Hands-on Training programme

on

Application of Molecular Markers in Seafood Authentication

''Anneal like a DNA helix and annihilate to rise like a phoenix"

September 07-11, 2026

Organized by

Central Aquaculture Genetics, Pathology and Food Testing Laboratory

(Accredited by NABL as per ISO/IEC 17025:2017)

RAJIV GANDHI CENTRE FOR AQUACULTURE (RGCA)

(MPEDA, Ministry of Commerce & Industry, Govt. of India)

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Website: www.rgca.org.in

About RGCA

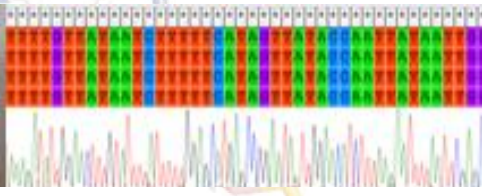
Rajiv Gandhi Centre for Aquaculture (RGCA) is the Research & Development arm of the Marine Products Export Development Authority (MPEDA) under the Ministry of Commerce & Industry, Govt. of India. RGCA is committed to develop new sustainable aquaculture technologies for export oriented species as well as to support the existing technologies in India inorder to reinforce the aquaculture production base of the country for sustained and enhanced exports. This is achieved through the implementation of 11 pioneering aquaculture projects established at 22 locations across the country. The headquarters of RGCA (Technology Transfer, Training and Administrative Complex) is located at Sirkazhi (Mayiladuthurai Dist.), Tamil Nadu, which functions as a leading technology transfer and training centre in aquaculture sector of the country. Regular multi-dimensional training programmes are organized at this centre for the benefit of progressive farmers, fisherfolk, entrepreneurs, aquaculture professionals, students, research scholars and Govt. officials besides undertaking cutting-edge applied research in specified areas of aquaculture and fisheries management. RGCA has a unique distinction of possessing two NABL (National Accreditation Board for Testing & Calibration Laboratories) accredited high-end laboratories, specifically dedicated for conducting pathology and genetics research in the aquaculture sector. These laboratories are (first and only in India) housed at its Training Complex in Sirkali.

Prelude to the Training Course

A molecular marker is a fragment of DNA that is associated with a certain location within the genome. The application of molecular markers (such as mitochondrial DNA, RFLP, RAPD, AFLP, ITS, microsatellites, SNP, and EST etc.) to address questions related to aquaculture and fisheries management has been steadily increasing in the last three decades. These markers can provide valuable information for various aspects of aquaculture practice, such as: (i) molecular identification of species, strain and hybrid; (ii) genetic diversity and resource analysis of aquaculture stocks; (iii) assessment of the impact on natural populations of escaped/released cultured fish; (iv) comparisons between hatchery and wild stocks; (v) monitoring of inbreeding or other changes in the genetic composition of the stocks; (vi) assignment of progeny to parents through genetic tags; (vii) identification of marker associated with quantitative trait loci and use of these markers in selection programmes, (viii) assessment of successful implementation of genetic manipulations such as induction of polyploidy and gynogenesis etc. The need of the hour is to implement the lab generated knowledge of molecular markers in field level.

The main objective of this training programme is to impart hands-on training on different molecular markers with an ultimate goal to develop trained manpower who could utilize the techniques to resolve ambivalences in the field of aquaculture and fisheries management. The Central Aquaculture Genetics Laboratory (CAGL) of RGCA is a well-equipped laboratory that envisages to impart this training on a regular basis to stakeholders of the Industry as well as academe. This lab is the first and only aquaculture genetics laboratory in India accredited by NABL as per ISO/IEC 17025:2005. Established in 2011, CAGL has already etched few significant breakthroughs in contemporary research on molecular & cellular biology and aquaculture geneti





Course contents

The 5 day training programme is designed to acquaint participants with recent advances in the field of aquaculture genetics and to impart hands-on-training to identify and implement molecular markers in aquaculture and fisheries management. Some of the important concepts and components that will be covered in the programme are:

- Types of molecular markers and their application
- Demo for tissue sample collection from aquaculture species
- DNA extraction using various protocols
- Quality and quantity determination of extracted DNA
- Agarose Gel electrophoresis
- DNA amplification(PCR)
- Restriction Fragment Length Polymorphism (RFLP)
- Internal Transcribed Spacer (ITS)
- Gene sequencing (DNA Barcoding)
- Data analysis and Phylogenetic tree construction

(Around 80% of the course will involve practical exposure to the above techniques to the participants. All the practical sessions will be hands-on, along with demonstration)

Unique features of the training

Participants could collect and bring fish/shrimp/mud crab samples for molecular identification using multiple molecular markers. Candidates will be allowed to process (starting from DNA extraction up to partial gene sequencing) their own samples during the training. Interested participants need to be informed the course coordinator well in advance and should follow the CAGPFTL standardized protocol to collect and bring samples.

