Dr. Priyanjalee Banerjee, Assistant Professor & Head, Department of Zoology, Raiganj Surendranath Mahavidyalaya, Raiganj, WB- 733134

Former **Post Doctoral Research Associate I** at Indian Association for the Cultivation of Science (IACS), Kolkata (Aug, 2017 – December, 2019) [DBT Research Associateship from July 2018]

PhD in Biochemistry (Calcutta University)(2017)

DST women scientist c- 8th batch 2016

MSc in zoology; Specialization: Biochemistry & molecular biology (BHU)

BSc in zoology from Lady Brabourne College, Kolkata.

Residential address : 101, Boral Main Road, Ushapally Bus Stop, Pacific Corner, Kolkata-700084.

Email id –dr.pbanerjee.rsmzoology@gmail.com
Contact no. – 91 – 9038279269/9007471137

Personal details:

Name	Priyanjalee Banerjee
Date of Birth	8 July,1987
Mother's name	(Late) Smt. Suprava Banerjee
Father's name	Sri Pradip Banerjee
Nationailty	Indian
Sex	Female
Languages Known	English, Bengali, Hindi.

Academic Qualification

University/ Board	Degree	Year	Subject (s)	Marks
Calcutta University, India	Ph.D.	Apr 26, 2017	Biochemistry (Neurobiology)	70%
Banaras Hindu University	MSc	2009-2011	Zoolgy Specialisation: Biochemistry and molecular biology	75%
Calcutta University	BSc	2006-2009	Zoology Chemistry Botany	68%
West Bengal Council for Higher Secondary Education (WBCHSE), India	Higher Secondary	2006	Mathematics, Biology, Chemistry, Physics, Bengali, English	78.6% ➢ Division:1st division with Star. .
West Bengal Board of Secondary Education	Secondary	2004	Physical Science, Life Science, Mathematics, History, Geography, English, Bengali	85.6% ➢ Division:1st division with Star.

CSIR UGC NET- June 2012(Life Sciences)

HighestQualification:

PhD in Biochemistry

MSc in Zoology
Specialisation: Biochemistry and molecular biology,
Banaras Hindu University (BHU)
Varanasi, India

Current academic status:

- Currently employed as
- Served as**post-doctoralDBT research associate** at Indian Association for the Cultivation of Science (IACS), Kolkata working in the field of gene therapy-based drug development for cancer treatment.

- Worked as a **Senior Research Fellow (SRF)** in Department of Science(DST) funded project entitled 'Role of α-synuclein and parkin in dopamine toxicity on SHSY5Y cells: Implications for sporadic Parkinson's Disease(No. SR/S0/HS-0026/2012).
- Worked as **woman scientist** in S. Majumdar & Co. by IIT-Delhi-TIFAC (co-ordination centre: Rajiv Gandhi Law School, IIT-KGP), under WOS-C scheme of DST, Govt. of India.

Research experiences:

- **PhD thesis topic: Metal dysregulation in the pathogenesis of Alzheimer's disease: an experimental study in rat brain and cultured neuroblastoma cells.**

Thesis Advisors: **Prof. Sasanka Chakrabarti** (MD, Department of Biochemistry, Institute of Post-Graduate Medical Education & Research (IPGME&R), Kolkata 700020, India.

Co-advisor: Prof. Satinath Mukhopadhyay (DM,Endocrinology, Institute of Post-Graduate Medical Education & Research (IPGME&R), Kolkata 700020, India.

- **Project title: 'Profile of antioxidant enzymes in liver and kidney of rats with thioacetamide induced chronic liver failure'**, Under supervision of Prof. S.K.Trigun, submitted as a partial fulfillment of degree in Master of Science.

Intellectual Property Right (IPR) field exposure:

1. **Patent search: -**Patent database searches for Freedom to Operate (FTO), preparing FTO search report;

2. **Patent filing and prosecution: -**Filing, drafting of examination report responses, reporting to client and IPO response; Specification drafting.
3. **IP Portfolio analysis: -**In dissertation project, IP portfolio of companies regarding gene silencing and genome editing.

Publications in International Journals (In Chronological Order)

1. **Banerjee P.** Translational Perspectives: Adult Neurogenesis in Treating Neurodegenerative Diseases. In. Emerging Trends in Multidisciplinary Research,2023, AGAR Publishers, pp 524-544.

