



Green Biotechnology Internship

NTHRYS provides Green Biotechnology Internship for interested candidates at its Hyderabad facility, Telangana. Please refer below for more details including Topics, Fee structures, 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

Topics / Titles

Note: Due to certain intellectual constrains complete titles of the topics are not mentioned

Students / Scholars can choose one topic from the below list to undergo internship under this field.

Topics / Titles list under modification. Please whatsapp / message to 9014935156 to get Topics details

Comprehensive list of research approaches used in green biotechnology for agricultural processes, plant micropropagation, transgenic plants, and related areas:

Genomic Sequencing

Analyzing the complete DNA sequences of organisms to identify genes related to specific traits, aiding in crop improvement.

2.

Phenotyping

Measuring and analyzing observable traits in plants to evaluate responses to different environmental conditions.

4.

Quantitative Trait Loci (QTL) Mapping

Identifying genomic regions associated with specific traits to guide breeding programs.

6.

Cryopreservation

Freezing plant tissues for long-term storage and conservation of genetic diversity.

8.

Agroforestry

Integrating trees with crops to enhance soil fertility, reduce erosion, and increase biodiversity.

10.

Research Approaches in Green Biotechnology: Plant Micropropagation

11.

Somatic Embryogenesis

Inducing plant cells to develop into embryos in vitro, allowing mass propagation.

13.

Micrografting

Joining sections of plants to facilitate the growth of new plants, ensuring uniformity.

15.

Haploid Production

Creating plants with half the usual number of chromosomes to accelerate breeding.

17.

Rooting Hormone Optimization

Enhancing root development in vitro for better survival during transplantation.

19.

In Vitro Conservation

Maintaining plant germplasm in sterile conditions to prevent genetic erosion.

Gene Cloning

Identifying and isolating specific genes to introduce into target plants.

22.

Gene Overexpression

Inserting extra copies of a gene to increase the production of a desired protein.

24.

Promoter Characterization

Studying gene promoters to control where and when a gene is expressed in transgenic plants.

26.

Agrobacterium-Mediated Transformation

Using the natural transfer of genetic material from Agrobacterium to introduce new genes.

28.

Genome Editing

Precisely modifying DNA sequences using tools like CRISPR-Cas9 to achieve desired traits.

30.

Biosensors in Plants

Developing transgenic plants to detect environmental pollutants or pathogens.

32.

Plant-Microbe Interactions

Studying the symbiotic relationships between plants and beneficial microbes for improved growth.

34.

Virus-Induced Gene Silencing (VIGS)

Using plant viruses to silence specific genes temporarily for functional studies.

36.

Transgene Promoter Stacking

Combining multiple promoters to achieve complex gene expression patterns.

38.

Pharmacrop Biotechnology

Engineering plants to produce pharmaceutical compounds for therapeutic use.

40.

Research Approaches in Green Biotechnology: Basic Research

41.

Epigenetics Research

Studying heritable changes in gene expression without altering the DNA sequence.

43.

Functional Genomics

Studying the functions of genes and how they interact within biological systems.

45.

Proteomics

Analyzing the complete set of proteins in a cell to identify their functions and interactions.

47.

Systems Biology

Integrating data from multiple omics approaches to model and simulate complex biological systems.

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49.

Functional Annotation

Assigning functions to genes or proteins based on experimental evidence or computational predictions.

Pharmaceutical Plant Production

Developing transgenic plants to produce high-value therapeutic proteins, vaccines, and antibodies.

52.

Plant-Derived Anticancer Compounds

Investigating plant compounds with potential anti-cancer properties.

54.

Herbal Medicine Research

Investigating the therapeutic potential of traditional medicinal plants.

56.

Bioactive Plant Compounds

Identifying and characterizing plant-derived molecules with potential health-promoting effects.

58.

Plant-Based Anti-Inflammatory Agents

Investigating plant compounds with anti-inflammatory properties.

60.