Biotechnology Advanced Training Program

This advanced biotechnology program is tailored for individuals looking to build upon their basic knowledge in biotechnology. It offers hands-on training in advanced techniques and applications, preparing participants for specialized roles in biotechnology industries.

Note: Below modules are designed keeping high end industrial professionals into consideration. Please refer individual protocols below for affordable prices.

Cell Biology Protocols

Biotechnology Training Module

Fee: Rs 180000/-

Protocols List

1. **Cell Culture Techniques: Aseptic Technique for Culture Maintenance, CO2 Incubator Setup and Validation, Primary Cell Isolation and Culture from Tissues, Cell Line Authentication via STR Profiling, Cryopreservation and Thawing Protocols for Cell Lines, Serum-free Culture for Bioproduction, Hypoxic Conditions Setup for Cancer Cell Studies, 3D Cell Culture Techniques including Spheroids and Organoids, Automated Cell Culture Systems for High-throughput Screening**
2. **Flow Cytometry for Cell Sorting: Single-Cell Sorting for Clonal Analysis, Multiparametric Sorting using 8+ Color Panels, High-Speed Cell Sorting for Large Sample Volumes, Sterile Sorting for Direct Culture and Transplantation, Intracellular Cytokine Staining and Sorting, Apoptosis and Cell Cycle Analysis via Flow Cytometry, Fluorescent Protein Sorting (e.g., GFP, RFP), Rare Population Sorting with High Sensitivity Detectors, Use of Sorting Chips for Microfluidic Flow Cytometry**
3. **Cellular Imaging with Confocal Microscopy: Live Cell Imaging for Dynamic Process Observation, FRET (Fluorescence Resonance Energy Transfer) for Molecular Interactions, FRAP (Fluorescence Recovery After Photobleaching) to Measure Protein Mobility, Super-**

resolution Techniques beyond Diffraction Limit, Multi-photon Excitation for Deep Tissue Imaging, Time-lapse Confocal Microscopy for Cellular Behavior, Z-stacking and 3D Reconstruction from Confocal Slices, Use of Fluorescent Dyes and Probes Specific to Organelles, Quantitative Image Analysis for Cellular Metrics

Immunology Protocols

Biotechnology Training Module

Fee: Rs 145000/-

Protocols List

1. **ELISA Enhancements: High-throughput robotic ELISA platforms, Multiplex ELISA for simultaneous detection of multiple targets, Digital ELISA for ultra-sensitive detection using single-molecule counting, Bead-based ELISA for enhanced capture efficiency, Time-resolved fluorescence ELISA for improved signal stability**
2. **Antigen Preparation Innovations: Cell-free expression systems for rapid protein synthesis, Use of molecular chaperones for proper protein folding, Transient expression in mammalian cells for post-translational modifications, Use of immobilized enzymes for tag cleavage, High-pressure refolding techniques for disulfide-rich proteins**
3. **Advanced Antigen Immunization Strategies: Use of nanoparticle-based adjuvants for enhanced immune response, Intralymphatic immunization for direct lymph node delivery, Use of gene electrotransfer for in vivo antigen expression, Implementing oral immunization strategies with encapsulated antigens, Autoantigen-based tolerization techniques for therapeutic antibody development**
4. **Sophisticated Antibody Titre Analysis: Utilization of electrochemiluminescence for sensitive titre measurements, Biacore surface plasmon resonance for affinity and concentration, High-content screening for functional antibodies, Single B cell screening for rapid clone identification, Immuno-PCR for combining PCR sensitivity with antibody specificity**
5. **Comprehensive Bleeding Techniques: Use of automated decapicone for high-throughput animal bleeding, Laser Doppler for real-time blood flow measurement during bleeding, Application of humane endpoints for ethical bleeding, Spectroscopic techniques for blood component analysis, Integration of stress-free handling equipment to minimize animal distress during bleeding**

