Henggui Zhang

List of Publications by Year
in descending order

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221	6,452	61857	91712
papers	citations	43 h-index	69 g-index

224	224	224	5663
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Biophysical Characterization of the Underappreciated and Important Relationship Between Heart Rate Variability and Heart Rate. Hypertension, 2014, 64, 1334-1343.	1.3	263
2	Detecting atrial fibrillation by deep convolutional neural networks. Computers in Biology and Medicine, 2018, 93, 84-92.	3.9	247
3	Heterogeneous three-dimensional anatomical and electrophysiological model of human atria. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 1465-1481.	1.6	229
4	Proâ€arrhythmogenic effects of atrial fibrillationâ€induced electrical remodelling: insights from the threeâ€dimensional virtual human atria. Journal of Physiology, 2013, 591, 4249-4272.	1.3	152
5	3D virtual human atria: A computational platform for studying clinical atrial fibrillation. Progress in Biophysics and Molecular Biology, 2011, 107, 156-168.	1.4	143
6	Cardiac cell modelling: Observations from the heart of the cardiac physiome project. Progress in Biophysics and Molecular Biology, 2011, 104, 2-21.	1.4	139
7	Automatic Cardiac Arrhythmia Classification Using Combination of Deep Residual Network and Bidirectional LSTM. IEEE Access, 2019, 7, 102119-102135.	2.6	120
8	An Image-Based Model of Atrial Muscular Architecture. Circulation: Arrhythmia and Electrophysiology, 2012, 5, 361-370.	2.1	112
9	Sinus node dysfunction following targeted disruption of the murine cardiac sodium channel geneScn5a. Journal of Physiology, 2005, 567, 387-400.	1.3	107
10	Computer Three-Dimensional Reconstruction of the Atrioventricular Node. Circulation Research, 2008, 102, 975-985.	2.0	106
11	Application of Micro-Computed Tomography With Iodine Staining to Cardiac Imaging, Segmentation, and Computational Model Development. IEEE Transactions on Medical Imaging, 2013, 32, 8-17.	5.4	106
12	High resolution 3-Dimensional imaging of the human cardiac conduction system from microanatomy to mathematical modeling. Scientific Reports, 2017, 7, 7188.	1.6	104
13	Role of up-regulation of in action potential shortening associated with atrial fibrillation in humans. Cardiovascular Research, 2005, 66, 493-502.	1.8	100
14	TGF-Î² ₁ -Mediated Fibrosis and Ion Channel Remodeling Are Key Mechanisms in Producing the Sinus Node Dysfunction Associated With SCN5A Deficiency and Aging. Circulation: Arrhythmia and Electrophysiology, 2011, 4, 397-406.	2.1	99
15	Mechanistic Links Between Na ⁺ Channel (SCN5A) Mutations and Impaired Cardiac Pacemaking in Sick Sinus Syndrome. Circulation Research, 2010, 107, 126-137.	2.0	94
16	Analysis of the Chronotropic Effect of Acetylcholine on Sinoatrial Node Cells. Journal of Cardiovascular Electrophysiology, 2002, 13, 465-474.	0.8	89
17	Computer Threeâ€Dimensional Anatomical Reconstruction of the Human Sinus Node and a Novel Paranodal Area. Anatomical Record, 2011, 294, 970-979.	0.8	89
18	Anatomical and molecular mapping of the left and right ventricular Hisâ€“Purkinje conduction networks. Journal of Molecular and Cellular Cardiology, 2011, 51, 689-701.	0.9	85

