UNIVERSITY OF CALCUTTA

ACADEMIC DEPARTMENT

FACULTY ACADEMIC PROFILE/ CV

1. **Full name of the faculty member**: Dr. Ishani Deb
2. **Designation**: Assistant Professor
3. **Specialisation** : Neurobiochemistry
4. **Passport size photograph** :

5. **Contact information** :

Department of Biochemistry, University of Calcutta, id3674@gmail.com, idbiochem@caluniv.ac.in

6. **Academic qualifications**:

College/ university from which the degree was obtained	Abbreviation of the degree
University of Calcutta	B.Sc.
University of Calcutta	M.Sc.
Jadavpur University	Ph.D.

7. **Positions held/ holding:**

2007-2012, Postdoctoral Fellow (University of New Mexico, USA)
2012-2013, Visiting Research Assistant Professor (University of New Mexico, USA)
2013-To date, Assistant Professor (University of Calcutta)

8. **Research interests**:

- Understanding the role of Circadian clock in opioid addiction.
- Cerebral ischemic stroke And Circadian clock.

9. **Research guidance** :
Number of researchers pursuing Ph.D : 3

10. **Projects :**

Research Support: (As Principal Investigator)

Sl. No.	Title of Project	Name of Funding Agency	Amount (Rs.)	Date of Initiation & Duration
1	Role of tyrosine phosphorylation in regulating circadian rhythm during morphine addiction and its associated relapse	UGC Start-up	6 lakhs	July,2014 2 yrs.
2	The effect of ischemic stroke on Circadian Clock: a comparative study between neuron and glia.	DST- SERB	25.45 lakhs	November , 2015 3 yrs
3	Understanding the Cellular and Molecular mechanisms of addiction associated disrupted Circadian rhythm in Striatum to explore potential new therapeutic targets for preventing relapse	ICMR	30 lakhs	Feb , 2018 3 yrs

11. **Select list of publications**

a) ***Journals:***

1. The Indian Genome Variation database (IGVdb): a project overview. Member of the The **Indian Genome Variation Consortium** (2005) Human Genetics, 118, 1-11.

2. Genetic landscape of the people of India: a canvas for disease gene exploration. **Indian Genome Variation Consortium** (2008) Journal of Genetics, 87(1), 3-20.

3. Water-soluble tripeptide Abeta (9-11) forms amyloid-like fibrils and exhibits neurotoxicity. Naskar J, Drew MG, **Deb I**, Das S, Banerjee A. (2008) Organic Letters. 10 (13), 2625-2628.

4. Synthesis and characterizations of novel quinoline derivatives having mixed ligand activities at the kappa and mu receptors: Potential therapeutic efficacy against morphine dependence. **Deb I**, Paira P, Hazra A, Banerjee S, Dutta PK, Mondal NB, Das S. (2009) Bioorganic & Medicinal Chemistry, 17(16), 5782-5790.

5. Single-nucleotide polymorphism (A118G) in exon 1 of OPRM1 gene causes alteration in downstream signaling by mu-opioid receptor and may contribute to the genetic risk for

addiction. **Deb I**, Chakraborty J, Gangopadhyay PK, Choudhury SR, Das S. (2010) Journal of Neurochemistry,112, 486-496.

6. NR2B-NMDA receptor mediated modulation of the tyrosine phosphatase STEP regulates glutamate induced neuronal cell death. Poddar R †, **Deb I** †, Mukherjee S, Paul S. (2010) Journal of Neurochemistry, 115, 1350-1362 **†equally contributed**.

7. EGLN1 involvement in high-altitude adaptation revealed through genetic analysis of extreme constitution types defined in Ayurveda. Aggarwal S, Negi S, Jha P, Singh PK, Stobdan T, Pasha MA, Ghosh S, Agrawal A; **Indian Genome Variation Consortium**, Prasher B, Mukerji M. (2010) Proc Natl Acad Sci U S A. 107, 18961-18966.

8. Oxidative stress induced oligomerization inhibits the activity of the non-receptor tyrosine phosphatase STEP61. **Deb I**, Poddar R, Paul S. (2011) Journal of Neurochemistry, 116, 1097-1111.

