



Harnessing Algal Potential

A Hands-on Workshop on

SUSTAINABLE BIOTECH APPLICATIONS & DRUG DISCOVERY

18th to 22nd August 2025 | 9.00 AM to 3.30 AM

AIT, Acharya Campus



About the Program

This five-day workshop on Algal Biotechnology and Its Applications is designed to provide hands-on exposure to the complete pipeline of working with microalgae from environmental sampling and culture techniques to high-value product development. The program blends wet-lab activities with industrial demonstrations including biofuel, bioplastic, bioremediation, and food/nutraceutical applications. It offers real-time training for students and researchers interested in algae-based sustainable technologies and innovations. The last two-days focuses on the harnessing of bioactive compounds from algal sources and utilizing them for computer-aided drug discovery (CADD). CADD encompasses a variety of methods, including molecular docking, ADMET, Interpretation of the results, Visualization and analysis. The main aim of this Training is to equip all the participants with the basic to advanced level and complete the research projects on their own without requiring any outside help, which will be helpful in landing a bioinformatics analyst job role. The workshop will be held in Acharya Institute of Technology Bengaluru by the Dept. of Biotechnology.

Objectives of the Program

- To introduce participants to field and laboratory techniques in freshwater algal biotechnology.
- To provide hands-on training in isolation and axenic culture preparation of algae.
- To demonstrate methods of algal biomass cultivation, harvesting, and scale-up.
- To teach participants the use of algae for wastewater bioremediation.
- To guide the preparation of Single Cell Protein (SCP) food products from algal biomass.
- To demonstrate pigment extraction, biofuel production, and bioplastic preparation using cultivated algal strains.
- To offer computational training in metabolite identification, drug discovery pipelines, and molecular docking using algae-based bioactive compounds.

Expected Outcomes of the Program



- Participants will gain hands-on experience in both wet-lab and dry-lab aspects of algal biotechnology.
- Learners will understand the complete workflow of culturing, processing, and utilizing algae for sustainable applications.
- Trainees will develop skills in preparing value-added products like SCP-based foods, natural pigments, biodiesel, and bioplastics.
- Participants will acquire basic to intermediate skills in bioinformatics, including metabolite filtering, structure retrieval, and docking simulations for drug discovery.
- Overall, the workshop aims to build industry-ready skills and spark research interest in sustainable algal technologies.

Target Audience: UG / PG/ Ph.D Life science Students

Committee Members

PATRONS	+
<ul style="list-style-type: none">• Shri B M Reddy, President, JMJ Education Society.• Shri B. Premnath Reddy, Chairman, Acharya Institutes.• Smt. Shalini Reddy, Executive Director, Acharya Institutes.• Shri Krishna Basani Reddy, Managing Director, Acharya Institutes.	
ADVISORY COMMITTEE	+
<ul style="list-style-type: none">• Dr. Marigowda C K, Principal of AIT, Bengaluru	
CONVENER	+
<ul style="list-style-type: none">• Dr. Shilpa Sivashankar	
EVENT COORDINATOR	+
<ul style="list-style-type: none">• Dr. Yuvaraj Ravikumar	

Resource Persons Details

	<p>Dr. Lavanyasri Rathinavel Designation: Founder & Managing Director, Aspire Tech Park Biotech Researcher, Innovation Strategist, Academic Entrepreneur</p>		<p>Dr. Yuvaraj Ravikumar Designation: Associate Professor, Department of Biotechnology, AIT</p>
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Workshop Schedule

DAY:01 - Isolation And Initial Processing Of Microalgae	+
DAY:02 - Functional Studies And Biochemical Applications	+
DAY:03 - Algal Bioproducts And Applied Innovations	+
DAY:04 - Molecular Docking	+
DAY:05 - Analysis Of Docked Complexes And Interactions	+



Acharya Institute of Technology

Acharya Dr. S. Radhakrishnan Road, Acharya P.O
Soladevanahalli, Bangalore - 560107, Karnataka, India.

LOCATE US

Event Coordinator

Dr. Yuvaraj Ravikumar