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Cardiac Tissue Engineering

By Smadar Cohen

Morgan & Claypool Publishers. Paperback. Condition: New. 200 pages. Dimensions: 9.3in. x 7.5in. x 0.6in. Cardiac tissue engineering aims at repairing damaged heart muscle and producing human cardiac tissues for application in drug toxicity studies. This book offers a comprehensive overview of the cardiac tissue engineering strategies, including presenting and discussing the various concepts in use, research directions and applications. Essential basic information on the major components in cardiac tissue engineering, namely cell sources and biomaterials, is firstly presented to the readers, followed by a detailed description of their implementation in different strategies, broadly divided to cellular and acellular ones. In cellular approaches, the biomaterials are used to increase cell retention after implantation or as scaffolds when bioengineering the cardiac patch, in vitro. In acellular approaches, the biomaterials are used as ECM replacement for damaged cardiac ECM after MI, or, in combination with growth factors, the biomaterials assume an additional function as a depot for prolonged factor activity for the effective recruitment of repairing cells. The book also presents technological innovations aimed to improve the quality of the cardiac patches, such as bioreactor applications, stimulation patterns and prevascularization. This book could be of interest not only from an educational perspective (i...



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Reviews

The publication is great and fantastic. Sure, it is enjoy, nevertheless an interesting and amazing literature. You will not truly feel monotony at at any moment of your own time (that's what catalogues are for concerning when you request me).

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