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19	Quantitative proteomics and single-nucleus transcriptomics of the sinus node elucidates the foundation of cardiac pacemaking. Nature Communications, 2019, 10, 2889.	5.8	84
20	Automatic Detection of Atrial Fibrillation Based on Continuous Wavelet Transform and 2D Convolutional Neural Networks. Frontiers in Physiology, 2018, 9, 1206.	1.3	82
21	Sick Sinus Syndrome in HCN1-Deficient Mice. Circulation, 2013, 128, 2585-2594.	1.6	80
22	SCN5A and sinoatrial node pacemaker function. Cardiovascular Research, 2007, 74, 356-365.	1.8	79
23	Increased Vulnerability of Human Ventricle to Re-entrant Excitation in hERG-linked Variant 1 Short QT Syndrome. PLoS Computational Biology, 2011, 7, e1002313.	1.5	79
24	Repolarisation and vulnerability to re-entry in the human heart with short QT syndrome arising from KCNQ1 mutationâ€"A simulation study. Progress in Biophysics and Molecular Biology, 2008, 96, 112-131.	1.4	78
25	A mathematical model of action potentials of mouse sinoatrial node cells with molecular bases. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 301, H945-H963.	1.5	77
26	The canine virtual ventricular wall: A platform for dissecting pharmacological effects on propagation and arrhythmogenesis. Progress in Biophysics and Molecular Biology, 2008, 96, 187-208.	1.4	71
27	A Computational Model of the Ionic Currents, Ca2+ Dynamics and Action Potentials Underlying Contraction of Isolated Uterine Smooth Muscle. PLoS ONE, 2011, 6, e18685.	1.1	68
28	Mechanisms of Transition from Normal to Reentrant Electrical Activity in a Model of Rabbit Atrial Tissue: Interaction of Tissue Heterogeneity and Anisotropy. Biophysical Journal, 2009, 96, 798-817.	0.2	67
29	hERG Inhibitors with Similar Potency But Different Binding Kinetics Do Not Pose the Same Proarrhythmic Risk: Implications for Drug Safety Assessment. Journal of Cardiovascular Electrophysiology, 2014, 25, 197-207.	0.8	65
30	Viewpoint: Is the resting bradycardia in athletes the result of remodeling of the sinoatrial node rather than high vagal tone?. Journal of Applied Physiology, 2013, 114, 1351-1355.	1.2	64
31	cAMP-dependent regulation of HCN4 controls the tonic entrainment process in sinoatrial node pacemaker cells. Nature Communications, 2020, 11, 5555.	5.8	63
32	Inverse Correlation between Heart Rate Variability and Heart Rate Demonstrated by Linear and Nonlinear Analysis. PLoS ONE, 2016, 11, e0157557.	1.1	59
33	In silico study of action potential and QT interval shortening due to loss of inactivation of the cardiac rapid delayed rectifier potassium current. Biochemical and Biophysical Research Communications, 2004, 322, 693-699.	1.0	58
34	Synergistic Anti-arrhythmic Effects in Human Atria with Combined Use of Sodium Blockers and Acacetin. Frontiers in Physiology, 2017, 8, 946.	1.3	58
35	Proâ€arrhythmogenic effects of the S140G KCNQ1 mutation in human atrial fibrillation â€" insights from modelling. Journal of Physiology, 2012, 590, 4501-4514.	1.3	53
36	Computational Analysis of the Mode of Action of Disopyramide and Quinidine on hERG-Linked Short QT Syndrome in Human Ventricles. Frontiers in Physiology, 2017, 8, 759.	1.3	51

