



Dr. Biraj Sarkar

Assistant Professor and Principal, Faculty of Allied Health Sciences, The ICFAI University, Tripura

Dr. Sarkar earned his Ph.D. in Microbiology from the University of Calcutta in 2022; his doctoral thesis explored the actinomycetes, a heterogenous gram-positive group of bacteria significant in medicine as a major source of antibiotics and other bioactive compounds. They are also crucial in environmental and biodegradation/bioremediation efforts, playing a role in cleaning up pollution by degrading organic matter and other pollutants.

He worked on isolation and characterization of poly-isoprene-degrading microbes from the rubber-contaminated areas of Tripura. He qualified the NET examination in 2016, completed M.Sc. in Microbiology at Tripura University in 2014, and obtained his B.Sc. in Microbiology from the University of Burdwan in 2012.

As a microbiologist, Dr. Sarkar investigates the genetic and biochemical foundations of pathogen virulence, polymer biodegradation, and antimicrobial resistance. His work deciphers whole-genome sequences of multidrug-resistant bacteria from silkworm and clinical contexts, maps metabolic pathways for poly-cis-isoprene degradation, and screens actinomycetes for novel antibiotics.

By integrating comparative genomics with classical microbiology, he contributes to improved public health, cleaner environments, and the discovery of new therapeutics. Methodologically, he commands bacterial isolation, phenotypic and molecular characterization, next-generation sequence analysis, phylogenetic analysis, antimicrobial-susceptibility profiling, and advanced spectroscopic and microscopic techniques.

Currently, Dr. Biraj Sarkar is Assistant Professor and Principal of the Faculty of Allied Health Sciences (FAHS) at The ICFAI University, Tripura (May 2025 – present), overseeing academic strategy, faculty mentoring, and multidisciplinary research works. Previously, he served as Assistant Professor and Coordinator in the same faculty (Aug 2023 – May 2025), coordinating academic and administrative roles, along with teaching courses in microbiology, immunology, and molecular biology.

From 2022 to 2023 he was Guest Faculty in the Department of Molecular Biology and Bioinformatics at Tripura University, where he lectured on microbial genomics and supervised M.Sc. dissertations on actinomycete diversity and biodegradation.

Dr. Sarkar's research includes numerous peer-reviewed articles in reputed journals like Scientific Reports, Applied Biochemistry and Biotechnology, 3 Biotech, Archives of Microbiology, RSC Advances, Microbiology Resource Announcements and Data in brief, alongside multiple book chapters for Springer and Elsevier on various relevant topics of microbiology and virology.