6. **Plasma Pheresis Advanced Protocols: Use of closed-system automated apheresis to prevent contamination, Application of differential centrifugation for selective plasma component retrieval, High-efficiency membrane separators for improved plasma yield, Real-time monitoring of plasma extraction parameters, Use of anticoagulant recycling systems to reduce waste**
7. **Antibody Extraction from Plasma: Supercritical fluid extraction for antibody isolation, Partitioning in aqueous two-phase systems, Affinity partitioning using smart polymers, Continuous extraction systems for scale-up, Phase inversion precipitation for selective antibody isolation**
8. **Highly Specialized Antibody Purification: Use of immunoaffinity columns specific to subclass or species, Sequential multi-step chromatography for removing aggregates, Utilization of fluidized bed chromatography for gentle processing, Cryogenic purification techniques for temperature-sensitive antibodies, Dynamic light scattering for real-time purity assessment**
9. **In-depth Antibody Purity Analysis: Application of 2D-DIGE for differential analysis, MALDI-TOF mass spectrometry for molecular weight determination, Capillary electrophoresis for charge heterogeneity, Use of chromatofocusing for isoelectric point determination, Automated Western blot for high-throughput screening**
10. **Coomassie Blue Staining Techniques: Use of reversible zinc staining for downstream MS analysis, Application of pre-stain protein loading controls for quantitative analysis, Implementation of gel documentation systems with fluorescence detection, Dual staining with imidazole-zinc and Coomassie for differential visualization, Use of eco-friendly Coomassie brilliant blue formulations for reduced toxicity**
11. **Silver Staining Protocols: Use of formaldehyde-free silver staining for reduced toxicity, Silver enhancement for nanoparticle visualization in tissues, Microwave-assisted silver staining for rapid processing, Use of alternative reducing agents for enhanced clarity, Multi-metal staining techniques for differential protein visualization**

Molecular Biology Protocols

Biotechnology Training Module

Fee: Rs 120000/-

Protocols List

1. **RNA Extraction from Tissue: Homogenization in Lysis Buffer, Use of**

Silica Columns or Magnetic Beads for RNA Purification, DNase Treatment to Remove DNA Contamination, RNA Integrity Assessment via Gel Electrophoresis or Bioanalyzer

2. **Reverse Transcriptase-PCR: Primer Design for Target RNA, Reverse Transcription of RNA to cDNA Using Reverse Transcriptase, PCR Amplification of cDNA, Gel Electrophoresis for PCR Product Verification**
3. **Vector Design: Selection of Cloning or Expression Vector, Multiple Cloning Site (MCS) Analysis, Incorporation of Selectable Markers and Reporter Genes, Optimization of Regulatory Sequences for Expression**
4. **Isolation of DNA: Cell Lysis and DNA Extraction from Various Tissue Sources, Phenol-Chloroform Extraction or Silica-Based DNA Purification, Quantification and Qualitative Assessment via Spectrophotometry or Fluorometry**
5. **Vector Selection: Plasmid, Bacterial Artificial Chromosome (BAC), or Yeast Artificial Chromosome (YAC) Selection Based on Application, Comparison of Copy Number and Stability, Antibiotic Resistance Marker Consideration**
6. **Restriction Digest: Selection of Restriction Enzymes Compatible with Vector and Insert, Setup of Digestion Reactions, Analysis of Digestion Efficiency via Agarose Gel Electrophoresis, Purification of Digested Products**
7. **Ligation: Preparation of Vector and Insert at Optimal Ratios, Use of T4 DNA Ligase for Covalent Bond Formation, Control Reactions Without Insert to Check Background, Transformation Efficiency Test of Ligation Mixture**
8. **Transformation: Preparation of Competent Cells (Chemical or Electroporation Competency), Heat Shock or Electroporation of Cells with Ligation Mixture, Recovery in SOC or LB Media, Plating on Selective Media**
9. **Blue White Screening: Use of X-gal Plates to Distinguish Between Recombinant and Non-Recombinant Clones, IPTG Induction of LacZ Marker, Selection of White Colonies for Further Analysis**
10. **Colony Picking: Sterile Technique for Isolating Individual Colonies, Inoculation in Liquid Culture for Amplification, Storage of Clones in Glycerol Stocks at -80°C**
11. **Plasmid Extraction: Small-Scale (Miniprep) or Large-Scale (Maxiprep) Plasmid DNA Isolation, Plasmid DNA Purification Using Spin Columns or Anion Exchange Chromatography, Determination of Plasmid Concentration and Purity**
12. **Sequencing: Preparation of DNA for Sanger Sequencing or Next-Generation Sequencing, Primer Design for Specific Regions, Submission of Samples to Sequencing Facility, Analysis of Sequencing Data for Verification of Cloning**

