



# MADURAI KAMARAJ UNIVERSITY



## UGC-NRCBS Summer School on PCR Applications

March 17 - 31, 2010

Applications are invited from research scholars, post-docs, young faculty members and scientists of Indian Universities / Research Institutions for the UGC-NRCBS Summer School on “PCR Applications” to be held from **March 17 -31, 2010**.

### ELIGIBILITY

Applicants should be young faculty members with Ph.D. degree, scientists or registered Ph.D. students working in research departments of Colleges or Universities / Research Institutes in India. Preference will be given to the candidates working or intended to work on the PCR based methods in their research programs.

### APPLICATION & SELECTION PROCEDURE

The registration form can be downloaded from the UGC-NRCBS website [www.nrcbsmku.org](http://www.nrcbsmku.org) or from [www.genomicsmku.org](http://www.genomicsmku.org). Candidates should submit the filled in registration form to **Dr. J. Rajendhran**, Convener, UGC-NRCBS Summer School on PCR Applications, School of Biological Sciences, Madurai Kamaraj University, Madurai – 625021 **on or before 5<sup>th</sup> March 2010**. No Registration fee is required. Applications should be forwarded by their research supervisor/Head of the department or Head of the institution. The candidates will be selected based on the qualification and research interests.

### TA / DA & ACCOMMODATION

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

### ABOUT SCHOOL OF BIOLOGICAL SCIENCES

**Madurai Kamaraj University**, established in 1966, has 18 Schools comprising 73 Departments, 66 affiliated Colleges and 15 Institutions. UGC has recognized MKU as a “**University with Potential for Excellence**”.

Founded by late Prof. S. Krishnaswamy, the School of Biological Sciences (SBS) stands as an internationally reputed Centre of Excellence in research in modern biology. The SBS had pioneered in teaching Integrated Biology and Genomic Sciences. The focus of research shifted in consonance with the contemporary developments and the UGC elevated the SBS as the “**Centre for Advanced Studies in Functional Genomics**”. The UGC has also supported SBS to establish the “**Centre for Excellence in Genomic Sciences**”. Recently, UGC has recognized SBS as a “**Networking Resource Centre in Biological Sciences**”.

### Dr. J. Rajendhran

Convener

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### ABOUT UGC-NETWORKING RESOURCE CENTRE IN BIOLOGICAL SCIENCES

University Grants Commission, New Delhi has created Networking Resource Centres in various subjects 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 in frontier areas of the respected subjects. School of Biological Sciences, Madurai Kamaraj University has established a National UGC-Networking Resource Centre in Biological Sciences.

UGC-NRCBS, MKU is functioning as a resource centre for training and research collaborations with state-of-the-art infrastructure facilities in Biological Sciences. The activities of the UGC-NRCBS include:

i) organizing the summer and winter schools, ii) guidance of Ph.D. students of other institute on experimental trouble shooting & research methodology, iii) support for Ph.D. students those who are deprived of equipment/laboratory facilities and iv) strengthening the collaborative research initiatives in Biological Sciences among universities and research institutes. UGC-NRCBS conducts series of winter schools and summer schools on various themes. Researchers from various parts of the country are trained in these winter/summer schools. The theme of this summer school is focused on “**PCR Applications**”.

### ABOUT THE SUMMER SCHOOL

The polymerase chain reaction (PCR) is a revolutionary method used in all disciplines of Life Science Research such as Microbiology, Genetics, Molecular Biology, Biotechnology, Genomics, Forensic Science and Environmental Sciences. Development of Real-Time PCR strategy is another milestone in life sciences, which permits the analysis of amplified products while the reaction is in progress. Real-time PCR is used for the quantification of the specific gene or gene expression. The objective of this summer school is to train young faculty members and research scholars in recent trends and associated laboratory exercises in PCR and its applications in life science research. Hands-on training will be provided on Designing of Primers, Optimization of PCR, Applications of PCR in Gene Cloning, DNA sequencing, DNA fingerprinting, Genome typing, Genome walking, Site-directed mutagenesis, Mutant detection, Transposition mapping, Whole genome amplification, DNA labeling and reporter assays. In addition, intense training will be given on gene expression analysis using Reverse Transcription PCR, Semi-quantitative PCR, Real-Time quantitative PCR and related Bioinformatics tools.

The course will consist of lecture sessions by experts in this field and practical sessions on various methods. Each experiment will be preceded by a detailed practical instruction and followed by a troubleshooting session. After the completion of summer school, participants will be able to design and execute PCR based methods for wide range applications.

### Prof. P. Gunasekaran

Coordinator

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