



**AMAL C. MONDAL**  
**Professor in Cellular & Molecular Neurobiology**

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**Education**

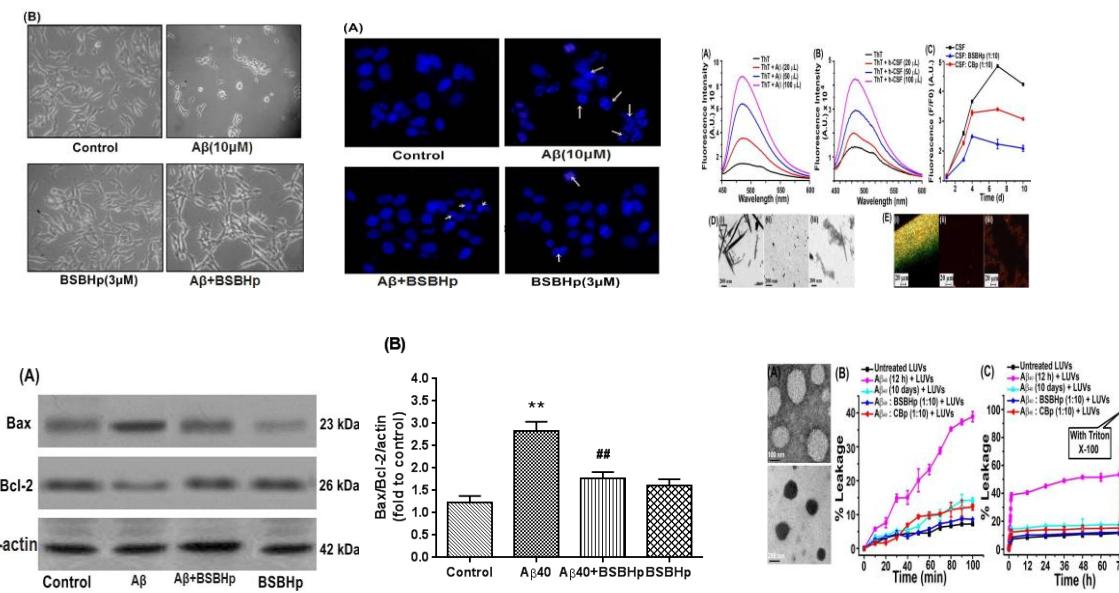
Ph.D. 2004 Chittaranjan National Cancer Institute (CNCI) & Jadavpur University, Kolkata-700 032, India.

**Position & Employment**

<b>Sl.</b>	<b>Institution /Place</b>	<b>Position</b>	<b>From (Date)</b>	<b>To (date)</b>
1.	Jawaharlal Nehru University, New Mehrauli Road New Delhi-110067	Professor in Cellular & Molecular Neurobiology	01.10.2019	Till now
2.	Jawaharlal Nehru University, New Mehrauli Road New Delhi-110067	Associate Professor in Cellular & Molecular Neurobiology	01.10.2015	30.09.2019
3.	Raja Peary Mohan College, Uttarpara, Hooghly, (W.B.)	Asst. Prof. in Human Physiology (Stage 1-3)	11.05.2005	30.09.2015
4.	University of Illinois at Chicago (UIC), Chicago, IL-60612, USA	Post Doctoral Research Associate	21.01.2003	30.04.2005
5.	Chittaranjan National Cancer Institute, Kolkata-700026	JRF & SRF	04.06.1998	13.09.2002

## Area of Research:

My laboratory is primarily interested in protein misfolding and aggregation in neurodegenerative disorders. Our research aims to better understand the molecular mechanisms that underlie progressive neuronal cell death in neurodegenerative diseases. Our major focus is Alzheimer's disease and Parkinson's disease specifically in relation to how defects in signal transduction contribute to the neurodegenerative process. We are trying to explore the role of Beta sheet breaker  $\alpha/\beta$  hybrid peptides (synthetic antibodies), Vanillin, Naringenin (phytochemicals) as a therapeutic approach to cellular model such as human neuroblastoma SH-SY5Y cells and in vivo toxin induced rat models of AD and PD. In order to understand the molecular mechanisms, various models have explored and the knowledge obtained has enriched our understanding towards some aspects of the disease. We are currently investigating how these newly synthesized breaker peptides, phenolic natural compounds that prevent accumulation of amyloid beta and alpha synuclein into its oligomeric & fibrillar form which forms cellular plaques and NFT, the important hallmark of the disease. So, we are trying to investigate how it prevents neuronal apoptosis by investigating various molecular marker proteins, ROS generation, autophagy and intracellular  $\text{Ca}^{2+}$  release into the cell. We are also trying to explore the effects of natural herbal extract *Bacopa monnieri* on AD model to halt the progress of disease.



## Research Projects received as PI

### a) Ongoing:

3. Assessment of therapeutic role of induced pluripotent stem cell (iPSC)..... in 6-OHDA and Paraquat rat model of Parkinson's disease (PD)" **(Sanctioned by ERPL, Bangalore, Apr, 2024)**

2. Calcium-permeable ion channels as therapeutic targets to manage neuropathic pain" **[BT/PR47726/CMD/150/26/2023] dated 28<sup>th</sup> Dec, 2023 to 27<sup>th</sup> Dec 2026**
1. A Study on Enriched *Bacopa monnieri* active component delivery targeting Glioblastoma and associated Neurocognitive Dysfunction. **BT/PR38493/TRM/120/465/2020 [22<sup>nd</sup> Nov, 2023 to 21<sup>st</sup> Nov 2026].**

### ***b) Completed***

7. To investigate anti-amyloidogenic.....inflammatory pathways involved in Parkinson's disease. **DBT, 2021--2024**
6. Effect of naturally occurring as well as synthetic cyclic molecules on inhibition of beta amyloid aggregation in vivo and in vitro. **DBT, 2017--2020**
5. Role of β-Breaker di-peptide for amyloid disruption in Alzheimer's disease: A novel therapeutic approach in *in vitro* model. **UPoE-II, 2016--2019**
4. Arresting Pre Fibriller-Aggregates of Alzheimer's Amyloid by Synthetic Antibodies. **DBT, 2013--2016**
3. Role of MAP Kinase in behavioral model of depression: Effect of chronic antidepressant treatment. **LSRB/ DRDO, 2012--2015**
2. Role of neurotrophins in stress and depression. **SERB, 2010--2013**
1. Role of Monoamine Neurotransmitters in Learned Helplessness Behavior and Depression in Rat Model. **UGC, 2008—2010**

### **Research Projects received as mentor**

4. Molecular cross talk between Wnt beta-catenin and sonic hedgehog (SHH) signaling pathways in neuroblastoma: Role of safranal (*Crocus sativus*) as a chemopreventive agent by Mr. Mir Hilal Ahmad (SRF). **ICMR sanctioned the project on 10.05.2019 Ref No. 45/7/2019/MP/BMS.**
3. Deciphering the novel proteins in depression and its interaction with sonic hedgehog (SHH) signaling in prenatally stressed (PNS) rats: Role of cannabidiol (CBD) as antidepressant by Dr. M. Fatima (RA). **ICMR sanctioned the project**
2. Effect of maternal chronic unpredictable mild stress (CUMS) on sonic hedgehog signaling, BDNF expression and DNA damage in the hippocampus and pre frontal cortex of neonatal and adult offspring by Dr. Mahino Fatima. **SERB approved the project on 06/07/2016 vide file No. PDF/2016/000670. (Completed)**
1. To study and elucidate common molecular cross talk between Parkin, p53 and JNK mediated apoptosis in both familial and sporadic Parkinson's disease using *Drosophila* model by Dr. Saurabh Srivastav. **SERB approved the project on 06/07/2016 vide file No. PDF/2016/000892. (Completed)**

### **Student Guidance**

Post Ph.D. Project supervised -03  
Ph. D. Thesis supervised -12

Current Ph.D. students -04  
M. Sc. Project supervision & Summer/Winter trainee thesis-13

### **Professional Recognition, Awards, Fellowships received**

- Elected fellow, **International Union of Physiological Sciences (FIUPS)- 2025**
- Elected fellow, **Royal Society of Biology (FRSB)- 2025**
- Elected fellow, **West Bengal Academy of Science & Technology - 2022**
- Awarded **NESA Eminent Scientist** of the Year - 2022
- Awarded **Prof. A. K. Mukherjee Memorial Oration** from The Physiological Society of India, 2021.
- Received **Dr. A. Namasivayam Award** by IABMS- 2016
- Awarded **International Travel Grant** by UGC to attend XXI World Congress of Neurology at Vienna, Austria, 2013.
- Awarded **International Travel Grant** by UGC to attend XX World Congress of Parkinson's and related disorders at Shanghai, China, 2011.
- Best Paper Presented at **PHYSICON-2011**, and Awarded **Dr. K. Anji Reddy Cash Prize**.
- Best paper presentation award in **UGC Sponsored Seminar**, 2005 at RPM College, Uttarpara, Hooghly, (W.B.).
- January 2003 – April 2005 **Post Doctoral Fellowship**, (with Dr. Y. Dwivedi) University of Illinois at Chicago (UIC), Chicago, IL-60612, USA.
- January, 2000 Selected for **Young Scientist Award** from 87<sup>th</sup> Indian Science Congress Association held at Pune University.
- July 1998–Sept 2002 **JRF & SRF** Awarded by the STBA Laboratory, Chittaranjan National Cancer Institute (**CNCI**) Kolkata-700 026.
- National fellow, 1998