Microbial Genetics Protocols

Biotechnology Training Module

Fee: Rs 230000/-

Protocols List

1. **Culture Media Preparation: Autoclaving Media, pH Adjustment, Sterile Filtration Techniques**
2. **Isolation Techniques: Serial Dilution for Plating, Single Colony Isolation using a Micromanipulator, Automated Colony Pickers**
3. **Biochemical Testing: Automated Microbial Identification Systems (VITEK, MALDI-TOF), Multi-Test Biochemical Panels, Enzyme Activity Assays**
4. **Molecular Identification: Real-Time PCR for Rapid Identification, High-Throughput Sequencing for Community Profiling, Multiplex PCR for Pathogen Detection**
5. **Whole Genome Sequencing: Library Preparation for Illumina, SMRTbell Library Construction for PacBio, Direct RNA Sequencing for Real-Time Applications**
6. **Site-Directed Mutagenesis Protocols: Temperature Gradient PCR for Mutation Screening, Use of Modified Nucleotides for Error-Prone PCR, High-Fidelity Enzymes for Minimal Errors**
7. **Overlap Extension PCR: Optimization of Primer Concentrations for Maximum Yield, Use of Thermostable DNA Polymerases, Adjustment of Annealing Temperatures for Different GC Contents**
8. **Commercial Kits for Mutagenesis: High-Efficiency Cloning Vectors, Seamless Cloning using Gibson Assembly, Use of Homologous Recombination Kits**
9. **Mega-primer Method: Primer Design for Target-Specific Mutagenesis, Use of Asymmetric PCR for Primer Amplification, Purification Techniques for Mega Primers**
10. **Double-Stranded Plasmid Mutagenesis: Use of Methyl-Sensitive Restriction Enzymes, Cold-Shock Expression Systems for Plasmid Stabilization, Post-Transformation Cure of Template DNA**
11. **Lambda Red Recombination: Induction of Lambda Prophage for Increased Efficiency, Recombineering with Linear DNA Fragments, Electrocompetent Cell Protocols Specific to Recombineering**
12. **Bacterial Adaptive Mutagenesis: Use of Reporters for Mutation Detection, Automated Systems for Mutation Rate Analysis, Environmental Stress Chambers for Induced Mutagenesis**
13. **CRISPR/Cas9 Techniques: Dual gRNA Design for Large Deletions, TracrRNA and crRNA Custom Synthesis, Lipid Nanoparticle Delivery**

Systems for In Vivo Editing

14. **Competent Cell Preparation: RbCl2 Preparation Method, Use of Different Strains for Optimized Uptake (DH5 alpha, BL21), Protocol Variations for Ultra-Competent Cells**
15. **DNA Transformation Methods: Microinjection for Direct Nucleus Delivery, Bioballistics for Plant Transformation, Silicon Carbide Whiskers for Transformation**
16. **Electroporation Settings: Optimization of Capacitance for Different Cell Types, Use of Multi-Pulse Electroporation for Increased Efficiency, Software-Controlled Electroporation Parameters**
17. **Antibiotic Selection Markers: Use of Dual Antibiotic Selection for Stability, Inducible Promoters for Controlled Expression, Linker Peptides for Cleavable Fusion Protein**
18. **Screening Techniques: Automated Fluorescence-Activated Cell Sorting (FACS) for High-Throughput Screening, Digital Droplet PCR for Precise Quantification, Chemiluminescent Reporters for Sensitive Detection**
19. **Bioreactor Operation: Software-Controlled pH and Dissolved Oxygen Probes, Use of Optical Density Sensors for Growth Monitoring, Automated Feeding Systems for Optimized Growth**
20. **GC-MS for Metabolite Profiling: Derivatization Techniques for Improved Volatility, Time-of-Flight (TOF) Detectors for Rapid Analysis, Tandem MS for Structural Elucidation**
21. **Fermentation Optimization: Use of Oscillating Perfusion Systems for Improved Cell Density, Dynamic Nutrient Feeding Algorithms, Real-Time Metabolite Monitoring Systems**
22. **Pilot Scale Production: CIP (Clean-In-Place) Systems for Bioreactors, Scale-Up Simulation Software, Inline Purification Technologies**
23. **Quality Control Testing: Real-Time Stability Testing under Accelerated Conditions, Use of Biosensors for Contaminant Detection, High-Throughput Sequencing for Genetic Stability Testing**
24. **Regulatory Compliance Documentation: Electronic Lab Notebooks for Data Integrity, Use of Regulatory Information Management Systems, Preparation of Submission-Ready Documentation Packages**