9. Thyroid hormones protect astrocytes from morphine-induced apoptosis by regulating nitric oxide and pERK 1/2 pathways. **Deb I** and Das S. (2011) Neurochemistry International, 58, 861–871.

10. A polymorphism of the CREB binding protein (CREBBP) gene is a risk factor for addiction. Kumar D, **Deb I**, Chakraborty J, Mukhopadhyay S, Das S. (2011) Brain Research, 1406, 59-64.

11. Dephosphorylation of specific sites in the kinase-specificity sequence domain leads to ubiquitin-mediated degradation of the tyrosine phosphatase STEP. Mukherjee S, Poddar R, **Deb I**, Paul S. (2011) Biochemical Journal, 440, 115-125.

12. Neuroprotective Role of a Brain-Enriched Tyrosine Phosphatase, STEP, in Focal Cerebral Ischemia. **Deb I**, Manhas N, Poddar R, Rajagopal S, Allan AM, Lombroso PJ, Rosenberg GA, Candelario-Jalil E, Paul S. (2013) The Journal of Neuroscience, 33(45),17814-17826.

13. Aging is associated with dimerization and inactivation of the brain-enriched tyrosine phosphatase STEP. Rajagopal S*; **Deb I** *; Poddar R; Paul S. (2016) Neurobiology of Aging, 41, 25-38. ***equally contributed**.

14. Naloxone precipitated morphine withdrawal and clock genes expression in striatum: A comparative study in three different protocols for the development of morphine dependence. Roy K, Bhattacharyya P, **Deb I**. (2018) Neurosci Lett., 685, 24-29.

15. Engineering of supramolecular β-sheet and nontoxic amyloid fibrils from synthetic oligopeptides containing γ-aminobutyric acid as the N-terminal residue. Samui S, Biswas S, Roy K, **Deb I**, Naskar J. (2019) ACS Chem Neurosci., 10(6), 2915-2918

16. Oxygen glucose deprivation impairs circadian clock genes expressions in Neuro 2A neuroblastoma cells unlike C6 glioma. Roy K. Maji D and **Deb I**. (2021) Biological Rhythm Research. https://doi.org/10.1080/09291016.2021.1911551

17. Increase of Cry 1 expression is a common phenomenon of the disturbed circadian clock in ischemic stroke and opioid addiction. Roy K, Maji D, **Deb I.** (2021) Biochem Biophys Res Commun. 558:8-13.

18. Morpho-functional variation and response pattern of microglia through rodent ontogeny showing infant microglia as stable and adaptive than matured. Ghosh A, Ghosh P, **Deb I**, Bandyopadhyay S. (2021) Brain Behav.11(8):e2315. doi: 10.1002/brb3.2315. [IF:2.21]

b) ***Books/ book chapters*** *:*

Ishani Deb and Sumantra Das (2005) Genetic variability leading to narcotic abuse: potential implication of single nucleotide polymorphism. In, "Molecular and Cellular Neurobiology" (M.K. Thakur and S. Prasad, Eds), pp247-257, Narosa Publishing House, New Delhi, India.

c) ***Conference/ seminar volumes***:

d) ***Other publications*** :

12. **Membership of Learned Societies**:
Japan Neuroscience Society (2006-present)

13. **Patents :** Nil

14. **Invited lectures delivered:**

- Bose Institute, Kolkata , India.
- Central Drug Research Institute (CDRI), Lucknow, India.
- Institute of Genomics and Integrative Biology (IGIB), Delhi, India.
- TIFR Centre for Interdisciplinary Sciences (TCIS), Hyderabad, India.
- Central University of Hyderabad, Hyderabad, India.
- Indian Institute of Science Education and Research Kolkata (IISER-Kolkata), Kolkata, India.
- CSIR-Indian Institute of Chemical Biology (IICB), KOLKATA NEUROSCIENCE
- CSIR-Indian Institute of Chemical Biology (IICB), Neuro Update Kolkata 2014,
- CSIR-Indian Institute of Chemical Biology (IICB), Neuro Update Kolkata 2017,

15. **Awards :** NA

16. **Other notable activities** :

Invited Reviewing Board Member of International Science Journals.