Culture of Cells for Tissue Engineering (Culture of Specialized Cells)

By Gordana Vunjak-Novakovic, R. Ian Freshney

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Step-by-step, practical guidance for the acquisition, manipulation, and use of cell sources for tissue engineering

Tissue engineering is a multidisciplinary field incorporating the principles of biology, chemistry, engineering, and medicine to create biological substitutes of native tissues for scientific research or clinical use. Specific applications of this technology include studies of tissue development and function, investigating drug response, and tissue repair and replacement. This area is rapidly becoming one of the most promising treatment options for patients suffering from tissue failure.

Written by leading experts in the field, ***Culture of Cells for Tissue Engineering*** offers step-by-step, practical guidance for the acquisition, manipulation, and use of cell sources for tissue engineering. It offers a unique focus on tissue engineering methods for cell sourcing and utilization, combining theoretical overviews and detailed procedures.

Features of the text include:

- Easy-to-use format with a two-part organization
- Logically organized—part one discusses cell sourcing, preparation, and characterization and the second part examines specific engineered tissues
- Each chapter covers: structural and functional properties of tissues, methodological principles, culture, cell selection/expansion, cell modifications, cell seeding, tissue culture, analytical assays, and a detailed description of representative studies
- End-of-chapter features include useful listings of sources for reagents, materials, and supplies, with the contact details of the suppliers listed at the end of the book
- A section of elegant color plates to back up the figures in the chapters

Culture of Cells for Tissue Engineering gives novice and seasoned researchers in tissue engineering an invaluable resource. In addition, the text is suitable for professionals in related research, particularly in those areas where cell and tissue culture is a new or emerging tool.

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Editorial Review

Review
"…among the best works on this subject. Recommended for all science and medical libraries." (*E-STREAMS*, September 2007)

"The editors have brought together an outstanding group of experts to describe cell culture methods and applications for tissue engineering." (*Doody's Health Services*)

From the Back Cover
Step-by-step, practical guidance for the acquisition, manipulation, and use of cell sources for tissue engineering

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About the Author
GORDANA VUNJAK-NOVAKOVIC, PhD, is Professor in the Department of Biomedical Engineering at Columbia University, New York. She is the author of more than 125 papers and twenty-five book chapters on biotechnology, biomechanics, orthopedics, and tissue engineering.

R. IAN FRESHNEY, PhD, is Senior Research Fellow in the Centre for Oncology and Applied Pharmacolgy at the University of Glasgow. He is the author or editor of numerous books and a world-renowned expert on

cell culture technique.

Users Review

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Donald Andrews:

The actual book Culture of Cells for Tissue Engineering (Culture of Specialized Cells) will bring you to the new experience of reading a book. The author style to elucidate the idea is very unique. In the event you try to find new book to learn, this book very appropriate to you. The book Culture of Cells for Tissue Engineering (Culture of Specialized Cells) is much recommended to you to read. You can also get the e-book in the official web site, so you can quickly to read the book.

Carla Floyd:

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Tia Rosario:

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