Biotechnology in Agriculture Protocols

Biotechnology Training Module

Fee: Rs 230000/-

Protocols List

1. **Genetic Modification of Crops: Vector Construction for Gene Insertion, Electroporation of Plant Cells, Floral Dip Method for Agrobacterium Transformation, Biolistic Particle Delivery System Setup, Selectable Marker Gene Incorporation, Screening for Transgenic Plants, Gene Editing via CRISPR-Cas9: Guide RNA Design, Cas9 Protein Delivery via Plasmid or Ribonucleoprotein, TALENs: Target Sequence Identification, Assembly of Custom TALENs, Zinc Finger Nucleases (ZFNs): Zinc Finger Protein Design, mRNA Synthesis for ZFN Delivery, Field Trial Setup for GM Crops, Regulatory Compliance for GMO Release**
2. **Soil Microbiome Analysis: Soil Sampling and Homogenization, DNA Extraction Using Commercial Kits, PCR Amplification of 16S rRNA Genes, Library Preparation for Sequencing, High-Throughput Sequencing on Illumina or PacBio, Bioinformatics: OTU Clustering and Taxonomic Assignment, Metagenomic Shotgun Library Preparation, Sequencing Data Analysis: Gene Prediction and Functional Annotation, RNA Extraction and Reverse Transcription for RNA-Seq, cDNA Library Construction and Sequencing for Metatranscriptomics, Data Integration and Microbial Community Interpretation, Stable Isotope Probing: DNA and RNA SIP, Analysis of Labeled DNA/RNA to Trace Metabolic Pathways**
3. **Plant Tissue Culture Techniques: Preparation of Nutrient Media Specific to Plant Species, Autoclaving Media and Culture Vessels, Surface Sterilization of Explants Using Chemical Agents, Establishment of Aseptic Culture Conditions, Callus Induction Using Plant Hormones (Auxins and Cytokinins), Subculturing Callus onto Regeneration Media, Inducing Shoot and Root Formation via Hormonal Manipulation, Micropropagation Through Meristem Culture, Somatic Embryo Development and Germination, Hardening Techniques for Tissue Cultured Plants: Gradual Adaptation to External Environment, Acclimatization in Greenhouse Conditions, Quality Assessment of Clonal Fidelity, Genetic Stability Testing Using Molecular Markers**