### **Affiliation to Scientific/ Technical Committees**

- Member, RAC—Tripura University
- Member, RAC—Nirma University
- Member, Evaluation committee AIIMS, New Delhi
- Member, Area Advisory Board-2025 (Neuroscience), Amity University, Noida.
- Member, UGC Expert evaluation committee
- Life Member, Indian Science Congress Association
- Life Member, Indian Academy of Neuroscience
- Life Member, Indian Association for Biomedical Scientist
- Life Member, The Physiological Society of India
- Life Member, National Environmental Science Academy
- Member, International Neuromodulation society
- Associate Editor, Journal of Alzheimer's Disease
- Associate Editor, Frontiers in Endocrinology
- Academic Editor, Brain Sciences

### **Publications in reverse chronological order**

**Papers & Reviews published as independent researcher**  
(PubMed link: <https://pubmed.ncbi.nlm.nih.gov/?term=Mondal+AC.&sort=date&size=20>)

69) Subba R, Fasciolo G, Petito A, Geremia E, Tomajoli MTM, & **Mondal AC\***, Napolitano G, Venditti P. Chlorogenic acid alleviates the detrimental effects of concurrent hyperglycemia and chronic stress on brain homeostasis by modulating antioxidative defense in adult zebrafish. **Antioxidants** 2025 Nov, 14, 1386, <https://doi.org/10.3390/antiox14121386>). **JIF- 7.3**

68) Ellappan S, Subba R, & **Mondal AC\***. Understanding borderline personality disorder: Clinical features, neurobiological insights, and therapeutic strategies. **Progress in Neuro-Psychopharmacology & Biological Psychiatry**. 2025, May 20:111403. <https://doi.org/10.1016/j.pnpbp.2025.111403> **JIF- 5.3**.

67) Usman S, & **Mondal AC\***. Menopause triggers microglia-associated neuroinflammation in Parkinson's disease. **Brain Research**. 2025 Apr 16:149649. doi: 10.1016/j.brainres.2025.149649 **JIF- 2.7**

66) Kujur PP, Ellappan S, & **Mondal AC\***. Neuronal and Therapeutic Perspectives on Empathic Pain: A Rational Insight. **Neuropharmacology** 272, 2025:110414, Mar 11. doi: 10.1016/j.neuropharm.2025.110414. **JIF- 5.27**

65) Rani L, & **Mondal AC\***. Vanillin Mitigates the MPTP-induced  $\alpha$ -Synucleinopathy in a Mouse Model of Parkinson's Disease: Insights into the Involvement of Wnt/ $\beta$ -Catenin Signaling. **Journal of Integrative Neuroscience**. 2024; 23 (9), 175 doi.org/10.31083/j.jin2309175. **JIF- 2.5**

64) Subba R, Fasciolo G, Geremia E, Tomajoli MTM, Petito A, Carella S, **Mondal AC\***, Napolitano G, Venditti P\*. Simultaneous induction of systemic hyperglycaemia and stress impairs brain redox homeostasis in the adult zebrafish. **Archives of Biochemistry and Biophysics**. 2024 Jul 18; 759:110101. doi: 10.1016/j.abb.2024.110101. **JIF- 3.8**

63) Sahu MR, Ahmad MH, & **Mondal AC\*** MST1 selective inhibitor Xmu-mp-1 ameliorates neuropathological changes in a rat model of sporadic Alzheimer's disease by modulating Hippo-Wnt signaling crosstalk. **Apoptosis** 2024 May 17. doi:10.1007/s10495-024-01975-0. **JIF- 7.2**

62) Biswal P, Sahu MR, Ahmad MH, & **Mondal AC\***. The Interplay between Hippo Signaling and Mitochondrial Metabolism: Implications for Cellular Homeostasis and Disease. **Mitochondrion** 76: 2024:101885, Apr 19. doi:10.1016/j.mito.2024.101885. **JIF- 4.4**

61) Sushma, Sahu MR, Murugan NA, & **Mondal AC\***. Amelioration of Amyloid- $\beta$  Induced Alzheimer's Disease by Bacopa monnieri through Modulation of Mitochondrial Dysfunction and GSK-3 $\beta$ /Wnt/  $\beta$ -Catenin Signaling (In a special issue- **Nutrition and Cognitive Diseases** under **Molecular Nutrition and Food Research** 2023 Dec 24: e2300245, doi: 10.1002/mnfr.202300245). **JIF- 5.20**

60) Sandeep, Subba R, & **Mondal AC\***. Does COVID-19 trigger the risk for the development of Parkinson's disease? Therapeutic potential of Vitamin C? (**Molecular Neurobiology** 2023 Nov 14. doi: 10.1007/s12035-023-03756-3). **JIF- 5.68**

59) Ratna D, **Mondal AC** & Mallick BN\*. Modulation of dopamine from ventral tegmental area neurons by the LC-REM-OFF and PPT-REM-ON neurons in REMS regulation in freely moving rats. **Neuropharmacology** 3 Jun, 2023, doi: 10.1016/j.neuropharm.2023.109621). PMID: 37276957. **JIF- 5.27**

58) Rani L, Ghosh B, Ahmad MH, & **Mondal AC**\*. Potential neuroprotective effects of Vanillin against MPP+/MPTP-induced dysregulation of dopaminergic regulatory mechanisms in SH-SY5Y cells and a mouse model of Parkinson's disease (**Molecular Neurobiology** 5 May, 2023, doi.org/ 10.1007/s12035-023-03358-z). **JIF- 5.68**

57) Sandeep, Sahu MR, Rani L, Kharat AS & **Mondal AC**\*. Could vitamins have a positive impact on the treatment of Parkinson's disease? (**Brain Sciences**, 2023: 13(2) 272 doi: 10.3390/brainsci13020272). PMID: 36831815. **JIF- 3.33**

56) Ahmad MH, Rizvi MA, Ali M & **Mondal AC**\*. Neurobiology of Depression in Parkinson's disease: Insights into Epidemiology, Molecular Mechanisms and Treatment Strategies. **Ageing Research Reviews** 2 Jan, (85) 2023. (doi.org/10.1016/j.arr.2022.101840). **JIF- 11.78**

55) Ahmad MH, Ghosh B, Rizvi MA, Fatima M, Ali M, Kaur L, **Mondal AC**\*. Neural crest cells development and neuroblastoma progression: Role of Wnt signaling. **Journal of Cellular Physiology** 11 Dec, 2022 doi:10.1002/jcp.30931. PMID: 36502519. **JIF- 6.51**

54) Anand SK, Ahmad MH, Sahu MR, Subba R, **Mondal AC**\*. Detrimental Effects of Alcohol-Induced Inflammation on Brain Health: From Neurogenesis to Neurodegeneration. **Cellular & Molecular Neurobiology** 2023 Jul; 43(5):1885-1904; doi: 10.1007/s10571-022-01308-2. Epub 2022 Nov 27. Nov, 2022. PMID: 36436159. **JIF- 4.86**

53) Ahmad MH, & **Mondal AC**\*. Cellular and Animal Models of Parkinson's Disease: Rationale into Neuroprotective Effects of Naringenin. **Indian Journal of Physiology and Allied Science** 9-12, 74(3): 2022.

52) Rani L, Sahu MR & **Mondal AC**\*. Age-related Mitochondrial Dysfunctions in Parkinson's disease: New Insights Into the Disease Pathology. **Neuroscience** 2022 Sep 1; 499: 152-169. doi: 10.1016/j.neuroscience.2022.07.007) PMID: 35839924. **JIF- 3.70**

51) Sandeep, Ahmad MH, Rani L & **Mondal AC**\*. Convergent molecular pathways in type 2 diabetes mellitus and Parkinson's disease: Insights into mechanisms and pathological consequences. **Molecular Neurobiology**, 2022 Jul; 59(7): 4466-4487. PMID: 35575870. **JIF- 5.68**

50) Subba R, Ahmad MH, Ghosh B. & **Mondal AC**\*. Targeting NRF2 in Type 2 diabetes mellitus and depression: Efficacy of natural and synthetic compounds. **European Journal of Pharmacology**, 2022, Jun 15; 925:174993. doi: 10.1016/j.ejphar.2022.174993. PMID: 35513015. **JIF- 5.19**

49) Sahu MR, Rani L, Subba R & **Mondal AC**\*. Cellular senescence in the aging brain: A promising target for neurodegenerative diseases. **Mechanisms of Ageing and Development**, 2022 Jun; 204: 111675. doi: 10.1016/j.mad.2022.111675. PMID: 35430158. **JIF- 5.49**

