Molecular Biology Industrial Training

NTHRYS provides Molecular Biology Industrial Training for interested candidates at its Hyderabad facility, Telangana. Please refer below for more details including Fee strctures, Eligibility, Protocols and Modules etc.,. Please do call / message / whatsapp for more details on 9014935156 [India - +91]

Eligibility: BSc / BTech / MSc / MTech / MPhil / PhD in any Life Sciences studying or completed students

Protocols / Techniques Covered

Note: Protocols are categorized according to various industries (Some protocols may not strictly fall under molecular biology, but due to their industrial importance, they are included in the list)
Healthcare and Pharmaceuticals
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- Real-Time PCR (qPCR) - For rapid quantification of gene expression and virus detection. (Rs 45000/-)
- CRISPR-Cas9 Genome Editing - Used for developing gene therapies and functional genomics. (Rs 175000/-)
- Next-Generation Sequencing - For whole-genome sequencing, targeted sequencing, and metagenomics. (Rs 175000/-)
- Microarray Analysis - For profiling gene expression and SNP genotyping. (Rs 135000/-)
- Western Blotting - For protein identification and quantification through antibody binding. (Rs 75000/-)
- Flow Cytometry - For cell counting, biomarker detection, and protein engineering. (Rs 225000/-)
- Mass Spectrometry - For proteomics, lipidomics, and metabolomics studies. (Rs 125000/-)
- ChIP-Seq (Chromatin Immunoprecipitation Sequencing) - For studying protein-DNA interactions. (Rs 155000/-)
- Single-Cell RNA Sequencing - For analyzing cellular heterogeneity in cancer and other diseases. (Rs 165000/-)
- siRNA Therapy - For gene silencing in cancer therapy and drug development. (Rs 225000/-)
- Cell-Free DNA Analysis - For non-invasive prenatal testing and cancer diagnostics. (Rs 125000/-)
- Gel Electrophoresis - For DNA and protein separation in research and diagnostics. (Rs 45000/-)

- Bisulfite Sequencing - For detailed DNA methylation analysis. (Rs 185000/-)
- RNA Interference (RNAi) - For gene function analysis and therapeutic target identification. (Rs 175000/-)
- DNA Ligation - Essential for creating recombinant DNA molecules. (Rs 75000/-)
- Transfection - For introducing nucleic acids into cells for gene expression studies. (Rs 225000/-)
- Reverse Transcription PCR (RT-PCR) - For converting RNA into DNA, crucial for gene expression analysis. (Rs 45000/-)
- Molecular Cloning - For gene isolation and expression in various host organisms. (Rs 125000/-)
- In Situ Hybridization - For localizing specific nucleic acid targets within fixed tissues and cells. (Rs 185000/-)
- Two-Hybrid Screening - For detecting protein-protein interactions. (Rs 325000/-)
- Site-Directed Mutagenesis - For introducing targeted mutations into DNA. (Rs 155000/-)

Agriculture
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- CRISPR-Cas9 Genome Editing - For developing genetically modified crops with improved traits. (Rs 175000/-)
- Microsatellite Analysis - For genetic diversity and population structure analysis in crops and livestock. (Rs 125000/-)
- RNA Interference (RNAi) - For pest control and crop trait enhancement by silencing specific genes. (Rs 185000/-)
- Marker-Assisted Selection - For accelerating breeding programs by using DNA markers associated with desirable traits. (Rs 165000/-)
- Gel Electrophoresis - For DNA fingerprinting to validate plant and animal breed genetics. (Rs 55000/-)
- Tissue Culture - For producing high-quality, disease-free plant clones. (Rs 125000/-)
- Transgenic Techniques - For introducing new genes into plant and animal genomes. (Rs 225000/-)
- PCR and qPCR - For pathogen detection and genetic testing in agriculture. (Rs 65000/-)
- Next-Generation Sequencing - For comprehensive genotyping and genomic studies in agriculture. (Rs 175000/-)
- Chloroplast Engineering - For expressing foreign genes in plant chloroplasts, enhancing traits like pest resistance. (Rs 525000/-)
- Agroinfiltration - A transient gene expression method for plant genetic engineering. (Rs 425000/-)
- Soil DNA Extraction - For studying soil microbial communities affecting plant health. (Rs 15000/-)
- DNA Barcoding - For species identification of plant materials and detecting adulteration. (Rs 175000/-)
- Genomic Selection - For predicting breeding values of plants and animals using whole-genome data. (Rs 155000/-)
- Site-Directed Nuclease Technology - For precise genetic modifications in crops. (Rs 155000/-)
- Bacterial Transformation - For creating transgenic plants with bacterial genes. (Rs

