1. Record Nr. UNINA9910298411603321

Titolo	Channelopathies in Heart Disease / / edited by Dierk Thomas, Carol Ann Remme
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-77812-9
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (435 pages)
Collana	Cardiac and Vascular Biology, , 2509-7830 ; ; 6
Disciplina	571.64
Soggetti	Biomedical engineering Cardiology Regenerative medicine Tissue engineering Cardiovascular system Bioinformatics Biomedical Engineering/Biotechnology Regenerative Medicine/Tissue Engineering Cardiovascular Biology Computational Biology/Bioinformatics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Part 1: (Dys)function of cardiac ion channels. Cardiac sodium channel (dys)function and inherited arrhythmia syndromes -- Potassium channels in the heart -- Voltage-gated calcium channels and their roles in cardiac electrophysiology -- HCN channels and cardiac pacemaking -- Dysregulation of ionic homeostasis: relevance for cardiac arrhythmias -- Part 2: Cardiac channelopathies: clinical and genetic findings. Long and short QT syndromes -- Brugada syndrome: current perspectives -- Sinus node disease and cardiac conduction disease -- Catecholaminergic polymorphic ventricular tachycardia -- Idiopathic ventricular fibrillation and early repolarization -- Atrial fibrillation -- Genetic testing for inheritable cardiac channelopathies -- Part 3: Research into cardiac channelopathies: new avenues. Novel imaging techniques in cardiac ion channel research -- Transgenic

	animal models of cardiac channelopathies – benefits and limitations -- Induced pluripotent stem cell-derived cardiomyocytes: towards personalized therapeutic strategies?. .
Sommario/riassunto	This book provides an expert overview on ion channel-related arrhythmia mechanisms, and describes important advances in our understanding of how ion channel dysfunction causes cardiac disease. Both, scientific findings and clinical implications are presented and discussed by scientists who have considerably contributed to the field. The book is organized in three parts: part I treats the molecular and electrophysiological mechanisms of function and dysfunction of ion channels, part II focuses on genetics and clinical findings, whereas part III describes novel research techniques, the use of stem cells and animal models and provides an outlook on future investigations and applications. The book is written for scientists in Cardiovascular Biology and Neuroscience and will be of general interest to Medical Doctors in Cardiology, Cardiac Electrophysiology and related disciplines. .