48) Sushma & **Mondal AC\***. Immunotherapeutic Approaches for the Treatment of Neurodegenerative Diseases: Challenges and Outcomes. **CNS & Neurological Disorders- Drug Targets**, 2021 Dec 28. doi: 10.2174/1871527321666211228100955) PMID: 34963438. **JIF- 4.38**

47) Ahmad MH, Fatima M, Ali M, Rizvi MA, & **Mondal AC\***. Naringenin alleviates paraquat-induced dopaminergic neuronal loss in SH-SY5Y cells and a rat model of Parkinson's disease. **Neuropharmacology**. Dec 15; 201: 108831. doi:10.1016/j.neuropharm. 2021.108831. PMID: 34655599. **JIF- 5.27**

46) Anand SK, Sahu MR & **Mondal AC\***. Bacopaside-I Alleviates the Detrimental Effects of Acute Paraquat Toxicity in the Adult Zebrafish Brain. **Neurochemical Research**, 2021 Nov; 46(11): 3059-3074. PMID: 34357519. **JIF- 4.41**

45) Anand SK, Sahu MR & **Mondal AC\***. Induction of oxidative stress and apoptosis in the injured brain: Potential relevance to brain regeneration in zebrafish. **Molecular Biology Reports**, 2021 Jun;48(6):5099-5108. PMID: 34165768. **JIF- 2.74**

44) Subba R, Sandhir R, Singh SP, Mallick BN & **Mondal AC\***. Pathophysiology linking depression and type 2 diabetes: Psychotherapy, physical exercise, and fecal microbiome transplantation as damage control. **European Journal of Neuroscience**, 2021, Apr; 53(8):2870-2900. PMID: 33529409. **JIF- 3.69**

43) Rani L & **Mondal AC\***. Unravelling the role of gut microbiota in Parkinson's disease progression: Pathogenic and therapeutic implications. **Neuroscience Research**, 2021 July; 168:100-112. PMID: 33417973. **JIF- 2.90**

42) Paul A, Kumar S, Kalita S, Kalita S, Sarkar D, Bhunia A, Bandyopadhyay A, **Mondal AC\***, Mondal B. An explicitly designed paratope of amyloid- $\beta$  prevents neuronal apoptosis *in vitro* and hippocampal damage in rat brain. **Chemical Science**, 2020, 12 (8):2853-2862. **Edge Article**. [Epub 2020, 22 Dec]. PMID: 34164050. **JIF- 9.96**

41) Sahu MR & **Mondal AC\***. Neuronal Hippo signaling: From development to diseases. **Developmental Neurobiology**, 2021, March; 81(2):92-109. PMID: 33275833. **JIF- 3.10**

40) Ahmad MH, Rizvi MA, Fatima M, **Mondal AC\*** Pathophysiological implications of neuroinflammation mediated HPA axis dysregulation in the prognosis of cancer and depression. **Molecular & Cellular Endocrinology**, 2021, Jan 15; 520:111093 doi.10.1016/j.mce.2020.111093. [Epub 2020, 27 Nov]. PMID: 33253761. **JIF- 4.36**

39) Srivastav S, Anand BG, Fatima M, Prajapati KP, Yadav SS, Kar K, **Mondal AC\***. Piperine-Coated Gold Nanoparticles Alleviate Paraquat-Induced Neurotoxicity in *Drosophila melanogaster*. **ACS Chemical Neuroscience**, 2020, Nov 18;11(22):3772-3785. PMID: 33125229. **JIF-5.78**

38) Naz F, Rahul, Fatima M, Naseem S, Khan W, **Mondal AC**, Siddique YH. Ropinirole silver nanocomposite attenuates neurodegeneration in the transgenic *Drosophila melanogaster* model of Parkinson's disease. **Neuropharmacology**, 2020, Oct 15; 177:108216 [Epub 2020, 21 July]. PMID: 32707222. **JIF- 5.27**

37) Singh AK, Yadav AN, Srivastava A, Srivastava S, Jaiswal RK, Mondal AC, Singh K. CdSe- Reduced graphene oxide nanocomposite toxicity alleviation via V<sub>2</sub>O<sub>5</sub> shell formation over CdSe core: in vivo and in vitro studies. *Nanotechnology*, 2020, Oct 9; 31(41):415101. PMID: 32311687. **JIF-3.95**

36) Fatima M, Ahmad MH, Srivastav S, Rizvi MA, Mondal AC\*. A selective D2 dopamine receptor agonist alleviates depression through up-regulation of tyrosine hydroxylase and increased neurogenesis in hippocampus of the prenatally stressed rats. *Neurochemistry International*, 2020 Jun; 136: 104730. doi: 10.1016/j.neuint.2020.104730. [Epub 2020, 19 Mar]. PMID: 32201282. **JIF- 4.29**

35) Sahu MR & Mondal AC\*. The emerging role of Hippo signaling in neurodegeneration. *Journal of Neuroscience Research* 2020 May; 98(5):796-814. PMID: 31705587. **JIF- 4.43**

34) Sushma & Mondal AC\*. Role of GPCR signaling and calcium dysregulation in Alzheimer's disease. *Molecular and Cellular Neuroscience*, 2019 Dec; 101, 103414 (doi: 10.1016/j.mcn.2019.103414) [Epub 2019, Oct. 23]. PMID: 31655116. **JIF- 4.62**

33) Rani L & Mondal AC\*. Emerging concepts of mitochondrial dysfunction in Parkinson's disease progression: Pathogenic and therapeutic implications. *Mitochondrion*, 2020 Jan; 50:25-34. PMID: 31654753. **JIF- 4.53**

32) Anand SK & Mondal AC\*. Neuroanatomical distribution and functions of brain-derived neurotrophic factor in zebrafish (Danio rerio) brain. *Journal of Neuroscience Research*, 2020 May; 98(5):754-763. PMID: 31532010. **JIF- 4.43**

31) Kumar S, Srivastav S, Fatima M, Giri RS, Mandal B, Mondal AC\*. A Synthetic Pro-Drug Peptide Reverses Amyloid-β-induced Toxicity in the rat model of Alzheimer's disease. *Journal of Alzheimer's Disease*, 2019 Apr; 69(2):499-512. PMID: 30958369. **JIF- 4.16**

30) Fatima M, Srivastav S, Ahmad MH, Mondal AC\*. Effects of chronic unpredictable mild stress induced prenatal stress on neurodevelopment of neonates: Role of GSK-3β. *Scientific Reports (Nature Publishing Group)* 2019 Feb; 9 (1):1305 doi: 10.1038/s41598-018-38085-2. [Epub 2019, Feb 4]. PMID: 30718708. **JIF- 5.13**

29) Ahmad MH, Fatima M, Mondal AC\*. Role of Hypothalamic-Pituitary-Adrenal Axis, Hypothalamic-Pituitary-Gonadal Axis and Insulin Signaling in the Pathophysiology of Alzheimer's disease. *Neuropsychobiology*, 2019 Apr; 77(4):197-205. PMID: 30605907. **JIF-12.32**

28) Ahmad MH, Fatima M, Mondal AC\*. Influence of microglia and astrocyte activation in the neuroinflammatory pathogenesis of Alzheimer's disease: Rational insights for the therapeutic approaches. *Journal of Clinical Neuroscience*, 2019 Jan; 59:6-11. PMID: 30385170. **JIF- 2.11**

27) Mondal AC\* Fatima M. Direct and indirect evidence of BDNF and NGF as key modulators in depression: Role of antidepressants treatment. *International Journal of Neuroscience*, 2019 Mar; 129(3):283-296. PMID: 30235967. **JIF- 2.59**

26) Srivastav S, Fatima M, **Mondal AC\***. *Bacopa monnieri* attenuates paraquat induced toxicity in *Drosophila* by inhibiting apoptosis through improved mitochondrial function and redox stabilization. *Neurochemistry International*, 2018 Dec; 121:98-107. PMID: 30296463. **JIF- 4.29**

25) Ahmad MH, Fatima M, Hossain M, **Mondal AC\***. Determination of potential oxidative damage, hepatotoxicity and cyto-genotoxicity in male Wistar rats: Role of indomethacin. *Journal of Biochemical & Molecular Toxicology*, 2018 Dec; 32(12): e22226. PMID: 30252991. **JIF- 3.65**

24) Ahmad MH, Fatima M, Hossain M, **Mondal AC\***. Evaluation of naproxen-induced oxidative stress, hepatotoxicity and *in-vivo* genotoxicity in male Wistar rats. *Journal of Pharmaceutical Analysis*, 2018 Dec; 8(6):400-406. PMID: 30595947. **JIF-14.06**

23) Anand SK, **Mondal AC\***. TrkB receptor antagonism inhibits stab injury induced proliferative response in adult zebrafish (*Danio rerio*) brain. *Neuroscience Letters*, 2018 Apr 13; 672:28-33. PMID: 29471003. **JIF- 3.19**

22) Anand SK, **Mondal AC\***. Cellular and molecular attributes of neuronal stem cell niches in adult zebrafish brain. *Developmental Neurobiology*, 2017 Oct; 77(10):1188-1205. PMID: 28589616. **JIF- 3.10**

