

CURRICULUM VITAE

ABHIJIT DAS PhD

Assistant Professor

Department of Bioscience and Biotechnology, Life Science Building,
Indian Institute of Technology Kharagpur

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ACADEMIC AND RESEARCH EXPERIENCE

Current position:

- **Assistant Professor** (Since Feb 2017)
Department of Bioscience and Biotechnology
Indian Institute of Technology Kharagpur, Kharagpur, India

Past position:

- **Post-doctoral Researcher** (Jan 2012 – Feb 2017)
The Wellcome Trust/Cancer Research UK Gurdon Institute, Cambridge University,
Cambridge, United Kingdom
- **Post-doctoral Fellow** (Aug 2010 – Jan 2012)
National Center for Biological Science (NCBS)
Bangalore, India.

ACADEMIC BACKGROUND

- **PhD** from National Centre for Biological Sciences (NCBS-TIFR), Bangalore, India (2005-2012).
Thesis supervisors: Late Prof. Veronica Rodrigues and Prof. K. VijayRaghavan
 - **MSc** in Zoology from Department of Zoology, Banaras Hindu University, Varanasi, India (2003-2005).
Specialization in Molecular, Applied and Clinical Genetics
 - **BSc** (with honours in Zoology) from Vivekananda Mahavidyalaya, The University of Burdwan, India (2000-2003)
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RESEARCH INTERESTS

- Transcriptional and epigenetic network regulating long-term memory
- Chromatin state alterations linked with long-term memory formation
- Mechanisms regulating memory retention and its extinction
- Spontaneous neuronal activity regulated pathways in the origin of Autism Spectrum Disorder
- Understanding Alzheimer's disease and its link with chromatin modification
- Glial contribution in *Drosophila* olfactory perception and memory formation/retention
- Social behavior in flies
- Trans-generational epigenetic inheritance (TEI) of memory

RESEARCH GRANTS

As Principal Investigator (PI)

- Spontaneous neuronal activity induced transcriptional regulation mediated by Mef2 in the origin of Autism Spectrum Disorder. Department of Biotechnology (DBT), Govt of India. Oct. 2024 – Oct 2027
- Deciphering the link between altered developmental Spontaneous Neuronal Activity and origin of Autism Spectrum Disorders. West Bengal Department of Science and Technology and Biotechnology (WB-DSTBT): April 2024 – April 2027
- Investigating the role of bivalent chromatin and immediate-early genes in long-term memory formation. Science and Engineering Research Board (SERB), GoI. Nov 2018 – Mar 2022
- Transcriptional and Chromatin Signature of Long-term Memory in Drosophila. Department of Biotechnology (DBT). GoI. May, 2018 - Nov, 2022
- Role of Astrocyte Glia and Chromatin modifications in long-term Memory and Alzheimers Disease. MHRD, IIT Kharagpur. Dec 2017 – Mar 2021

As Co-Principal Investigator (Co-PI)

- In vitro and in Vivo Investigation of the Role of Intrinsically Disordered Regions in the Regulation of HOX Transcription Factor Function. Science and Engineering Research Board (SERB). PI: Soumya De, BSBT, IIT Kharagpur. March 2021 – March 2023
- Regulation of activity dependent synaptic plasticity by Ube3a: Implication in autism spectrum disorders. Department of Biotechnology (DBT), GoI. PI: Nihar Ranjan Jana, BSBT, IIT Kharagpur. Feb, 2020 – Jan 2023

RESEARCH PUBLICATIONS

Book Chapters:

- Papiya Mandal, Subhajit Sarkar and **Abhijit Das**. Epigenetic Regulation of Neurological Disorders (2023). In Boosani C. and Goswami R. (Eds.) *Epigenetics in Organ Specific Disorders*. Elsevier.

Journal articles:

1. Ghosh, S., Mandal, S., Das, A., Shukla, P. C. & Das, S. Probing Shear-Induced Endothelial Activation in Vascular Conditions Using On-Chip Models. *ACS Biomater. Sci. Eng.* (2025) doi:10.1021/acsbiomaterials.4c02164.
2. Roy, P. K. *et al.* PSMC2 promotes resistance against temozolomide in glioblastoma via suppressing JNK-mediated autophagic cell death. *Biochem. Pharmacol.* **233**, 116755 (2025).
3. Parveen, N., Mondal, P., Vanapalli, K. R., Das, A. & Goel, S. Phytotoxicity of trihalomethanes and trichloroacetic acid on *Vigna radiata* and *Allium cepa* plant models. *Environ. Sci. Pollut. Res. Int.* **31**, 5100–5115 (2024).
4. Bisht, A. *et al.* Prefoldin 5 is a microtubule-associated protein that suppresses Tau-aggregation and neurotoxicity. 1–39 (2024) doi:10.7554/eLife.104691.1.
5. Dey, S. *et al.* Paradigms for Behavioral Assessment in Drosophila Model of Autism Spectrum Disorder. *J. Vis. Exp.* 1–23 (2024) doi:10.3791/66649.
6. Sarkar, S. & Das, A. Drosophila olfaction as a model system for studying human neurological disorders. *J. Biosci.* **48**, (2023).
7. Das, A. *et al.* Neuroblast lineage-specific origin of the neurons of the Drosophila larval olfactory system. *Dev. Biol.* **373**, 322–37 (2013).

