



Centre for Research & Development

Research Supervisor (Guide) Profiles

Discipline of Supervision: **Genetics**



Dr. Samrat Das

Assistant Professor
Department of Life Sciences
School of Biological & Forensic Sciences

Areas of Specialisation:

Cytogenetics, Genotoxicity, Cancer Research

Dr. Samrat Das is an Assistant Professor at Kristu Jayanti University. He completed his postdoctoral research at the globally renowned International Agency for Research on Cancer, Lyon, and is a recipient of the prestigious IARC Postdoctoral Fellowship. During his postdoctoral tenure, He has gained extensive expertise in advanced experimental and analytical techniques. His work involved in vitro culturing of various human cell lines and murine primary cells, single-cell sub-cloning to establish clonal populations for DNA methylome and whole-exome sequencing studies, and comprehensive transcriptomic analyses. He also conducted cell viability and genotoxicity assays, along with live-cell imaging to monitor cell growth and cell death. His research primarily focused on cellular responses to environmental carcinogens such as arsenic and smokeless tobacco. In addition, he expanded his research scope to include breast cancer studies and the characterization of protein-protein interactions that sustain p53 oncogenic activity, employing advanced molecular biology approaches. He also led a major review on Aristolochic acid-associated cancers, which was published in the prestigious journal Nature Reviews Cancer. He completed his doctoral research at Assam University Silchar, where he investigated the chronic effects of arsenic and smokeless tobacco exposure using the Swiss albino mouse model. His doctoral work also included extensive human genotoxicity and biomonitoring studies among populations affected by arsenic contamination.

Selected Publications:

- 1. Das S, Thakur S, Korenjak M, Sidorenko VS, Chung F, Zavadil J.** Aristolochic acid-associated cancers: a public health risk in need of global action. *Nat Rev Cancer*. 2022. doi: <https://doi.org/10.1038/s41568-022-00494-x>
- 2. Das S, Thakur S, Cahais V, Virard F, Claeys L, Renard C, Cuenin C, Cros MP, Keita S, Venuti A, Sirand S, Ghantous A, Herceg Z, Korenjak M, Zavadil J.** Molecular and cell phenotype programs in oral epithelial cells directed by co-exposure to arsenic and smokeless tobacco. *BioFactors*. 2025. <https://iubmb.onlinelibrary.wiley.com/doi/full/10.1002/biof.70011>
- 3. Das S, Thakur S, Cahais V, Virard F, Claeys L, Renard C, Cuenin C, Cros MP, Keita S, Venuti A, Sirand S, Ghantous A, Herceg Z, Korenjak M, Zavadil J.** Molecular and cell phenotype programs in oral epithelial cells directed by co-exposure to arsenic and smokeless tobacco. *bioRxiv (Preprint)*. 2024. doi: [10.1101/2024.10.14.618077](https://doi.org/10.1101/2024.10.14.618077)