



## Aero Microbiology Winter Internship

Basic Sector:

1.

### **Metabolic Profiling of Airborne Microbial Communities**

Techniques: Molecular Biology (metabolic pathway analysis), Bioinformatics (metabolomics), Plant Tissue Culturing (metabolite production studies).

3.

### **Evolutionary Dynamics of Airborne Pathogens**

Techniques: Molecular Biology (phylogenetics), Bioinformatics (evolutionary modeling), Plant Tissue Culturing (pathogen-plant interaction studies).

5.

### **Airborne Microbial Biofilm Formation Mechanisms**

Techniques: Molecular Biology (biofilm gene expression), Bioinformatics (biofilm pathway analysis), Plant Tissue Culturing (biofilm development studies).

7.

### **Functional Diversity of Aero-Microbial Communities in Varying Altitudes**

Techniques: Molecular Biology (functional gene analysis), Bioinformatics (functional diversity prediction), Plant Tissue Culturing (altitude simulation studies).

9.

### **Aero-Microbial Contribution to Biogeochemical Cycling in Urban Environments**

- Techniques: Molecular Biology (metabolic gene expression), Bioinformatics (urban microbial ecology), Plant Tissue Culturing (urban ecosystem studies).

Therapeutic Sector:

1.

## **Development of Aero-Microbial Vaccines for Respiratory Diseases**

Techniques: Molecular Biology (vaccine antigen design), Bioinformatics (vaccine efficacy prediction), Plant Tissue Culturing (vaccine production optimization).

3.

## **Engineering Airborne Microbes for Therapeutic Delivery Systems**

Techniques: Molecular Biology (gene modification for drug delivery), Bioinformatics (targeted delivery prediction), Plant Tissue Culturing (biofilm encapsulation studies).

5.

## **Microbial Communities in Indoor Air Quality and Human Health**

Techniques: Molecular Biology (indoor microbial diversity), Bioinformatics (microbial health impact), Plant Tissue Culturing (indoor environment simulation).

7.

## **Aero-Microbial Influence on Gut Microbiota and Health**

Techniques: Molecular Biology (gut microbial dynamics), Bioinformatics (gut-microbe interaction analysis), Plant Tissue Culturing (gut-microbe co-culture studies).

9.

## **Bioactive Compounds from Aero-Microbial Sources for Therapeutics**

- Techniques: Molecular Biology (compounds biosynthesis pathways), Bioinformatics (compounds prediction), Plant Tissue Culturing (compound production optimization).

Industrial Sector:

1.

## **Airborne Microbes in Sustainable Agriculture: Biofertilizers**

Techniques: Molecular Biology (beneficial microbial gene identification), Bioinformatics (biofertilizer prediction), Plant Tissue Culturing (biofertilizer efficacy testing).

3.

## **Airborne Microbes in Bioprocessing for Sustainable Production**

Techniques: Molecular Biology (optimized microbial strains), Bioinformatics (process optimization), Plant Tissue Culturing (production scale-up).

5.

### **Aero-Microbial Metabolites for Green Chemical Production**

Techniques: Molecular Biology (metabolic pathway analysis), Bioinformatics (metabolite prediction), Plant Tissue Culturing (metabolite production optimization).

7.

### **Harnessing Aero-Microbial Consortia for Bioenergy Production**

Techniques: Molecular Biology (engineered consortia for bioenergy production), Bioinformatics (metabolic modeling), Plant Tissue Culturing (bioenergy crop optimization).

9.

### **Airborne Microbes in Biofilm-Based Industrial Applications**

- Techniques: Molecular Biology (biofilm engineering), Bioinformatics (biofilm pathway analysis), Plant Tissue Culturing (biofilm production optimization).

## **Fee Structure**

Note 1: Fee mentioned below is per candidate.

Note 2: Fee of any sort is NON REFUNDABLE once paid. Please cross confirm all the details before proceeding to fee payment.

Note 3: Fee is including all taxes.

2 Days Total Fee: Rs 20000/-

**Reg Fee Rs 5500/-**

5 Days Total Fee: Rs 20000/-

**Reg Fee Rs 5500/-**

10 Days Total Fee: Rs 20000/-

**Reg Fee Rs 5500/-**

15 Days Total Fee: Rs 20000/-

**Reg Fee Rs 5500/-**

20 Days Total Fee: Rs 20000/-

**Reg Fee Rs 5500/-**

**30 Days Total Fee: Rs 32308/-**

**Reg Fee Rs 5500/-**

**45 Days Total Fee: Rs 53333/-**

**Reg Fee Rs 5500/-**

**Please contact +91-9014935156 for fee payments info or EMI options or Payment via Credit Card or Payment using PDC (Post Dated Cheque).**

Please check below for Payment QR Code.

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