



Looking forward to a life full of learning and contributing to Neuroscience.

CONTACT



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ACHIEVEMENTS

- **Prof. R.C. Shukla Oration Award** for the best paper in Cardiovascular Physiology (2021)
- **Siri research award** – best research paper in the area of stress (2019)
- **Principal Investigator of 3 Nationally Funded Projects, India** - ~65k€ (2012-2021)
- **University Topper in MD Physiology (2010)**
- **Prof. N. Padmanabhan Memorial Award** - best paper by any PG student (2009)

Recent Courses completed

- Metabolomics
- RNA Sequencing Data Analysis
- Laboratory safety
- Function A: Carrying out minor procedures on animals in research
- Swedish law and ethics on the protection of laboratory animals
- Refinement of minor procedure skills in mice
- Anaesthesia, Analgesia, and Surgery in Mice and Rats

Kirthana Kunikullaya U

MBBS, MD (Physiology), DNB, Ph.D,
PostDoc (Neuroscience)



About

I am a researcher, trained in Medicine and Human Physiology. I am presently a postdoc studying neuroendocrine effects of circadian rhythms, metabolism, and aggression in mice. I worked previously as an Assistant Professor in a Medical College & Teaching hospital in India for 10 years. I am **interested in designing sex-specific treatment and prevention strategies for neurological and neuroendocrinological problems.**

EXPERIENCE

Mar 2024
- to date



Postdoctoral Scholar | Karolinska Institute, Sweden

(Funded by The Wenner-Gren Foundations (2024-25))

Studying neuroendocrine effects of circadian rhythms, diet and metabolism, and aggression in mice. Advisor: Paul Petrus

2021-2024



Postdoctoral Researcher | University of Rennes 1, France

(Postdoc - Based on research experience post MD) - Stratégie d'Attractivité Durable - Region Bretagne Postdoctoral Funding (2022-24)

List of Completed Projects:

- Prenatal exposure to neonicotinoids in mice and zebrafish
- Developmental neurotoxicity by exposure to Ethinyl Estradiol
- Neurological changes in an AroKO model of zebrafish

2019-2023



PhD | University of Maastricht, Netherlands

Thesis: Short-term impact of anthropogenic environment on neuroplasticity – a study among humans and animals

- Advisors: Harry Steinbusch, Thierry Charlier, Jodi Pawluski

2010-2021



Assistant Professor, Physiology | Rajiv Gandhi University of Health Sciences (RGUHS), India

- Involved in teaching, research, patient care, and admin roles.
- As a PI, I Investigated the effect of music as an acoustic stimulus on the cardiovascular and nervous systems (using HRV, ERP and EEG-based approaches).

2007-2010



Postgraduate - MD Physiology | RGUHS, India

Thesis: Comparative study of autonomic functions between day and night shift workers.

SKILLS

Animal models in neuroscience - Molecular Biology Techniques

- Mice brain dissection, brain inclusion/embedding, tissue cryosections, mounting, punching specific brain areas, IF, IHC, and behavioral tests.
- Zebrafish fish models – IF, EASZY assay for screening chemicals, transgenic fish breeding, Light Sheet Microscopy
- DNA, RNA extraction, Genotyping (PCR), qRT-PCR, Western blot, confocal microscopy, Cortisol /amylase assay, ELISA, bacterial culture.
- Physiology & Pharmacology of rabbit heart and rat intestine, amphibian heart, neuromuscular junctions (Physiograph)

Human Physiology - Electrophysiology Techniques

- Holter monitoring of blood pressure, electrocardiography, heart rate variability (autonomic function),
- Neurophysiology - event-related potentials (ERP), electroencephalography (EEG), sleep polysomnography recordings,
- Emotional, anxiety, stress, health scales and questionnaires, cognitive functions; analysis of biomarkers in serum and saliva (ECLIA, ELISA, RIA).

Others - Softwares

SPSS, Statistica, R, Graphpad, Adobe Photoshop, Image J, PsychoPy