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**Dr. J.J.Prince Prakash**, Scientist 'E', CEE, MoES-NIOT, Chennai

**Dr. T.T. Ajith Kumar**, Principal & Scientist In-Charge, NBFG-DCAR, Cochin

**Dr. S. Anbumani**, Scientist, CSIR-Indian Institute of Toxicology, Research, Lucknow, UP

**Dr. Deepak Samuel**, Scientist 'E', National Centre for Sustainable Coastal Management, MoEFCC, Chennai

**Dr. T. Muneeshwaran**, Principal Scientist, Science for World and Academic Network, Madurai

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**Dr. K. Altaff**, Professor, Department of Marine Biotechnology, AMET University

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**Dr. C.M. Ramakritinan** Professor & Head, Dept. of Marine Biotechnology, AMET University

### Co-convener

**Dr. M. Jayaprakashvel**, Professor, Dept. of Marine Biotechnology, AMET University

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32  
years



AMET  
UNIVERSITY  
(Deemed to be University Under Section 3 of UGC Act 1956)



## Department of Marine Biotechnology

Organizes

# National Workshop on Toxicological Testing in Environmental Monitoring and Drug Discovery TT-EMDD-2025

Date: 11.06.2025 -13.06.2025

Venue: AMET University



Academy of Maritime Education and Training (AMET)

Deemed to be University

#135, East Coast Road, Kanathur - 603112

Chennai, Tamil Nadu, India

Website : [www.ametuniv.ac.in](http://www.ametuniv.ac.in)

## ABOUT THE UNIVERSITY

AMET is India's First Deemed to be University in Maritime Education which is ranked as 5th among Maritime Universities of the World in the Performance Indicators in Maritime Education and Training (PIMET) Ranking of International Association of Maritime Universities (IAMU). Established during 1993, AMET's uncompromising strides of excellence in the field of maritime education and training laced with its capacity to feed the global shipping industry with an unrivalled maritime human resources secured it to have many national and International recognitions, accreditations and rankings such as NAAC – A Grade, NBA, NIRF, ARIIA, DGS-CIP, PIMET, DSIR - SIRO, etc.

### VISION

To sustain identity as a World Class Leader in Maritime Education and empower learners with wholesome knowledge through progressive innovation in training, research and development which will render students a unique learning experience and a transformation impact on the Global Society.

### MISSION

AMET will strive continuously to

- Impart value-based higher education and technical knowledge with uncompromising strides of an outstanding quality.
- Emerge as a Centre of Excellence inculcating skill development in recent technologies in accordance with industrial trends.
- Create World class research capabilities on par with the finest in the world and broaden student's horizons beyond classroom education.
- Nurture talent and entrepreneurship to enable all round personality development among students.
- Empower students across socio economic strata.
- Make a positive difference to society through technical education.

## ABOUT THE DEPT. OF MARINE BIOTECHNOLOGY

The Department of Marine Biotechnology, AMET deemed to be University is established during 2008-2009 with the aim of imparting world class higher education in Marine Biotechnology. Marine Biotechnology is an important field which is still in its infancy and the scopes in future are enormous. New pharmaceutical companies are focusing on developing new drugs from marine resources. The enhanced focus on aquaculture will generate thousands of jobs for trained Marine Biotechnologists. The growing use of marine products in the food, cosmetic, and agriculture industries has created a current demand that we can barely meet. The Department of Marine Biotechnology is offering Ph.D. Degree Programme in Marine Biotechnology. The Department identified "Biologically active molecules from marine organisms" as its core theme of approach, both in teaching, research and consultancy.

### VISION OF THE DEPARTMENT

To be a Centre of Excellence in the field of Marine Biotechnology equipped to nurture world-class bioengineers with a potential to innovate, discover and disseminate knowledge for the welfare of mankind.