2. Hossain A, Hassan R, Pradhan R, Datta S, **Banerjee P.** Serum ammonia and serum lactate predicting clinical outcome in critically-ill children: A prospective study. Journal of cardiovascular disease research, 2023, vol 14, issue 07, 1759-1765.

3. **Banerjee P.** Breaking New Ground: Leveraging Artificial Intelligence for Precision Medicine in Neurodegeneration. In. Recent Trends in Multidisciplinary Research, 2023, AGAR Publishers, pp 287-313.

4. Bose C, Das U, Kuilya T K, Mondal J, Bhadra J, **Banerjee P**, Goswami R K, Sinha S. Cananginone Abrogates EMT in Breast Cancer Cells through Hedgehog Signaling. Chemistry and Biodiversity, 2022, https://doi.org/10.1002/cbdv.202100823.

5. Kundu J, **Banerjee P**, Bose C, Das U, Ghosh U, Sinha S. Internal Oligoguanidinium Transporter: Mercury-Free Scalable Synthesis, Improvement of Cellular Localization, Endosomal Escape, Mitochondrial Localization, and Conjugation with Antisense Morpholino for NANOG Inhibition to Induce Chemosensitization of Taxol in MCF-7 Cells. Bioconjugate Chem. 2020, 31, 10, 2367–2382.

6. Bose C, **Banerjee P**, Kundu J, Dutta B, Ghosh I, et. al. Evaluation of a Tubulin-Targeted Pyrimidine Indole Hybrid Molecule as an Anticancer Agent, Chemistry Select,2020; 5(44); 14021-14031.

7. Ghosh K C, Duttagupta I, Bose C, **Banerjee P**, Gayen A K, Sinha S. Synthesis and anticancer activities of proline containing cyclic peptides and their linear analogs and congeners. Synthetic Communications, 2019, 49(2), 221-236.

8. Lepeta K, Lourenco M, Schweitzer B, Martino Adami P, **Banerjee P**, Catuara-Solarz Silvana, de la Fuente Revenga M, Guillem A, Haidar M, Ijomone O, Nadrop B, Qi L, Perera N, Refsgaard L, Reid K, et al..Seidenbecher, Constanze. "Synaptopathies: synaptic dysfunction in neurological disorders". Journal of Neurochemistry, 2016 Sep;138(6):785-805.

9. **Banerjee P**, Sahoo A, Anand S, Bir A, Chakrabarti S. Oral iron chelator, deferasirox, reverses the age dependent alterations in iron and amyloid beta homeostasis in rat brain: implications in the therapy of Alzheimer's disease.J Alzheimers Dis.2015,2015;49(3):681-693.

10. Kaur U, **Banerjee P,** Bir A, Sinha M, Biswas A, Chakrabarti S. Reactive Oxygen Species, Redox Signaling and Neuroinflammation in Alzheimer;s Disease: The NF-κB connection. Current Topics in Medicinal Chemistry. 2015;15(5):446-57.

11. **Banerjee P**, Sahoo A, Anand S, Ganguly A, Righi G, Bovicelli P, Saso L, Chakrabarti S. Multiple mechanisms of iron-induced amyloid beta peptide accumulation in SHSY5Y cells: protective action of negletein. Neuromolecular Medicine, 2014, 16(4), 787-798.

12. Guha Thakurta I, **Banerjee P**, Bagh MB, Ghosh A, Sahoo A, Chattopadhyay S, Chakrabarti S. Combination of N-Acetylcysteine, α-lipoic acid and α-tocopherol substantially prevents the brain synaptosomal alterations and memory and learning deficits of aged rats. Experimental Gerontology. 2014,50, 19-25.

13. Sahoo A, **Banerjee P**, Khemka VK, Bir A, Anand S, Bandopadhyay K. Lipid peroxidation and antioxidant status in cancer patients: Implications in carcinogenesis. International Journal of Biological and Medical Research, 2014, 5,(1),3755-3758.

14. Sahoo A, **Banerjee P**. NT-ProBNP as a Diagnostic and Prognostic Marker in Case of NSTEMI Patients. Journal of Medical Science and Clinical Research, 2014, 2(8), 2106-2113.

