

## Department of Botany

### ➤ Invitation

#### ORGANIZING COMMITTEE

##### Patron

**Sr. Flora Mary**

Secretary, St. Mary's College (Autonomous), Thoothukudi

##### Chairman

**Dr. Sr. A.S.J. Lucia Rose**

Principal, St. Mary's College (Autonomous), Thoothukudi

##### Convenor

**Dr. M. Glory**

Head and Associate Professor of Botany

##### Program Coordinator

**Dr. Sr. A. Arockia Jenecius Alphonse**

Overall coordinator & Member Secretary

DBT STAR College Scheme

Assistant Professor of Botany

##### Organizing Team

Dr. A. Jacintha Tamil Malar, Assistant Professor of Botany

Dr. G. Flora, Assistant Professor of Botany

Dr. S. Beulah Jerlin, Assistant Professor of Botany

Dr. E. Daffodil D Almeida, Assistant Professor of Botany

Dr. F. Dayana Lobo, Assistant Professor of Botany

Dr. B. Maria Sumathi, Assistant Professor of Botany

Ms. S. Pauline Jennifer, Assistant Professor of Botany

Dr. S. Mary Sautthi, Assistant Professor of Botany

Dr. P. Hermalm, Assistant Professor of Botany

## INTERNATIONAL WORKSHOP ON MICROALGAL TECHNOLOGY

UNDER STAR COLLEGE SCHEME

2021 - 2022

Sponsored by



Department of Biotechnology  
Ministry of Science & Technology,  
Government of India

16<sup>th</sup> - 18<sup>th</sup> February 2022

Organized by

**MARIAN STAR CENTRE**

Department of Botany

St. Mary's College (Autonomous)

(Re-accredited by NAAC with 'A+' Grade)

Thoothukudi - 628001



Registration link : <https://forms.gle/Q9n2mmiwQCH9FQvGA>  
Google Class Room Code : heed72g  
Mail Id : smcstar@dbt2021@gmail.com  
botanydeptstmarys@gmail.com

#### About the Department

The Department of Botany was established in the year 1957 with B.Sc. course in Botany and became Post Graduate Department in the year 1972. The M. Phil. programme was started in the year 1987 and was upgraded as research centre in the year 2000. It offers an unparalleled education to undergraduate and post graduate students with horizontal mobility, interdisciplinary options, supplementary enrichment programmes under choice based credit system. The programme has courses like Molecular biology, Biological techniques, Bioinformatics, Biostatistics, Biodiversity, Forestry, Renewable energy resources and Marine biotechnology to suit professional and social needs of the students and also to tune with emerging national and global needs.

The Department is actively engaged in research programmes in the frontiers of Botany like Environmental Biology, Plant Diversity, Phytochemistry, Marine micro algal resources, Nanotechnology and Bioinformatics. It has DST-BST and DBT Star College scheme funded sophisticated equipments to carryout advanced research. It has successfully completed major, minor and student projects funded by UGC, New Delhi and TNSCST, Chennai. The research publications of the department in reputed journals by the dedicated faculties are evident for their commitment in research programme. In turn, faculty members strive hard for the holistic development of next generation of plant scientists. The Department is also marked by well established Botanical garden and a good number of collections of specimens of diversified groups.

#### About DBT STAR College Scheme

"Star College Scheme" has been initiated by the Department of Biotechnology (DBT) in 2006 to support colleges offering undergraduate programmes to promote and facilitate science teaching. The scheme aims to hone the skills of teachers by helping the institution to organise faculty training programmes to offer improved curriculum keeping up with the current trends. It emphasizes applied learning and practical training for students by providing access to specialized infrastructure and consumables. Star College Scheme is formulated with an aim to enhance conceptual clarity, develop scientific thinking and creativity among students. It enables interactive participation among different scientific disciplines and departments with a holistic approach towards science rather than compartmentalised thinking. DBT has supported around 200 undergraduate colleges across the country in the past 9 years. Star College scheme was sanctioned in March 2019. Four departments of the college namely Physics, Chemistry, Botany and Zoology have been recommended by the Department of Biotechnology (DBT), Ministry of Science & Technology, Government of India, New Delhi, to receive financial assistance under the Star College Scheme.

