Biotechnology Summer Training Program

This summer training program provides participants with a comprehensive introduction to biotechnology techniques and applications in various fields, offering a great opportunity to gain practical skills during the summer break.

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

Environmental Biotechnology

Kindly review the fees outlined for the individual protocols listed in this module.

- Water Quality Testing Using Biotechnologies: Deployment of Biosensors for Detection of Contaminants like Heavy Metals and Organic Pollutants, Use of Microbial Fuel Cells to Assess BOD (Biological Oxygen Demand), Application of Bioluminescent Bacteria for Toxicity Testing, Development of DNA Microarrays for Pathogen Detection, Real-time PCR for Quantitative Microbial Analysis, Enzyme-linked Immunosorbent Assay (ELISA) for Pesticide Detection, Nanotechnology-enhanced Sensors for Improved Sensitivity and Specificity, Integration of IoT Devices for Continuous Remote Monitoring, Standardization of Protocols for Regulatory Compliance
- Phytoremediation Techniques: Selection of Hyperaccumulator Plants for Heavy Metal Uptake, Design of Constructed Wetlands for Wastewater Treatment, Use of Rhizofiltration for Removal of Water Soluble Contaminants, Implementation of Phytostabilization to Immobilize Contaminants in Soil, Application of Phytoextraction Techniques for Soil Remediation, Genetic Engineering of Plants for Enhanced Phytoremediation Capabilities, Monitoring and Managing Biomass Disposal Post-remediation, Lifecycle Analysis to Evaluate Overall Environmental Benefits, Development of Guidelines for Scaling Up Phytoremediation Projects
- Microbial Biofuel Production: Optimization of Microbial Strains for Enhanced Biofuel Yield, Design and Operation of Bioreactors for Algal Biofuel Production, Fermentation Process Development for Bioethanol, Use of Genetic Engineering to Improve Lipid Accumulation in Microbes, Scale-up of Anaerobic Digestion for Biogas Production, Integration of Waste Biomass as Feedstock, Purification and Upgrading Techniques for Biofuels, Lifecycle Assessment to Ensure Sustainability, Establishment of Protocols for Commercial Scale Production

Healthcare Biotechnology

Kindly review the fees outlined for the individual protocols listed in this module.

- Biotech Approaches in Disease Diagnostics: Development of Molecular Diagnostics Using PCR and Real-Time PCR for Pathogen Detection, Application of Next-Generation Sequencing for Comprehensive Disease Screening, Use of CRISPR-based Diagnostics for Rapid and Accurate Testing, Design of Immunoassays (ELISA) for Biomarker Detection, Integration of Microfluidic Devices for Point-of-Care Testing, Implementation of Biosensors for Non-invasive Disease Monitoring, Standardization of Lab-on-a-Chip Systems for Multiplex Analysis, Validation of Diagnostic Tests Under Clinical Settings, Establishment of Global Diagnostic Standards for Interoperability
- Personalized Medicine Applications: Genomic Profiling to Guide Drug Therapy Decisions, Development of Pharmacogenomic Tests for Drug Response Prediction, Use of Bioinformatics Tools to Analyze Genetic Data for Personalized Treatment Plans, Application of Tissue Engineering for Customized Organ and Tissue Replacement, Implementation of Targeted Therapy Based on Genetic Markers, Development of Personalized Cancer Vaccines, Integration of Wearable Technology for Continuous Health Monitoring, Design of Personal Health Records for Patient-Specific Data Collection, Collaboration with Regulatory Bodies to Fast-Track Approval of Personalized Therapies
- Biotech in Vaccine Development: Use of Reverse Vaccinology to Identify New Antigens, Design of Synthetic Peptide Vaccines for Precise Immune Targeting, Development of Viral Vector Vaccines for Robust Immune Response, Application of Adjuvant Formulations to Enhance Vaccine Efficacy, Scale-Up of mRNA Vaccine Production Facilities, Integration of Nanotechnology for Controlled Vaccine Release, Conducting Preclinical Trials with Animal Models, Implementation of Rapid Response Platforms for Emerging Pathogens, Coordination with Global Health Authorities for Vaccine Roll-out

Agricultural Biotechnology

Kindly review the fees outlined for the individual protocols listed in this module.

