

National Workshop on Microbiome Data Analysis for Clinical & Translational Research in Human Health

7-DAYS HANDS-ON WORKSHOP



SUN PHARMA
SCIENCE FOUNDATION



16th – 22nd November 2026



BRIC-NIBMG, Kalyani



25–30 participants



ABOUT BRIC-NIBMG

The BRIC–National Institute of Biomedical Genomics (BRIC-NIBMG), Kalyani, is an institute of the Government of India under the Biotechnology Research and Innovation Council, Department of Biotechnology. It is India's first institute dedicated to research, training, translation, service and capacity-building in biomedical genomics. NIBMG investigates the molecular basis of disease using genomics, metagenomic approaches and integrative biology, translating genomic insights into improved prediction, prevention and cure. Its laboratories house state-of-the-art high-end instruments within a 30-acre campus.

ABOUT THE HUMAN MICROBIOME RESEARCH (HMR) LABORATORY

Led by Dr Souvik Mukherjee, Associate Professor, the Human Microbiome Research Laboratory at BRIC-NIBMG investigates the complex interplay between the human microbiome, host genomics and health. The laboratory uses integrative genomic and metagenomic approaches, with a particular focus on Indian populations, to advance understanding of complex chronic and inflammatory disorders.

ABOUT THE WORKSHOP

The human microbiome, across the gut, skin, mouth and reproductive tract, shapes health, immune regulation, disease susceptibility and response to therapy. From inflammatory and metabolic diseases to cancer, maternal and child health to antimicrobial resistance, it is opening new routes to biomarkers, probiotics, FMT and other therapies. Turning this data into clinical insight needs robust analysis and India-specific reference datasets. This hands-on workshop trains young researchers and clinicians in study design, 16S and shotgun metagenomic data analyses.

WHO CAN APPLY

MBBS and MD/MS trainees, Ph.D. scholars, postdoctoral researchers, and young faculty or research scientists

SELECTION

Selection of 25–30 participants based on CV and Letter of Intent (research interests, motivation, prior or planned microbiome work and intended use of the skills), aiming for balanced experimental and therapeutic research.

HOW TO APPLY

Apply at: <https://forms.gle/QBU7QilvmtHsY1zS6>

Last date: 04th November, 2026

Registration fee: ₹1,000 per participant

PERKS

On-campus food and guest-house accommodation
Participants will also be awarded 'Travel Allowance'

WORKSHOP PROGRAMME AT A GLANCE

**16th
MON**

Inauguration & Introduction to Data Analysis

Inaugural session, the human microbiome in health and disease, hands-on Unix & R programming

**17th
TUE**

Metagenomic Bioinformatics

Amplicon data analysis, R-based 16S pipeline, QIIME2, raw sequence file formats and QC

**18th
WED**

Microbiome Therapeutics & 16S Analysis

FMT in IBS and exosomes in IBD; hands-on 16S: ASVs, taxonomy, diversity, rarefaction

**19th
THU**

Shotgun Metagenomics Data Analysis

Hands-on removal of human reads, QA/QC and taxonomic profiling of WGS data

**20th
FRI**

Antimicrobial Resistance & Hands-on Shotgun Metagenomics

Antimicrobial resistance in Metabolic diseases, Chronic Wound infections and Sewage Surveillance

**21st
SAT**

Statistical Methodologies and Meta-Analysis; Maternal-Child Health

Research questions, study design, and meta-analysis in microbiome
Maternal oral and vaginal microbiome, child gut microbiome

**22nd
SUN**

Human microbiome databases, participant feedback, summary and closing address

What will you GAIN?

- Practical proficiency in computational and statistical analysis of raw microbiome sequencing data
- Hands-on experience with standardised, reproducible workflows, including analysis of participants' own datasets
- Ability to integrate clinical metadata with microbiome findings for translational interpretation
- Opportunities to build collaborations among clinicians, basic scientists and early-career researchers across India