

HANDS ON TRAINING
CSIR Integrated Skill Initiative
on
**“MICROALGAL DIVERSITY AND
THEIR BIOTECHNOLOGICAL
POTENTIALS”**



CSIR- Integrated Skill Initiative



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CSIR-CSMCRI

CSIR- Central Salt & Marine Chemicals Research Institute
14 – 16 Dec 2021.

Preface

Microalgae are tiny single/multi-cellular photosynthetic cells that can proliferate rapidly and generate colossal biomass. They are the primitive life on Earth's planet with oxygenic photosynthetic capability making the entire biosphere rich in oxygen for other creatures to respire since the Precambrian era. They are classified based on their variety of sizes, structures, and forms. Microalgae, in general, consist of several essential metabolites, such as sugars, protein, lipids, and bio-silica, etc.

Microalgae have gradually drawn the attention of scientists and entrepreneurs for their high-value products, feed supplements of humans and animals, transport fuels, industrial chemicals, pharmaceuticals, etc.

The past decades have witnessed substantial progress in establishing microalgae as a unique source of high-value compounds and therapeutic substances as a promising biofuel feedstock in response to the uprising energy crisis, climate change, and depletion of natural sources. Microalgae being an excellent source of pigments (carotenoids and phycobiliproteins), proteins, vitamins, enzymes, minerals, amino acids, lipids, γ -linolenic acid, and biopolymer, recently has received more attention towards the integrated processes including food, feed, fuel, and pharmaceuticals, considering its unique chemical composition, if exploited efficiently through optimized upstream and downstream processing.

Due to its potential high-value applications, these intracellular and extracellular compounds are sought globally. The strategy for efficient exploitation of the microalgae is being developed. A pure culture of a required strain for their mass cultivation and downstream processes for extracting valuable products requires skills to handle such microorganisms for large-scale biotechnological applications.

This program will generate awareness of the importance of microalgae, downstream and upstream processes, and products through digital and practical demonstrations.

PROGRAM DETAILS

Avenues of Products from Microalgae

Morphology and Diversity of Microalgae

Methods of Molecular identification

Mass cultivation techniques of Microalgae

Downstream processing of Microalgae

“Microalgal diversity and their biotechnological potentials”

Date: 14 - 16 December, 2021

REGISTRATION FORM

Name _____
(First name) _____ (Last name) _____

Gender Male Female Date of Birth ____/____/____

Home Address _____

Organization/company _____

Aadhar Card No. _____

Educational qualification _____ Sponsored by/ Self interested _____

Contact no . (Home) _____ (Mobile) _____

Registration fee: Government/ Industry

Self-Sponsored Students/ Individuals : ₹ 1000/- +18%GST/-

Industry Sponsored/ Entrepreneurs : ₹ 5000/- +18%GST/- (Only)

DIGITAL PAYEMENT ONLY WILL BE ACCEPTED, and NO CASH TRANSACTION WILL BE ALLOWED

Kindly submit completed registration form along with all relevant information (AADHAR card, COVID-19 Double dose vaccinated Certificate and your CV) on/ before 20 November 2021,

To Dr. Subir Kumar Mandal at email : skmandal@csmcri.res.in , +91-9426284820

NOTE: Candidates with all required information including CV will be selected primarily based on their CV to participate in the said training program.

Selected Candidates have to deposit their required fees to the account of the Director, CSIR-CSMCRI (will be given later on) within 4 December 2021 through online only.

Accommodation for staying at Bhavnagar has to be arranged by Candidates only. No accommodation will be provided by the Institute. The selected candidate has to submit a copy of the filled registration form, receipt of deposited fees, AADHAR card, certificate of double dose introduction of COVID-19 protective vaccines during joining to the training program.

Experts:

Dr. Subir Kumar Mandal, is working as Senior Scientist in CSIR-CSMCRI, Bhavnagar He is working on microalgal diversity, harmful algal blooms (HABs) and Bio-prospecting microalgae.

Dr Avinash Mishra is working as Principal Scientist in CSIR-CSMCRI, Bhavnagar, Gujarat, India. He is having expertise on plant molecular biology and also seaweed metabolomics. He has also worked on Molecular Systematics and Molecular Phylogeny.

Dr. Sourish Bhattacharya is working as a Senior Scientist at CSIR-CSMCRI, Bhavnagar Gujarat, India. He is having a strong background in the area of microalgal biotechnology, microalgal biofuel, biopolymers and nutraceuticals for therapeutic applications.

Dr. Dineshkumar R. is working as a Senior Scientist in CSIR-CSMCRI, Bhavnagar, India. His work focuses on designing and optimizing upstream and downstream processes for improved manufacturing of bio-products that benefits the society in the sectors of healthcare, energy and environment.

Dr. Arup Ghosh is working as a Principal Scientist and Head Applied Phycology and Biotechnology, CSIR-CSMCRI, Bhavnagar, India. His has wide experience in the field of micro and macro algae including large scale cultivation and stress tolerance. He has also expertise in value addition of microalgal product like biofuel, biofertilizer etc.



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