- Plant Genetic Engineering: Use of Agrobacterium-mediated Transformation for Gene Delivery, Particle Bombardment Techniques for Direct DNA Transfer, CRISPR-Cas9 Gene Editing for Targeted Trait Development, Tissue Culture and Regeneration Protocols for Engineered Plants, Use of

RNAi for Silencing Unwanted Traits, Protocols for Developing Disease Resistant Varieties, Integration of Synthetic Biology for Novel Trait Synthesis, Compliance with Regulatory Frameworks for GMO Release, Monitoring of Field Trials and Environmental Impact Assessment

- Biocontrol Methods in Pest Management: Development and Field Application of Beneficial Microorganisms as Biopesticides, Mass Rearing and Release of Insect Predators and Parasitoids, Use of Pheromones for Mating Disruption in Pest Populations, Genetic Modification of Biocontrol Agents for Enhanced Efficacy, Formulation of Microbial Biopesticides for Extended Shelf Life and Potency, Protocols for Habitat Management to Enhance Natural Enemy Populations, Regulatory Compliance and Risk Assessment for Biocontrol Agents, Impact Studies on Non-target Organisms and Ecosystems, Education and Outreach Programs for Farmer Adoption of Biocontrol Practices
- Biotech in Sustainable Agriculture: Development of Crop Varieties with Enhanced Nutrient Use Efficiency, Genetic Engineering for Drought and Salinity Tolerance, Application of Biostimulants to Promote Plant Growth and Yield, Protocols for Soil Microbiome Enhancement to Improve Soil Health, Use of Molecular Markers for Precision Breeding, Integration of Agroecological Practices with Modern Biotechnology, Life Cycle Analysis of Biotech Crops for Sustainability Assessment, Development of Decision Support Systems for Integrated Crop Management, Collaboration with Stakeholders for Technology Transfer and Scalability

Individual Protocols Under Biotechnology Summer Training Program

1. Deployment of Biosensors for Detection of Contaminants like Heavy Metals and Organic Pollutants | **Fee: 5,000 (Rupees Five Thousand)**
2. Use of Microbial Fuel Cells to Assess BOD (Biological Oxygen Demand) | **Fee: 15,000 (Rupees Fifteen Thousand)**
3. Application of Bioluminescent Bacteria for Toxicity Testing | **Fee: 18,000 (Rupees Eighteen Thousand)**
4. Development of DNA Microarrays for Pathogen Detection | **Fee: 95,000 (Rupees Ninety Five Thousand)**
5. Real-time PCR for Quantitative Microbial Analysis | **Fee: 15,000 (Rupees Fifteen Thousand)**
6. Enzyme-linked Immunosorbent Assay (ELISA) for Pesticide Detection | **Fee: 65,000 (Rupees Sixty Five Thousand)**
7. Integration of IoT Devices for Continuous Remote Monitoring | **Fee: 1,50,000 (Rupees One Lakh Fifty Thousand)**
8. Standardization of Protocols for Regulatory Compliance | **Fee: 3,00,000 (Rupees Three Lakh)**
9. Selection of Hyperaccumulator Plants for Heavy Metal Uptake | **Fee: 2,00,000 (Rupees**

Two Lakh)

10. Design of Constructed Wetlands for Wastewater Treatment | **Fee: 3,00,000 (Rupees Three Lakh)**
11. Use of Rhizofiltration for Removal of Water Soluble Contaminants | **Fee: 1,20,000 (Rupees One Lakh Twenty Thousand)**
12. Implementation of Phytostabilization to Immobilize Contaminants in Soil | **Fee: 1,20,000 (Rupees One Lakh Twenty Thousand)**
13. Application of Phytoextraction Techniques for Soil Remediation | **Fee: 3,00,000 (Rupees Three Lakh)**
14. Genetic Engineering of Plants for Enhanced Phytoremediation Capabilities | **Fee: 3,00,000 (Rupees Three Lakh)**
15. Monitoring and Managing Biomass Disposal Post-remediation | **Fee: 5,00,000 (Rupees Five Lakh)**
16. Lifecycle Analysis to Evaluate Overall Environmental Benefits | **Fee: 2,00,000 (Rupees Two Lakh)**
17. Development of Guidelines for Scaling Up Phytoremediation Projects | **Fee: 1,30,000 (Rupees One Lakh Thirty Thousand)**
18. Optimization of Microbial Strains for Enhanced Biofuel Yield | **Fee: 7,00,000 (Rupees Seven Lakh)**
19. Design and Operation of Bioreactors for Algal Biofuel Production | **Fee: 15,00,000 (Rupees Fifteen Lakh)**
20. Fermentation Process Development for Bioethanol | **Fee: 35,000 (Rupees Thirty Five Thousand)**
21. Use of Genetic Engineering to Improve Lipid Accumulation in Microbes | **Fee: 9,00,000 (Rupees Nine Lakh)**
22. Scale-up of Anaerobic Digestion for Biogas Production | **Fee: 3,00,000 (Rupees Three Lakh)**
23. Integration of Waste Biomass as Feedstock | **Fee: 75,000 (Rupees Seventy Five Thousand)**
24. Purification and Upgrading Techniques for Biofuels | **Fee: 2,00,000 (Rupees Two Lakh)**
25. Lifecycle Assessment to Ensure Sustainability | **Fee: 1,50,000 (Rupees One Lakh Fifty Thousand)**
26. Establishment of Protocols for Commercial Scale Production | **Fee: 3,00,000 (Rupees Three Lakh)**
27. Development of Molecular Diagnostics Using PCR and Real-Time PCR for Pathogen Detection | **Fee: 2,00,000 (Rupees Two Lakh)**
28. Application of Next-Generation Sequencing for Comprehensive Disease Screening | **Fee: 3,00,00 (Rupees Thirty Thousand)**
29. Use of CRISPR-based Diagnostics for Rapid and Accurate Testing | **Fee: 5,00,000 (Rupees Five Lakh)**
30. Design of Immunoassays (ELISA) for Biomarker Detection | **Fee: 5,00,000 (Rupees Five Lakh)**
31. Integration of Microfluidic Devices for Point-of-Care Testing | **Fee: 9,00,000 (Rupees Nine Lakh)**
32. Implementation of Biosensors for Non-invasive Disease Monitoring | **Fee: 3,00,000 (**

