Introduction

High-throughput sequence datasets are growing in an exponential rate and there is a need for bioinformaticians to analyse and extract biological meaning from these datasets. Transcriptomics and Metagenomics are the major areas for the bioinformatics researchers. Transcriptomics is applied to generate unigenes and to find differential expressed genes that provide clue on the response of a species to various treatment conditions. Metagenomic analysis reveals the composition of microorganisms present in an environment along with their functions. Generating and developing skills to analyse NGS datasets are slowly becoming mandatory knowledge for biologists in the recent years. In this context, the current training program gives a complete hands-on experience on analyses of sequence datasets and drawing functional inferences out of it.

The scientists at ICAR-CIBA are well-versed in applying bioinformatics tools on NGS datasets to generate prokaryote and eukaryote genome assemblies, analyze RNAseq datasets and extract functional information, analyze amplicon datasets for microbial profiling, document and develop marker database etc. The institute has a high-performance computing facility installed with several opensource tools and few proprietary software like Omicsbox. Interested candidates may apply in the prescribed format on or before 30th April 2025.

Course Contents

- Introduction to Linux, R and Python
- NGS datasets and quality control
- Prokaryote genome assembly
- Transcriptomics: Transcriptome assembly; Discovery of unigenes; Differential Gene Expression analysis
- Metagenomics: Taxonomic and functional profiling; Diversity analysis; Discovery of biomarkers
- Sequence annotation methods

Accomodation

- Shared-only accommodation on payment basis would be provided at the institute trainees' hostel on first-come first-serve basis.

Course Fee

A fee of Rs. 8,000/- (plus 18% GST) per candidate will be charged for the course. Course material and working lunch will be provided by the organisers. Travel and accommodation charges have to be borne by the participants.

PAYMENT
Digitally to the bank account (ICAR-Unit CIBA)
Account No. 10013240762 (Current A/c)
IFSC Code: SBIN0005797

How to Apply

Young scientists, faculties, government officials, technical officers, research associates and scholars with strong interest to learn bioinformatics skills like Transcriptome/Metagenome data analysis can apply for the course. The interested candidates can apply by filling the online registration form at https://forms.gle/pYvXoo4EGbmLNrXv8 or by scanning the QR code given below. Last date of receiving the application is 30th April, 2025. The selected candidates for the course will be intimated by e-mail. Course fee has to be paid only after receiving the communication from the organisers.

Scan here to register

HANDS-ON TRAINING PROGRAM ON NGS DATA ANALYSIS

19 – 23 May 2025

ICAR-Central Institute of Brackishwater Aquaculture
75 Santhome High Road, RA Puram, Chennai – 600 028

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