

MADURAI KAMARAJ UNIVERSITY

UGC-NRCBS XIX Winter School on Plant Viruses as tools in Biotechnology

November 1 – 15, 2011



SCHOOL OF BIOLOGICAL SCIENCES

Madurai Kamaraj University (MKU), established in 1966, has 18 schools comprising 73 Departments, 66 affiliated colleges and 15 Institutions. University Grants Commission (UGC) has recognized MKU as a "University with Potential for Excellence". Founded by the late Prof. S. Krishnaswamy, the School of Biological Sciences (SBS) stands as an internationally reputed Centre of Excellence for research in modern biology. The SBS had pioneered in teaching Integrated Biology and Genomic Sciences. The focus of research in the school shifted in consonance with the contemporary developments. UGC has elevated the SBS as the "Centre for Advanced Studies in Functional Genomics". SBS recently received support from Department of Biotechnology (DBT) to establish an Interdisciplinary Program in Life Sciences (DBT-IPLS). The UGC has also supported SBS to establish the "Centre for Excellence in Genomic Sciences".

UGC-NETWORKING RESOURCE CENTRE IN BIOLOGICAL SCIENCES

UGC, New Delhi has created Networking Resource Centres in various disciplines at leading University Departments/Research Institutions in India. The major objectives of the centres are to promote collaborative research, to provide access to advanced research facilities and to impart training to young researchers working in frontier areas of biology. SBS was recognized as a "Networking Resource Centre in Biological Sciences (NRCBS)" in the year 2008.

UGC-NRCBS, MKU, with its state-of-the-art infrastructure, is functioning as a resource centre for training and research collaborations. The activities of the UGC-NRCBS include: i) organizing Summer and Winter schools, ii) guidance of Ph.D students of other Institutes on research methodology, iii) support for Ph.D students who are in need of equipment/laboratory facilities and iv) strengthening the collaborative research initiatives in Biological Sciences among Universities and research Institutes. Researchers from various parts of the country are trained in the winter/summer schools. The theme of the proposed winter school is "Plant Viruses as tools in Biotechnology".

ABOUT THE WINTER SCHOOL

Plant viruses are of considerable economic importance because they cause extensive damage to broad range of plant species worldwide. Viruses display a myriad of opportunities to be targets or tools of plant biotechnology. Viruses are intracellular pathogens impossible to combat chemically, hence fighting against them requires various approaches. Hence, molecular based technologies for virus detection and analysis is imperative. In this context, recent advances in biotechnology and molecular biology based techniques such as PCR, cDNA hybridization and monoclonal antibody production have played significant roles in detecting viral DNA/RNA/Protein molecules. Viruses can be used as efficient vehicles for heterologous gene expression in plants. Virions are but highly complex and stable nanostructures, the basis for development of multiple nano-biotechnological tools.

This winter school is designed to give an overview of applications of plant viruses in biotechnology. There would be lectures on pathogen derived resistance for making virus resistant transgenic plants, functional genomics through virus induced gene silencing vectors and expression of epitopes on plant viruses.

Hands-on training will be provided on plant virology such as purification of virus, extraction of viral nucleic acid, cDNA synthesis, PCR, cloning of viral genes, detection of virus through Western and ELISA, detection of viral nucleic acid through Real time PCR and purification of recombinant viral proteins

ORGANIZING TEAM

Convener : **Dr. T. Jebasingh**
Assistant Professor
DBT-IPLS programme
School of Biological Sciences
Madurai Kamaraj University

Organizing Secretary : **Dr. P. Gopal**, Assistant Professor, SBT

Members : **Dr. K. Sujatha**, NRCBS Faculty
Dr. A. Murugan, NRCBS Faculty
Dr. A. Mahalakshmi, NRCBS Faculty
Dr. J. Sridhar, NRCBS Faculty
Dr. B. Singaravelan, NRCBS Faculty
Dr. J. Rajendhran, Assistant Professor
Dr. G. Kumaresan, Associate Professor
Dr. Ganesan Gopalan, Associate Professor

ELIGIBILITY

Applications are invited from research scholars, young faculty members and scientists working in the Research Departments of colleges or Universities/Research Institutes in India. Preference will be given to the candidates working or intended to work in the area of Plant Tissue Culture Applications.

APPLICATION & SELECTION PROCEDURE

The application form can be downloaded from www.nrcbsmku.org or www.genomicismku.org. Candidates should submit the filled in application form to Dr. T. Jebasingh, Convener, UGC-NRCBS Winter School on "Plant Viruses as tools in Biotechnology", School of Biological Sciences, Madurai Kamaraj University, Madurai-625 021 on or before October 20, 2011. Applications should be forwarded by the research supervisors/Head of the Department or Head of the Institution. The candidates will be selected based on their qualifications and research interests.

TA / DA & ACCOMMODATION

UGC-NRCBS, MKU will provide TA/DA to the participants as per Madurai Kamaraj University regulations. Participants should produce a certificate stating that they have not been provided with TA/DA by their Institute (Head of the Department / Institute) and the training period shall be considered as 'On Duty' by the participant's parent institution. Accommodation will be arranged at the faculty guest house in Madurai Kamaraj University campus.

Dr. T. JEBASINGH

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