Dr. Ananda Mukherjee
Associate Professor (Research)
Cancer Biology Lab, Medical Oncology
SRMC & RI

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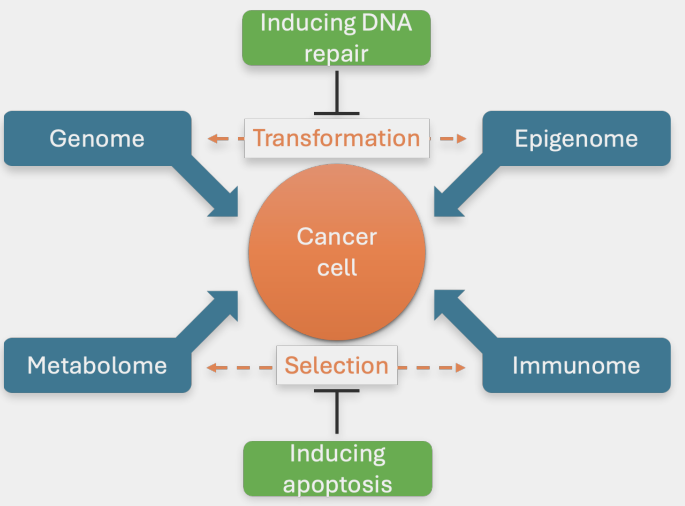
Positions available for Ph.D. and Postdoctoral training

Personal Profile:

Dr. Mukherjee earned his bachelor's degree from the University of Calcutta and his master's degree in biotechnology from the University of North Bengal. He received his Ph.D. from Jadavpur University in 2012 and moved to the USA for his postdoctoral training (2012–2017), where he worked on DNA damage response and cancer. Returning to India in 2017, he joined the Cancer Research Program of the Rajiv Gandhi Centre for Biotechnology, an autonomous DBT institute in Thiruvananthapuram, Kerala, as a Faculty Fellow with a DBT-Ramalingaswami Re-entry Fellowship (2018-2024), also serving as a faculty member for their M.Sc. Biotechnology course. In 2024, he joined the Sri Ramachandra Institute of Higher Education and Research as an Associate Professor in the Cancer Biology Laboratory at the Department of Medical Oncology.

Research Interests:

Changes in a person's DNA occur at varying rates, depending on numerous internal and external factors. These changes give rise to a mutated cell population that can grow faster than normal cells and has the ability to become cancerous. Two mechanisms lead to the emergence of mutations in the cell's DNA: (a) base misincorporation during the replication of non-damaged DNA, and (b) the accumulation of DNA damage that remains unrepaired.
Tumor suppressor genes mitigate the negative consequences of mutations by preventing tumorigenesis through the careful removal of faulty cells and promoting genome maintenance through DNA repair. The longstanding goal of Dr. Mukherjee's research is to understand genomic instability and DNA repair defects in the context of tumor initiation, progression, and therapy.



Selected Publications (in last five years):

1. Hameed FJS, Devarajan A, Priya DMS, Bhattacharyya A, Shirude MB, Dutta D, Karmakar P, Mukherjee A. PTEN-negative endometrial cancer cells protect their genome through enhanced DDB2 expression associated with augmented nucleotide excision repair. BMC Cancer. 2023;23(1):399. doi:10.1186/s12885-023-10892-5.
2. Baral I, Shirude MB, Jothi DL, Mukherjee A, Dutta D. Characterization of a distinct state in the continuum of pluripotency facilitated by inhibition of PKCζ in mouse embryonic stem cells. Stem Cell Rev Rep. 2023;19(4):1098-1115. doi:10.1007/s12015-023-10513-5.
3. Varghese PC, Rajam SM, Nandy D, Jory A, Mukherjee A, Dutta D. Histone chaperone APLF level dictates the implantation of mouse embryos. J Cell Sci. 2021;134(1):jcs246900. doi:10.1242/jcs.246900.
4. Majumder A, Syed KM, Mukherjee A, Lankadasari MB, Azeez JM, Sreeja S, Harikumar KB, Pillai MR, Dutta D. Enhanced expression of histone chaperone APLF associate with breast cancer. Mol Cancer. 2018;17(1):76. doi:10.1186/s12943-018-0826-9.
5. Mukherjee A, Patterson AL, George JW, Carpenter TJ, Madaj ZB, Hostetter G, Risinger JI, Teixeira JM. Nuclear PTEN expression contributes to DNA damage repair in endometrial adenocarcinoma and could have a diagnostic benefit for therapeutic management of the disease. Mol Cancer Ther. 2018;17(9):1995-2003. doi:10.1158/1535-7163.MCT-17-1255.

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Department of Biotechnology
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