21) Srivastav S., Fatima M, **Mondal AC\***. Important medicinal herbs in Parkinson's disease pharmacotherapy. *Biomedicine and Pharmacotherapy*, 2017 Aug; 92:856-863. PMID: 28599249. **JIF- 7.41**

20) Fatima M, Srivastav S, **Mondal AC\***. Prenatal stress and depression associated neuronal development in neonates. *International Journal of Developmental Neuroscience*, 2017 Aug; 60:1-7. PMID: 28389369. **JIF- 2.54**

19) Kumar S., Paul A, Kalita S, Kumar A, Srivastav S, Hazra S, Ghosh AK, Mandal B, **Mondal AC\***. A Peptide Based Pro-Drug Ameliorates Amyloid- $\beta$  Induced Neuronal Apoptosis in *in vitro* SH-SY5Y cells. *Current Alzheimer Research*, 2017 Jul; 14 (12) 1293-1304. PMID: 28714389. **JIF-3.04**

18) Paul A, Kumar S, Kalita S, Ghosh AK, **Mondal AC**, Mandal B. A Peptide Based Pro-Drug Disrupts Alzheimer's Amyloid into Non-Toxic Species and Reduces A $\beta$  Induced Toxicity *in vitro*, *International Journal of Peptide Research and Therapeutics*, 2018 Jan; 24(1):201-211. **JIF- 2.19**

17) Hazra S, Kumar S, Saha GK, **Mondal AC\***. Reversion of BDNF, Akt and CREB in Hippocampus of Chronic Unpredictable Stress Induced Rats: Effects of Phytochemical, *Bacopa Monnieri*. *Psychiatry Investigation*, 2017 Jan; 14(1):74-80. PMID: 28096878. **JIF- 3.20**

16) Kumar S, Paul A, Kalita S, Ghosh AK, Mandal B and **Mondal AC\***. Protective effects of  $\beta$ -sheet breaker  $\alpha/\beta$  hybrid peptide against amyloid  $\beta$ -induced neuronal apoptosis *in vitro*.

**Chemical Biology and Drug Design**, 2017 Jun; 89(6):888-900. PMID: 27995757. **JIF- 2.81**

15) Kumar S. and **Mondal AC\***. Neuroprotective, Neurotrophic and Anti-oxidative Role of *Bacopa monnieri* on CUS Induced Model of Depression in Rat. **Neurochemical Research**, 2016 Nov; 41(11):3083-3094. PMID: 27506204. **JIF- 4.41**

14) Banerjee R, Hazra S, Kumar S, Ghosh AK, **Mondal AC\***. Chronic administration of bacopa monniera increases BDNF protein and mRNA expressions: a study in chronic unpredictable stress induced animal model of depression. **Psychiatry Investigation**, 2014 Jul; 11(3):297-306. PMID: 25110503, **JIF- 3.20**

13) Banerjee R, Ghosh AK, Ghosh B, Bhattacharya S, **Mondal AC\***. Decreased mRNA and Protein Expression of BDNF, NGF, and their Receptors in the Hippocampus from Suicide: An Analysis in Human Postmortem Brain. **Clinical Medicine Insights Pathology**, 2013 Aug 26; 6:1-11, doi:10.4137/CMPATH.S12530. PMID: 24031163, eCollection 2013.

**Papers published from post-doctoral research:**

12) Ren X, Dwivedi Y, **Mondal AC**, Pandey GN. Cyclic-AMP response element binding protein (CREB) in the neutrophils of depressed patients: **Psychiatry Research**, 2011 Jan 30; 185(1-2):108-12. PMID: 20494459. **JIF- 11.22**

11) Dwivedi Y, Rizavi HS, Zhang H, **Mondal AC**, Roberts RC, Conley RR, Pandey GN. Neurotrophin receptor activation and expression in human post-mortem brain: effect of suicide: **Biological Psychiatry**, 2009 Feb 15; 65(4):319-28. PMID: 18930453, **JIF- 12.81**

10) Dwivedi Y, Rizavi HS, Teppen T, Zhang H, **Mondal AC**, Roberts RC, Conley RR, Pandey GN. Lower Phosphoinositide 3-Kinase (PI 3-kinase) Activity and Differential Expression Levels of Selective Catalytic and Regulatory PI 3-Kinase Subunit Isoforms in Prefrontal Cortex and Hippocampus of Suicide Subjects. **Neuropsychopharmacology**, 2008; 33:2324-2340. **[NPG] JIF- 8.20**

9) Dwivedi Y, **Mondal AC**, Rizavi HS, Faludi G, Palkovits M, Sarosi A, Conley RR, Pandey GN. Differential and brain region-specific regulation of Rap-1 and Epac in depressed suicide victims. **Arch Gen Psychiatry**, 2006 Jun; 63(6):639-48. PMID: 16754837, **JIF- 25.91** [After 2013 new name of the journal is **Jama Psychiatry**]

8) Dwivedi, Y. **Mondal, AC**. Rizavi, HS. and Pandey GN: Suicide brain is associated with decreased expression of neurotrophins: **Biological Psychiatry**, 2005 Aug; 58 (4):315-324. PMID: 15939410, **JIF- 12.81**

7) Pandey, GN. Dwivedi, Y. Ren, X. Rizavi, HS. **Mondal, A.** Shukla, PK, Conley RR. Brain region specific alterations in the protein and mRNA levels of protein kinase A subunits in the post-mortem brain of teenage suicide victims. **Neuropsychopharmacology**, 2005 Aug; 30(8):1548-1556. PMID: 15920506 **JIF- 8.20**

6) Dwivedi, Y. **Mondal, AC.** Shukla, PK. Rizavi, HS. Payappagoudar, G. and Pandey GN: Differential regulation of serotonin (5HT) 2A receptor mRNA and protein levels after single and repeated stress in rat brain: role in learned helplessness behavior. ***Neuropharmacology***, 2005 Feb; 48(2):204-214. PMID: 15695159, **JIF-5.27**

5) Dwivedi, Y. **Mondal, AC.** Shukla, PK. Rizavi, HS. Prakasam, S. and Pandey GN: Single and repeated stress-induced modulation of phospholipase C catalytic activity and expression: role in LH behavior. ***Neuropsychopharmacology***, 2005 March; 30(3):473-483, PMID: 15536495, **[NPG]. JIF- 8.20**

4) Dwivedi, Y. **Mondal, AC.** Shukla, PK. Rizavi, HS. Lyons J. Altered protein kinase A in brain of learned helpless rats: effects of acute and repeated stress. ***Biological Psychiatry***, 2004 Jul; 56(1):30-40. PMID: 15219470, **JIF-12.81**

#### **Papers published from doctoral research:**

3) Ghosh, MC. **Mondal, AC.** Basu, S. Banerjee, S. Majumder, J. Bhattacharya, D. Dasgupta, PS. Dopamine inhibits cytokine release and expression of tyrosine kinases, Lck and Fyn in activated T cells. (*Authors 1 & 2 have equal contribution*) ***International Immunopharmacology*** 2003 Jul; 3 (7):1019-1026. PMID: 12810359, **JIF- 5.71**

2) Saha, B. **Mondal, AC.** Basu, S. Dasgupta, PS. Circulating dopamine level, in lung carcinoma patients, inhibits proliferation and cytotoxicity of CD4+ and CD8+ T-cells by D1 dopamine receptors: an in vitro analysis. ***International Immunopharmacology*** 2001 Jul; 1 (7):1363-1374. PMID: 11460316, **JIF- 5.71**

1) Saha, B. **Mondal, AC.** Majumder, J. Basu, S. Dasgupta, PS. Physiological concentrations of dopamine inhibit proliferation and cytotoxicity of human CD4+ and CD8+ T cells in vitro: a receptor-mediated mechanism. ***Neuroimmunomodulation*** 2001; 9 (1):23-33. PMID: 11435749, **JIF- 2.79**

#### **Total Citations 3652, h-index-36, i10-index-57**

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#### **Published Book**

1. *Role of Plasma DA in Chronic Anxiety & Depression* Published by LAP LAMBERT Academic Publishing GmbH & Co. KG Heinrich-Böcking-Str. 6-8 66121, Saarbrücken, Germany ISBN-13: 978-3-659-15335-8; ISBN-10: 3659153354; Date of online publication: 11-06-2012. <https://www.lap-publishing.com/.../role-of-plasma-da-in-chronic-anxiety...>

2. *Role of miRNA in Major Depressive Disorder* in the e-book entitled Major Depressive Disorder Published by **Avid Science**, Borsigstr. 9, 10115 Berlin, Germany. 2017

3. Srivastav S, Fatima M, Ahmad MH, and **Mondal AC\***. Impact of CRISPR based gene editing in Environmental Biotechnology, Chapter 11; Page No. 131-142 in the book titled “**Emerging Trends in Environmental Biotechnology**” edited by S. Mondal, S. P. Singh and Y. K. Lahir. eBook ISBN9781003186304. The book is published on 04<sup>th</sup> July 2022 by **CRC Press, Taylor & Francis Group, USA**. <https://doi.org/10.1201/9781003186304>

4. Ahmad MH, Rizvi MA, Fatima M, and **Mondal AC\***. Impact of NGF signaling on neuroplasticity during depression: Insights in neuroplasticity-dependent therapeutic approaches, Chapter 31, Page No.341-350 in the book titled “**The Neuroscience of Depression: Genetics, Cell Biology, Neurology, Behavior and Diet**” Paperback ISBN No. 978-0-12-817935-2, Editors: Colin Martin, Lan-Anh Hunter, Vinod Patel, Kings College London, Stamford Street, London SE1 9NU, UK. The book published on 27<sup>th</sup> March, 2021 by **Academic Press**, an imprint of Elsevier.

