

## Microbiology Advanced Training Program

The Microbiology Advanced Training Program is crafted for individuals seeking to deepen their expertise in advanced microbiology fields, covering molecular microbiology, synthetic biology, industrial applications, and more.

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

### Molecular Microbiology

#### Microbiology Training Module

**Fee: Contact Us**

#### Protocols List

1. Gene cloning and expression protocols for microbial studies
2. RNA interference and gene regulation techniques
3. Protein expression in microbial systems
4. Advanced DNA sequencing and genome annotation methods

### Genomics and Metagenomics

#### Microbiology Training Module

**Fee: Contact Us**

#### Protocols List

1. Metagenomic library construction and analysis techniques
2. Whole-genome sequencing and microbial genome annotation
3. Bioinformatics tools for microbial community analysis
4. Phylogenetic analysis for microbial diversity

## **Synthetic Microbiology**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

- 1. CRISPR-Cas systems for synthetic biology applications**
- 2. Pathway reconstruction and metabolic engineering**
- 3. Development of biosensors for microbial applications**
- 4. Engineering microbes for bio-production**

## **Industrial Microbiology and Bioprocessing**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

- 1. Bioreactor design and microbial production systems**
- 2. Techniques for enzyme production and purification**
- 3. Downstream processing and product refinement**
- 4. Quality control in industrial bioprocessing**

## **Environmental Microbiology**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

- 1. Environmental pathogen detection and water testing**
- 2. Biofilm analysis for environmental applications**
- 3. Heavy metal biotransformation by microbes**
- 4. Microbial ecosystem modeling and conservation microbiology**

## **Medical and Clinical Microbiology**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

1. Antimicrobial susceptibility and resistance testing
2. Molecular diagnostics for infectious diseases
3. Host-pathogen interaction studies
4. Vaccine development and immunological studies

## **Proteomics and Metabolomics in**

## **Microbiology**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

1. Mass spectrometry for microbial proteomics
2. Metabolomic profiling and pathway analysis
3. Biochemical assays for microbial metabolism
4. Protein-protein interaction studies in microbes

## **Immunomicrobiology**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

1. Flow cytometry for immune cell analysis
2. Host-microbe immune interaction studies
3. Vaccine formulation and immunogenetics
4. T-cell and B-cell response studies in microbial infections

## **Agricultural Microbiology**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

1. Biofertilizer and biopesticide development
2. Microbial inoculant production for agriculture
3. Plant-microbe interaction studies
4. Sustainable agriculture and microbial applications

## **Virology (Microbial Virology)**

### **Microbiology Training Module**

**Fee: Contact Us**

#### **Protocols List**

1. Bacteriophage therapy and antiviral applications
2. Viral genome sequencing and phylogenetic analysis
3. Antiviral screening and drug development
4. Vaccinology applications in viral infections

## **Individual Protocols Under Microbiology Advanced Training Program**

1. CRISPR gene editing and knockout methods | [Fee: Contact Us](#)
2. Gene cloning and expression protocols for microbial studies | [Fee: Contact Us](#)

3. RNA interference and gene regulation techniques | [Fee: Contact Us](#)
4. Protein expression in microbial systems | [Fee: Contact Us](#)
5. Advanced DNA sequencing and genome annotation methods | [Fee: Contact Us](#)
6. 16S rRNA sequencing for microbial identification | [Fee: Contact Us](#)
7. Metagenomic library construction and analysis techniques | [Fee: Contact Us](#)
8. Whole-genome sequencing and microbial genome annotation | [Fee: Contact Us](#)
9. Bioinformatics tools for microbial community analysis | [Fee: Contact Us](#)
10. Phylogenetic analysis for microbial diversity | [Fee: Contact Us](#)
11. Design and construction of synthetic gene circuits | [Fee: Contact Us](#)
12. CRISPR-Cas systems for synthetic biology applications | [Fee: Contact Us](#)
13. Pathway reconstruction and metabolic engineering | [Fee: Contact Us](#)
14. Development of biosensors for microbial applications | [Fee: Contact Us](#)
15. Engineering microbes for bio-production | [Fee: Contact Us](#)
16. Fermentation process scale-up and optimization | [Fee: Contact Us](#)
17. Bioreactor design and microbial production systems | [Fee: Contact Us](#)
18. Techniques for enzyme production and purification | [Fee: Contact Us](#)
19. Downstream processing and product refinement | [Fee: Contact Us](#)
20. Quality control in industrial bioprocessing | [Fee: Contact Us](#)
21. Microbial bioremediation for pollution control | [Fee: Contact Us](#)
22. Environmental pathogen detection and water testing | [Fee: Contact Us](#)
23. Biofilm analysis for environmental applications | [Fee: Contact Us](#)
24. Heavy metal biotransformation by microbes | [Fee: Contact Us](#)
25. Microbial ecosystem modeling and conservation microbiology | [Fee: Contact Us](#)
26. Pathogen identification and rapid diagnostic assays | [Fee: Contact Us](#)
27. Antimicrobial susceptibility and resistance testing | [Fee: Contact Us](#)
28. Molecular diagnostics for infectious diseases | [Fee: Contact Us](#)

29. Host-pathogen interaction studies | [Fee: Contact Us](#)
30. Vaccine development and immunological studies | [Fee: Contact Us](#)
31. Protein isolation and quantification techniques | [Fee: Contact Us](#)
32. Mass spectrometry for microbial proteomics | [Fee: Contact Us](#)
33. Metabolomic profiling and pathway analysis | [Fee: Contact Us](#)
34. Biochemical assays for microbial metabolism | [Fee: Contact Us](#)
35. Protein-protein interaction studies in microbes | [Fee: Contact Us](#)
36. ELISA and immunoassays for microbial antigen detection | [Fee: Contact Us](#)
37. Flow cytometry for immune cell analysis | [Fee: Contact Us](#)
38. Host-microbe immune interaction studies | [Fee: Contact Us](#)
39. Vaccine formulation and immunogenetics | [Fee: Contact Us](#)
40. T-cell and B-cell response studies in microbial infections | [Fee: Contact Us](#)
41. Soil microbiome analysis for crop health | [Fee: Contact Us](#)
42. Biofertilizer and biopesticide development | [Fee: Contact Us](#)
43. Microbial inoculant production for agriculture | [Fee: Contact Us](#)
44. Plant-microbe interaction studies | [Fee: Contact Us](#)
45. Sustainable agriculture and microbial applications | [Fee: Contact Us](#)
46. Viral culture and molecular virology techniques | [Fee: Contact Us](#)
47. Bacteriophage therapy and antiviral applications | [Fee: Contact Us](#)
48. Viral genome sequencing and phylogenetic analysis | [Fee: Contact Us](#)
49. Antiviral screening and drug development | [Fee: Contact Us](#)
50. Vaccinology applications in viral infections | [Fee: Contact Us](#)

**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