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37	Atrial arrhythmogenicity of KCNJ2 mutations in short QT syndrome: Insights from virtual human atria. PLoS Computational Biology, 2017, 13, e1005593.	1.5	51
38	Multi-Views Fusion CNN for Left Ventricular Volumes Estimation on Cardiac MR Images. IEEE Transactions on Biomedical Engineering, 2018, 65, 1924-1934.	2.5	51
39	Optimal Velocity and Safety of Discontinuous Conduction through the Heterogeneous Purkinje-Ventricular Junction. Biophysical Journal, 2009, 97, 20-39.	0.2	49
40	Proarrhythmia in KCNJ2-linked short QT syndrome: insights from modelling. Cardiovascular Research, 2012, 94, 66-76.	1.8	49
41	A computational model of spatio-temporal cardiac intracellular calcium handling with realistic structure and spatial flux distribution from sarcoplasmic reticulum and t-tubule reconstructions. PLoS Computational Biology, 2017, 13, e1005714.	1.5	49
42	In silico investigation of the short QT syndrome, using human ventricle models incorporating electromechanical coupling. Frontiers in Physiology, 2013, 4, 166.	1.3	48
43	Atrial proarrhythmia due to increased inward rectifier current (IK1) arising from KCNJ2 mutation â€“ A simulation study. Progress in Biophysics and Molecular Biology, 2008, 98, 186-197.	1.4	46
44	Emerging therapeutic targets in the short QT syndrome. Expert Opinion on Therapeutic Targets, 2018, 22, 439-451.	1.5	46
45	A circadian clock in the sinus node mediates day-night rhythms in Hcn4 and heart rate. Heart Rhythm, 2021, 18, 801-810.	0.3	46
46	A multi-step method with signal quality assessment and fine-tuning procedure to locate maternal and fetal QRS complexes from abdominal ECG recordings. Physiological Measurement, 2014, 35, 1665-1683.	1.2	45
47	Mkk4 Is a Negative Regulator of the Transforming Growth Factor Beta 1 Signaling Associated With Atrial Remodeling and Arrhythmogenesis With Age. Journal of the American Heart Association, 2014, 3, e000340.	1.6	45
48	Abnormal calcium homeostasis in heart failure with preserved ejection fraction is related to both reduced contractile function and incomplete relaxation: an electromechanically detailed biophysical modeling study. Frontiers in Physiology, 2015, 6, 78.	1.3	45
49	Left ventricular ejection fraction is determined by both global myocardial strain and wall thickness. IJC Heart and Vasculature, 2015, 7, 113-118.	0.6	44
50	In silico investigation of a KCNQ1 mutation associated with short QT syndrome. Scientific Reports, 2017, 7, 8469.	1.6	44
51	The virtual heart as a platform for screening drug cardiotoxicity. British Journal of Pharmacology, 2015, 172, 5531-5547.	2.7	43
52	Ionic Mechanisms for Electrical Heterogeneity between Rabbit Purkinje Fiber and Ventricular Cells. Biophysical Journal, 2010, 98, 2420-2431.	0.2	42
53	Optogenetic Control of Heart Rhythm by Selective Stimulation of Cardiomyocytes Derived from Pnmt+ Cells in Murine Heart. Scientific Reports, 2017, 7, 40687.	1.6	42
54	Antenatal architecture and activity of the human heart. Interface Focus, 2013, 3, 20120065.	1.5	39

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55	Importance of Gradients in Membrane Properties and Electrical Coupling in Sinoatrial Node Pacing. PLoS ONE, 2014, 9, e94565.	1.1	39
56	Human Atrial Arrhythmogenesis and Sinus Bradycardia in KCNQ1-Linked Short QT Syndrome: Insights From Computational Modelling. Frontiers in Physiology, 2018, 9, 1402.	1.3	39
57	Action potential clamp and chloroquine sensitivity of mutant Kir2.1 channels responsible for variant 3 short QT syndrome. Journal of Molecular and Cellular Cardiology, 2009, 47, 743-747.	0.9	38
58	Image-Based Model of Atrial Anatomy and Electrical Activation: A Computational Platform for Investigating Atrial Arrhythmia. IEEE Transactions on Medical Imaging, 2013, 32, 18-27.	5.4	38
59	Deep Atlas Network for Efficient 3D Left Ventricle Segmentation on Echocardiography. Medical Image Analysis, 2020, 61, 101638.	7.0	38
60	Generating electrocardiogram signals by deep learning. Neurocomputing, 2020, 404, 122-136.	3.5	38
61	Evolution and pharmacological modulation of the arrhythmogenic wave dynamics in canine pulmonary vein model. Europace, 2014, 16, 416-423.	0.7	37
62	Mechanisms by which Cytoplasmic Calcium Wave Propagation and Alternans Are Generated in Cardiac Atrial Myocytes Lacking T-Tubulesâ€"Insights from a Simulation Study. Biophysical Journal, 2012, 102, 1471-1482.	0.2	35
63	Heterogeneous and anisotropic integrative model of pulmonary veins: computational study of arrhythmogenic substrate for atrial fibrillation. Interface Focus, 2013, 3, 20120069.	1.5	34
64	Pak1 Is Required to Maintain Ventricular Ca ²⁺ Homeostasis and Electrophysiological Stability Through SERCA2a Regulation in Mice. Circulation: Arrhythmia and Electrophysiology, 2014, 7, 938-948.	2.1	32
65	In silico assessment of genetic variation in KCNA5 reveals multiple mechanisms of human atrial arrhythmogenesis. PLoS Computational Biology, 2017, 13, e1005587.	1.5	32
66	Novel ion channel targets in atrial fibrillation. Expert Opinion on Therapeutic Targets, 2016, 20, 947-958.	1.5	31
67	Acidosis Impairs the Protective Role of hERG K⁺ Channels Against Premature Stimulation. Journal of Cardiovascular Electrophysiology, 2010, 21, 1160-1169.	0.8	30
68	A Computer Simulation Study of Anatomy Induced Drift of Spiral Waves in the Human Atrium. BioMed Research International, 2015, 2015, 1-15.	0.9	30
69	The role of transient outward K+ current in electrical remodelling induced by voluntary exercise in female rat hearts. Basic Research in Cardiology, 2009, 104, 643-652.	2.5	29
70	A novel computational sheep atria model for the study of atrial fibrillation. Interface Focus, 2013, 3, 20120067.	1.5	29
71	Computational Cardiac Modeling Reveals Mechanisms of Ventricular Arrhythmogenesis in Long QT Syndrome Type 8: CACNA1C R858H Mutation Linked to Ventricular Fibrillation. Frontiers in Physiology, 2017, 8, 771.	1.3	27
72	Effects of Persistent Atrial Fibrillation-Induced Electrical Remodeling on Atrial Electro-Mechanics â€" Insights from a 3D Model of the Human Atria. PLoS ONE, 2015, 10, e0142397.	1.1	26