15. Sahoo A, **Banerjee P**. Implications of Procalcitonin as a prognostic marker in neonatal sepsis. International Journal of Science and Research, 2014,3(8), 470-473.

16. Bir A, Sen O, Anand S, Khemka V, **Banerjee P,** Cappai R, Sahoo A, Chakrabarti S. α-synuclein-induced mitochondrial dysfunction in isolated preparation and intact cells: Implications in the pathogenesis of Parkinson's disease. Journal of Neurochemistry, 2014, 131(6), 868-877.

17. Chakrabarti S, Sinha M, Thakurta IG, **Banerjee P**, Chattopadhyay M. Oxidative Stress and Amyloid Beta Toxicity in Alzheimer's Disease: Intervention in a Complex Relationship by Antioxidants. Current Medicinal Chemistry 2013.20(37),4648-4664.

18. **Banerjee P**, Sahoo A, Anand S, Khemka V K, Chakrabarti S. PSS73 - Iron and Oxidative Stress Promote Amyloid Beta Accumulation in Aged Rat Brain and SHSY5Y cells:Therapeutic Implications of Deferasirox in Alzheimer's Disease. Free Radical Biology and Medicine, 2013, 65(2), S43.

Professional Development Courses:

- One Week Online Faculty Development Programme on Advancing towards Sustainable Teaching-learning and Evaluation Methods jointly organized by Sydenham Faculty Development Centre (SFDC) in association with K J Somaiya College of Arts and Commerce, Mumbai from 10-14 August, 2020 under the Pandit Madam Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT), MHRD, New Delhi and UGC PARAMARSH Scheme.
- Participated in the online faculty induction program from 13.11.2021 to 17.12.2021 organised by UGC HRDC Aligarh Muslim University.
- Participated in the online subject refresher course from 16th to 29th August, 2023, organised by UGC HRDC Aligarh Muslim University.

Oral Presentations in conferences:

Priyanjalee Banerjee. Deferasirox attenuates iron induced amyloid beta accumulation and toxicity in aged rat brain: therapeutic implications in Alzheimer's disease. 13th ISN Advanced Scool, 2015; 19-23 Aug, Cairns, Australia.

Priyanjalee Banerjee. Iron induced amyloid beta toxicity in aged rat brain is attenuated by deferasirox.therapeutic implications in Alzheimer's disease. NEUROCON, 2015, International Conference on "Development, Degeneration and Regeneration of Neurons: Neurochemistry to Clinical Neurology", 9th Jan,Haldia, West Bengal.

Priyanjalee Banerjee. Negletein, a chemically synthesised flavone, prevents iron induced amyloid beta toxicity in SHSY5Y cells: Implications in Alzheimer's disease, Indian Academy of Neurosciences Meeting, Kolkata,2013. School of Tropical Medicine, Kolkata.

Priyanjalee Banerjee.Deferasirox prevents iron induced amyloid beta toxicity in aged rat brain: therapeutic implications in Alzheimer's disease**.** Neuroupdate 2013,29th Nov,2013, Indian Institute of Chemical Biology(IICB), Kolkata..

Priyanjalee Banerjee. Adult Neurogenesis;Journey towards a better brain. Brain Awareness Week, 2011,

Banaras Hindu University, Varanasi.

Priyanjalee Banerjee. Neurogenesis in adult mammalian brain. Dept. of Zoology, Banaras Hindu University, Varanasi.

Sasanka Chakrabarti, **Priyanjalee Banerjee,** Shruti Anand, Arghyadip Sahoo and Aritri Bir. Iron dysregulation and oxidative stress interact to cause increased amyloid beta production in aged rat brain: implications in the pathogenesis of sporadic Alzheimer's disease.ICAD, 1-3 Nov, 2014. Beijing,China.

Sasanka Chakrabarti, Maitrayee Sinha, **Priyanjalee Banerjee**, Shruti Anand, Aritri Bir, Anindita Banerjee. NLT, a combination of N-acetylcysteine, α-lipoic acid and tocopherol, prevents multiple age related changes in rat brain: Implications in Alzheimer's disease therapy. NEUROCON 2015, International Conference on "Development, Degeneration and Regeneration of Neurons: Neurochemistry to Clinical Neurology".7-10 Jan,2015.