5. Subba R, Ahmad MH, and **Mondal AC\***. Modelling prenatal stress in rats: impact on the hippocampus, Chapter 44 in the book titled “**Handbook of Animal Models in Neurological Disease**” Editors: Colin Martin, Vinod Patel & V R Preddy, Kings College London, Stamford Street, London SE1 9NU, UK. ISBN 978-0-323-89833-1. **Academic Press**, an imprint of Elsevier. (Nov, 2022).

6. Kujur PP, Sahu MR, and **Mondal AC\***. Depression in Parkinson’s Disease: A Trajectory Linking Gut Microbiota and Neuroinflammation. Chapter-13; Page No. 323-355 In the book titled “**PsychoNeuroimmunology**” Volume 2: Interdisciplinary Approaches to Diseases Editors: Niloufar Yazdanpanah & Nima Rezaei, The book was published by Integrated Science Book Series on 10<sup>th</sup> Jan, 2025, **Springer Nature**. ISBN 978-3-031-72078-9. <https://doi.org/10.1007/978-3-031-72079-6>

## Referred Papers Published in Conference Proceedings

80) **A.C. Mondal** delivered an invited talk as resource person entitled “Brain ageing and it’s impact on neurodegenerative diseases” at UGC MMTTC, Sant Gadge Baba Amravati University, Maharashtra, India on 24th Nov, 2025.

79) **A.C. Mondal** delivered an invited talk as resource person entitled “Neurobiology of Parkinson’s disease and its therapeutic perspectives” at UGC Refresher course in Biology & Biotechnology MMTTC, JNU, New Delhi, India on 20th Nov, 2025.

78) **A.C. Mondal** presented an invited talk entitled “MST1 Selective Inhibitor Xmu-mp-1 Ameliorates Sporadic Alzheimer’s Disease in a Rat Model by Modulating Hippo-Wnt Signaling Crosstalk” at PHYSICON-2025, AIIMS, Bhubaneswar, Odissa, India on 21st Nov, 2025.

77) **A.C. Mondal** presented an invited talk entitled “Understanding Alzheimer’s disease from a therapeutic perspective” at international conference on ‘Recent Advances In Neurochemistry and Neurological Disorders’ organized by Department of Pharmaceutical Sciences, Mohanlal Sukhadia University, Udaipur, Rajasthan, India on 08th Nov, 2025.

76) **A.C. Mondal** presented an invited talk entitled “Neuropharmacological interventions in Alzheimer’s disease: Molecular insights into the pathophysiology” at IBRO-APRC School on ‘Neuro-Pharmaco-Behavioural Studies Using Cell-Culture And Acute As Well As Chronic Animal Models’ organized by AINN, Amity University, Noida on 06th Nov, 2025.

75) **A.C. Mondal** presented a talk entitled “Current therapeutic landscape for neurodegenerative diseases” at international conference SBVB-2025 organized by Sharda University, Greater Noida on 11th July, 2025.

74) **A.C. Mondal** presented a talk entitled “Role of Hippo Signaling inhibitor Xmu-mp-1 in a rat model of sporadic Alzheimer’s disease”. at SAGE University, Indore on 28<sup>th</sup> March, 2025. **(Awarded travel grants from the organizer).**

73) **A.C. Mondal** presented a talk entitled “Unravelling molecular mechanisms in neurodegenerative diseases and therapeutic approaches” at School of Life Sciences, JNU, on 23<sup>rd</sup> October, 2024.

72) **A.C. Mondal** presented a plenary talk entitled “Pharmacological therapies on Alzheimer’s disease” at international conference organized by Kalasalingam University, 3<sup>rd</sup> August, 2024 at Krishnankoil, Tamilnadu. **(Awarded travel grants from the organizer).**

71) Rhea Subba & **A.C. Mondal** presented “Hyperglycemic zebrafish exposed to chronic unpredictable mild stress display oxidative damage in the brain: mitigation by chlorogenic acid” SiNAPSA Neuroscience Conference 2023 (SNC’23) held in Ljubljana, Slovenia from Sept 28th-30th, 2023. Slovenia. **(Awarded Int. travel grants from SNC’2023).**

70) **A.C. Mondal** presented an invited talk entitled “Investigations into the therapeutic potential of phytochemicals (Vanillin & Naringenin) in cellular and animal models of Parkinson’s disease” at a meeting jointly organized by Dr. Reddy’s Lab & Ignite Life Science Foundation on 4-5<sup>th</sup> July, 2023 at Hyderabad. **(Awarded travel grants from the organizer).**

69) Manas R. Sahu & **A.C. Mondal** presented “Treatment with novel Hippo Signaling inhibitor, Xmu-mp-1, ameliorates cognitive impairments in sporadic Alzheimer’s disease” in the XL annual meeting of Indian Academy of Neuroscience (IAN) on December 8-10, 2022. **(Awarded travel grants from IAN).**

68) Manas R. Sahu & **A.C. Mondal** presented “Neuroprotective role of Hippo Signaling inhibitor, Xmu-mp-1, in a cellular model of Alzheimer’s Disease” in the Southeastern Neurodegenerative Disease Conference at Bonita Springs, Florida, United States virtually on September 28-30, 2022. **(Awarded Int. travel grants from SENDCon).**

67) Rhea Subba & **A.C. Mondal** presented “The involvement of NRF2 in the brain of hyperglycemic zebrafish exposed to chronic unpredictable stress.” in 10th International Congress of Neuroendocrinology on 7<sup>th</sup>-10th August, 2022 at the Scottish Events Campus, Glasgow, Scotland. **(Awarded Int. travel grants from SERB-DST, GOI).**

66) Mir Hilal Ahmad & **A.C. Mondal** presented “Naringenin modulates paraquat-induced oxidative stress and mitochondrial dysfunction in a cellular model of Parkinson’s disease (SH-SY5Y cells)” in FENS Forum held on July 9-13, 2022 at Paris, France. **(Awarded Int. travel grants from SERB-DST, GOI).**

65) Linchi Rani & **A.C. Mondal** presented “Neurobehavioral assessment of Vanillin in MPTP-induced mouse model of Parkinson’s disease” in FENS Forum held on July 9-13, 2022 at Paris, France. **(Awarded FENS/ IBRO-PERC Int. travel grants from FENS forum-2022).**

64) Sushma Kumari & **A.C. Mondal** presented “Effect of Bacopa monnieri on amyloid-beta induced Alzheimer’s disease-like pathological changes” in FENS Forum held on July 9-13, 2022 at Paris, France. **(Awarded FENS/ IBRO-PERC Int. travel grants from FENS forum-2022).**

63) Rhea Subba & **A.C. Mondal** presented “The consequences of concurrent stress and hyperglycemia on redox homeostasis in the adult zebrafish brain” in FENS Forum held on July 9-13, 2022 at Paris, France. **(Awarded FENS/ IBRO-PERC Int. travel grants from FENS forum-2022).**

62) **A.C. Mondal** presented **Prof. A. K. Mukherjee Memorial Oration** on “Cellular & animal models of Parkinson’s disease: Rational into neuroprotective effect of Naringenin” in XXXII Annual conference of PSI held on March 14-16, 2022 at Berhampore Girl’s College, Berhampore, West Bengal. Abstract page No-06

61) Rhea Subba & **A.C. Mondal** presented “Simultaneous stress and D-glucose treatment causes hyperglycemia and induces oxidative stress in adult zebrafish brain” in 3rd Italian Zebrafish Meeting held on February 9-11, 2022 in the University of Naples Federico II, Naples, Italy.

60) **A.C. Mondal** presented an invited talk through webinar entitled “A Synthetic Pro-Drug Peptide Reverses Amyloid- $\beta$ -Induced Toxicity in the cellular and Rat Model of Alzheimer’s Disease” at 4<sup>th</sup> Int. New York Science Congress on 16<sup>th</sup> Jan, 2022. Abstract book proceedings (ISBN 978-605-71167-2-7) page No. 104.

59) **A.C. Mondal** presented an invited talk through webinar entitled “Neurobiology of Parkinson’s disease” at UGC-HRDC organized by Dept. of Physiology, University of Calcutta on 14<sup>th</sup> Jan, 2022.

