Rudradeep Mukherjee . *ORCID: 0000-0001-9582-064X* . *linkedin.com/in/rudramukh*

Research interests

Transcription factors, gene regulation, genomic assays in cancer evolution, structural abnormalities, gene amplification, new regulatory regions, protein and transcription factor variants, survival pathways unique to tumors.

Education

University of Connecticut Health Center — Farmington, Connecticut, USA
Graduate Student, Biomedical Science Ph.D. program (Concentration: Systems Biology) — Aug 2021 – present
Mentor: Dr. Michael J. Guertin

National Brain Research Centre — Gurugram, India
M.Sc. in Neuroscience — *Aug 2019 – May 2021*

Birla Institute of Technology, Mesra — Ranchi, India
Bachelor of Engineering (BE), Computer Science — *July 2012 – May 2016*

Publications

Journal submissions

[1] Rudradeep Mukherjee, Michael J. Guertin. "Genome-wide dynamic nascent transcript profiles reveal that most paused RNA polymerases terminate" *bioRxiv*, 2025. doi: https://doi.org/10.1101/2025.03.27.645809

[2] Jinhong Dong, Kizhakke Mattada Sathyan, Thomas G Scott, Rudradeep Mukherjee, Michael J Guertin, "ZNF143 binds DNA and stimulates transcription initiation to activate and repress direct target genes", *Nucleic Acids Research*, 2025. doi: https://doi.org/10.1093/nar/gkae1182

Research and Work Experience

Master's Dissertation - National Brain Research Centre — *August '20 - Present*
Resting-state brain dynamics of autistics across age using an unbiased model — Mentored by Prof Dipanjan Roy

Software Development Engineer — *Bangalore, India*
Cloud Infrastructure team, Flipkart — December 2016 - July 2019

Software Development Engineer Intern — *Bangalore, India*
Nestaway — June 2016 - Nov 2016

Conferences and teaching assistantships

- Summer 2025. Teaching Assistant in the GeneX 2025 course at Cold Spring Harbor Laboratory. Assisted students in ChIP-seq and ATAC-seq.
- Fall 2023. Presented a poster titled, "Modeling Effects On Transcription Cycle Using Nascent Transcriptomic Data" in 22nd International Conference on Systems Biology (ICSB 2023).
- Summer 2022. Mentored a high-school student in Guertin Lab on cloning and protein purification as part of HRP program.

Additional Roles & Awards

- Ann Cowan Award 2025 for Outstanding Student in Systems Biology.
- Volunteered as a student interviewer for UConn Health Graduate Admissions committee and submitted evaluation forms for potential graduate students (2024 – 25).
- Student representative for System Biology department (2023 – 25).