#### About the Workshops

For millennia, humans have appreciated the usefulness of terrestrial plants as renewable sources of food, medicine, and materials. Agricultural technologies have been consistently modified and improved throughout human history to satisfy the evolving needs of civilization. Algae are a varied collection of photosynthetic organisms that have the ability to meet critical industrial and agricultural demands. Algae's biological diversity can be used to generate a variety of useful bioproducts, either naturally or by genetic modification which has not been tapped to the fullest yet. Microalgae have recently sparked a lot of attention around the world because of its vast range of applications in the renewable energy, biopharmaceutical, and nutraceutical industries. Microalgae can be converted into a variety of products using conversion technologies such as algal lipid upgrading, liquefaction, pyrolysis, gasification, and bioethanol technology as an environmentally friendly renewable feedstock. The broad scope of the workshop includes gaining of knowledge about the culturing of microalgae, production and extraction of value added products from microalgae and the use of microalgae in environmental sustainability.

#### Programme schedule

Day I, 16.02.2022

Time 9:00 am - 11:00 am

#### Inaugural Ceremony

##### Person in Charge

Welcoming Address: Dr. M. Glory

Head and Associate Professor of Botany

Religious Invocation: Dr. Sr. A.S.I. Lucia Rose

Principal, St. Mary's College (Autonomous), Theethadai

##### Session I

Topic: Microalgae: a Biofactory for Value Products

Dr. Obulrajy Parthiba Karthikeyan

Research Scientist and Lecturer

Department of Civil and Environmental Engineering,

South Dakota School of Mines and Technology, USA

##### Session II

Virtual Hands on Session

Day II, 17.02.2022

Time 2:00 p.m. - 3:00 p.m.

Time 9:00 a.m. - 11:00 a.m.

##### Session I

Topic: Role of Algae on Environmental Sustainability

Dr. Arthur James

Professor and Head

Department of Marine Science

Bharathidasan University,

Trichirappalli, Tamilnadu

##### Session II

Topic: Microalgal Culture Techniques

Dr. F. Anantharaman

Professor and Dean,

Centre of Advanced Study in Marine Biology

Faculty of Marine Sciences

Anna University, Parangipet, Tamilnadu

Day III, 18.02.2022

Time 6:00 p.m. - 7:00 p.m.

Time 9:00 a.m. - 11:00 a.m.

##### Session I

Topic: Marine Microplastic Pollution - Threat to Marine Environment

Dr. R. Rajaram

Associate Professor

Department of Marine Science

Bharathidasan University

Trichirappalli, Tamilnadu

#### Valedictory Ceremony

Valedictory Address: Dr. Sri Priya

Assistant Professor of Zoology

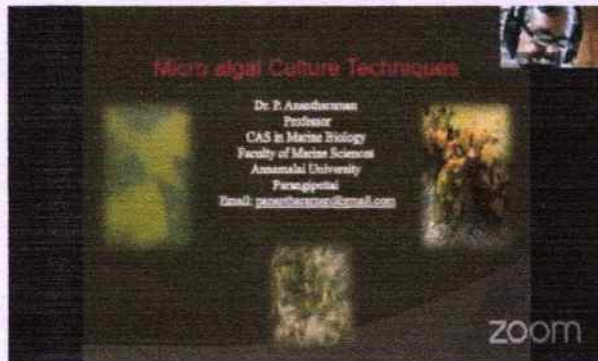
St. Mary's College (Autonomous), Theethadai

Time: 4:00 p.m.





➤ Photos



➤



➤ Certificate





## ➤ Report

### Workshop on Microalgal Technology

**16.2.2022 to 18.2.2022**

The Marian Star Centre, Department of Botany St. Mary's College (Autonomous), Thoothukudi organized an International Workshop on Microalgal technology, sponsored by The Department of Biotechnology, New Delhi under the Star college programme from 16<sup>th</sup> February 2022 to 18<sup>th</sup> February 2022. The first day of the workshop started with the Prayer song followed by the formal welcome address by Dr. M. Glory, Head and Associate Professor of Botany. Rev. Sr. Dr. A.S.J. Lucia Rose, Principal, St. Mary's College (Autonomous), Thoothukudi gave the presidential address. The first session started by introducing the resource person of the day Dr. Obulisamy Parthiba Karthikeyan, Research Scientist and Lecturer, Department of Civil and Environmental engineering, South Dakota School of Mines and Technology, USA. He gave the lecture on the topic "Microalgae: a biofactory for valuable products." He gave a brief introduction about the microalgae culture and identification. He also threw light on how this can be used to generate valuable products. He shared numerous papers and example to explain the same. The session was concluded with the vote of thanks. Finally, Google form was shared with the participants to get their feedback. About 89 participants have benefitted from today's programme.

