

Book Title (ID 2024_09)

Biotechnological and Molecular Approaches in the Management of Biotic Stress in Plants

About the Book

This comprehensive exploration delves into the realm of biotechnology and molecular biology, showcasing innovative strategies aimed at bolstering plant resilience against pests, pathogens, and other biotic challenges. It offers a nuanced examination of advanced techniques and methodologies employed to mitigate the detrimental impacts of biotic stressors on plant species. From targeted genetic modifications to precision breeding techniques, this title illuminates the forefront of research and practical applications shaping the future of plant biotic stress management. The book will play a pivotal role in advancing knowledge, facilitating learning and fostering innovation in the fields of plant science, biotechnology and molecular biology, making it indispensable for researchers.

Chapters outlines but not limited to:

Chapter 1: Harnessing Biotechnology for Pest Control

Innovative tools to combat agricultural pests.

Chapter 2: Transgenic Triumph: Crops with Built-In Defenses

Revolutionizing insect resistance through genetic transformation.

Chapter 3: Super Enemies: Enhancing Natural Predators

Boosting the effectiveness of natural pest controllers.

Chapter 4: Next-Gen Biopesticides: Genetic Enhancement

Transforming biopesticides for superior pest management.

Chapter 5: Marker-Assisted Marvels: Precision in Pest Resistance

Selecting the best through molecular markers.

Chapter 6: Decoding Genes: Sequencing and Function Analysis

Unveiling the secrets of plant-insect interactions.

Chapter 7: Pathways to Protection: Metabolic Insights

Understanding plant metabolism for better pest resistance.

Chapter 8: Switching Defenses: Inducible Resistance Mechanisms

Activating plant defenses on demand.

Chapter 9: Molecular Diagnosis: Identifying Pests and Allies

Precision tools for identifying insect pests and natural enemies.

Chapter 10: Crafting New Weapons: Developing Insecticides

Innovative molecules for modern pest control.

Chapter 11: Sterility Solutions: Dominant Repressible Lethal Systems

Genetic strategies to produce sterile insects.

Chapter 12: Fortifying Crops: Biotechnological Resistance Enhancement

Boosting plant resilience against pests.

Chapter 13: Resistant Roots: Phenotyping for Defense

Identifying and breeding resilient plants.

Chapter 14: Gene Silence: RNAi in Pest Management

Harnessing RNA interference for targeted pest control.

Chapter 15: Fruit Fly Genomics: Insights from Tephritid Research

Exploring the genetics and distribution of fruit flies.

Chapter 16: Gut Check: Molecular Detection of Bacteria

Unraveling the gut microbiome of insects.

Chapter 17: RNAi Revolution: Future of Pest Management

Current status and future directions in RNAi research.

Chapter 18: Vector Engineering: Crafting RNAi Tools

Designing effective RNAi vectors for pest control.

Chapter 19: RNAi Readiness: Deployment Strategies

Preparing for RNAi application in the field.

Chapter 20: Signal Spread: dsRNA/siRNA Uptake Mechanisms

Understanding the journey of RNA molecules in plants and insects.

Chapter 21: Bioremediation Brilliance: Cleansing Pesticides

Using microorganisms to detoxify the environment.

Chapter 22: Microbial Allies: Pathogens in Pest Control

Harnessing microorganisms for insect management.

Chapter 23: Nematode Knights: EPNs in Action

Entomopathogenic nematodes as pest warriors.

Chapter 24: Marker Magic: Tools in Entomological Research

Advances in molecular markers for insect studies.

Chapter 25: Cotton Chronicles: Transgenics in India

The story of genetically modified cotton in India.

Chapter 26: Fruit Crop Defense: Biotech Against Pests

Biotechnological strategies for fruit crop protection.

Chapter 27: Microbial Mastery: Managing Resistance

Tackling resistance to microbial control agents.

Chapter 28: Bt Breakthroughs: Overcoming Cross Resistance

*Strategies to combat resistance to *Bacillus thuringiensis*.*

Chapter 29: Bt Strategies: Managing Resistance in the Field

Approaches to sustain the effectiveness of Bt toxins.

Chapter 30: Mosquito Wars: Bacterial Insecticides

Battling mosquito populations with bacterial tools.

Chapter 31: Mite Management: Biological and Molecular Approaches

Innovative solutions for managing mite pests.

Chapter 32: Pest Profiles: Biosystematics and Characterization

Molecular techniques for pest identification and management.

Chapter 33: Honeybee Health: Precision Diagnostics

Molecular methods for diagnosing diseases and mites in honeybees.

Chapter 34: Sustainable Shield: Biointensive Pest Management

Integrating biological controls for sustainable agriculture.

Chapter 35: Host Plant Heroes: Natural Resistance

Breeding plants with inherent pest resistance.

Chapter 36: Insecticide Insights: Molecular Resistance

Understanding the genetics behind insecticide resistance.

Chapter 37: Primed for Defense: Induced Resistance

Harnessing priming techniques for stronger plant defenses.

Chapter 38: Transgenic Triumphs: Insect-Resistant Plants

Advances in transgenic technology for pest control.

Chapter 39: Stress Shield: Molecular Approaches

Molecular strategies to manage plant stress.

Chapter 40: RNAi Tech: Cutting-Edge Pest Control

Exploring RNA interference for innovative pest management.

Chapter 41: Protease Protection: Inhibitors in Defense

Using proteinase inhibitors to protect plants.

Chapter 42: Hormone Hijinks: Analogues and Inhibitors

Manipulating insect hormones for pest control.

Chapter 43: Plant Defenders: Phyto-Antifeedants

Natural compounds deterring insect pests.

Chapter 44: Chemical Communication: Chemoecology

Understanding plant-insect chemical interactions.

Chapter 45: Bioinformatics Brilliance: Data-Driven Decisions

Leveraging bioinformatics for pest management.

Chapter 46: Nano Innovations: Tiny Tools for Big Problems

Nanotechnology in the fight against pests.

Chapter 47: Ethical Excellence: Safety in Biotech

Balancing innovation with ethical considerations.

****Note:** Chapter title may be modified or new chapter may also be proposed by the author.

Key Features & Benefits

- Free CrossRef DOI to each chapter
- Free Authorship Certificate
- Lifetime Archived Data in Biotica DigiLibrary
- Indexing in ANGIRAS and other databases
- Concessions in Registration Fees of all Biotica International Conferences
- Fast, Rigorous and Constructive Peer-Review system
- Very Nominal Publication Fees
- Unique Book Launching Program at International Platform
- Skilled, Proficient, Experienced and Competent Editorial and Production Team
- Unlimited authors
- And many more.....

CHAPTER SUBMISSION PROCEDURE:

Book Chapter may be submitted through e-mail: bioticabooks@gmail.com or online portal

- **Last date of chapter booking:** 5th August, 2024
- **Last date of chapter submission:** 15th Sept., 2024
- Chapter must be prepared in accordance with the authors guidelines
- **Reference:** Standard API style
- Manuscript should not exceed 6000 words or 15 pages, whichever is less, including references

Book your chapter now

WhatsApp: +91-9863023086

e-mail: bioticabooks@gmail.com

Website: www.bioticapublications.com



Join WhatsApp

The Book will be Launched during the Upcoming 4th Biotic Science Congress (BioSCon, 24) & International Conference