Individual Protocols Under Biotechnology Advanced Training Program

1. Aseptic Technique for Culture Maintenance | **Fee: 8000 (Rupees Eight Thousand)**
2. CO2 Incubator Setup and Validation | **Fee: 30000 (Rupees Thirty Thousand)**
3. Primary Cell Isolation and Culture from Tissues | **Fee: 30000 (Rupees Thirty Thousand)**
4. Cell Line Authentication via STR Profiling | **Fee: 75000 (Rupees Seventy Five Thousand)**
5. Cryopreservation and Thawing Protocols for Cell Lines | **Fee: 15000 (Rupees Fifteen Thousand)**
6. Serum-free Culture for Bioproduction | **Fee: 55000 (Rupees Fifty Five Thousand)**
7. Hypoxic Conditions Setup for Cancer Cell Studies | **Fee: 125000 (Rupees One Lakh Twenty Five Thousand)**
8. 3D Cell Culture Techniques including Spheroids and Organoids | **Fee: 300000 (Rupees Three Lakh)**
9. Automated Cell Culture Systems for High-throughput Screening | **Fee: 300000 (Rupees Three Lakh)**
10. Single-Cell Sorting for Clonal Analysis | **Fee: 300000 (Rupees Three Lakh)**
11. Multiparametric Sorting using 8+ Color Panels | **Fee: 300000 (Rupees Three Lakh)**
12. High-Speed Cell Sorting for Large Sample Volumes | **Fee: 300000 (Rupees Three Lakh)**
13. Sterile Sorting for Direct Culture and Transplantation | **Fee: 300000 (Rupees Three Lakh)**
14. Intracellular Cytokine Staining and Sorting | **Fee: 110000 (Rupees One Lakh Ten Thousand)**
15. Apoptosis and Cell Cycle Analysis via Flow Cytometry | **Fee: 300000 (Rupees**

Three Lakh)

16. Fluorescent Protein Sorting (e.g., GFP, RFP) | **Fee: 200000 (Rupees Two Lakh)**
17. Rare Population Sorting with High Sensitivity Detectors | **Fee: 200000 (Rupees Two Lakh)**
18. Use of Sorting Chips for Microfluidic Flow Cytometry | **Fee: 200000 (Rupees Two Lakh)**
19. Live Cell Imaging for Dynamic Process Observation | **Fee: 300000 (Rupees Three Lakh)**
20. FRET (Fluorescence Resonance Energy Transfer) for Molecular Interactions | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
21. FRAP (Fluorescence Recovery After Photobleaching) to Measure Protein Mobility | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
22. Super-resolution Techniques beyond Diffraction Limit | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
23. Multi-photon Excitation for Deep Tissue Imaging | **Fee: 400000 (Rupees Four Lakh)**
24. Time-lapse Confocal Microscopy for Cellular Behavior | **Fee: 400000 (Rupees Four Lakh)**
25. Z-stacking and 3D Reconstruction from Confocal Slices | **Fee: 400000 (Rupees Four Lakh)**
26. Use of Fluorescent Dyes and Probes Specific to Organelles | **Fee: 400000 (Rupees Four Lakh)**
27. Quantitative Image Analysis for Cellular Metrics | **Fee: 400000 (Rupees Four Lakh)**
28. High-throughput robotic ELISA platforms | **Fee: 400000 (Rupees Four Lakh)**
29. Multiplex ELISA for simultaneous detection of multiple targets | **Fee: 85000 (Rupees Eighty Five Thousand)**
30. Digital ELISA for ultra-sensitive detection using single-molecule counting | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
31. Bead-based ELISA for enhanced capture efficiency | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
32. Time-resolved fluorescence ELISA for improved signal stability | **Fee: 150000 (**

Rupees One Lakh Fifty Thousand)

33. Cell-free expression systems for rapid protein synthesis | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
34. Use of molecular chaperones for proper protein folding | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
35. Transient expression in mammalian cells for post-translational modifications | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
36. Use of immobilized enzymes for tag cleavage | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
37. High-pressure refolding techniques for disulfide-rich proteins | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
38. Use of nanoparticle-based adjuvants for enhanced immune response | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
39. Intralymphatic immunization for direct lymph node delivery | **Fee: 300000 (Rupees Three Lakh)**
40. Use of gene electrotransfer for in vivo antigen expression | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
41. Implementing oral immunization strategies with encapsulated antigens | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
42. Autoantigen-based tolerization techniques for therapeutic antibody development | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
43. Utilization of electrochemiluminescence for sensitive titre measurements | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
44. Biacore surface plasmon resonance for affinity and concentration | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
45. High-content screening for functional antibodies | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
46. Single B cell screening for rapid clone identification | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
47. Immuno-PCR for combining PCR sensitivity with antibody specificity | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
48. Use of automated decapicone for high-throughput animal bleeding | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**