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73	Automatic Detection of QRS Complexes Using Dual Channels Based on U-Net and Bidirectional Long Short-Term Memory. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1052-1061.	3.9	26
74	Effect of cardiac ventricular mechanical contraction on the characteristics of the ECG: A simulation study. Journal of Biomedical Science and Engineering, 2013, 06, 47-60.	0.2	26
75	Peroxynitrite formation mediates LPC-induced augmentation of cardiac late sodium currents. Journal of Molecular and Cellular Cardiology, 2008, 44, 241-251.	0.9	25
76	Cyclical modulation of human ventricular repolarization by respiration. Frontiers in Physiology, 2012, 3, 379.	1.3	25
77	A Combined Fully Convolutional Networks and Deformable Model for Automatic Left Ventricle Segmentation Based on 3D Echocardiography. BioMed Research International, 2018, 2018, 1-16.	0.9	25
78	Comparison of Electric- and Magnetic-Cardiograms Produced by Myocardial Ischemia in Models of the Human Ventricle and Torso. PLoS ONE, 2016, 11, e0160999.	1.1	25
79	In silico investigation of short QT syndrome-linked potassium channel mutations on electro-mechanical function of human atrial cells. , 2015, , .		24
80	Physiological mechanisms of pulmonary hypertension. American Heart Journal, 2016, 180, 1-11.	1.2	24
81	The end of the unique myocardial band: Part II. Clinical and functional considerations. European Journal of Cardio-thoracic Surgery, 2018, 53, 120-128.	0.6	24
82	Sustained Inward Current and Pacemaker Activity of Mammalian Sinoatrial Node. Journal of Cardiovascular Electrophysiology, 2002, 13, 809-812.	0.8	23
83	Simulation of Brugada syndrome using cellular and three-dimensional whole-heart modeling approaches. Physiological Measurement, 2006, 27, 1125-1142.	1.2	23
84	Virtual tissue engineering of the human atrium: Modelling pharmacological actions on atrial arrhythmogenesis. European Journal of Pharmaceutical Sciences, 2012, 46, 209-221.	1.9	23
85	Populations of in silico myocytes and tissues reveal synergy of multiatrialâ€predominant K⁺â€current block in atrial fibrillation. British Journal of Pharmacology, 2020, 177, 4497-4515.	2.7	23
86	Action Potential Clamp and Pharmacology of the Variant 1 Short QT Syndrome T618I hERG K+ Channel. PLoS ONE, 2012, 7, e52451.	1.1	23
87	Imaging the heart: computer 3-dimensional anatomic models of the heart. Journal of Electrocardiology, 2005, 38, 113-120.	0.4	22
88	Theoretical investigation of the mechanism of heart failure using a canine ventricular cell model: Especially the role of up-regulated CaMKII and SR Ca2+ leak. Journal of Molecular and Cellular Cardiology, 2013, 56, 34-43.	0.9	22
89	Atrioventricular Node Dysfunction and Ion Channel Transcriptome in Pulmonary Hypertension. Circulation: Arrhythmia and Electrophysiology, 2016, 9, .	2.1	22
90	Modification by KCNE1 variants of the hERG potassium channel response to premature stimulation and to pharmacological inhibition. Physiological Reports, 2013, 1, e00175.	0.7	21

