

BIOINFORMATICS FACILITY NEWSLETTER 2024

CERTIFICATE PROGRAM IN BIOINFORMATICS

In the year 2024, we received over 38 applications from students across India. After a thorough screening process conducted by the academic committee, 8 students were deemed eligible for the training program, which commenced in October 2024 and is scheduled to conclude in March 2025. The students participating in this program hold degrees in various fields, including BSc, B.Tech, and MSc.

BIOINFORMATICS ONE-DAY WORKSHOPS

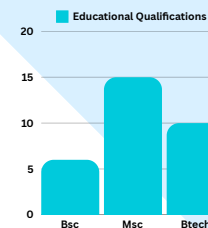
Six online workshops addressing the fundamentals of bioinformatics were held in 2024, spanning different topics from April to December. Also, 412 participants from various regions of India have taken part in these sessions.

- Introduction to next generation sequencing data analysis
- Protein Structure Modelling and 3D Visualization
- Microbiome/Metagenome Data Analysis
- Molecular Docking Essentials: Fundamental Techniques for Chemical Library Screening
- Programming For Biologist
- Introduction to RNA-Seq Analysis

ACADEMIC PROJECTS

In the year 2024, a diverse group of 31 students from various universities across India visited bioinformatics facility to undertake research projects on a range of topics. These students, hailing from different academic backgrounds and institutions, brought with them unique perspectives and expertise, enriching the collaborative environment at the facility. Throughout their time at the facility, the students engaged in intensive research activities, collaborating with mentors and peers. They had access to state-of-the-art computational resources and tools, enabling them to perform sophisticated analyses and generate meaningful results.

These projects not only enhanced the students' technical skills and knowledge but also fostered a deeper understanding of the practical applications of bioinformatics.

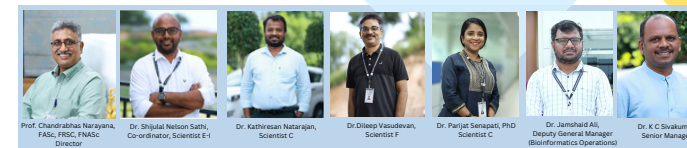


SERVICES

Our team of bioinformaticians possesses expertise in computer programming, structural bioinformatics, and genomics, equipping them for thorough and extensive big data analysis. Utilizing a blend of custom-built and open-source software, our analyses are tailored to meet your specific research requirements. Our bioinformatics services transform raw data into comprehensive analyses and customized figures, accompanied by support for data interpretation. We offer precise and customized solutions to researchers in the following areas.

- Molecular Docking
- Protein Mutation design and Structural analysis
- Protein 3D Structure modelling
- Molecular Dynamics Simulations
- Functional annotations
- NGS analysis and DE novo assembly
- RNA-Seq analysis
- Phylogenetic analysis
- Metagenomics
- Heatmaps/3D plots/Interactive charts

TEAM



GALLERY



ABOUT US

We are a team of multidisciplinary researchers, IT experts and technicians dedicated to provide Bioinformatics services, training and technical support to researchers and students. The RGCB-Bioinformatics facility is located at the Rajiv Gandhi Centre for Biotechnology Campus II located at Akkulam. Considering the growing demand for computational approaches to solve biological problems, we are providing various bioinformatics services and training programs at the Rajiv Gandhi Centre for Biotechnology.

We offer,

- Computational infrastructure for performing large-scale biological data analysis (Servers and data storage).
- Bioinformatics training for researchers and students (Short term and Long term).
- Essential bioinformatics services such as NGS data analysis (Genome assembly and RNA seq), Structural Bioinformatics (Docking and simulations), Biological sequence analysis (Bacterial and Viral), Phylogenetics, etc.
- Academic projects to both internal and external students (MSc/B.Tech and Mtech).