

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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