2<sup>nd</sup> Day (14.02.2022) of International Workshop on Microalgal technology was organized by Marian Star Centre, Department of Botany St. Mary's College (Autonomous), Thoothukudi. Dr. P. Santhanam, Associate Professor, Department of Marine Science, School of Marine Sciences, Bharathidasan University, Tiruchirappalli was the resource person. The Morning session was started at 9.00 a.m. with a prayer song and it was followed by welcome address and virtual group photo session. Dr. Santhanam delivered a talk on "Harmful Algal Blooms: Causes, Impacts and Mitigation Strategies" He started his lecture by focusing on marine ecosystem and food chain. He clearly defined the harmful algal blooms and its effect on the ecosystem. Different types of algal blooms, its favorable conditions, colour change in the water bodies, distribution of harmful species and the effect of toxicity were discussed with the participants. At the end of his talk he discussed about the control measures to overcome the algal bloom. He concluded that microalgae is a source of nutrition for all the organisms but when a species of diatoms, blue green algae etc., dominates in a particular area, it creates a serious problem to the ecosystem where it presents. The morning session of 2<sup>nd</sup> day was concluded with the vote of



thanks. Finally, Google form was shared with the participants to get their feedback. About 69 participants have benefitted from today's programme.

The 2<sup>nd</sup> day (14.02.2022), the second session of the International Workshop on Microalgal Technology was organized by Marian Star Centre, Department of Botany, St. Mary's College (Autonomous), Thoothukudi and sponsored by the Department of Biotechnology, Star College Scheme, New Delhi started with invocation of God blessing. Dr. B. Maria Sumathi, Assistant Professor, Department of Botany, St. Mary's College (Autonomous) Thoothukudi introduced and welcome the chief guest of the session Dr. P. Anantharaman, Professor and Dean, Centre of Advanced Study in Marine Biology, Faculty of Marine Sciences, Annamalai University, Paragipettai, Tamilnadu. The expert speaker Dr. P. Anantharaman, addresses the participants on the topic "Microalgal Culture Techniques". He clearly explained the structure, importance and cultural techniques of microalgae. Participants enthusiastically raised questions and gain knowledge of the answers given by Dr. P. Anantharaman. He enriched the interest and knowledge of the participants by clearing their doubts. The session was quite interactive. Finally, Dr. B. Maria Sumathi, Assistant Professor, Department of Botany, St. Mary's College (Autonomous) Thoothukudi expressed her words of gratitude. About 83 participants have benefitted from today's programme.

The Day 3 (18. 02. 2022) session of Marine microplastic pollution – Threat to marine environment, organized together by the Marine star centre and Dept. of Botany of St. Mary's college (Autonomous), Thoothukudi and sponsored by the DBT – Star college scheme, New Delhi. The session was started at 9 am with a prayer song. Dr. P. Hermalin, Assistant Professor, department of Botany welcomed Dr. R. Rajaram, the resource person of the day and the Participants. Dr. R. Rajaram, Assistant Professor, Department of Marine Science, Bharathidasan university, Trichy, introduced the participants and explained, what is microplastics and their types and how it is hazards to the biodiversity. The meeting witnessed active participation and interaction of the participants with the resource person. The session was concluded with the vote of thanks delivered by Dr. P. Hermalin, Assistant Professor, Department of Botany, St. Mary's College (Autonomous), Thoothukudi. Nearly 78 participants from various colleges all over the country attended the programme.

The Valedictory of the workshop was organized at the end of the session. Dr. Sripriya, Assistant Professor of Zoology, St. Mary's College gave the valedictory address. The workshop came to an end with the feedback of the participants and formal Vote of thanks.

*M. Mary*  
Head of the Department  
HOD of Botany  
St. Mary's College (Autonomous)  
Thoothukudi-628 001

*B. Serena Margaret*  
IQAC Coordinator  
IQAC Co-ordinator  
St. Mary's College (Autonomous)  
Thoothukudi

*Lini Rose*  
Principal  
St. Mary's College (Autonomous)  
Thoothukudi-628 001.