Course material

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

Venue

Technology Transfer Training & Administrative Complex (TTTAC), RGCA, Sirkali,
Tamil Nadu, India-609 109

Duration

7th to 11th September, 2026

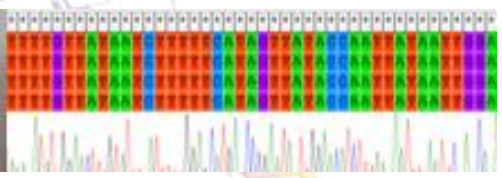
Last date

Last Date for acceptance of duly filled application form: 31st August 2026 (Selection will be based on first come-first serve basis after screening)

Who can apply

Post-graduate students, teachers, researchers and scientists from R&D institutes in the field of basic sciences, fisheries, genetics, wildlife biology, medical sciences or related field and stakeholders from the aquaculture industries are encouraged to apply.





Course Fee

Rs. 7500/- (Rupees seven thousand five hundred only). This is inclusive of a course kit with study material, tea & snacks for the entire training period. The fee does not include travel, boarding, lodging and other personal expenses.

Local Conveyance

Local conveyance will be arranged for the participants to and from the venue to the place of stay on all days of the training programme at no additional charges.

Travelling, Boarding and lodging

Accommodation: AC/Non-AC hostel accommodation will be provided by RGCA on payment basis upon the request received from the candidate. Selected candidates may make their own arrangements for food and accommodation if they are not interested in RGCA hostel accommodation. However, during working days students may make use of RGCA canteen for breakfast/lunch/dinner on payment basis.

How to Apply

Duly completed application forms along with Demand Draft for requisite course fee, drawn in favour of **"Rajiv Gandhi Centre for Aquaculture"** payable at Mayiladuthurai, should reach us at the address given below on or before the last date of registration specified. The payment may also be wire transferred to RGCA A/C: State Bank of India, Mayiladuthurai (A/c No. 10948711219, IFSC code: SBIN0000**875**, SWIFT CODE: SBININBB464). Registration confirmation and receipt will be e-mailed to the participants after processing. No refund of registration fee will be entertained.

The Course Co-ordinator,
Rajiv Gandhi Centre for Aquaculture,
MPEDA-Ministry of Commerce & Industry, Govt. of India,
3/197, Poompuhar Road, Karaimedu, Sattanathapuram P O, Sirkazhi Taluk,
***PIN – 609109, Nagapattinam Dt., TamilNadu. Ph:* 04364 -265208,9894627039**

Course **Co-ordinators (for course content & other details)**

Dr. Mathews Varkey, Senior Scientific Officer, CAGPFTL, Mob: 7382287509
Dr. Anjali K. M., Scientific Officer, CAGPFTLL, Mob: 8973235528

Course Co-coordinators (for registrations, accommodation & other logistics)

Dr. Johny. T. Varghese, Scientific Officer
Mr. S. John, Library & Information Assistant, Mob: 9894627039, Email: rgca.ttac@gmail.co

How to reach the venue

By Train: Nearest Railway stations are; Sirkali-6kms, Mayiladuthurai-20kms, & Chidambaram-20kms
By Bus: From Chennai-260kms Puducherry-90kms (Private&Govt. Transport buses operate frequently)

For details please contact:
Dr. Mathews Varkey
Senior Scientific Officer
Central Aquaculture Genetics, Pathology and Food Testing Laboratory
3/197, Poompuhar Road, Karaimedu, Sattanathapuram P.O.
Sirkazhi Taluk – 609 109, Nagapattinam, Tamil Nadu, INDIA.
Tel: 04364 -265215; Mob: 09597630609
Email: geneticsrgca@gmail.com; Web: https://rgca.co.in

Format of Application form

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Application of Molecular Markers in in Seafood Authentication

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Full Name (Block Letter): _____

Institutional Affiliation: _____

Address: _____

City: _____ State: _____ Country: _____

Phone/Mobile: _____

Fax No: _____

E-mail: _____

Date of Birth: _____

Sex (M/F/T): _____

Academic qualification:

Exam/ Degree	Subjects	Year of passing	Institution
Bachelor			
Master			
Ph.D.			
Diploma/ Others			

Mode of payment: Please tick (√) as applied:

(Registration for Hands-on training: **Rs. 7,500/-**)

SCAN & PAY

☐ Demand Draft in favour of "**Rajiv Gandhi Centre for Aquaculture**"

☐ On-line Transfer Receipt

DD No.: _____ Date: _____ Bank: _____

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

Date & place: _____ Signature of applicant: _____

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