Report

Workshop Title: PHYSIOLOGICAL AND MOLECULAR MARKERS FOR ABIOTIC STRESS TOLERANCE IN PLANTS

Date: 31/10/2022 to 04/11/2022 Venue: Dept. of Botany, University of Calicut

A five-day international workshop on "Physiological and molecular markers for abiotic stress tolerance in plants" was conducted by the department of Botany. The workshop was held at the Department of Botany, University of Calicut from October 31 to November 4, 2022. Eminent scientists including Dr. Szilvia Z. Tóth (Hungarian Academy of Sciences, Hungary), Dr. Maddi Vanaja (ICAR Hydrabad), Dr. Umesh Bhageshwar (Texas A&M University, USA), and Dr. Dinakar Challabathulla (Central University of Tamil Nadu) handled the scientific practical sessions. During these sessions, participants received hands on training in methods like chlorophyll a fluorescence, infrared gas analyzers (IRGA), RNA isolation, primer designing, and cDNA synthesis. This event also featured the introduction of expression, purification, and detection of new generation fluorescent proteins, along with isolation of plasmids, restriction digestion, and cloning. This event was organised and guided by Prof. Dr. Jos T. Puthur (Head of Department Botany, University of Calicut) and Prof. Pardhasaradhi (Department of Environmental science, Andhra University). Researchers and faculties from all over India participated in this event. The valedictory session was inaugurated by Dr. Satheesh E.K. (Registrar, University of Calicut). This event was a grand success with the completion of all its objectives.

Sl. No.	Topics	Resource person
1.	**Chlorophyll *a* fluorescence as a tool to monitor plant health**	**Dr. Szilvia Z. Tóth**
2.	**Modulated fluorescence: PAM fluorometry and the quenching analysis method**	**Dr. Szilvia Z. Tóth**
3.	**Measuring Photosynthetic Rate: Using Infra-Red Gas Analyzers (IRGA)**	**Dr. Maddi Vanaja**
4.	**Expression, Purification and Detection of New Generation Fluorescent Proteins to study Biotic and Abiotic Stresses.**	**Dr. Umesh Bhageshwar**
5.	**Analysing alternative oxidase gene expression under abiotic stress conditions in leaves of *Oryza sativa***	**Dr. Dinakar Challabathulla**

Photographs