Winter School Workshop on Biological Techniques

Invitation

Since 1951

Jamal Mohamed College (Autonomous)

Accredited (3rd Cycle) with 'A' Grade by NAAC

(Affiliated to Bharathidasan University)

Tiruchirappalli- 620 020

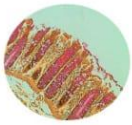
PG and Research Department of Botany

(Under DBT Star College Scheme)

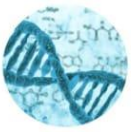
WINTER SCHOOL WORKSHOP ON BIOLOGICAL TECHNIQUES

31st January - 3rd February & 6th February 2023

31.01.2023 *Tissue Culture Techniques*
Dr. S.P. Anand, Assistant Professor, Department of Botany
National College Tiruchirappalli



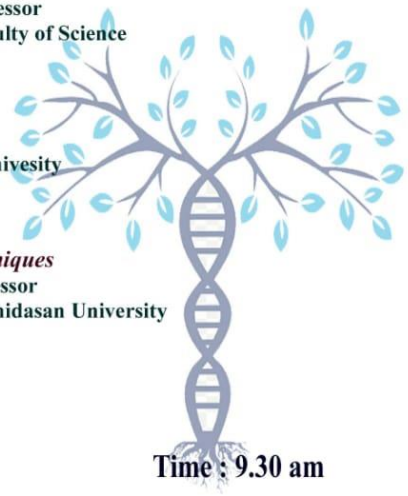
01.02.2023 *Histochemical Techniques*
Dr. V.Nandagopalan, Associate Professor
Department of Botany & Dean, Faculty of Science
National College Tiruchirappalli



02.02.2023 *Molecular Techniques*
Dr.M.Manickavasagam, Assistant Professor
Department of Biotechnology, Bharathidasan University
Tiruchirappalli

03.02.2023 *Microbiological Techniques*
Dr. D.Dhanasekaran, Assistant Professor
Department of Microbiology,Bharathidasan University
Tiruchirappalli

06.02.2023 *Ecoinformatics*
Dr.S.Soosairaj, Assistant Professor
Department of Botany, St.Joseph's College
Tiruchirappalli



Time : 9.30 am

Dr.H. SYED JAHANGIR
Associate Professor in Botany
Departmental Coordinator
DBT Star College Scheme

Dr. M. GHOUSE BASHA
Head, Department of Botany
Dean, Faculty of Science

Dr. S. ISMAIL MOHIDEEN
Principal

Report

Jamal Mohamed College (*Autonomous*), Department of Botany organized a five days winterschool workshop on "**Biological Techniques**" from 31st January to 6th February under DBT STAR College scheme to strengthen the knowledge in biological techniques among the under graduate students.

The first day (31.01.2023) Dr. M. Kamaraj, Assistant Professor, Department of Botany welcomed the gathering **Dr. S.P. Anand,** Assistant Professor, Department of Botany, National College (*Autonomous*), Tiruchirappalli. Has inaugurated the program and delivered a lecture on "**Tissue culture Techniques**" by explaining about media preparation, sterilization, inoculation techniques and elaborated about the direct organogenesis, indirect organogenesis, somatic embryo genesis and hardening of plants.

The second day (01.02.2023) Dr. K. Mohamed Rafi, Assistant Professor of Botany welcomed the gathering and introduced the chief guest **Dr. V. Nandhagopalan**, Associate professor, Department of Botany, National College (*Autonomous*), Tiruchirappalli. He attractively explained and demonstrated "**Histochemical techniques**" by discussing about the histochemistry of plants and the role of stains involved in this technique.

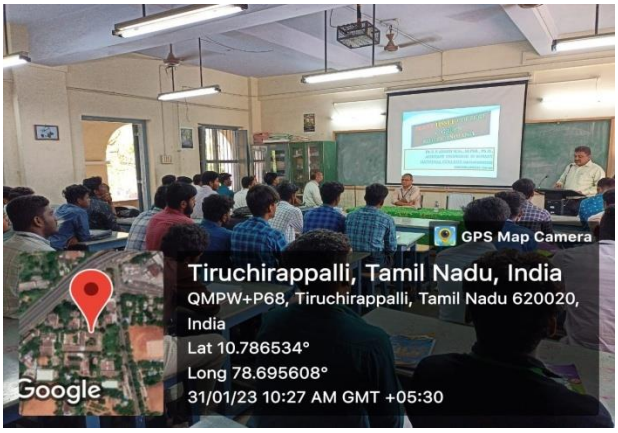
The third day (02.02.2023) Dr. A. Aslam, Assistant Professor of Botany, welcomed and introduced the speaker **Dr. M. Manickavasagam** Assistant professor, Department of Biotechnology, Bharathidasan University, Tiruchirappalli. He highlighted "**Molecular Techniques**" by focusing on DNA, RNA and Protein isolation techniques, protocols and working principles of molecular instruments like agarose gel electrophoresis, SDS-Page and Polymerase chain reaction.

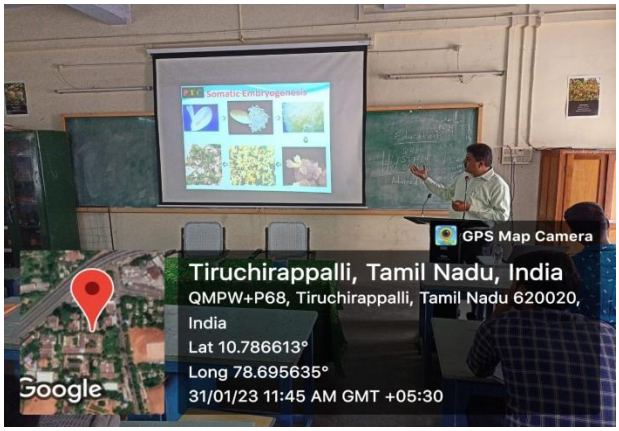
The forth day (03.02.2023) Dr. N. Ahamed Sherif, Assistant Professor of Botany welcomed the gathering and introduced the speaker **Dr. D. Dhanasekeran,** Assistant professor, Department of microbiology, Bharathidasan University. He elaborated various "**Microbiological Techniques**" by revealing aseptic conditions, staining procedures, isolation, culture techniques and characterization of microbes.

