B.S. ABDUR RAHMAN CRESCENT INSTITUTE OF SCIENCE AND TECHNOLOGY

SCHOOL OF LIFE SCIENCES

MOLECULAR BIOLOGY HANDS-ON WORKSHOP (MODULE-1)

GENE AMPLIFICATION BY POLYMERASE CHAIN REACTION (PCR)

The School of Life Sciences (BSACIST) has been hosting a series of molecular biology workshops from basic to advance level to get the exposure to the advancement in the technique.

The primary goal of the workshop is to train undergraduates, postgraduates, research scholars and technicians so that they can design and perform molecular biology experiments and techniques independently.

The module-I is structured with lectures and hands on training on Good laboratory Practices (GLPs), DNA extraction, quantitative and qualitative analysis of DNA, basics of PCR, primer designing and amplifications techniques.

Course content – Lectures and Hands on-

- Good laboratory Practices (GLPs)
- Hands on training to get purified genomic DNA (Bacteria and Plants)
- Quantity and Quality check
- Bioinformatics – training on retrieval of sequences and analysis
- Designing of the Primers, identification of restriction endonucleases sites in DNA Sequences
- Principle of polymerase chain reaction
- Types of PCR and its applications
- Demonstration of highly sensitive thermal cycler
- Hands on reactions preparation for PCR amplification
- PCR product analysis by AGE
- Photo documentation by Gel doc
- Data analysis and experts suggestion for future research

Participants

- Graduates, postgraduate, research scholars, laboratory technicians from diverse background (Biotechnology, Molecular Biology, Microbiology, Agriculture, Botany etc.)
- Professionals from industry and academia

Study Materials

Soft copy of procedures and PowerPoint material will be provided

REGISTRATION LINK

https://forms.gle/GSa1K1NtdEQi3G3QA

Registration Fees:

Student/ Scholars/ Post Doc:	**Rs.1000/-**
Students from other Institutes (UG/PG)	**Rs.1500/-**
Research Scholars	**Rs.1700/-**
Industry/Academia	**Rs.2000/-**

Limited Seats: Only 30 participants (First come first served)

Accommodation: Shared lodging will be provided in hostel at their own expenses (Kindly request earlier for accommodation)

Account Transfer Details:

In favor of: Dean, School of Life Sciences, B. S. Abdur Rahman Crescent Institute of science and Technology
Branch: Vandalur, Chennai-600048.
Bank name: Indian Overseas Bank (IOB)
Account number: 165701000019853
IFSC Code: IOBA0001657

Certificates and on duty will be provided to all the participants

Organizing Secretary

Dr. S. Hemalatha
Professor and Dean
School of Life Sciences (SLS)

Coordinators

Dr. Mohd Shahanbaj Khan
Assistant Professor, SLS

Dr. S. M. Fazeela Mahaboob Begum
Assistant Professor, SLS

Contact: Dr. Mohd Shahanbaj Khan/ Dr. S. M. Fazeela Mahaboob Begum
Email: slsmolbio@gmail.com

AGENDA (September 27-28, 2022)

DAY - I

Tuesday, September 27, 2022

09:30-10:00 hrs	*Inaugural Lecture*
10:00 -10:30 hrs	*Lecture on Molecular Biology Techniques and GLPs*
10:30 -10:45 hrs	*Tea Break*
10:45 - 12:45 hrs	*Hands on extraction, isolation and purification of genomic DNA from bacteria*
12:45 - 01:30 hrs	*Lunch Break*
01:30 - 03:30 hrs	*Hands on extraction, isolation and purification of genomic DNA from Plants*
03:30 - 03:45 hrs	*Tea Break*
03:45 - 04:30 hrs	*Quantitative and qualitative analysis of DNA*

DAY - II

Wednesday, September 28, 2022

09:30-10:00 hrs	*Lecture on PCR techniques and application*
10:00 -10:30 hrs	*Retrival of sequences and Primer designing*
10:30 -10:45 hrs	*Tea Break*
10:45 - 11:45 hrs	*Hands on training on DNA amplification*
11:45 -12-45 hrs	*Amplification of DNA samples with gene specific primers-Hands on*
12:45 - 01:30 hrs	*Lunch Break*
01:30 - 03:30 hrs	*Amplicon analysis by AGE and Photo documentation*
03:30 - 03:45 hrs	*Tea Break*
03:45 - 04:15 hrs	*Data analysis and future prospects*
04:15 – 4:50 hrs	*Valedictory and certificate distribution*