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Titolo	Cardiac Extracellular Matrix : Fundamental Science to Clinical Applications / / edited by Eric G. Schmuck, Peiman Hematti, Amish N. Raval
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Collana	Advances in Experimental Medicine and Biology, , 0065-2598 ; ; 1098
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Nota di contenuto	Preface -- Biomechanical Properties and Mechanobiology of Cardiac ECM -- Imaging the Cardiac Extracellular Matrix -- Animal Models and Cardiac Extracellular Matrix Research -- Applications of Cardiac Extracellular Ma-trix in Tissue Engineering and Regenera-tive Medicine -- Whole Cardiac Tissue Bioscaffolds -- Natural Sources of Extracellular Matrix for Cardiac Repair -- Cardiac Extracellular Matrix Modification as a Therapeutic Approach -- Extracellular Matrix for Myocardial Repair -- Role of Extracellular Matrix in Cardiac Cellular Therapies -- Regulation of Regenerative Medicine Products -- Clinical Trial Design for Investigational Cardio-Regenerative Therapy -- Regenerative Medicine Venturing at the University-Industry Boundary: Implications for Institutions, Entrepreneurs, and Industry -- Index.
Sommario/riassunto	This book on cardiac extracellular matrix (ECM) features three sections, Fundamental Science, Pre-Clinical and Translational Science, and Clinical Applications. In the Fundamental Science section, we will cover

the spectrum of basic ECM science from ECM's role in development, biomechanical properties, cardiac ECM influence of cardiomyocyte biology, pathophysiology of ECM in heart disease, and ECM in tissue engineering. Section two, Preclinical and Translational Science, will discuss cardiac ECM technologies in the clinical pipeline including approaches to ECM as a therapeutic, animal models of cardiac research, tracking and imaging methods of cardiac ECM, and cGMP manufacturing and regulatory considerations for ECM based therapeutics. Finally, the third section, Clinical Applications, will highlight the clinical experience around cardiac ECM including therapeutic strategies targeting scar tissue in the heart, Clinical trial design and regulatory considerations, current human clinical trials in cardiovascular medicine and the role of pharmaceutical and biotech companies in the commercialization of ECM technologies for cardiovascular indications. This book provides a comprehensive review for basic and translational researchers as well as clinical practitioners and those involved in commercialization, regulatory and entrepreneurial activities.