Rupees Three Lakh)

33. Standardization of Lab-on-a-Chip Systems for Multiplex Analysis | **Fee: 3,00,000 (Rupees Three Lakh)**
34. Validation of Diagnostic Tests Under Clinical Settings | **Fee: 7,00,000 (Rupees Seven Lakh)**
35. Establishment of Global Diagnostic Standards for Interoperability | **Fee: 7,00,000 (Rupees Seven Lakh)**
36. Genomic Profiling to Guide Drug Therapy Decisions | **Fee: 5,00,000 (Rupees Five Lakh)**
37. Development of Pharmacogenomic Tests for Drug Response Prediction | **Fee: 7,00,000 (Rupees Seven Lakh)**
38. Use of Bioinformatics Tools to Analyze Genetic Data for Personalized Treatment Plans | **Fee: 65,000 (Rupees Sixty Five Thousand)**
39. Application of Tissue Engineering for Customized Organ and Tissue Replacement | **Fee: 4,00,00,000 (Rupees Four Crore)**
40. Implementation of Targeted Therapy Based on Genetic Markers | **Fee: 5,00,000 (Rupees Five Lakh)**
41. Development of Personalized Cancer Vaccines | **Fee: 4,00,00,000 (Rupees Four Crore)**
42. Integration of Wearable Technology for Continuous Health Monitoring | **Fee: 10,00,000 (Rupees Ten Lakh)**
43. Design of Personal Health Records for Patient-Specific Data Collection | **Fee: 4,00,000 (Rupees Four Lakh)**
44. Collaboration with Regulatory Bodies to Fast-Track Approval of Personalized Therapies | **Fee: 55,00,000 (Rupees Fifty Five Lakh)**
45. Use of Reverse Vaccinology to Identify New Antigens | **Fee: 15,00,000 (Rupees Fifteen Lakh)**
46. Design of Synthetic Peptide Vaccines for Precise Immune Targeting | **Fee: 65,00,000 (Rupees Sixty Five Lakh)**
47. Development of Viral Vector Vaccines for Robust Immune Response | **Fee: 1,50,00,000 (Rupees One Crore Fifty Lakh)**
48. Application of Adjuvant Formulations to Enhance Vaccine Efficacy | **Fee: 9,00,000 (Rupees Nine Lakh)**
49. Scale-Up of mRNA Vaccine Production Facilities | **Fee: 7,00,00,000 (Rupees Seven Crore)**
50. Integration of Nanotechnology for Controlled Vaccine Release | **Fee: 2,00,00,000 (Rupees Two Crore)**
51. Conducting Preclinical Trials with Animal Models | **Fee: 35,00,000 (Rupees Thirty Five Lakh)**
52. Implementation of Rapid Response Platforms for Emerging Pathogens | **Fee: 2,00,00,000 (Rupees Two Crore)**
53. Coordination with Global Health Authorities for Vaccine Roll-out | **Fee: 4,00,00,000 (Rupees Four Crore)**

Please contact on +91-8977624748 for more details

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