

## Dr. Nabanita Ghosh

Designation: **Assistant Professor of Zoology**



Qualifications: **M.Sc., Ph.D.** (University of Calcutta)

*Ph.D. Thesis title- "Neurotransmitter modulation and neuronal status during Parkinsonism in mouse brain: Role of neuroinflammation and neurogenesis".*

### **Experience / Expertise:**

Research experience in the field of Neuroimmunology of Parkinson's Disease. Interested in immune modulation and behavioural alterations on stress exposure in vertebrate model. Proficient in immunology and cell biology experiments.

**Specialisation & Area of Interests:** Immunology and Cell Biology

**Current Teaching:** Chordate Biology, Cell biology, Immunology, Parasitology, Neuroscience, Developmental Biology.

**Research Interests:** Immunology and Neuroscience

### **Selected Publications:**

#### ○ **Book Chapters**

Sinha, P1. **Ghosh, N1**. Mitra, S2. & Bhattacharyya, A1. (2016). Neuroinflammation during Parkinson's disease: Key cells and molecules involved in it. Chapter 7 in *Inflammation: the Common Link in Brain Pathologies*, N. Jana et al. (eds.). ISBN 978-981-10-17117.

#### ○ **Papers**

1. **Ghosh N1**, Mitra S1, Sinha P2. et al. (2019). Study of Microglial and Astroglial Alterations Induced by Acute 1-Methyl-4-Phenyl-1,2,3,6-Tetrahydropyridine Treatment in Mouse Brain. *Proc Zool Soc*, <https://doi.org/10.1007/s12595-019-00296-4>.
2. **Ghosh N1**, Mitra S1, Sinha P2, Chakrabarti N2, Bhattacharyya A1. (2018). TNFR2 mediated TNF- $\alpha$  signaling and NF- $\kappa$ B activation in hippocampus of 1-methyl-4phenyl-1,2,3,6-tetrahydropyridine-treated mice. *Neuroscience Research*, Dec;137:36-42. doi: 10.1016/j.neures.2018.02.007.
3. Mahapatra E1, Dasgupta D1, Bhattacharya N1, Mitra S1, Banerjee D1, Goswami S1, **Ghosh N1**, Dey A1, Chakraborty S2. (2017). Tissue Cell. Sustaining immunity during starvation in bivalve mollusc: A costly affair. *Apr*;49(2 Pt B):239-248. doi: 10.1016/j.tice.2017.02.005.
4. Mitra S1, **Ghosh N1**, Sinha P2, Chakrabarti N2, Bhattacharyya A1. (2016). Alteration of nuclear factor-kappaB pathway promote neuroinflammation depending on the functions of estrogen receptors in substantianigra after 1-methyl-4-phenyl1,2,3,6-tetrahydropyridine treatment. *Neuroscience Letters*, Mar 11;616:86-92. doi: 10.1016/j.neulet.2016.01.046.
5. Mitra S1, **Ghosh N1**, Sinha P2, Chakrabarti N2, Bhattacharyya A1. (2015). Alteration in Nuclear Factor-KappaB Pathway and Functionality of Estrogen via Receptors Promote Neuroinflammation in Frontal Cortex after 1-Methyl-4-Phenyl1,2,3,6-Tetrahydropyridine Treatment. *Scientific reports*, Sep 14;5:13949. doi: 10.1038/srep13949.
6. Mitra S, Keswani T, **Ghosh N**, Goswami S, Datta A, Das S, Maity S, Bhattacharyya A. (2013). Copper induced immunotoxicity promote differential apoptotic pathways in spleen and thymus. *Toxicology*, Apr 5;306:74-84. doi: 10.1016/j.tox.2013.01.001.
7. Mitra S, Keswani T, Dey M, Bhattacharya S, Sarkar S, Goswami S, **Ghosh N**, Dutta A, Bhattacharyya. (2012). Copper-induced immunotoxicity involves cell cycle arrest and cell death in the spleen and thymus. *Toxicology*, Mar 11;293(1-3):78-88. doi: 10.1016/j.tox.2011.12.013.

#### ○ **Posters**

1. *Frontiers in Biotechnology*, Chapter III, 2018 on 12th October, 2018 at St. Xavier's College (Autonomous), Kolkata. Title of Poster- Effect of rainfall and environmental temperature on parasitic burden in common toad (*Bufo* sp.) : a preliminary study.
2. International Conference on "Neurodegenerative Disorders: Current and Future Perspective", Date: February 10 - 12, 2017. Title of Poster: Prevention of MPTP induced neurodegeneration in mouse hippocampus by TNF- $\alpha$  mediated TNFR2 activation.
3. Annual Conference of Indian Immunology Society, IMMUNOCON-2014, 12th -14th December 2014. Title of Poster: Copper induced immunotoxicity promotes distinct apoptotic pathways in spleen and thymus and causes cytotoxic t-cell proliferation.
4. International Symposium on Translational Neuroscience and XXXII Annual Conference of the Indian Academy of Neurosciences, November 1st -3rd, 2014. Theme- Translational Research: Novel Approaches to treat Neurological and Psychiatric Disorders. Title of the Poster presented: Exogenous Estrogen alters the MPTP-induced neuro-inflammatory status differentially in male and female mouse hippocampus.
5. XXXI Annual Meeting of Indian Academy of Neurosciences, October 25th-27th, 2013. Theme-"Emerging Trends and Challenges in Neuroscience". Title of Poster: Paraquat treatment causes differential region-specific dopaminergic neurotoxicity and variable inflammatory status in three regions of mouse brain.

Contact Details: **Email: nabanitaghosh89@gmail.com**

### **Professional Memberships and Activities:**

- Life member of Zoological Society of Kolkata
- Annual member of Indian Academy of Neuroscience