8. Das, A. *et al.* Identification and analysis of a glutamatergic local interneuron lineage in the adult *Drosophila* olfactory system. *Neural Syst. Circuits* **1**, 4 (2011).
 9. Larkin, A. *et al.* Central synaptic mechanisms underlie short-term olfactory habituation in *Drosophila* larvae. *Learn. Mem.* **17**, 645–653 (2010).
 10. Das, A., Reichert, H. & Rodrigues, V. Notch regulates the generation of diverse cell types from the lateral lineage of *Drosophila* antennal lobe. *J. Neurogenet.* **24**, 42–53 (2010).
 11. Das, A. *et al.* *Drosophila* olfactory local interneurons and projection neurons derive from a common neuroblast lineage specified by the empty spiracles gene. *Neural Dev.* **3**, 33 (2008).
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COURSES / WORKSHOPS / CONFERENCES / SYMPOSIUMS

- “31st Mahabaleshwar in From Molecules to Networks and Behaviour” organized by the Tata Institute of Fundamental Research (TIFR). December, 2005-January, 2006
- 8th IBRO-APRC School of Neuroscience, at the Tata Institute of Fundamental Research (TIFR), Mumbai, India. September 2-10, 2006
- Benny Shilo course on Developmental biology at National Centre for Biological Sciences (NCBS), Bangalore - organized by Prof. K. VijayRaghavan (NCBS, India) and Prof Benny Shilo of the Weizmann Institute, Israel, December, 2006
- Poster presentation at “Sushi and the snail: A meeting on cellular trafficking, circuits and behavior” at National Centre for Biological Sciences (NCBS), Bangalore, India. February 23rd –25th, 2007
- Poster presentation at the 16th CDB meeting on “CIS-SEQUENCE REGULATION AND ITS EVOLUTION” held in RIKEN Center for Developmental Biology, Kobe, Japan, 29th Sept to 2nd Oct 2008
- Platform (oral) presentation at “XXXII All India Cell Biology Conference & Symposium on Stem Cells and Pattern Formation” organized by MACS-Agharkar Research Institute, Pune, India. 4th - 6th December 2008
- Poster presentation at the ‘2010 Bangalore Maggot Meeting: Neural Circuits to Behaviour’ organized by Matthias Louis, Reinhard Stocker and K. VijayRaghavan at National Centre for Biological Sciences (NCBS), Bangalore, India. July 25th – 27th, 2010
- Poster presentation at the “Neurofly 2010: 13th European *Drosophila* Neurobiology Conference”, Manchester, United Kingdom, organized by the University of Manchester, 1st to 5th September, 2010
- Platform presentation at the “2016 IMB conference on Epigenetics in Development”, in Institute of Molecular Biology, Mainz, Germany. 20-22 October, 2016
- Poster presentation at the 3rd Indian *Drosophila* Research Conference (InDRC). 6th- 9th December 2017, IISER Bhopal.
- Poster presentation at the Indian Society of Developmental Biologists’ Biennial Meeting 2017. 24th to 28th June, 2018, at IISER, Pune.
- Invited lecture at the workshop on “Methods in *Drosophila* Biology”. April 2021, NCBS, Bangalore
- Invited lecture at the Indian Neurobehavior Conference (INC) on “Molecules, genes & circuits to brain & behavior”. Dec 19-21, 2022, MAHE, Manipal.
- Poster Presentation at the CHINTA Inaugural Symposium “From Molecules to Mind” in Kolkata. 18-20 January, 2024
- Oral presentation at the Cold Spring Harbour Asia Conference “Autism & Neurodevelopment Disorders – from Genetic Discoveries to Interventions” in Suzhou, China. 17-21 June, 2024.