### MISSION OF THE DEPARTMENT

- To transform into a comprehensive and a multidisciplinary Marine Biotechnology center that supports, coordinates, disseminates and advances in the area of Marine Biotechnology
- To impart quality education for lifelong professional growth and opportunity in a wide range of Careers
- To become a resource center for Marine Biotechnology information and education to create awareness towards socio ethical implications of potentials of biotechnology
- To initiate multi-disciplinary programs through academia-industry interface with a special emphasis on implementation of bioprocess and scale-up
- To endow students with the educational opportunity belonging to different socio-economic backgrounds
- To engage in the fruitful research that can be beneficial to create a better society

## ABOUT THE WORKSHOP

Toxicology is a multidisciplinary field of Science such as Environmental Toxicology / Ecotoxicology, Clinical Toxicology, Nutritional Toxicology and Occupational Toxicology. Most of the ecosystems and environments are typical in nature hence the characterization and assessment of the complex exposure situation are key challenges for the toxicologists. Toxicity tests on laboratory scale using animals / microbes / cell lines serve as an important role in public health and regulatory decisions concerning toxic chemicals as well as drug safety assessment. The traditional toxicity testing methods utilized the organism / animal as test species for aquatic environmental monitoring. On the part of the protection of aquatic ecosystem, the toxicological testing methods play a major role for derivation of water quality criteria and standards. Currently the traditional toxicity testing is shifted to the advantage of on-going revolution in biology and biotechnology i.e., to study the effects of chemicals using cells, cellular components, and tissues preferably of human / animal origin rather than whole animals.

New tests should elucidate changes at the molecular level, helping scientists to better predict how chemical exposures do or do not lead to certain health effects and how they affect sensitive populations. The toxicological testing should enable rapid screening of chemicals which could reduce the backlog of large number of industrial chemicals that have not yet been evaluated under the current testing system. This should also reduce animal use and suffering. Also, the toxicological testing is one of the important scientific tools to screen and evaluate the safety of potential drug candidates. This processes involve using different types of toxicity tests including in-vitro, in-vivo, in-silico, and toxicogenomics approaches. The toxicology is currently shifting towards novel methods for evaluating toxicity using cell culture, molecular biology and computer modelling for prediction. This speed up the toxicity testing process thus allowing the rapid assessment of numerous compounds consecutively. In this context, the Three Days National Level Hands on Workshop in "Toxicological Testing in Environmental Monitoring and Drug Discovery" is planned. This workshop will provide theoretical and practical knowledges in current

advancement in toxicological testing methodologies and computational applications in environmental monitoring and drug development.

## Focused Areas of Workshop:

1. Acute & Chronic Toxicity Testing
2. Microbial Toxicity Testing
3. Genotoxicity & Mutagenicity
4. Cell Line Toxicity Testing
5. In-vitro and In-vivo testing
6. Nanotoxicology
7. Biochemical and Biomarker Enzymes analysis
8. Histopathology
9. Water Quality Guidelines and Regulations
10. In-silico computational analysis
11. Statistical Applications in Toxicological Testing

## Invited Lectures by:

1. **Dr. D. Mohan**, Former Scientist 'F', MoES-NCCR (Formerly ICMAM), Chennai
2. **Dr.R.BabuRajendran**, Former Senior Professor, Bharathidasan University, Tiruchirappalli
3. **Dr. M. Ramesh**, Professor, Dept. of Zoology, Bharathiar University, Coimbatore
4. **Dr. S. Anbumani**, Scientist, CSIR-Indian Institute of Toxicology, Research, Lucknow, UP
5. **Dr. S.R. Marigoudar**, Scientist E, MoES-NCCR, Chennai
6. **Dr. T. Muneeshwaran**, Principal Scientist, Science for World and Academic Network, Madurai
7. **Dr. D. Anantha Krishnan**, Post-Doctoral Fellow, SRM-IST, Chennai

## Participants

Post Graduate students, Research scholars, Environmental Scientists, Biomedical Scientists, Academicians and related Government Agencies. **Only 20 Participants will be selected based on the field of interest.** TA/DA will be provided for selected participants only.

## Important Dates

Submission deadline for Registration form : 01-06-2025  
Acceptance Notification : 03-06-2025  
Registration fee payment deadline : 07-06-2025

## Registration Fees

Academicians/Scientists/Research Associates: **Rs.2000**  
Research Scholars/PG Students: **Rs.1500**



SCAN FOR REGISTRATION

Participants are requested to submit the "Registration Form" using the Google link <https://forms.gle/C9mF4qrYzvqJJ97UA> or hard copy along with a reason for attending this workshop and benefit. Selected participants will be informed, and upon confirmation, they are requested to pay the prescribed fee through online transfer. Bank account details will be provided at the time of selection notification.