

Plant Cell and Tissue Culture Laboratory Manual: A Comprehensive Guide to Plant Biology Techniques

This laboratory manual provides a comprehensive overview of plant cell and tissue culture techniques, from basic principles to advanced applications. It is suitable for students, researchers, and professionals in plant biology, plant biotechnology, and related fields.



Plant Cell and Tissue Culture: A Laboratory Manual

by J. Reinert

★★★★★ 5 out of 5

Language : English

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Print length : 83 pages



Chapter 1: to Plant Cell and Tissue Culture

This chapter provides an overview of the history, principles, and applications of plant cell and tissue culture. It also covers the basic laboratory equipment and techniques used in this field.

Chapter 2: Plant Tissue Culture Techniques

This chapter describes the different methods for establishing and maintaining plant tissue cultures, including:

- Explant selection and preparation

- Culture media
- Aseptic techniques
- Callus induction and maintenance
- Shoot and root regeneration

Chapter 3: Plant Cell Culture Techniques

This chapter describes the techniques for isolating, culturing, and manipulating plant cells, including:

- Protoplast isolation
- Cell suspension culture
- Somatic embryogenesis
- Gene transfer and transformation

Chapter 4: Applications of Plant Cell and Tissue Culture

This chapter discusses the various applications of plant cell and tissue culture, including:

- Micropropagation
- Genetic engineering
- Secondary metabolite production
- Plant conservation

Chapter 5: Troubleshooting and Optimization

This chapter provides troubleshooting tips and strategies for optimizing plant cell and tissue culture techniques. It also covers common problems and their solutions.

Appendix

The appendix includes useful references, tables, and figures, as well as a glossary of terms.

This laboratory manual is a valuable resource for anyone interested in learning about or using plant cell and tissue culture techniques. It is well-written and illustrated, and it provides a comprehensive overview of this important field of plant biology.

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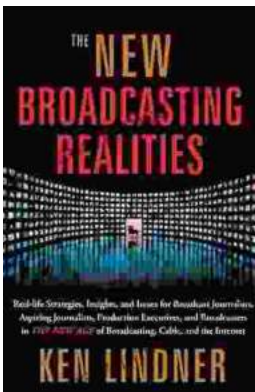
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