RESEARCH MENTORSHIP

Doctoral students Ongoing: as supervisor

Papiya Mondal. IIT Kharagpur PhD student
 Sarani Dey. CSIR SRF, IIT Kharagpur PhD student
 Shreya Mandal, CSIR SRF, IIT Kharagpur PhD student
 Snehasis Majumder. PMRF SRF, IIT Kharagpur PhD student
 Ankit Singh. ICMR JRF, IIT Kharagpur PhD student

Doctoral students Ongoing: as Joint-supervisor

Jayashis Dasgupta. JRF, IIT Kharagpur PhD student

Doctoral students completed: as Joint-supervisor

Nikita Veronica Saibo. CSIR SRF, IIT Kharagpur PhD student

Master's students (ongoing)

Atul Patel: MTech student, IIT Kharagpur
 Tarun Bhagwani: MTech student, IIT Kharagpur

Master's students (completed)

Name	Affiliation	Duration	Current affiliation
Shreya Mandal	Joint MSc-PhD, IITKGP-IACS	2019-20	PhD student, IIT Kharagpur
Snehasis Majumder	Joint MSc-PhD, IITKGP-IACS	2020-21	PhD student, IIT Kharagpur
Digvijay Dinesh Gogoi	Joint MSc-PhD, IITKGP-IACS	2021-22	PhD Student, InStem Bangalore
Sampa Mondal	Joint MSc-PhD, IITKGP-IACS	2022-23	PhD student, IICB Kolkata
Biswajit Chakraborty	MSc, Univ. Kalyani	May-Aug 2022	Graduate student, Univ. Düsseldorf
Nilasha Chakraborty	MSc, St. Xavier's College, Kolkata	Jan-May 2022	Graduate student, New Jersey
Suman Sasmal	MSc, MAKAUT, WB	Jan-May 2023	
Jinia Raychaudhuri	MSc, MAKAUT, WB	Jan-June 2023	
Anannya Maity	MSc, Vidyasagar University	Mar-Aug 2023	
Shubham Pandey	MTech, IIT Kgp	2023-24	Teacher, Narayana Hyderabad
Sumana Mahata	MSc, Central University Haryana	Sept 2023 - June 2024	
Reshmi Das	MSc, Vellore Institute of Technology	Dec 2023-May 2024	
Sayantani Paul	MSc, Pondicherry University	Jan-May 2024	
Abhishek Ghoshal	Swami Vivekananda University Barrackpore, WB	Jan-Jun 2024	
Dipsikha Shome	MSc, St. Xavier's College, Kolkata	Mar-May 2024	
Shreya	MSc, Department of	Dec 2024 - May	

Chattopadhyay	Biotechnology, KIIT	2025
Avinash Bharti	MTech, IIT Kgp	2024-25

Review of PhD theses – 1 no.

RESEARCH COLLABORATORS

Dr Owen Marshall, University of Tasmania, Australia
 Dr Gaurav Das, National Center for Cell Science, Pune
 Dr Francisco A Martin, Instituto Cajal CSIC, Madrid, Spain
 Dr Vimlesh Kumar, Indian Institute of Science Education and Research, Bhopal
 Dr Sharba Bandyopadhyay, Electronics and Electrical Communication Engineering, IIT Kharagpur
 Dr Riddhiman Dhar, Bioscience and Biotechnology, IIT Kharagpur
 Dr Soumya De, Bioscience and Biotechnology, IIT Kharagpur

TEACHING

Subject	Subject level	Teaching years
BS60005 Epigenetics and Epigenomics	PhD, MSc, MTech, UG	Since 2019
BS40002 Molecular Microbiology	MSc, MTech, UG	Since 2018
BT20204 Cell and Molecular Biology	UG	Since 2019
BT10001 Science of Living Systems	UG	Since 2024
BS10003 Science of Living Systems	UG	2020-24
BS20001 Science of Living System	UG	2018-20
DIY17003 Do It Yourself Lab	UG	2023-24
BS49002 Cell Biology Lab	MSc	Since 2020
BT29204 Cell and Molecular Biology Lab	UG	Since 2022
BS58004 Seminar	MSc	2019-22

HONOURS AND AWARDS

- Ramalingaswami Re-entry Fellowship from Department of BioTechnology (DBT), Govt. of India (2017)
- Fellowship of Indo Swiss Bilateral Research Initiative (ISBRI) from École Polytechnique Fédérale de Lausanne (EPFL) Switzerland for working in Biozentrum, Basel, Switzerland (2007)
- Travel fellowship from Asia-Pacific Developmental Biology Network (APDBN), Japan (2008)
- Travel fellowship from Department of Science and Technology (DST), India (2010)