

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
Recommendation of forwarding authority if any	
Signature of competent authority	
- PAYMENT DETAILS-	
Online transaction no. / Demand draft no.:	
Date:	



CONTACT US

Convenor

K. K. Vijayan, Director, ICAR-CIBA

Course Director

M.S. Shekhar, SIC, NGBD

Course Coordinator

B. Sivamani, Scientist, NGBD

Course Facilitators

Sherly Tomy, J. Ashok Kumar, K. Vinaya Kumar,
J. Raymond Jani Angel, Misha Soman

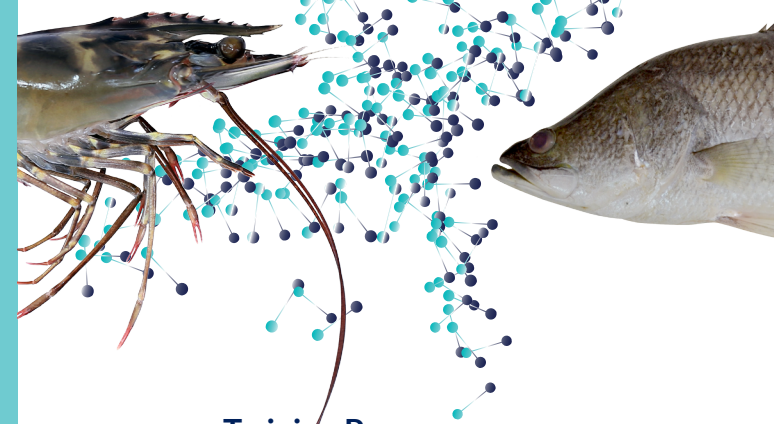
ICAR-Central Institute of Brackishwater Aquaculture
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Nutrition Genetics and Biotechnology Division

14th - 19th October
2019



Training Programme on:
**Recent Advances in Genetics and
Biotechnological tools**

About ICAR-CIBA

ICAR-Central Institute of Brackishwater Aquaculture is primarily a research institute under the ICAR established in 1987 being headquartered in Chennai has a field station at Muttukadu 30Km south of Chennai and a Research Centre at Kakdwip in West Bengal. ICAR-CIBA conducts research on brackishwater fishes and their ecosystem to develop sustainable aquaculture system to enhance the fish production as well as to upgrade the farmers living standards. The Nutrition, Genetics and Biotechnology division utilizes state-of-the-art genomic analyses and cutting edge technologies to discover candidate genes and to understand the pathways in physiological processes including growth, reproduction and disease resistance in finfish/shellfish. Some of the recent achievements of this division include development of high density linkage map in tiger shrimp, identification of QTL against WSSV resistance through whole genome association studies using custom-designed SNP chips, whole genome assembly in eukaryotes and bacteria, mtDNA and microsatellites based population diversity studies, Gene expression profile against WSSV, salinity stress and hormone induced maturation in penaeid shrimps. Further we have a well-equipped 48-core, 512 GB memory server to assist in bioinformatics and big-data analysis.

Course Content

The six days training programme is designed to acquaint the participants with basic concepts along with the recent advances on state of the art techniques in genetics, biotechnology and bioinformatics. It will involve both theory and practical sessions. Some of the broad areas covered under the course are as follows. The training will involve both theory and practical.

- Nucleic acid (DNA and RNA) extraction, Determination of Purity and concentration, gel electrophoresis, cDNA synthesis, DNA amplification (PCR), Gene expression analysis (Real-Time PCR), gene cloning
- Recombinant DNA technology: Preparation of vector and competent cells, gene ligation, transformation, selection of recombinant colonies, Protein extraction, sonication, SDS-PAGE, Western blot.
- Gene editing tools, Micromanipulation techniques in Transgenic and Gene-editing
- DNA markers: Types and their application, DNA barcoding and species identification, mtDNA and microsatellites based Population Genetic Analysis, Phylogenetic tree construction and interpretation
- Bioinformatics: Introduction to bioinformatics programming languages (UNIX and R) Primer designing, Similarity searches, Simple and Multiple Sequence Alignment, Bacterial genome assembly, Gene annotation.

General Information

Eligibility:

Post-graduates from any discipline of science, scientists, teachers, technical officers, academicians and researchers are encouraged to apply. The official language for all purposes of the training will be English. Participants can download the application form from our institute website (<http://www.ciba.res.in/>).

Course material:

Each participant would be provided with a Training Manual containing all presentations made during the programme.

Venue:

Nutrition, Genetics and Biotechnology Division, ICAR-Central Institute of Brackishwater Aquaculture, 75, Santhome High Road, RA Puram, Chennai 600 028 Tamil Nadu

Last Date for Application:

Duly filled application form endorsed by competent authority should reach the training coordinators on or before 30th September 2019. The application completed in all aspects accompanied with brief biodata may be sent by email to sivamani@ciba.res.in.

Preclude to the training course

Genetics and Biotechnology as a discipline is gaining importance in aquaculture research in the present global scenario of increased demand for seafood. The application of biotechnology has great potential to improve the quality and quantity of aquatic species through selection of individuals with economically important traits, genetic traceability, sex manipulation, chromosome engineering, and development of vaccines, drugs, diagnostics and genetically modified organisms. The evolution of genetics and revolution in high throughput sequencing technology generated huge amount of genome and transcriptome data. Analysing such huge datasets require skills in using relevant software as well basic knowledge in bioinformatics. This training programme aims at exposing the participants to the advancements in the field of aquatic biotechnology and trains them on different genetic and bioinformatics tools. The training would cover vast areas including development of molecular markers, genotyping technologies, phylogenetic analysis, barcoding, gene expression analysis, basics of bioinformatics and their tools, Gene editing tools, transcriptome assembly and annotation.

Location and weather

ICAR-CIBA Chennai is well connected by air/rail/road. The institute is around 9kms from the Chennai central railway station and 18Kms from the Chennai airport. Weather in Chennai during October is pleasant. The temperature ranges from 24°C to 32°C.

Fees and payment

Fees amount = Rs 8000 + 18% GST = RS 9440/-

1. Through online transfer: A/C No: 10013240762, SBI, Santhome Branch, Chennai-28.
2. Through Demand Draft: In favour of "ICAR Unit, CIBA" for an amount of Rs. 9440/- Payable at State Bank of India, Santhome Branch, Chennai -600028.

Selection criteria

There are 10 seats in the training and selection will be on first come - first serve basis, however the priority would be given to their exposure and interest. Selected candidates will be intimated through email.