195000/-)
- Fluorescent In Situ Hybridization (FISH) - For genetic mapping and chromosomal analysis in plants. (Rs 175000/-)
- Molecular Cloning - For cloning agricultural genes of interest. (Rs 125000/-)
- Plant Regeneration - For regenerating plants from cultured cells or tissues. (Rs 175000/-)
- Viral Induced Gene Silencing (VIGS) - For studying gene function in plants by knocking down gene expression. (Rs 375000/-)

Biotechnology
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1. Gene Synthesis - For constructing synthetic genes to use in research and product development. (Rs 65000/-)
2. Protein Expression and Purification - For producing and isolating proteins for therapeutic or industrial use. (Rs 45000/-)
3. CRISPR-Cas9 Genome Editing - For editing genes in microorganisms to enhance bio-production capabilities. (Rs 95000/-)
4. Metagenomics - For analyzing genetic material recovered directly from environmental samples. (Rs 55000/-)
5. RNA Sequencing - For transcriptome profiling to discover novel genes, splice variants, and regulatory sequences. (Rs 65000/-)
6. Microarray Analysis - For exploring gene expression and gene discovery in biotechnological processes. (Rs 85000/-)
7. Molecular Cloning - For cloning genes to express in bacterial, yeast, or mammalian systems. (Rs 125000/-)
8. Next-Generation Sequencing - For whole-genome sequencing applications in biotechnology. (Rs 135000/-)
9. Site-Directed Mutagenesis - For creating specific protein mutations to improve industrial enzymes. (Rs 155000/-)
10. Flow Cytometry - For cell sorting and analysis in biotechnological applications. (Rs 75000/-)
11. Phage Display - For discovering new peptides or proteins that bind with high specificity to target molecules. (Rs 175000/-)
12. Liposome Technology - For drug delivery and vaccine formulation. (Rs 75000/-)
13. Bacterial Transformation - For genetic manipulation in prokaryotic systems. (Rs 75000/-)
14. Yeast Two-Hybrid Screening - For detecting protein-protein interactions in research and development. (Rs 95000/-)
15. Reverse Transcription PCR (RT-PCR) - For studying gene expression in biotechnological processes. (Rs 15000/-)
16. Antibody Engineering - For modifying the genes of therapeutic antibodies and other protein therapeutics. (Rs 255000/-)
17. Proteomics - Using mass spectrometry to identify proteins involved in biotechnological processes. (Rs 125000/-)
18. Electroporation - For introducing DNA into cells, commonly used in microbial and mammalian cell engineering. (Rs 85000/-)
19. Bioinformatics - For data analysis in genomic and proteomic studies to enhance biotechnological applications. (Rs 45000/-)

20. Cell-Free Systems - For studying synthetic biology and enzyme kinetics outside of living cells. (Rs 155000/-)
21. Glycan Engineering - For modifying the glycosylation patterns of therapeutic proteins to improve efficacy. (Rs 255000/-)

