ANALABHA BASU, PhD

Research Interest:

Population Genetics, Genetic Epidemiology, Admixture Mapping.

ARINDAM MAITRA, PhD

Research Interest:

Human disease genomics and platform technologies

ANUP MAZUMDER, PhD

Research Interest

Role of epigenetic modifications in antiviral immune response; Cancer epigenomics

ARVIND KORWAR, PhD

Research Interest:

Mass-spectrometry based proteomics and metabolomics: Chronic inflammatory diseases/disorders and resolution of inflammation

BHASWATI PANDIT, PhD

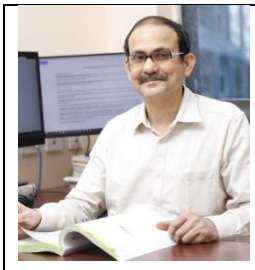
Research interest

My research is to understand genetic basis of disease that includes infectious and complex disease. Tuberculosis (TB) is potentially a serious infectious disease usually caused by a virulent bacteria *Mycobacterium tuberculosis.* The outcome of infection is manyfold. Only a minor group of people develop active tuberculosis upon exposure to *Mycobacterium tuberculosis*. A handful of individuals are able to clear the infection, whereas majority of infected individuals harbor the infection in latent condition. The ability to effectively restrict M.tb infection depends on the immune status of the individual. We are interested in deep mining of host genetic factors determining susceptibility to infection and understand pathogen and host interface using multiomics approach. The other aspect of my research is to understand genetic basis of congenital heart disease.

DEBANJAN MUKHOPADHYAY, PhD

Research Interest

	Cell autonomous innate immunity, macrophage polarization, intracellular pathogens
	**KARTIKI V. DESAI, PhD** Research Interest Breast Cancer Genomics and Epigenomics; biology of selected cancer related coding and non-coding RNAs; Exocytic Vesicle Biology.
	**PRIYADARSHI BASU, PhD** Research Interest My research interest is in deciphering genotype-environmental interactions in common diseases. Currently, my laboratory is studying the genomic and transcriptomic causes of Non-alcoholic fatty liver disease (NAFLD) in Indian populations
	**SAMSIDDHI BHATTACHARJEE, PhD** Research Interest Our group is primarily involved in Statistical Genomics with applications to identification of genetic variants which confer susceptibility to complex diseases in humans. We use data from GWAS, transcriptomics, epigenomics, e-QTL studies, and develop techniques to accelerate discovery of variants, genes and pathways from high-throughput genomics data. For this, we apply analytic approaches such as multiple-testing, meta-analysis, pathway/enrichment analysis and integrative genomics. We are also interested in understanding the causal mechanisms underlying these variants driving disease pathogenesis and in developing ways to understand gene-gene and gene-environment interactions that is crucial for effective genomics driven personalized medicine.
	**SANDEEP SINGH, PhD** Research Interest Aggressive nature of cancer has been correlated with heterogeneity among cancer cells which is collectively ascribed to the genetic diversity along with gene-environment interaction established between cancer and stromal cells that constitute tumor microenvironment (TME). Our research interest is to comprehend the mechanisms responsible for cellular and functional heterogeneity in solid tumors through cancer stem cell model. Taking help of technologies which facilitate studies at holistic level; we are emphasizing on the biology of stemness maintenance in cancer, interactions between cells within TME and identification of therapeutic targets.

	**SAROJ K. MOHAPATRA, MD** Research Interest Our research focus is on rapid identification of modifiable factors of mortality in neonatal sepsis. We have developed molecular assays for virulent pathogens and antimicrobial resistance for detection of bacteria causing lethal neonatal sepsis in India. We plan to link the activity of our laboratory with the national UMMID initiative of the Department of Biotechnology, Government of India for making these assays easy-to-access in clinical diagnosis. Sepsis is caused by a dysregulated host response to infection. We focus on understanding sepsis with data-driven approaches using public health and host transcriptome data, and cutting edge tools, like artificial intelligence.
	**SOUVIK MUKHERJEE, PhD** Research Interest Host-Metagenome Interactions in Human Health and Disease, Genetics of Innate Immunity Genes, Population Genetics and Molecular Evolution Our group is interested to understand why do chronic wounds in Diabetic Patients mostly progress towards non-healing state and what are the host genomic and metagenomic factors leading to the development of antibiotic resistance in chronic Diabetic Foot Ulcers? For this, we will undertake Metagenome Wide Association Study (MWAS) to decipher the complex host-microbiome interactions and characterization of the antibiotic resistome that leads to the chronic condition.