

Kirthana Kunikullaya U



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



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

CONTACT



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<https://kirthanaku.github.io/>

ACHIEVEMENTS

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

I wish to explore

Area of Interest: Neuroendocrinology.
Specific Focus on these:

- Sex Differences in Neurology - Hormonal Influence on Neurotransmission
- Mechanisms of Action of Exposome on brain aging and neuropsychiatric conditions
- Design Preventive and treatment strategies for Brain Aging and Neuropsychiatric Conditions

About

I am a Physician, trained in Medicine and specialized in Human Physiology (MD, DNB). After being an Assistant Professor in a Medical College & Teaching hospital in India for 10 years, I shifted to France as a postdoc in Neuroscience. I am **interested to design sex-specific treatment and prevention strategies for neurological and neuroendocrinological problems.**

EXPERIENCE

2021-2024
2.7 years



Postdoctoral Researcher | Institut de recherche en santé, environnement et travail (IRSET), University of Rennes 1

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

Studying the effect of anthropogenic stimuli on neurosteroids and neuroplasticity. **Ongoing & 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
4 years



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
10.9 years



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

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

2007-2010
3 years



Postgraduate - MD Physiology | RGUHS, India

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

SKILLS

Animal models in neuroscience - Molecular Biology Techniques

- Rat brain tissue brain slice preparation, mounting, IHC, immunofluorescence, confocal microscopy, bacterial culture, behavioral tests.
- Zebrafish fish models - DNA, RNA extraction, Genotyping, PCR, qRT-PCR, brain inclusion, slicing, IF, Immunostaining for different markers in the brain, cell counting, EASZY assay for screening chemicals, Light Sheet Microscopy, Cortisol assay (ELISA).
- 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