Sasanka Chakrabarti, Maria Bindu Bagh, Ishita Guha Thakurta, Maitrayee Sinha, **Priyanjalee Banerjee**.Brain Aging: Interventions and implications. NEUROCON 2013, International conference on neurodegenerative and neurodevelopmental disorders: translational aspects.17-20 Jan,2013.

Poster Presentations in conferences:

1. **Priyanjalee Banerjee,**Arghyadip Sahoo, ShrutiAnand, Aritri Bir, Sasanka Chakrabarti. Deferasirox attenuates iron induced amyloid beta accumulation and toxicity in aged rat brain: therapeutic implications in Alzheimer's disease.(13th ISN Advanced School, Australia, 2015).

2. **Priyanjalee Banerjee,** Arghyadip Sahoo, Shruti Anand, Vineet Kumar Khemka and Sasanka Chakrabarti Iron and oxidative stress promote amyloid beta accumulation in aged rat brain and SHSY5Y cells: therapeutic implications of deferasirox in Alzheimer's disease. (SFRR, Texas, 2013)

3. **Priyanjalee Banerjee**, Arghyadip Sahoo, Shruti Anand, Oishimaya Sen, Vineet Kumar Khemka and Sasanka Chakrabarti. Negletein prevents iron induced amyloid β protein accumulation in SHSY5Y cells: therapeutic implications in Alzheimer's disease. (IAN 2013, Allahabad)

4. Aritri Bir, O. Sen, S. Anand, **P. Banerjee**, A. Sahoo, V. Khemka, R.Cappai, S. Chakrabarti α-Synuclein mediated alterations in mitochondrial oxidative phosphorylation system : implications in the pathogenesis of Parkinson's disease. (Austria, 2013)

5. Shruti Anand, Aritri Bir, **Priyanjalee Banerjee**, Oishimaya Sen, Arghyadip Sahoo, and Sasanka Chakrabarti. α-Synuclein interaction with mitochondria from rat brain and SHSY5Y cells: implications in the pathogenesis of Parkinson's disease. (Japan, 2013)

6. Oishimaya Sen, Arghyadip Sahoo, **Priyanjalee Banerjee**, Aritri Bir, Anindita Banerjee, Debojit Bagchi, Vineet Khemka, Sasanka Chakrabarti.Oxidative and non-oxidative mechanisms of dopamine induced cytotoxicity in SHSY5Y human neuroblastoma cell line. (IAN,2013 Allahabad)

7. Aritri Bir, Oishimaya Sen, Shruti Anand, Upasana Ganguly, **Priyanjalee Banerjee**, Vineet Khemka, Arghyadip Sahoo, Roberto Cappai, Sasanka Chakrabarti.Metal dysregulation,α-synuclein accumulation and mitochondrial permeability transition pore interaction: a possible mechanism of cell death in sporadic Parkinson's disease. NEUROCON 2015,International Conference on "Development, Degeneration and Regeneration of Neurons: Neurochemistry to Clinical Neurology"

8. Vineet Khemka, Anirban Ganguly, Arindam Ghosh, Arghyadip Sahoo**, Priyanjalee Banerjee**, Oishimaya Sen, Sasanka Chakrabarti. Serum proiflammatory cytokines level in Alzheimer's Disease patients. (IAN 2013).

9. Maitrayee Sinha, Anindita Banerjee, Aritri Bir, **Priyanjalee Banerjee**, Arindam Ghosh, Sasanka Chakrabarti. Amyloid beta peptide induced calcium influx and membrane depolarisation are absent in aged rat brain synaptosomes. International symposium on translational neuroscience : unravelling mysteries of brain in health and disease. (IAN 2012)

Conferences/ Seminars/ Workshops Attended:

