Estd. 1974

# The Oxford College of Science

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Supported by DST GoI under FIST program, Supported by DBT GoI under DBT-STAR College

## DBT-STAR Scheme 2025

### REPORT

**DEPARTMENT: BIOCHEMISTRY:**

| | |
|---|---|
| **TITLE** | **Primer Designing for PCR<br>Sequence retrieving from Database** |
| **ACTIVITY TYPE** | **Enrichment program** |
| **YEAR/SEMESTER** | All Biochemistry U G students. |
| **DATE OF EVENT** | 07/3/2026 |
| **VENUE** | Room No. 106 |
| **ORGANISED BY** | Department of Biochemistry |
| **RESOURCE PERSON (with designation and affiliation)** | Dr.Moumita Arun Sardar, Senior Scientist, Biocon Biologics, Bangaluru. |
| **FACULTY INCHARGE/EVENT COORDINATOR** | Mr. Bhanu Prakash K S , Assistant Professor. |
| **TARGET AUDIENCE** | All U G Biochemistry Students |
| **NUMBER OF BENEFICIARIES** | 64 |

**The objectives of the Program:** To enrich the knowledge of students in Primer Designing for PCR & Sequence retrieving Database.

**Highlights of the Program:**

- Introduction to PCR primer design principles such as primer length, GC content, melting temperature (Tm), and avoidance of secondary structures.
- Demonstration of retrieving gene or nucleotide sequences from biological databases like NCBI GenBank and NCBI.
- Hands-on training on designing primers using bioinformatics tools such as Primer3 and BLAST for specificity checking.
- Practical session on analyzing DNA sequences, identifying target regions, and generating forward and reverse primers for PCR amplification.
- Discussion on validating primers *in silico* and understanding common errors in primer design.

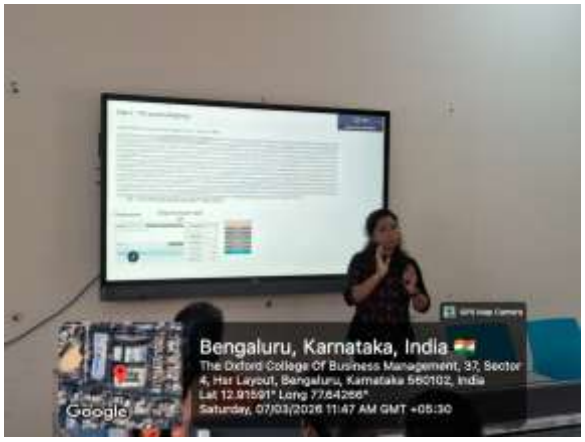
**The outcome of the program:**

- Participants will be able to retrieve nucleotide sequences from biological databases effectively.
- Participants will understand the criteria for designing efficient PCR primers.
- Ability to use bioinformatics tools for primer design and sequence analysis.
- Skills to verify primer specificity using sequence alignment tools.
- Improved competency in applying molecular biology and bioinformatics techniques for research and laboratory experiments.

## Geo-tagged photos with titles

**MC starting the program**


**Welcoming the speaker to the event**




**Speaker Explaining retriving Seuqencing from Database**


**Speaker Explaing the Primer designing**


**Vote of thanks from the students**

**Attachments:**

| Sl. NO | Document | ( ✔ ) mark (if attached) |
|---|---|---|
| 1 | Brochure of the event | ✔ |
| 2 | Circular of the event<br>(For training/ workshop/guest lecture/FDP) | ✔ |
| 3 | Geo-tagged photos/ Screen Shots<br>(Save as separate photos) | ✔ |
| 4 | Attendance sheet with signature of the attendees | ✔ |
| 5 | Copy of the Certificate/E-cerfiticate issued | - |
| 6 | Feedback Forms<br>(For training/ workshop/Guest lecture/FDP) | - |

**Head of the Department** **DBT-STAR Coordinator** **Vice-Principal** **Principal**