49. Laser Doppler for real-time blood flow measurement during bleeding | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
50. Application of humane endpoints for ethical bleeding | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
51. Spectroscopic techniques for blood component analysis | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
52. Integration of stress-free handling equipment to minimize animal distress during bleeding | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
53. Use of closed-system automated apheresis to prevent contamination | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
54. Application of differential centrifugation for selective plasma component retrieval | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
55. High-efficiency membrane separators for improved plasma yield | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
56. Real-time monitoring of plasma extraction parameters | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
57. Use of anticoagulant recycling systems to reduce waste | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
58. Supercritical fluid extraction for antibody isolation | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
59. Partitioning in aqueous two-phase systems | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
60. Affinity partitioning using smart polymers | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
61. Continuous extraction systems for scale-up | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
62. Phase inversion precipitation for selective antibody isolation | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
63. Use of immunoaffinity columns specific to subclass or species | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
64. Sequential multi-step chromatography for removing aggregates | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
65. Utilization of fluidized bed chromatography for gentle processing | **Fee: 350000 (**

Rupees Three Lakh Fifty Thousand)

66. Cryogenic purification techniques for temperature-sensitive antibodies | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
67. Dynamic light scattering for real-time purity assessment | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
68. Application of 2D-DIGE for differential analysis | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
69. MALDI-TOF mass spectrometry for molecular weight determination | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
70. Capillary electrophoresis for charge heterogeneity | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
71. Use of chromatofocusing for isoelectric point determination | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
72. Automated Western blot for high-throughput screening | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
73. Use of reversible zinc staining for downstream MS analysis | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
74. Application of pre-stain protein loading controls for quantitative analysis | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
75. Implementation of gel documentation systems with fluorescence detection | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
76. Dual staining with imidazole-zinc and Coomassie for differential visualization | **Fee: 350000 (Rupees Three Lakh Fifty Thousand)**
77. Use of eco-friendly Coomassie brilliant blue formulations for reduced toxicity | **Fee: 85000 (Rupees Eighty Five Thousand)**
78. Use of formaldehyde-free silver staining for reduced toxicity | **Fee: 850000 (Rupees Eight Lakh Fifty Thousand)**
79. Silver enhancement for nanoparticle visualization in tissues | **Fee: 250000 (Rupees Two Lakh Fifty Thousand)**
80. Microwave-assisted silver staining for rapid processing | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
81. Use of alternative reducing agents for enhanced clarity | **Fee: 95000 (Rupees Ninety Five Thousand)**

82. Multi-metal staining techniques for differential protein visualization | **Fee: 150000 (Rupees One Lakh Fifty Thousand)**
83. Homogenization in Lysis Buffer | **Fee: 33000 (Rupees Thirty Three Thousand)**
84. Use of Silica Columns or Magnetic Beads for RNA Purification | **Fee: 40000 (Rupees Forty Thousand)**
85. DNase Treatment to Remove DNA Contamination | **Fee: 4000 (Rupees Four Thousand)**
86. RNA Integrity Assessment via Gel Electrophoresis or Bioanalyzer | **Fee: 5000 (Rupees Five Thousand)**
87. Primer Design for Target RNA | **Fee: 6000 (Rupees Six Thousand)**
88. Reverse Transcription of RNA to cDNA Using Reverse Transcriptase | **Fee: 8000 (Rupees Eight Thousand)**
89. PCR Amplification of cDNA | **Fee: 5000 (Rupees Five Thousand)**
90. Gel Electrophoresis for PCR Product Verification | **Fee: 3000 (Rupees Three Thousand)**
91. Selection of Cloning or Expression Vector | **Fee: 8000 (Rupees Eight Thousand)**
92. Multiple Cloning Site (MCS) Analysis | **Fee: 8000 (Rupees Eight Thousand)**
93. Incorporation of Selectable Markers and Reporter Genes | **Fee: 35000 (Rupees Thirty Five Thousand)**
94. Optimization of Regulatory Sequences for Expression | **Fee: 35000 (Rupees Thirty Five Thousand)**
95. Cell Lysis and DNA Extraction from Various Tissue Sources | **Fee: 6000 (Rupees Six Thousand)**
96. Phenol-Chloroform Extraction or Silica-Based DNA Purification | **Fee: 6000 (Rupees Six Thousand)**
97. Quantification and Qualitative Assessment via Spectrophotometry or Fluorometry | **Fee: 4000 (Rupees Four Thousand)**
98. Plasmid, Bacterial Artificial Chromosome (BAC), or Yeast Artificial Chromosome (YAC) Selection Based on Application | **Fee: 6000 (Rupees Six Thousand)**
99. Comparison of Copy Number and Stability | **Fee: 6000 (Rupees Six Thousand)**
100. Antibiotic Resistance Marker Consideration | **Fee: 15000 (Rupees Fifteen Thousand**