58) **A.C. Mondal** presented an invited talk through webinar entitled “Naringenin alleviates paraquat-induced dopaminergic neuronal loss in SH-SY5Y cells and a rat model of Parkinson’s disease” at 7<sup>th</sup> Int. Istanbul Scientific Research Congress, Istanbul, on 19<sup>th</sup> Dec, 2021. IISRC Book Proceedings (ISBN: 978-605-71167-1-0) Page No-64

57) **A.C. Mondal** presented an invited talk through webinar entitled “Molecular mechanisms of Parkinson’s disease and its model systems: Naringenin a new therapeutic lead” at Ramthakur College, Agartala, on 27<sup>th</sup> Nov, 2021.

56) **A.C. Mondal** presented an invited talk on “Parkinson’s disease, experimental models and new therapeutic approaches” at Amity University, Noida on 28<sup>th</sup> Sept, 2021

for **IBRO-APRC Associate School** on Advances in Neurodegenerative disorders and Therapeutics from 27<sup>th</sup> September to 01<sup>st</sup> Oct, 2021.

55) **A.C. Mondal** presented an invited talk via webinar entitled “Parkinson’s disease, experimental models and therapeutic approaches” at Ascension St. Mary’s Department of Neuroscience, Field Neuroscience Institute, Saginaw, Michigan-USA on 08<sup>th</sup> July, 2021.

54) **A.C. Mondal** presented an invited talk via a webinar entitled “Neurobiology of Parkinson’s disease, experimental models and therapeutic approaches” at Bhairab Ganguly College, Belghoria, Kolkata on 26<sup>th</sup> June, 2021.

53) **A.C. Mondal** presented an invited talk entitled “Neuroprotective role of a synthetic peptide targeting Alzheimer’s disease” at AIIMS, New Delhi on 19<sup>th</sup> Nov, 2019 for XXVIII IAN meeting

52) S.K. Anand and **A.C. Mondal** presented a paper entitled "The cellular and molecular attributes of adult neurogenesis and brain regeneration in zebrafish (Danio rerio)" at SFN, Chicago, IL, USA from 19th to 23rd of October, 2019. (**Awarded Int. travel grants from SERB**).

51) **A.C. Mondal** presented an invited talk on “Parkinson’s disease, its different experimental models, and current therapeutic approaches” at ISLS-BHU, Varanasi on 12<sup>th</sup> Sept, 2019 for IBRO-APRC Neuroscience School on Molecular Basis of Neuroinflammation Mediated Neurodegeneration from September 01-14, 2019.

50) S.K. Anand and **A.C. Mondal** presented a paper entitled "Adult neurogenesis and brain regeneration in zebrafish (Danio rerio)" at 2019 World Neuroscience and Psychiatry Conference on 11th Sept, 2019 at Singapore. (**Awarded Int. travel grants from WNPC**).

49) **A.C. Mondal** presented an invited talk entitled “Basics of Parkinson’s disease and modern therapeutic approaches” at DIPSAR, Pusph Vihar, New Delhi on 12<sup>th</sup> March, 2019 for AICTE approved XXVIII QIP on “Recent Advances in Pharmaceutical Sciences”.

48) M.H. Ahmad and **A. C. Mondal** presented a paper at International Conference on Advances in Zoological Research entitled “Neuroprotective role of naringenin in substantia nigra and striatum in paraquat induced rat model of parkinsonism” on 9-10 March, 2019 at AMU, Aligarh (U.P.). Page No. 162 (Abstract)

47) **S. K. Anand** and A.C. Mondal presented a paper entitled "BDNF/TrkB system mediates the reparative brain regeneration in zebrafish (Danio rerio)" at EMBO Conference on Molecular neuroscience on 04<sup>th</sup> to 7<sup>th</sup> Feb, 2019 organized by NCBS, Bangalore.

46) **A.C. Mondal** presented an invited talk entitled “Parkinson’s disease and therapeutic approaches” at BIT, Mesra, Ranchi on 16<sup>th</sup> Jan, 2019.on AICTE approved QIP on the topic “Cutting Edge & Emerging Technologies in Pharmaceutical Education and Research”.

45) **S. K. Anand** and A.C. Mondal presented a paper entitled "Involvement of BDNF in mediating the reparative regeneration in adult zebrafish (*Danio rerio*) brain" at 38th Annual Scientific Meeting of the Australasian Neuroscience Society", Brisbane, Queensland, Australia, organized by the Australasian Neuroscience Society (ANS) from 3rd to 6<sup>th</sup>, Dec, 2018. (**Awarded Int. travel grants from ANS**).

44) **A.C. Mondal** presented an invited talk entitled "Bacopa monnieri attenuates paraquat induced toxicity in *Drosophila* by inhibiting apoptosis through redox stabilization and improved mitochondrial function" at PHYSIOCON-2018 Conference at Serampore College, on 22-24<sup>th</sup> Nov, 2018. Page No. 67 (Abstract)

43) **A.C. Mondal** presented a paper entitled "Alzheimer's disease: Fundamental concepts and therapeutic outcomes of  $\beta$ - breaker peptide" at ICREB-2018 Int. Conference at GGU, Koni, Bilaspur (CG), on 29-30<sup>th</sup> Oct, 2018. Page No125 (Abstract)

42) **A.C. Mondal** presented an invited talk entitled "Prodrug peptide: A potential therapeutic agent for treatment of Alzheimer's disease at AIIMS, Rishikesh on 15<sup>th</sup> Oct, 2018.

41) **S. K. Anand** and A.C. Mondal presented a paper entitled "Involvement of BDNF/TrkB signaling in regulation the injury induced regeneration response in adult zebrafish (*Danio rerio*) brain" at 22<sup>nd</sup> Int. Conference on Neurology & Neurophysiology, Rome, Italy on 23-24 April, 2018. J. Neurol Neurophysiol. 2018, Volume-9, Page No. 74 (Abstract) (DOI: 10.4172/2155-9562-C2-065) (**Awarded Int. Travel grant & best poster to SKA**)

40) **S. K. Anand** and A.C. Mondal presented a paper entitled "TrkB receptor antagonism inhibits stab injury induced proliferative response in adult zebrafish (*Danio rerio*) brain" at Biosparks, SLS, JNU, New Delhi on 23-24 Feb, 2018. Page No. 22 (Abstract).

39) **A.C. Mondal** presented a paper entitled "A peptide based pro-drug ameliorates amyloid beta induced neuronal apoptosis in in vitro SH-SY5Y cell" at World Neurocongress-2017, organized by IBRC and IAN, Aligarh Muslim University, Aligarh on 09-10 Dec, 2017. Souvenir cum Abstract Book, Page No. 52 (Abstract).

38) **A.C. Mondal** presented a paper entitled "Neuroprotective and antioxidative effects of Bacopa monnieri on CUS induced model of depression in rat" at ICBAFM-2017: 2<sup>nd</sup> International Conference on Biotechnological advances in free radical biology and medicine-2017, organized by Dept. of Bioscience, Integral University, Lucknow on 23-25 Jan, 2017. Proceedings of ICBAFM-2017, Page No. 23 (Abstract).

37) **A.C. Mondal** presented a paper entitled "Cognitive enhancement and neuroprotective effects of Bacopa Monnieri in Alzheimer's disease model" at PHYSIOCON-2016: National Conference on Classical & Molecular approaches to life style management to environmental changes, organized by Dept. of Physiology, Midnapore College on 18-20 Nov, 2016. Proceedings of PHYSIOCON-2016, Page No. 60 (Abstract).

36) **A.C. Mondal** presented a paper entitled "Effects of  $\beta$ -sheet breaker  $\alpha/\beta$  peptide against amyloid  $\beta$ -induced neuronal apoptosis in human neuroblastoma cells SHSY5Y

cells" at IABMS-2016: National Conference on "Current Advances in Integrated Biomedicine for Healthcare, organized by Shobhit University, Meerut, (U.P.) on 3-6 Nov, 2016. Proceedings of IABMS-2016, Page No. 54 (Abstract). **[Dr. A. Namasivayam Awarded to A. C. Mondal]**

35) **A.C. Mondal** "Effects of chronic foot shocks on nerve growth factor content in rat brain" at Neurocon-2015: International Conference on "Development, Degeneration and Regeneration of Neurons: Neurochemistry to Clinical Neurology, Organized by CSIR-IICB, IPGME&R & ICARE Institute of Medical Science & Research on 7-10 Jan, 2015. P.19

34) S Kumar, S Hazra, **A.C. Mondal** "Resveratrol, a Phytoalexin has a Neuroprotective Role in Animal Model of Alzheimer Disease" Neurocon-2015 at International Conference on Neurodegenerative and Neurodevelopmental Disorders: Translational Aspects, Organized by CSIR-IICB, IPGME&R & ICARE Institute of Medical Science & Research on 7-10 Jan, 2015. P. 61

33) **A.C. Mondal** "Effects of chronic multiple stress on learning and memory and the expression of Fyn, BDNF, TrkB in the hippocampus of rats" on PHYSICON-2014 at Berhampore Girls College on 19-21 December, 2014. P.20

32) S Kumar, S Hazra, **A.C. Mondal** "Chronic Administration of Bacopa Monnieri Increases Expression Level of TrkB, Erk1/2, p-Erk ½ and Ameliorates Depression Like Behavior of Rats" on PHYSICON-2014 at Berhampore Girls College on 19-21 December, 2014. P. 85