Environmental Science
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- PCR and qPCR - For detecting and quantifying environmental DNA and assessing biodiversity. (Rs 25000/-)
- Next-Generation Sequencing - For studying biodiversity and ecological interactions through metagenomics. (Rs 175000/-)
- Bioinformatics - For managing and analyzing large sets of environmental genomic data. (Rs 65000/-)
- Environmental Metagenomics - For identifying microbial communities and their functions in ecosystems. (Rs 95000/-)
- Microbial Culturing and Isolation - To study specific organisms from environmental samples. (Rs 25000/-)
- ChIP-Seq - To analyze protein interactions with DNA in environmental samples. (Rs 175000/-)
- RNA Sequencing - For transcriptome analysis of environmental samples. (Rs 155000/-)
- DNA Barcoding - For species identification and monitoring of biodiversity. (Rs 175000/-)
- Fluorescent In Situ Hybridization (FISH) - For identifying and localizing specific microbial taxa in environmental samples. (Rs 145000/-)
- Molecular Cloning - For cloning DNA from environmental samples to study functional genes. (Rs 125000/-)
- Gel Electrophoresis - For DNA profiling of environmental samples. (Rs 15000/-)
- Bacterial Conjugation - For studying gene transfer in microbial communities. (Rs 55000/-)
- Bioremediation Techniques - Using genetically engineered microbes to degrade environmental pollutants. (Rs 350000/-)
- Phylogenetic Analysis - For constructing evolutionary relationships based on genetic data. (Rs 10000/-)
- Soil DNA Extraction - For extracting and analyzing genetic material from soil samples. (Rs 15000/-)
- Microbial Diversity Analysis - Using molecular techniques to assess microbial diversity in different habitats. (Rs 125000/-)
- Environmental Monitoring - Using molecular tools to monitor pollutants and assess environmental health. (Rs 155000/-)
- Enzyme Assays - For studying enzymes involved in environmental processes. (Rs 95000/-)
- Toxicogenomics - For studying the effects of environmental contaminants on gene expression. (Rs 125000/-)
- Water Quality Testing - Using molecular assays to detect pathogens and contaminants in water sources. (Rs 55000/-)
- Conservation Genetics - For studying genetics to aid in the conservation of species and habitats. (Rs 125000/-)

Food and Beverage

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- PCR for Pathogen Detection - For identifying foodborne pathogens quickly and accurately. (Rs 125000/-)
- Next-Generation Sequencing - For comprehensive food microbiome analysis and food safety. (Rs 175000/-)
- Gel Electrophoresis - For DNA analysis in food quality control. (Rs 15000/-)
- CRISPR-Based Systems - For developing new food products and improving crop traits. (Rs 175000/-)
- Microarray Analysis - For detecting GMOs and allergens in food products. (Rs 175000/-)
- Mass Spectrometry - For identifying unknown compounds and contaminants in food. (Rs 175000/-)
- Site-Directed Mutagenesis - For modifying enzymes used in food processing. (Rs 155000/-)
- Molecular Cloning - For expressing flavor-enhancing enzymes or improving nutritional content. (Rs 125000/-)
- DNA Barcoding - For authenticating food ingredients and combating food fraud. (Rs 175000/-)
- RNA Interference (RNAi) - For developing pest-resistant crops used in food production. (Rs 175000/-)
- Food Genomics - For studying the genetic traits of crops for breeding purposes. (Rs 175000/-)
- Real-Time PCR (qPCR) - For quantifying GMO content and validating food quality. (Rs 45000/-)
- Fluorescent In Situ Hybridization (FISH) - For identifying microbial species in fermented food products. (Rs 175000/-)
- Protein Engineering - For enhancing flavors, textures, and preservation in food products. (Rs 675000/-)
- Metabolomics - For flavor and aroma profiling in the food development process. (Rs 175000/-)
- Bacterial Transformation - For creating probiotic cultures and other functional food ingredients. (Rs 195000/-)
- Yeast Fermentation - For optimizing yeast strains for brewing and baking industries. (Rs 195000/-)
- Antibiotic Residue Testing - Using molecular techniques to ensure food safety. (Rs 195000/-)
- Enzyme Assays - For testing enzymes used in food processing and production. (Rs 65000/-)
- Transgenic Techniques - For developing genetically modified organisms (GMOs) for enhanced food production. (Rs 495000/-)
- Lipid Analysis - For assessing fats and oils in food products through advanced molecular techniques. (Rs 195000/-)

Forensic Science

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- DNA Fingerprinting - Utilizing STR profiling for criminal identification and paternity

tests.

