



Training cum Workshop Advanced Analytical Techniques in

METABOLOMICS AND PROTEOMICS

OBJECTIVE

To provide technical know-how in understanding the principle, design, components, operation of high-end scientific instruments and maintenance, various analytical techniques, generation of data and interpretation of results by organizing theory and practical classes

ANALYTICAL FACILITIES

- ✦ Fourier Transform-Infrared Spectroscopy - Identification of functional group of compounds
- ✦ Multimode Microplate Reader - Detection of fluorescence, chemiluminescence, Western blot, optical density and enzyme kinetics
- ✦ Gas Chromatography with MS, FID and TD - Profiling of plant volatiles, microbial metabolites, fatty acids, essential oils, antimicrobials, VOCs
- ✦ Liquid Chromatography-MS-MS and HPLC - Analysis of sugars, pigments, amino acids, organic acids, phytohormones and secondary metabolites
- ✦ Flow Cytometer - Determination of cell density, cell viability, microbial biofilms, tagging and tracking of micro organisms, microbial colonization
- ✦ Other facilities - Tangential Flow Filtration, Thermo Mixer, Ultra Sonicator, Probe Sonicator, Vacuum Concentrator, Gel documentation system, Iso Electric Focussing (2D gel), DGGE, Fast Performance Liquid Chromatography (FPLC)

TRAINING DETAILS, DURATION AND FEES

S. No	Training Code	No. of Days	For TNAU Students / Faculty (Rs)	Other Academic Institutions / Government Department (GST 18% extra) (Rs)	Private Firms / Industries / Entrepreneurs / Others (GST 18% extra) (Rs)
1.	*MPAF-01	1 day	1000	1500	2000
2.	*MPAF-02	2 days	2000	3000	4000
3.	MPAF-03	5 days	5000	7500	10000
4.	MPAF-04	10 days	10000	15000	20000

*Minimum of 5 members mandatory for one and two days training duration



FT-IR



LC-MS-MS
LC - PDA



GC-MS, GC-FID, GC-TCD,
GC-MS with ATD

For Registration
Kindly click on the link or
scan the QR code below



<https://forms.gle/pP4CvF5NhLXBBQFK8>



Department of Agricultural Microbiology
Tamil Nadu Agricultural University, Coimbatore 641 003, Tamil Nadu, India

TAMIL NADU AGRICULTURAL UNIVERSITY

The Tamil Nadu Agricultural University (TNAU) had its genesis as Agricultural School at Saidapet, Madras, Tamil Nadu, as early as 1868 and it was later relocated at Coimbatore. In 1920 it was affiliated to Madras University. TNAU undertake responsibilities of Agricultural Education and Research and supported farmers and State Agricultural Department through education, research and trainings. With more than 925 scientists and instructional professionals, the University has 39 Agricultural Research Stations dispersed over the seven agroclimatic zones of Tamil Nadu, 28 associated institutions and 18 constituent colleges involved in imparting quality agricultural education and research in the state. Students from all over India and overseas apply for admission to various Undergraduate and Post Graduate programmes of TNAU.



DEPARTMENT OF AGRICULTURAL MICROBIOLOGY

The Department of Agricultural Microbiology was started as one of the units of the Department of Biology in 1971 in TNAU and attained the status of a separate department in 1979. The department is actively involved in research, teaching and extension activities. The department has released several strains of biofertilizers for use in various crops and soils and is pioneer in producing novel strains for Nitrogen fixation, K, Zn, Si and Mn solubilization. Postgraduate programs leading to M.Sc. and Ph.D. in Agricultural Microbiology were started in 1979 and so far 265 M.Sc. (Ag) and 108 Ph.D. students have successfully passed out. Recent research focus of the Department has been extended towards Biological Nitrogen Fixation (BNF), plant microbiome, bioprocessing, climate change impact on microbial diversity, metabolomics in host-microbe interaction, post-harvest microbiology and value addition and biofuels. The Department is well equipped with high through put lab instruments for advanced research.

Coordinators

Dr. U. SIVAKUMAR, Professor & Head

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