TRAINING MODULE – BASIC BIOINFORMATICS

COURSE DURATION: 5 DAYS   FEE: 2000 INR

DAY 1: Fundamentals of Bioinformatics

- Introduction to bioinformatics including history, application and its role in modern biological research
- Navigation and utilization of various biological databases like NCBI, Ensembl, and UCSC genome browser

DAY 2: In-Depth Databases Walkthrough

- Data retrieval from biological databases
- Gene and genome data visualization
- Gene prediction and functional annotation
- Introduction to core bioinformatics Tools (BLAST, BLAT etc)

DAY 3: Primer Designing for PCR and Quality Assurance

- Detailed coverage of primer design considerations, and QC check
- Primer design using software tools (e.g., Primer3, NCBI Primer-BLAST)
- Quality control of primer design

DAY 4: Oligonucleotide Synthesis Fundamentals

- Conceptualizing solid-phase oligo synthesis
- Case studies on applications in gene editing, molecular diagnostics, and therapeutic development

DAY 5: Report Submission and Certificate Issue