- PCR Amplification - For amplifying traces of DNA found at crime scenes.
- Next-Generation Sequencing - For more comprehensive DNA profiling, including degraded samples.
- Microsatellites Analysis - For analyzing short repetitive DNA sequences found in the human genome.
- Mass Spectrometry - For identifying substances such as drugs, explosives, and poisons.
- Y-Chromosome Analysis - For tracing male lineages in forensic investigations.
- Mitochondrial DNA Analysis - For examining DNA in cases where nuclear DNA is limited.
- Gel Electrophoresis - For resolving DNA fragments based on size for comparison and identification.
- Bloodstain Pattern Analysis - Molecular techniques to characterize blood samples at crime scenes.
- Epigenetic Modifications - For determining the age and lifestyle characteristics of suspects from biological samples.
- RNA Profiling - For identifying body fluids and determining their age on crime scene materials.
- Single Nucleotide Polymorphism (SNP) Analysis - For fine-scale genetic profiling in forensic cases.
- DNA Methylation Analysis - For estimating the age of biological samples at crime scenes.
- Touch DNA Techniques - For collecting and analyzing DNA left from skin cells on objects.
- Forensic Entomology - Using DNA barcoding to identify species of insects that feed on decomposing remains. (Rs 175000/-)
- Forensic Botany - DNA analysis of plant materials to link suspects and crime scenes.
- Forensic Geology - Molecular analysis of soil and mineral samples.
- Isotope Analysis - For tracing the geographical origins of substances and individuals.
- Chemical Fingerprinting - Molecular techniques for analyzing residues and linking them to their sources.
- Hair and Fiber Analysis - Using molecular methods to compare materials found at crime scenes.
- Saliva and Semen Analysis - For detecting and analyzing biological fluids in forensic examinations.

Academic Research
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- Molecular Cloning - Fundamental for studying gene function and genetic engineering. (Rs 125000/-)
- PCR and RT-PCR - Core techniques for amplifying and studying specific DNA and RNA sequences.
- Western Blotting - For protein detection and analysis in various research contexts.
- Flow Cytometry - For analyzing the expression of cell surface and intracellular molecules.
- CRISPR-Cas9 - For genome editing in basic and applied research.
- Electrophoresis - For separating nucleic acids and proteins by size and charge.
- RNA Interference (RNAi) - For gene silencing to study gene function.

- ChIP-Seq - For studying protein-DNA interactions involved in gene regulation.
- Single-Cell Sequencing - For exploring cellular heterogeneity in complex tissues.
- Bisulfite Sequencing - For detailed analysis of DNA methylation patterns.
- Two-Hybrid Screening - For identifying protein-protein interactions.
- Yeast Genetics - For functional genomics and protein engineering studies.
- Microarray Analysis - For high-throughput analysis of gene expression and genotyping.
- Mass Spectrometry - For analyzing proteins, nucleic acids, and other biomolecules.
- Next-Generation Sequencing - For deep genomic and transcriptomic analysis.
- Fluorescent In Situ Hybridization (FISH) - For detecting and localizing specific RNA targets in cells and tissues.
- Protein Purification - Essential for biochemical and structural studies.
- Antibody Production - For creating specific tools for protein detection and research.
- Cell Culture Techniques - For studying cellular processes in controlled environments.
- Gene Expression Studies - Using various molecular techniques to quantify and manipulate gene expression.
- Enzyme Assays - For studying enzyme activity and kinetics in biochemical pathways.

Please choose your desired industry or protocols to request for further procedures via WhatsApp on +91-9014935156. There will be 18% additional GST to the fee structures mentioned. Please contact on above given number via whatsapp to get / confirm fee details for protocols mentioned above. NTHRYS Management have all rights to change fee structure at any given time.