
Contents

Preface	v
Contributors	xi
List of Color Plates	xv
1 Processing of Resorbable Poly- α -Hydroxy Acids for Use as Tissue-Engineering Scaffolds Minna Kellomäki and Pertti Törmälä	1
2 Fibrin Microbeads (FMB) As Biodegradable Carriers for Culturing Cells and for Accelerating Wound Healing Raphael Gorodetsky, Akiva Vexler, Lilia Levdansky, and Gerard Marx	11
3 Synthesis and Characterization of Hyaluronan-Based Polymers for Tissue Engineering Carlo Soranzo, Davide Renier, and Alessandra Pavesio	25
4 Synthesis and Characterization of Chitosan Scaffolds for Cartilage-Tissue Engineering Steven H. Elder, Dana L. Nettles, and Joel D. Bumgardner	41
5 Characterization of a Calcium Phosphate-Based Matrix for rhBMP-2 Hyun D. Kim, John M. Wozney, and Rebecca H. Li	49
6 Methodologies for Processing Biodegradable and Natural Origin Scaffolds for Bone and Cartilage Tissue-Engineering Applications Manuela E. Gomes, Patrícia B. Malafaya, and Rui L. Reis	65
7 Alginates in Tissue Engineering Marcy Wong	77
8 Production and Surface Modification of Polylactide-Based Polymeric Scaffolds for Soft-Tissue Engineering Yang Cao, Tristan I. Croll, Justin J. Cooper-White, Andrea J. O'Connor, and Geoffrey W. Stevens	87
9 Modification of Materials With Bioactive Peptides Jennifer L. West	113
10 Isolation and Osteogenic Differentiation of Bone-Marrow Progenitor Cells for Application in Tissue Engineering António J. Salgado, Manuela E. Gomes, Olga P. Coutinho, and Rui L. Reis	123

11	Cell Seeding of Polymer Scaffolds Gordana Vunjak-Novakovic and Milica Radisic	131
12	Chondrocyte Isolation, Expansion, and Culture on Polymer Scaffolds Aileen Crawford and Sally C. Dickinson	147
13	Bioreactor Culture Techniques for Cartilage-Tissue Engineering David A. Lee and Ivan Martin	159
14	Microscopic Methods for the Analysis of Engineered Tissues Sally Roberts and Janis Menage	171
15	Transmission Electron Microscopy of Tissue-Polymer Constructs Paul V. Hatton	197
16	Application of Microscopic Methods for the Detection of Cell Attachment to Polymers John Hunt and Deborah Heggarty	207
17	Biochemical Methods for the Analysis of Tissue-Engineered Cartilage Wa'el Kafienah and Trevor J. Sims	217
18	Real-Time Quantitative RT-PCR Assays Ivan Martin and Oliver Frank	231
19	Mechanical Testing of Cell-Material Constructs: A Review John Kisiday, Alex Kerin, and Alan Grodzinsky	239
	Index	255



<http://www.springer.com/978-0-89603-967-4>

Biopolymer Methods in Tissue Engineering

Hollander, A.P.; Hatton, P.V. (Eds.)

2004, XV, 257 p., Hardcover

ISBN: 978-0-89603-967-4

A product of Humana Press