1. International Symposium on Brain Aging and Dementia, 2011, organized by DBT-ISLS Department of Zoology,Banaras Hindu University, Varanasi.
2. Brain Storming Meeting On Advances in Neuroendocrinology, 2011, Banaras Hindu University, Varanasi.
3. NEUROCON 2011, organized by IPGMER, Kolkata. 'Neuron: Degeneration, Regeneration and Proliferation' held at CGCRI, Kolkata.
4. NEUROCON 2013, held at IICB,Kolkata, organized by IPGMER. International conference on neurodegenerative and neurodevelopmental disorders: translational approach.
5. Indian Academy of Neuroscience Meeting, 2013 Allahabad. International symposium on emerging trends and challenges in neuroscience.
6. **Neuroupdate** 2013, organized by IICB, Jadavpur, Kolkata.
7. **Ambicon**,West Bengal Chapter, 2013, held at KPC Medical College, Jadavpur,Kolkata, organized by Association of Medical Biochemists of India.
8. Indian Academy of Neurosciences Meeting, Kolkata Chapter,2013.
9. **NEUROCON 2015**. International Conference on "Development, Degeneration and Regeneration of Neurons : Neurochemistry to Clinical Neurology" organized by ICARE, IPGMER&R and IICB, Haldia, West Bengal, 7-10 Jan,2015.
10. 13th**ISN Advanced School of Neurochemistry** 2015, Aug 19-23, Mission Beach, **Australia** on"Synaptopathies - synaptic molecules with clinical implications''.
11. 25th**Biennial Meeting of the ISN** jointly with 13th Meeting of APSN in conjunction with the 35th Meeting of ANS, Cairns**, Australia**, 23-27 Aug, 2015.
12. Patent drafting workshop at TIFAC, Delhi, Oct 20-22, 2016.
13. TEQIP II sponsored workshop on 'Revisiting IPRs in the context of recent developments in science and Technology, 20th Oct, 2016, Jadavpur University.
14. Patent workshop, IIT-KGP, 24-25 Sep, 2016.
15. Talk on bioresources and IPR, 27th June, 2016, PFC, West Bengal State Council of Science and Technology, Saltlake, Kolkata.

Awards & Certificates:

a) **Research Associateship** from Department of Biotechnology, Govt. of India from July 2018 (Co-ordinator Indian Institute of Science, Bangalore).

b) **Full scholarship** to attend **13th ISN Advanced School**, 19-23 August,2015 in Mission Beach, Australia and 25th**Biennial Meeting of the ISN** jointly with 13th Meeting of APSN in conjunction with the 35th Meeting of ANS, Cairns**, Australia**, 23-27 Aug, 2015.

c) **Second** prize in oral presentation contest in**Brain Awareness Week from BHU sponsored by National Brain Reseach Centre and National Academy of Sciences**, India, 2011.

d) **Third** prize in Young Scientist original work presentation in NEUROCON 2015,**International Conference on "Development, Degeneration and Regeneration of Neurons : Neurochemistry to Clinical Neurology", 2015.**

e) **Third** prize for oral presentation of original work in Kolkata chapter**, Indian Academy of Neurosciences** meeting, 2013.

f) Certificate from Department of Zoology,BHU for presenting seminar on the topic 'Neurogenesis in adult mammalian brain', 2011.

g) Certificate for star marks in Secondary and Higher Secondary Examination from Bidya Bharati Girls' High School, 2004 and 2006.

h) Certificate from Lady Brabourne College for participation in Science Day celebration, 2008.

Activities: Member of International Society of Neurochemistry and Indian Academy of Neurosciences.

References:

1. **Prof. Sasanka Chakrabarti**
   Head of the Deptt. Of Biochemistry, ICARE IMSAR, Haldia & Honorary professor at biochemistry department, IPGME&R, Kolkata; Phone: +91 9874489805; Email id: profschakrabarti95@gmail.com

2. **Prof. Sumantra Das**
   Ex-Chief Scientist, CSIR-Indian Institute of Chemical Biology
   Division of Cell Biology & Physiology, Head
   4, Raja S C Mullick Road, Jadavpur, Kolkata 700 032, India Phone
   +91 9163790331
   Email id: sumantra00@gmail.com

3. **Prof. Satinath Mukhopadhyay** Professor,
   Department of Endocrinology 4th floor,
   Ronald Ross Building, IPGME&R
   244, AJC Bose Road, Kolkata-700020; Phone: +91 9830027985
   Email id: satinath.mukhopadhyay@gmail.com

I, Priyanjalee Banerjee, hereby declare that all the information stated above are true to my knowledge.