

Format of application form

Training Programme on Genetics and Biotechnology: Tools and their Application in Aquaculture December 14-19, 2015

1. Full Name (Block Letter).....
2. Designation:
3. Present employer and address...
4. Address to which reply should be sent (in block letters).....
5. Email, Tel, Fax, Mobile.....
6. Date of birth....
7. Sex: Male/Female.....
8. Working Experience....
9. Academic qualification

Exam/ Degree	Subjects	Year of passing	Class/ Rank	Institution
Bachelor				
Master				
Ph.D.				

10. Particulars of course fee/DD enclosed.

Certificate: This is to certify that all the information provided here are true to best of my knowledge.

Date:

Place: Signature of applicant

Recommendation of the forwarding Institute

Signature of the forwarding
Authority with Seal and Date

Travelling, Boarding and lodging

Guest house accommodation at ICAR-CIBA is limited and shall be provided at standard rate on first-come-first-serve basis on sharing basis.

Fees

The Programme fee is Rs. 8,000 + tax per person. The charges include course fee, course material, working lunch and refreshments. The fee does not include travel, lodging, conveyance and other personal expenses.

Course Director

Dr. K.K.Vijayan, Director, CIBA, Chennai

Course Co-ordinator

Dr. G. Gopikrishna, Head, NGBD, CIBA, Chennai

Course Facilitator

Dr. (Ms) Sherly Tomy, Senior Scientist

Co-coordinators

Dr.M.S.Shekhar, Dr. K. Vinaya Kumar

Dr. B.Sivamani, Shri. J. Ashok Kumar

For more details contact:

Dr. G. Gopikrishna

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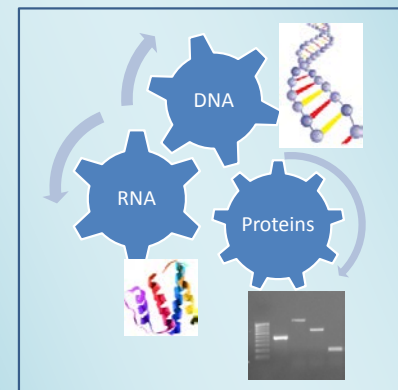
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Genetics and Biotechnology: Tools and their Application in Aquaculture



December 14-19, 2015

Organized by

**ICAR - Central Institute of
Brackishwater Aquaculture**

75 Santhome High Road, RA Puram,
Chennai 600028, Tamil Nadu

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Introduction

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, 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. Analyzing 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 recombinant protein production, genotyping technologies, gene expression analysis, retrieving information from public databases and file formats, bio-informatic programming languages, transcriptome assembly and annotation, molecular evolutionary analysis based on maximum likelihood, distance and probabilistic methods, creation of local databases and similarity searches.

Objectives

- To acquaint participants with recent advances in the field of Genetics and Biotechnology
- To impart hands-on training on biotechnology and bioinformatics tools

Course content

The training will involve both theory and practicals.

Some of the broad areas covered for the course are as follows:

Theory

- Introduction to biotechnological tools and their applications
- Types of DNA markers and their application in population genetics
- Application of Bioinformatics in sequence analysis

Hands on training on

- Nucleic acid extraction and analysis
DNA, RNA isolation, Determination of DNA concentration using nanodrop, gel electrophoresis, gel documentation, DNA amplification (PCR), Gene expression analysis (Real-Time PCR)
- Recombinant DNA technology
Preparation of vector and competent cells for gene cloning, gene ligation, transformation, selection of recombinant colonies
- DNA barcoding

Amplification of mtDNA genes, species identification

- DNA probe dot blot analysis
- Protein analysis
Protein extraction, sonication, SDS-PAGE, Western blot
- Bioinformatics and software application demonstration
Introduction to bioinformatics programming languages (UNIX, Perl, Python and R), Primer designing, Similarity searches, Simple and Multiple Sequence Alignment, Population Genetic Analysis and Gene annotation

Eligibility

Post-graduate in any discipline of science. The official language for all purposes of the training will be English. State Fisheries officers, Scientists, Academicians and Research Scholars are encouraged to apply.

Selection criteria

Applications of those serving in government/private institutions need to get their requests processed through proper channel. Candidates will be selected based on their exposure and interest.

The last date to receive filled in application is **26th November, 2015**. Selected candidates will be intimated through email.