31) **A.C. Mondal** "A study on evaluation of anxiolytic-antidepressant activity of Bramhi: CUS induced animal model of depression" on International Seminar on Molecular Biology and its applications at Jadavpur University, Kolkata on 14th & 15th February, 2014. P. 27

30) S Kumar, R Banerjee, S Hazra, **A.C. Mondal** "Neurotrophins: the positive regulator of Alzheimer's Disease" on International Seminar on Molecular Biology and its applications at Jadavpur University, Kolkata on 14th & 15th February, 2014. P. 57

29) **A.C. Mondal** "Brain-derived neurotrophic factor and tyrosine kinase B receptor signaling in post-mortem brain of teenage suicide victims" on Kolkata Neuroscience Conference Organized by CSIR-IICB, IPGMER & Manovikas Kendra on 31 Jan-01 Feb, 2014. P. 22

28) S Kumar, R Banerjee, S Hazra, **A.C. Mondal** "Influences of CMS on behavioral and neurotrophins levels in rat hippocampus" on Kolkata Neuroscience Conference Organized by CSIR-IICB, IPGMER & Manovikas Kendra on 31 Jan-01 Feb, 2014. P. 25

27) R. Banerjee, AK Ghosh, B Ghosh & **A.C. Mondal**: "Dysregulation of Neurotrophins mediated signaling milieu in the Hippocampus from Suicide: An Analysis in Human Postmortem Brain" on XX World Congress on Parkinson's Disease and related disorders, Organized by Kenes International, Switzerland held on 8-11 December, 2013, Geneva, Switzerland. **[Travel Grant awarded to R. Banerjee]**

26) **A.C. Mondal** "Chronic administration of BM increases BDNF protein and mRNA expressions: a study in CUS induced animal model of depression" on International Symposium on "Emerging Trends and Challenges in Neuroscience" organized by IAN at Allahabad held on 25-27 Oct, 2013. Annals of Neurosciences 20: (Suppl).2013, P.10

25) R. Banerjee, AK Ghosh, B Ghosh & **A.C. Mondal**: "Role of neurotrophins in pathophysiology of suicide" on International Symposium on "Emerging Trends and Challenges in Neuroscience" organized by IAN at Allahabad held on 25-27 Oct, 2013. Annals of Neurosciences 20: (Suppl).2013, P. 34 **[Awarded Tulsibai Somany prize for best paper]**

24) S. Hazra, R. Banerjee, S. Kumar & **A.C. Mondal**: "Bacopa Monniera treatment reverses CUS induced depressive like behavior by increasing expression of neurotrophins in rat brain" on International Symposium on "Emerging Trends and Challenges in Neuroscience" organized by IAN at Allahabad held on 25-27 Oct, 2013. Annals of Neurosciences 20: (Suppl).2013, P. 61

23) **A.C. Mondal** "Reduced Expression of Hippocampal BDNF, NGF and their Cognate Receptors in Postmortem Brain of Suicide Victims" on XXI World Congress of Neurology (WCN-2013) Organized by Kenes International, Switzerland at Vienna, Austria held on 21-26 Sept, 2013. Journal of the Neurological Sciences 333 (2013) e1–e64, Page No. e715 (Abstract) [doi:10.1016/j.jns.2013.07.2465](https://doi.org/10.1016/j.jns.2013.07.2465) **[Travel Grant awarded to Dr. A.C. Mondal]**

22) **A.C. Mondal**, R. Banerjee & S. Hazra: "Bacopa monniera reverses the effects of chronic unpredictable stress on behavior, the HPA axis, BDNF protein and mRNA expressions" on a National Seminar Organized by VURSA, VU, Midnapore, held on 19 Mar, 2013. P.34

21) R. Banerjee, S. Hazra & **A.C. Mondal**: "Neurochemical aspects of depression in postmortem brain of suicide victims". at Neurocon- 2013 International Conference on Neurodegenerative and Neurodevelopmental Disorders: Translational Aspects, Organized by IPGME&R, Kolkata, held on 17-20 Jan, 2013. P. 72

20) **A.C. Mondal**, R. Banerjee & S. Hazra: "Effects of *Bacopa monnieri* on chronic unpredictable stress-induced changes in Behavior and Brain BDNF in rats". at Neurocon- 2013 International Conference on Neurodegenerative and Neurodevelopmental Disorders: Translational Aspects, Organized by IPGME&R, Kolkata, held on 17-20 Jan, 2013. P.71

19) S. Hazra, R. Banerjee & **A.C. Mondal**: "Evaluation of Antidepressant activity of *Bacopa monnieri* in rat: A study in Animal Model of Depression" 100<sup>th</sup> Indian Science Congress Association Conference, organized jointly by ISCA & University of Calcutta, held on 03-07 Jan, 2013. Part-II, P. 265

18) R. Banerjee, S. Hazra & **A.C. Mondal**: "Effect of chronic inescapable foot shock and antidepressant treatment on BDNF/TrkB levels in rat Hippocampus." 100<sup>th</sup> Indian Science Congress Association Conference, organized jointly by ISCA & University of Calcutta, held on 03-07 Jan, 2013. Part-II, P. 264

17) **A.C. Mondal**, R. Banerjee & S. Hazra: "Reduced Expression Profile of Neurotrophins and their Cognitive Receptors in the Hippocampal Region of Postmortem Suicidal Brain" 100<sup>th</sup> Indian Science Congress Association Conference, organized jointly by ISCA & University of Calcutta, held on 03-07 Jan, 2013. Part-II, P.123

16) **A.C. Mondal**, R. Banerjee, A. K. Ghosh & B. Ghosh: "Effect of chronic inescapable footshocks and Antidepressant treatment on PI-3 kinase and MAP Kinase signaling in rat brain" in 23<sup>rd</sup> Annual National Conference of PSI- PHYSICON-2011, NRI Medical College, Guntur, (A.P.) held on 21-23 December, 2011, Proceedings of PHYSICON-2011, P.121 **[Awarded best Abstract presentation and received a certificate & cash prize]**

15) R. Banerjee, A. K. Ghosh, B. Ghosh & **A.C. Mondal**: "Impairment of ERK1/2 and PKC-delta mediated Signal Transduction in the Hippocampus in LH model of depression is sensitive to Chronic AD treatment" in UGC Sponsored National Level Seminar on exploration of biological processes through chemical sciences, N.D. College, Howrah held on 07-08 December, 2011, P. 34-35

14) **A.C. Mondal**, R. Banerjee, A. K. Ghosh & B. Ghosh: "Stress: The Negative Modulator of NGF" in UGC Sponsored National Level Seminar on exploration of biological processes through chemical sciences, N.D. College, Howrah held on 07-08 December, 2011, P. 33

13) **A.C. Mondal**, R. Banerjee & A. K. Ghosh: "Stress induced dysregulation of BDNF-TrkB signaling cascade in hippocampus of LH model of rats" in International Conference on Molecules to system Physiology: 100 Years Journey, Kolkata held on 21-23 Sept, 2011, P.78

12) R. Banerjee, **A.C. Mondal** & M. Das: "Effects of long-term stress recovery on behavioral, physiological and neurochemical aspects in male and female rats" in 18<sup>th</sup> West Bengal State Science and Technology Congress, organized jointly by WBSS&T & RKM Residential College Narendrapur, Kolkata held on 28 Feb - 01 March, 2011, P.175

11) R. Banerjee & **A.C. Mondal**: "Differential Gender Specific Vulnerability to Depression Induction in Learned Helpless model of rat" 98<sup>th</sup> Indian Science Congress Association, organized jointly by ISCA & SRM University Chennai, held on 03-07 Jan, 2011, Section III, P. 89

10) **A.C. Mondal** & R. Banerjee: "Single and repeated stress induced alteration of neurotrophins in rat brain: Role in learned helpless behavior" 98<sup>th</sup> Indian Science Congress Association Conference, organized jointly by ISCA & SRM University Chennai, held on 03-07 Jan, 2011. Part II, P.138

9) **A.C. Mondal**: "Effect of learned helplessness on plasma levels of monoamines in animal model of depression" An International Conference on Integrative Physiology: Modern perspective and platinum Jubilee Celebration of PSI, Organized by PSI, Science City, Kolkata, held on 12-14 Nov, 2009. P.290

8) **A.C. Mondal**: "Volume of Red blood cell to Pubescent Athletes: A comparative Study" to the UGC Sponsored State level Seminar on "Recent Trends in Sports Physiology" organised by the Department of Physiology, Bhairab Ganguly College, Belghoria, Kolkata-56 held on the 10<sup>th</sup> December, 2008. P. 52

7) **A.C. Mondal**: "Altered expression of PKC in learned helpless (LH) rats: A study in the behavioral model of depression". A State level UGC-Sponsored Seminar, organized by the Dept. of Physiology, RPMC, 16-17 Dec, 2005. Page No. 74-78 (full paper)

