screening modality to aid in the upkeep of women's reproductive health.

- **Research Grants: (Extramural, Intramural and University Industry Linked Consultancy)**
- **Ongoing**

✓ **(2021-2024)** - Expression of tumor microenvironment stromal markers and its relationship with mTOR in Oral Squamous Cell Carcinoma - A Retrospective Cohort Study SERB POWER

✓ **(GATE 2024)** - Ramachandra Institute of Higher education and Research in July 2024 for project titled Development and supplementation of resistant starch based product to improve the gut microbiome composition of women with Polycystic Ovarian Syndrome(PCOS)

✓ **(GATE 2022)** - Ramachandra Institute of Higher education and Research in October 2022 for project titled Impact of Phytoestrogen rich supplementation on gut microbiome composition in women with PCOS

✓ **(GATE 2022)** - Ramachandra Institute of Higher education and Research in October 2022 for project titled Extraction, characterisation and evaluation of active compound from Brahmi on circadian genes disrupted zebrafish animal model

- **Completed**

✓ (**GATE 2019)** Ramachandra Institute of Higher education and Research in October 2019 for project titled "Nanopesticide induced genotoxic studies in *D. melanogaster*"

✓ (**GATE 2011**) Ramachandra University in October 2011 for project titled Evaluation of *in vivo* genotoxicity of Ethyl methane sulphonate (EMS) and heavy metals in *Drosophila melanogaster* using the Wing Spot Test".

- **University Industry Linked Consultancy Projects(UILIC)**

✓ Anna University. Chennai (2022-2023) – Microplastics testing on zebra fish and *Drosophila melanogaster*
✓ Temple University, USA (2022)- Modelling gastric cancer in fly system
✓ Anna University, Chennai (2022)- Exploring the role of furfural in induction of gastric cancer in zebra fish.
✓ SRIHER, Chennai (2022)- Exploring the role of furfural in induction of gastric cancer in fly model
✓ University of Madras, Chennai (2021)- *In vitro* and *In vivo* toxicity of Hydroxychloroquine
✓ Vellore Institute of Technology, Vellore (2020*)- In vivo* toxicity assessment of microplastics on Drosophila
✓ Rajalakshmi Engineering College, Chennai (2017)- Synthesis and characterization of silver nanoparticles by chemical reduction method
✓ Bharathiar University, Coimbatore (2017)- Effect of carbamazepine on regeneration- an analytical study using zebra fish
✓ Sathyabama University, Chennai (2015)- Toxicity assessment of multi walled carbon nanotubes
✓ Vellore Institute of Technology, Vellore(2013)-

a. *Genotoxicity assessment of iron oxide and silicon dioxide NPs in Drosophila melanogaster and human lymphocytes*
b. Genotoxic assessment of magnesium oxide NPs in *Drosophila melanogaster and human lymphocytes*
c. Genotoxic evaluation of Nano Cobalt oxide in *Drosophila melanogaster* and Human peripheral blood
d. Genotoxicity testing of nano permethrin using in vivo and in vitro studies
e. In vivo genotoxicity testing of carbon nano tubes in Drosophila melanogaster

Selected Publications:

1. Kavitha Sri AnnaDurai, Natarajan Chandrasekaran, Supriya Velraja, Gnanadhas Sobhin Hikku, **Venkatachalam Deepa Parvathi**. Essential oil nanoemulsion: An emerging eco-friendly strategy towards mosquito control. *Acta Tropica*. 2024.IF2.9.https://doi.org/10.1016/j.actatropica.2024.107290
2. Jennifer Sally Samson, Anuradha Ramesh, **V Deepa Parvathi.** Development of midbrain dopaminergic neurons and the advantage of using hiPSCs as a model system to study Parkinson's disease. Neuroscience. 2024 IF 3.7. https://doi.org/10.1016/j.neuroscience.2024.03.025
3. Vijaya Harini S, Yoghalakshmi Nagarajan, **V Deepa Parvathi**. Mitochondrial- Endoplasmic Reticulum Contact Sites(MERCS): A new axis in neuronal degeneration and regeneration. Molecular Neurobiology.2024. **IF 5.98.** https://doi.org/10.1007/s12035-024-03971-6
4. Jennifer S Samson, V Deepa Parvathi. Prospects of microRNAs as therapeutic biomarkers in non-small cell lung cancer. Medical Oncology. 2023.**IF 3.98.** https://doi.org/10.1007/s12032-023-02212-5
5. Sivaramakrishnan Shantha, Susruthan Muralitharan, Uma Sudhakar, Harikrishnan Thamizhchelvan, **V. Deepa Parvathi**. Role of tissue markers associated with tumor microenvironment in the progression and immune suppression of oral squamous cell carcinoma. Medical Oncology.2023. **IF 3.98.** https://doi org/10.1007/s12032-023-02169-5
6. Gayathri Venkatakrishnan, **V. Deepa Parvathi.** Decoding the mechanism of vascular morphogenesis to explore future prospects in targeted tumor therapy. Medical Oncology.2022. **IF 3.98.** https://doi.org/10.1007/s12032-022-01810-z
7. Gopinath PM, **V. Deepa Parvathi**, Yoghalakshmi N, Kumar SM, Athulya PA, Mukherjee A, Chandrasekaran N. Plastic particles in medicine: A systematic review of exposure and effects to human health. 2022. Chemosphere.**IF 8.1.** 10.1016/j.chemosphere.2022.135227
8. Manu Sudhakar, Sofi W Beaulah, Gowri Meiazhagan, **Deepa Parvathi V**. Mechanisms contributing to adverse outcomes of COVID-19 in obesity. Molecular and Cellular Biochemistry.2022. **IF 3.2** https://doi.org/10.1007/s11010-022-04356-w
9. **Deepa Parvathi V**, Rajagopal K and Sumitha R. Standardization of alternative methods for nanogenotoxicity testing in Drosophila melanogaster using iron nanoparticles: a promising link to nano dosimetry. Journal of Nanotechnology.2016 Volume 2016, Article ID 2547467.
10. Gowri Meiyazhagan, Rajesh Raju, Sofi Beaula Winfred, Bhavani Mannivanan, Hemadev Bhoopalan, Venkatesh Shankar, Sathiya Sekar, **Deepa Parvathi Venkatachalam**, Ravishankar Pitani, Venkateshbabu Nagendrababu,Malini Thaiman, Kandaswamy Devivanayagam, Jeyakanthan Jayaraman,Raghunathan Ragavachary*, Ganesh Venkatraman. Bioactivity Studies of β-Lactam DerivedPolycyclic Fused Pyrroli-Dine/PyrrolizidineDerivatives in Dentistry: In Vitro, In Vivo andIn Silico Studies. **PLOS ONE** | DOI: 10.1371/journal.pone.0131433 July 17, 2015

For full list of publications https://scholar.google.com/citations?hl=en&tzom=-330&user=JDvzQFMAAAAJ

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