
Contents

1	Key Issues Related to Cryopreservation and Storage of Stem Cells and Cancer Stem Cells: Protecting Biological Integrity.....	1
	Feridoun Karimi-Busheri, Aghdass Rasouli-Nia, and Michael Weinfeld	
2	Cryopreservation: Evolution of Molecular Based Strategies.....	13
	John M. Baust, William Corwin, Kristi K. Snyder, Robert Van Buskirk, and John G. Baust	
3	Fundamental Principles of Stem Cell Banking	31
	Changbin Sun, Jianhui Yue, Na He, Yaqiong Liu, Xi Zhang, and Yong Zhang	
4	Biobanking: An Important Resource for Precision Medicine in Glioblastoma.....	47
	Si Yan Melanie Tan, Edwin Sandanaraj, Carol Tang, and Beng Ti Christopher Ang	
5	Slow Cooling Cryopreservation Optimized to Human Pluripotent Stem Cells.....	57
	Takamichi Miyazaki and Hirofumi Suemori	
6	Cryopreservation in Closed Bag Systems as an Alternative to Clean Rooms for Preparations of Peripheral Blood Stem Cells	67
	Silvia Spoerl, Robert Peter, and Angela M. Krackhardt	
7	Cryopreserved or Fresh Mesenchymal Stromal Cells: Only a Matter of Taste or Key to Unleash the Full Clinical Potential of MSC Therapy?	77
	Guido Moll, Sven Geißler, Rusan Catar, Lech Ignatowicz, Martin J. Hoogduijn, Dirk Strunk, Karen Bieback, and Olle Ringdén	

8	Biobanking of Human Mesenchymal Stem Cells: Future Strategy to Facilitate Clinical Applications	99
	Kar Wey Yong, Jane Ru Choi, and Wan Kamarul Zaman Wan Safwani	
9	Menstrual Blood-Derived Stem Cells: <i>In Vitro</i> and <i>In Vivo</i> Characterization of Functional Effects	111
	Maria Carolina Oliveira Rodrigues, Trenton Lippert, Hung Nguyen, Sussannah Kaelber, Paul R. Sanberg, and Cesar V. Borlongan	
10	Cryopreservation of Human Pluripotent Stem Cell-Derived Cardiomyocytes: Strategies, Challenges, and Future Directions.....	123
	Marcela K. Preininger, Monalisa Singh, and Chunhui Xu	
11	Cryopreserved Adipose Tissue-Derived Stromal/Stem Cells: Potential for Applications in Clinic and Therapy.....	137
	Fabiana Zanata, Shahensha Shaik, Ram V. Devireddy, Xiying Wu, Lydia Masako Ferreira, and Jeffrey M. Gimble	
12	Banking of Adipose- and Cord Tissue-Derived Stem Cells: Technical and Regulatory Issues	147
	David T. Harris	
13	Mature Oocyte Cryopreservation for Fertility Preservation	155
	Tina Liang and Tarek Motan	
14	Stem Cell Banking and Its Impact on Cardiac Regenerative Medicine	163
	Silvana Bardelli and Marco Moccetti	
15	Preservation of Ocular Epithelial Limbal Stem Cells: The New Frontier in Regenerative Medicine	179
	Zala Lužnik, Marina Bertolin, Claudia Breda, Barbara Ferrari, Vanessa Barbaro, Petra Schollmayer, and Stefano Ferrari	
16	Cryopreservation of Hair-Follicle Associated Pluripotent (HAP) Stem Cells Maintains Differentiation and Hair-Growth Potential	191
	Robert M. Hoffman, Satoshi Kajiura, Wenluo Cao, Fang Liu, and Yasuyuki Amoh	
17	Cryopreservation and Banking of Dental Stem Cells	199
	Petra Hilkens, Ronald B. Driesen, Esther Wolfs, Pascal Gervois, Tim Vangansewinkel, Jessica Ratajczak, Yörg Dillen, Annelies Bronckaers, and Ivo Lambrichts	
	Index.....	237

Biobanking and Cryopreservation of Stem Cells

Karimi-Busheri, F.; Weinfeld, M. (Eds.)

2016, XIV, 238 p. 23 illus., 20 illus. in color., Hardcover

ISBN: 978-3-319-45455-9