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101. Selection of Restriction Enzymes Compatible with Vector and Insert | **Fee: 9000 (Rupees Nine Thousand)**
102. Setup of Digestion Reactions | **Fee: 4000 (Rupees Four Thousand)**
103. Analysis of Digestion Efficiency via Agarose Gel Electrophoresis | **Fee: 5000 (Rupees Five Thousand)**
104. Purification of Digested Products | **Fee: 6000 (Rupees Six Thousand)**
105. Preparation of Vector and Insert at Optimal Ratios | **Fee: 12000 (Rupees Twelve Thousand)**
106. Use of T4 DNA Ligase for Covalent Bond Formation | **Fee: 6000 (Rupees Six Thousand)**
107. Control Reactions Without Insert to Check Background | **Fee: 8000 (Rupees Eight Thousand)**
108. Transformation Efficiency Test of Ligation Mixture | **Fee: 12000 (Rupees Twelve Thousand)**
109. Preparation of Competent Cells (Chemical or Electroporation Competency) | **Fee: 6000 (Rupees Six Thousand)**
110. Heat Shock or Electroporation of Cells with Ligation Mixture | **Fee: 6000 (Rupees Six Thousand)**
111. Recovery in SOC or LB Media | **Fee: 6000 (Rupees Six Thousand)**
112. Plating on Selective Media | **Fee: 3000 (Rupees Three Thousand)**
113. Use of X-gal Plates to Distinguish Between Recombinant and Non-Recombinant Clones | **Fee: 6000 (Rupees Six Thousand)**
114. IPTG Induction of LacZ Marker | **Fee: 12000 (Rupees Twelve Thousand)**
115. Selection of White Colonies for Further Analysis | **Fee: 6000 (Rupees Six Thousand)**
116. Sterile Technique for Isolating Individual Colonies | **Fee: 2000 (Rupees Two Thousand)**
117. Inoculation in Liquid Culture for Amplification | **Fee: 2000 (Rupees Two Thousand)**
118. Storage of Clones in Glycerol Stocks at -80°C | **Fee: 4000 (Rupees Four Thousand**

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119. Small-Scale (Miniprep) or Large-Scale (Maxiprep) Plasmid DNA Isolation | **Fee: 12000 (Rupees Twelve Thousand)**
120. Plasmid DNA Purification Using Spin Columns or Anion Exchange Chromatography | **Fee: 15000 (Rupees Fifteen Thousand)**
121. Determination of Plasmid Concentration and Purity | **Fee: 8000 (Rupees Eight Thousand)**
122. Preparation of DNA for Sanger Sequencing or Next-Generation Sequencing | **Fee: 15000 (Rupees Fifteen Thousand)**
123. Primer Design for Specific Regions | **Fee: 6000 (Rupees Six Thousand)**
124. Submission of Samples to Sequencing Facility | **Fee: 4000 (Rupees Four Thousand)**
125. Analysis of Sequencing Data for Verification of Cloning | **Fee: 15000 (Rupees Fifteen Thousand)**

Please contact on +91-7993084748 for more details

Cant Come to Hyderabad or Chennai or Bangalore? No Problem, You can do it in Virtual / Online Mode