6) **A. C. Mondal**, H.S. Rizavi, P.K. Shukla, X. Ren, G.N. Pandey & Y. Dwivedi: Single and repeated stress differentially regulate protein kinase C in brain of learned helpless Rats. 34<sup>th</sup> Soc for Neuroscience meeting, San Diego, USA, Oct 23-27, 2004

5) P.K. Shukla, **A.C. Mondal**, H.S. Rizavi, G. Payappagoudar, S. Prakasam, G.N. Pandey, & Y. Dwivedi: Antidepressant effects on HPA-axis mediated changes in protein kinase A in rat brain. 34<sup>th</sup> Soc for Neuroscience meeting, San Diego, USA, Oct 23-27, 2004

4) Y. Dwivedi, H.S. Rizavi, **A.C. Mondal**, R.R. Conley & G.N. Pandey: Neurotrophic factors in postmortem brain of suicide victims. 34<sup>th</sup> Soc for Neuroscience meeting, San Diego, USA, Oct 23-27, 2004

3) Y. Dwivedi, H.S. Rizavi, **A.C. Mondal**, G.V. Payappagoudar, R.R. Conley & G.N. Pandey: Altered expression of RAP1 in postmortem brain of suicide victims. 43<sup>rd</sup> Annual Meeting of American College of Neuropsychopharmacology, Puerto Rico, USA, 29, Suppl. 179, 2004

2) Y. Dwivedi, **A.C. Mondal**, H. Rizavi, J. Lyons & G. N. Pandey: Effect of learned helplessness on catalytic activity and expression of Phospholipase C in rat brain. 33<sup>rd</sup> Soc. For Neuroscience, New Orleans, USA, Nov 8-12, 2003

1) **A.C. Mondal**, B. Saha, S. Banerjee & P.S. Dasgupta: "Dopamine an endogenous regulator of Acute Lymphocytic Leukemia (ALL)": 87<sup>th</sup> Indian Science Congress meeting from 3<sup>rd</sup> Jan to 7<sup>th</sup> Jan, 2000 at Pune University, India. Young Scientist Award Division, P. 56-57 [Selected for Young Scientist Award by ISC]

#### **Collaborators:**

1. IITG, IITD, IITK, IIITD, AIIMS Delhi
2. Aligarh Muslim University (AMU)
3. Jamia Millia Islamia (Delhi)
4. Bose Institute, Kolkata
5. Chittaranjan National Cancer Institute (CNCI) (Kolkata)
6. University of Naples Fedrico II, Italy

#### **Postdoctoral Project supervision**

1. Dr. Saurabh Srivastav, SERB-N-PDF  
Project Title: To study and elucidate common molecular cross talk between Parkin, p53 and JNK mediated apoptosis in both familial and sporadic Parkinson's disease using Drosophila model.  
Funding Agency: SERB
2. Dr. Mahino Fatima, SERB-N-PDF

Project Title: Effect of maternal chronic unpredictable mild stress (CUMS) on sonic hedgehog signaling, BDNF expression and DNA damage in the hippocampus and pre frontal cortex of neonatal and adult offspring.

Funding Agency: SERB

3. Dr. Mir Hilal Ahmad, ERPL Project, RA-I

Project Title: Assessment of therapeutic role of induced pluripotent stem cell (iPSC)-derived unmodified and engineered neural progenitor cells (NPCs), dopaminergic neurons transplanted in 6-OHDA and Paraquat rat model of Parkinson's disease.

Funding Agency: ERPL

#### **Ph.D. Thesis Supervised**

1. Ritabrata Banerjee- awarded Ph.D. degree on 2014 (Jadavpur University)  
Thesis Title: Evaluation of expression of Neurotrophins and their Receptors in rat brain: An analysis of the Molecular basis of Depression.  
**Current Position:** Assistant Professor in Zoology at Parimal Mitra Smriti Mahavidyalaya, Malbazar, Dist.-Jalpaiguri, West Bengal-735221.
2. Somoday Hazra- awarded Ph.D. degree on 2017 (Calcutta University)  
Thesis Title: Evaluation of *Bacopa monniera* on chronic unpredictable stress induced behavioral and molecular changes: a study in rat model of depression.  
**Current Position:** Research Scientist under Prof. York Winter at Institute of Biology, Cognitive Neurobiology, Humboldt-Universität zu Berlin, Berlin-10115, Germany.
3. Sourav Kumar- awarded Ph.D. degree in 2019 (Jadavpur University)  
Thesis Title: Arresting Pre fibrillar Aggregates of Alzheimer's amyloid by synthetic antibodies. **Current Position:** Post-doctoral fellow at Tel Aviv University, Tel Aviv, Israel.
4. Surendra Kumar Anand awarded Ph.D. degree in 2021 (Jawaharlal Nehru University)  
Thesis Title: Studies on Adult Neurogenesis and Brain Regeneration in zebrafish: Cell Proliferation in Telencephalon and its Molecular Mechanism. [Reg. No. 28524], [Ph.D. degree awarded on 30.09.2021]. **Current Position:** Post-doctoral fellow at Dept. of Pathology and Cell Biology, the University of South Florida, Tampa, FL, USA.
5. Dibyendu Ray awarded Ph.D. degree in 2022 (Calcutta University) Thesis Title: Amelioration by Nicotine induced testicular damage by Folic acid and vitamin B<sub>12</sub>. Reg No. 7551/Ph.D. (Sc.) Proceed/2014 dated 07.11.2014. **Current Position:** Assistant Professor in Human Physiology, Serampore College, Hooghly (W.B.)
6. Deshdeepak Ratna awarded Ph.D. degree in 2023 (Jawaharlal Nehru University)  
Thesis Title: Rapid Eye Movement sleep regulation in rats by modulation of ventral tegmental dopaminergic neurons [Reg. No. 23644] [Enrollment No. 15/30/ML/013]. [Ph.D. degree awarded in 2024]. **Current Position:** Post-doctoral fellow at University of Maryland, Baltimore, USA.
7. Sushma awarded Ph.D. degree in 2024 (Jawaharlal Nehru University). Thesis title: To study the role of *Bacopa monnieri* in blocking amyloid- $\beta$  induced pathophysiological changes in Alzheimer's disease. [Reg. No. 150099].

[Enrollment No. 17/30/ML/018] **Current Position:** Post-doctoral fellow at THSTI, Faridabad, Haryana, India.

8. Manas Ranjan Sahu awarded Ph.D. degree in 2024 (Jawaharlal Nehru University) Thesis Title: Role of RASSF/MST-mediated Hippo signaling pathway in the pathogenesis of Alzheimer's disease. [Reg. No. 72140. [Enrollment No. 18/30/ML/023] **Current Position:** Post-doctoral fellow at University of Ohio, Columbus, OH, USA.
9. Linchi Rani awarded Ph.D. degree in 2024 (Jawaharlal Nehru University). Thesis Title: To explore the role of Vanillin in intervening pathophysiology related to Parkinson's disease [Reg. No. 150366. [Enrollment No. 17/30/ML/018]
10. Mir Hilal Ahmad awarded Ph.D. degree in 2024 (Jamia Millia Islamia University) Thesis Title: Assessment of neuroprotective potential of Naringenin and its associated mechanisms in human neuroblastoma cells and a rat model of Parkinson's disease. [Reg. No. 00330026 dated 14.02.2019].
11. Rhea Subba awarded Ph.D. degree in 2024 (Jawaharlal Nehru University) Thesis Title: "Role of NRF2/KEAP1 system in concurrent hyperglycemia and chronic stress model in zebrafish. [Reg. No. 70521. [Enrollment No. 18/30/ML/018]

**Current Ph.D. Students**

1. Mr. Punit Prasanna Kujur, 2023-2028
2. Mr. Surendra Ellappan 2024-2029
3. Ms. Sehar Usman 2024-2029
4. Ms. Sana Naz 2025-2030
5. Ms. Rama Prasad 2025-2030
6. Mr. Mohd. Shariq 2025-2030

**M.Sc. Project and Summer/Winter trainee dissertation**

1. Ms. Anamika Singh-2017, Patna University
2. Mr. Manvendra Nandan-2017, SLS, JNU
3. Ms. Rhea Subba-2017, SLS, JNU
4. Ms. Aditi Thakur -2018, Amity University
5. Mr. Divyam Singh- 2018, Amity University
6. Mr. Sandeep 2018- SLS, JNU
7. Md. Abu Nasar, 2019 (Biochemistry, Jamia Millia Islamia),
8. Anjali, 2019 (Biochemistry, Jamia Millia Islamia),
9. Surbhi Mishra 2019 (Biochemistry, Jamia Millia Islamia),
10. Surbhi Bihani, 2019 (IIT-Roorkee),
11. Roshni Sherpa, 2021 SLS, JNU
12. Payavulla Ragini, 2022 SLS, JNU
13. Priyanka Biswal, 2023 SLS, JNU
14. Palak Gupta, 2024 SLS, JNU
15. Rubi 2024 SLS, JNU
16. Sunidhi Bisht, 2025 SLS, JNU
17. Deeksha Mathur, 2026 SLS, JNU

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