

REGISTRATION

Name (in block letters)	
Designation :	
Date of Birth :	
Gender :	
Present employer and address :	
Address for communication (including tel/mob/fax & email) :	
Area of research & Professional experience :	
Academic record (graduation onwards) :	

It is certified that the information furnished above are true to the best of my knowledge

Date: Place:	Signature of the Applicant
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Recommendation of forwarding authority if any

Signature of competent authority

- PAYMENT DETAILS-

Demand Draft No.:
Dated:
In favour of "ICAR Unit, CIBA" for an amount of Rs. 15000/-
Payable at State Bank of India, Santhome Branch, Chennai -600028.



CONTACT US

Patron

K. K. Vijayan

Convener

G. Gopikrishna and M.S. Shekhar

Course Director

J. Ashok Kumar and K. Vinaya Kumar

Co-Course Director

Sherly Tomy, B. Sivamani, J. Raymond Jani Angel and Misha Soman

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HANDS-ON TRAINING ON

AQUACULTURE GENOMICS AND BIOINFORMATICS



Nutrition Genetics and Biotechnology
Division

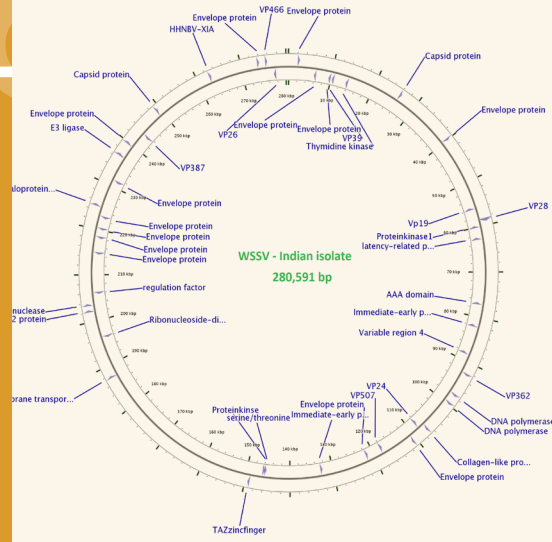
ICAR-CIBA | 27th AUG - 1st SEP
CHENNAI | 2018

INTRODUCTION

Complex studies on biological systems require exhaustive sequence information beyond the levels achieved through traditional Sanger sequencing.

The next generation sequencing (NGS) technologies with the capabilities of high sequencing output at high speed and low cost revolutionized the field of genomics and molecular biology. With latest sequencing instruments it is possible to generate few hundred giga bases of data per week. Researchers now are facing computational challenges to analyse volumes of data and draw meaningful inferences. Even the storage has become a constraint. In this context, this course aims to provide hands-on-training with real NGS datasets related to aquaculture genomics studies. Specifically, the program focuses on analysing RNAseq datasets which are commonly used to capture RNA profile in specimens at various experimental conditions to find differentially expressed genes. The program also deals with practical sessions on assembling small bacterial and viral genomes including their annotation and submission to GenBank. All the topics would be covered right from generation of raw data to final submission at NCBI.

The institute has a Linux server installed with several open source tools and few paid tools like blast2go and CLC genomics workbench. Interested persons shall apply as per the details mentioned below.



TRAVEL

The expenditure on travel, TA, DA, etc., has to be borne by the sponsoring authority or by the candidates themselves.

ACCOMMODATION

Limited accommodation would be provided on nominal charges at the institute trainees' hostel.



SOFTWARES

Linux	R	Trinity	FastQC	Trimmomatic	BPGA
NGS QC Toolkit	MrBayes	Cutadapt	Blast2GO		
CLC Genomics Workbench	MaSuRCA	Prokka	knsp3		

NGS DATA ANALYSIS AND ASSEMBLY

- COURSE CONTENT -

- Introduction to Linux environment for running Bioinformatics jobs.
- Introduction to R for Bioinformatics
- Downloading NCBI/ UniProt datasets and creation of database for local blast
- Quality control of Illumina data
- *denovo* assembly of whole genome/transcriptome data
- Conducting differential gene expression studies with RNAseq data
- Annotation, enzyme code mapping and KEGG pathway mapping of transcripts
- Sequencing, assembly, annotation and GenBank submission of microbial genomes
- Phylogenetic analysis for comparing genomes

COURSE FEE

A fee of Rs. 15,000/- per candidate will be charged for the course. The applications would be screened and candidates will be short-listed as limited candidates can be accommodated for the course.



HOW TO APPLY

Young scientists, faculties, government officials, technical officers, research associates and scholars with interest to learn/improve bioinformatics skills can apply for the course. The interested candidates can apply by sending the filled-in application form in the given format through proper channel to The Director, ICAR-CIBA, 75, Santhome High Road, RA Puram, MRC Nagar, Chennai 600 028. Last date of receiving the application is 15th August, 2018. The selected candidates for the course will be intimated by e-mail.