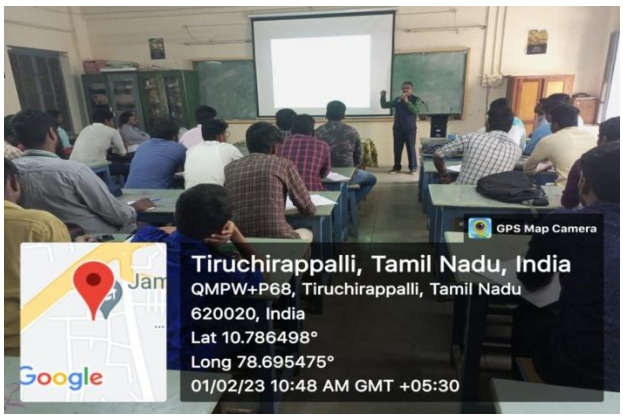
Finally, the fifth day (06.02.2023) Dr. B. Balaguru, Assistant Professor of Botany welcomed the gathering and introduced the chief guest **Dr. S. Soosairaj**, Assistant professor, Department of

Botany, St. Joseph's College (*Autonomous)*, Tiruchirappalli. He delivered a lecture on "**Ecoinformatics**" by providing information about data collection, interpretation and informatics. In addition to that he has also explained about several beneficial databases such as genbank (NCBI, DDBJ and EMBL) protein bank (SWISS-PORT and InterPro) and taxonomic databases (ICNP, ICVCN, ICN, ICZN and IPNI).

Dr. H. Syed Jahangir, Associate Professor, Departmental DBT STAR College Scheme coordinator, Department of Botany has proposed a vote of thanks.





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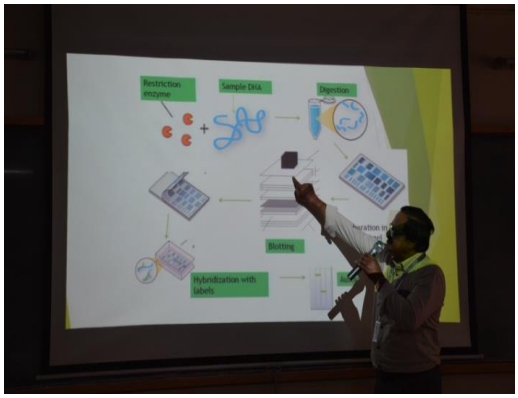
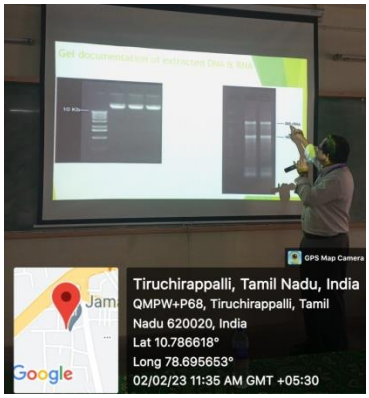
Molecular techniques


Restriction enzyme
Sample DNA
Digestion
Blotting
Hybridization with labels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Microbiological Techniques


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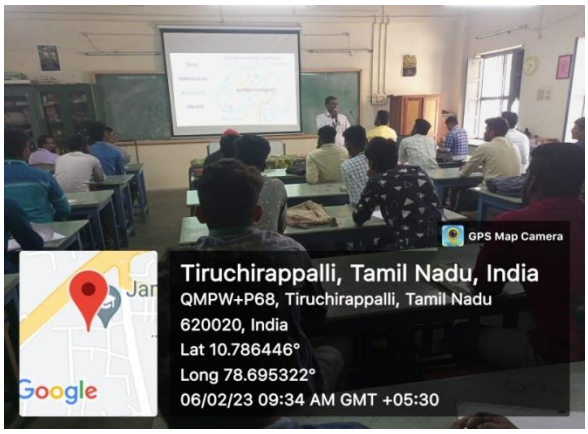
Fungi as Symbionts (Mutualism)


Ecoinformatics
Dr. S. Soosairaj
Assistant Professor
Department of Botany
St.Joseph's College
Tiruchirappalli



Out Comes:

This winterschool program provided a platform for the under graduate students to enriched their theoretical as well as practical knowledge in the field of "Biological Techniques" particularly in Tissue culture, Histochemical, Molecular, Microbiological Techniques and Ecoinformatics. In tissue culture techniques students received hands on training along in callus induction, somatic embryogenesis and hardening of plants. In histochemical techniques students were understood the importance of different stains and its role in histochemistry. In molecular techniques they acquired knowledge on DNA, RNA and protein isolation techniques and also trained on agarose gel electrophoresis. In microbial techniques, students aspired the importance of isolation and characterization of microbes. In ecoinformatics, students acquired knowledge on the basics of ecology and its relevance to informatics databases such as genbank (NCBI, DDBJ and EMBL) protein bank (SWISS-PORT and InterPro) and taxonomic databases (ICNP, ICVCN, ICN, ICZN and IPNI).