

About the Department

The Department of Marine Biotechnology, AMET University with a long history of teaching and research, is currently running postgraduate and research programs *viz.*, M.Sc, M.Phil., and Ph.D., in Marine Biotechnology, and also M.Phil., Marine Microbiology. The Department is actively engaged in research on Marine Microbial Diversity, Enzyme technology, Secondary metabolites from marine organisms, Marine Bio products and Bioprocess Technology with a core theme of bioactive molecules from marine organisms.

The Department also provides Short Term Training and Project guidance for postgraduate students. The Department is also involved in the bacterial identification services by 16S rRNA sequencing method. During 2010-2016, the Department has organized 19 academic events such as, Seminar, Workshops, Orientation Programs and Public Awareness programs.

Laboratory facilities

The Department of Biotechnology, AMET University is enriched with specialized facilities like

- Gradient PCR machine
- Lyophilizer
- SHIMADZU –UV/VIS Spectrophotometer
- Rotary evaporator
- Fume exhauster
- Refrigerated centrifuges
- Micro centrifuge
- Deep freezer
- Western blotting apparatus
- Environmental shaker
- UV transilluminator
- Vertical Gel Electrophoresis
- Horizontal Electrophoresis
- Submarine Electrophoresis
- Refractometer
- Chromatography aids & Soxhlet apparatus

Besides, the Department is well equipped with very essential instruments for research and training in Microbiology, Biochemistry, Biotechnology, Marine Biology and Aquaculture.



DEPARTMENT OF MARINE BIOTECHNOLOGY
AMET UNIVERSITY
(Under Sec. 3 of UGC Act 1956)

Cordially invites you for the

SECOND NATIONAL LEVEL WORKSHOP ON TECHNIQUES IN BIOACTIVE METABOLITES FROM MARINE AND OTHER BIORESOURCES

MAY 25 —27, 2016

PATRONS

Dr. J. Ramachandran,
FOUNDER- PRESEDENT, AMET University

Col. Dr. G. Thiruvasagam,
Vice Chancellor, AMET University

CONVENER

Dr. M. Jayaprakashvel, M.Sc., Ph.D.,
Assistant Professor & Head i/c,
Dept. of Marine Biotechnology, AMET University

ORGANIZING SECRETARY

Dr. N. Sri Kumaran, M.Sc., Ph.D.,
Assistant Professor, Dept. of Marine Biotechnology,
AMET University

SECOND NATIONAL LEVEL WORKSHOP ON TECHNIQUES IN BIOACTIVE METABOLITES FROM MARINE AND OTHER BIORESOURCES

MAY 25 — 27, 2016

INFORMATION BROCHURE



Organized by
**DEPARTMENT OF MARINE
BIOTECHNOLOGY**
AMET UNIVERSITY
(Under Sec. 3 of UGC Act 1956)
**135, EAST COAST ROAD
KANATHUR, CHENNAI-603112**



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ABOUT THE WORKSHOP

Research on Bioactive metabolites has always been a fascinating field which utilizes the principles of Biology and Chemistry. Search of novel bioactive metabolites from various biological resources are essentially needed for the new drug discovery programs, development of useful bioproducts etc.

Various metabolic groups such as alkaloids, flavanoids, saponins, terpenoids, phenolics, quinines and peptides were found to have various biological activities such as anti microbial, antifungal, anti-inflammatory, anti cancer, antioxidant, antihelminthic, antiviral, wound healing, hepatoprotective, hypoglycemic, cardioprotective etc.

A beginner in research field who is intended to take up natural product research has to have knowledge on the techniques such as extraction, purification and bioactivity evaluation. This workshop would provide a basic introduction to the drug discovery programs. The technical aspects of the workshop covers the broad area of techniques related to bioactive metabolites and their bioactivities.

Marine bioresources are potential choices for the discovery of novel bioactive metabolites. Separate technical considerations are required to work with marine biological materials. This workshop would provide technical training in working with marine and other terrestrial bioresources for the extraction of bioactive metabolites.

TECHNICAL DETAILS OF THE WORKSHOP

Techniques under the following area will be given as hands on experience in the workshop.

1. Preparation of Biomaterial

Collection, preservation and processing of biomaterials from marine and other bioresources for the extraction of bioactive metabolites.

2. Extraction of bioactive metabolites

Classical and modern methods of extraction Soxhlet extraction; Direct and Serial exhaustive extraction.

Extraction of microbial pigments.

3. Phytochemical analysis

Detection of major phytochemical in crude metabolites

Bio-activity assay

Assay for Anti-bacterial, anti-fungal, Hemolytic, Cytotoxic and anti oxidant activities of bioactive extracts. Stability of metabolites.

4. Bio-assay guided isolation / purification of bio-active compounds

Thin Layer Chromatography (TLC) - Use of Pre-coated and manually prepared plates; Antibioassay/bioautography; Column Chromatography - Wet Packing, Sample packing and Elution; Bio-activity assay.

5. Structure elucidation of purified Bio-active compound(s) (Theory)

Ultra Violet Spectroscopy (UV), Infra Red Spectroscopy (IR), Nuclear Magnetic Resonance Spectroscopy (NMR), Mass Spectroscopy.

Registration details

Industry/ R&D Scientists : Rs. 3000

Faculty members of Academic Institutions : Rs. 3000

Research Scholars and Students : Rs. 2000

Registration fee includes a Workshop kit (includes manual), lunch and light refreshments on all the three days.

Registration forms can be requested through e mail to ametmarinebiotech@gmail.com or downloaded from www.ametuniv.ac.in

Payment mode: Demand Draft in favour of **Academy of Maritime Education and Training** payable at Chennai.

Last date for registration : 18-5-2016

Only limited participants (30 numbers) will be selected for the workshop. Registration will be done on first come first serve basis.



All correspondences should be addressed to

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**SECOND NATIONAL LEVEL
WORKSHOP ON TECHNIQUES IN BIOACTIVE METABOLITES FROM MARINE
AND OTHER BIORESOURCES**

MAY 25 – 27, 2016

REGISTRATION FORM

NAME :.....

DESIGNATION :.....

DEPARTMENT :.....

INSTITUTION :.....

ADDRESS :.....

.....

.....

.....

E. MAIL :.....

MOBILE NO :.....

REGISTRATION FEE: **Rs 2,000** **Rs 3,000**

DD NO:.....

DATE :..... **BANK** :.....

**HOD/ Research Supervisor
Signature**

**Candidate
Signature**

- Last date for Submission: 18-05-2016
- Submit your registration form to **Dr M. Jayapragashvel**, Assistant Professor & Head i/c, Dept. of Marine Biotechnology, Academy of Maritime Education and Training, No. 135, East Coast Road, Kanathur, Chennai-603112

(Copies of the registration form will be accepted)