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91	Effects of human atrial ionic remodelling by Î²-blocker therapy on mechanisms of atrial fibrillation: a computer simulation. Europace, 2014, 16, 1524-1533.	0.7	21
92	A New Algorithm to Diagnose Atrial Ectopic Origin from Multi Lead ECG Systems - Insights from 3D Virtual Human Atria and Torso. PLoS Computational Biology, 2015, 11, e1004026.	1.5	21
93	Mechanisms Underlying the Emergence of Post-acidosis Arrhythmia at the Tissue Level: A Theoretical Study. Frontiers in Physiology, 2017, 8, 195.	1.3	21
94	Commensal correlation network between segmentation and direct area estimation for bi-ventricle quantification. Medical Image Analysis, 2020, 59, 101591.	7.0	21
95	In silico assessment of the effects of quinidine, disopyramide and E-4031 on short QT syndrome variant 1 in the human ventricles. PLoS ONE, 2017, 12, e0179515.	1.1	21
96	Simulation of clinical electrophysiology in 3D human atria: a highâ€performance computing and highâ€performance visualization application. Concurrency Computation Practice and Experience, 2008, 20, 1317-1328.	1.4	20
97	Three-Dimensional Computer Model of the Right Atrium Including the Sinoatrial and Atrioventricular Nodes Predicts Classical Nodal Behaviours. PLoS ONE, 2014, 9, e112547.	1.1	20
98	Parallel Optimization of 3D Cardiac Electrophysiological Model Using GPU. Computational and Mathematical Methods in Medicine, 2015, 2015, 1-10.	0.7	20
99	Pro-arrhythmogenic effects of CACNA1C G1911R mutation in human ventricular tachycardia: insights from cardiac multi-scale models. Scientific Reports, 2016, 6, 31262.	1.6	20
100	Transient outward K⁺ current can strongly modulate action potential duration and initiate alternans in the human atrium. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 316, H527-H542.	1.5	20
101	Electrophysiological Mechanisms Underlying T-Wave Alternans and Their Role in Arrhythmogenesis. Frontiers in Physiology, 2021, 12, 614946.	1.3	20
102	Correlation Between P-Wave Morphology and Origin of Atrial Focal Tachycardiaâ€"Insights From Realistic Models of the Human Atria and Torso. IEEE Transactions on Biomedical Engineering, 2011, 58, 2952-2955.	2.5	19
103	Modeling the Chronotropic Effect of Isoprenaline on Rabbit Sinoatrial Node. Frontiers in Physiology, 2012, 3, 241.	1.3	19
104	Insights from echocardiography, magnetic resonance imaging, and microcomputed tomography relative to the midâ€myocardial left ventricular echogenic zone. Echocardiography, 2016, 33, 1546-1556.	0.3	19
105	In-silico investigations of the functional impact of KCNA5 mutations on atrial mechanical dynamics. Journal of Molecular and Cellular Cardiology, 2017, 111, 86-95.	0.9	18
106	Postnatal development of transmural gradients in expression of ion channels and Ca2+-handling proteins in the ventricle. Journal of Molecular and Cellular Cardiology, 2012, 53, 145-155.	0.9	17
107	Stress-Activated Kinase Mitogen-Activated Kinase Kinase-7 Governs Epigenetics of Cardiac Repolarization for Arrhythmia Prevention. Circulation, 2017, 135, 683-699.	1.6	17
108	Cardiac Pacemaker Dysfunction Arising From Different Studies of Ion Channel Remodeling in the Aging Rat Heart. Frontiers in Physiology, 2020, 11, 546508.	1.3	17

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109	In silico study of the effects of anti-arrhythmic drug treatment on sinoatrial node function for patients with atrial fibrillation. Scientific Reports, 2020, 10, 305.	1.6	16
110	Regulation of sinus node pacemaking and atrioventricular node conduction by HCN channels in health and disease. Progress in Biophysics and Molecular Biology, 2021, 166, 61-85.	1.4	16
111	Mechanisms underlying adaptation of action potential duration by pacing rate in rat myocytes. Progress in Biophysics and Molecular Biology, 2008, 96, 305-320.	1.4	15
112	Air Pollution and Cardiac Arrhythmias: From Epidemiological and Clinical Evidences to Cellular Electrophysiological Mechanisms. Frontiers in Cardiovascular Medicine, 2021, 8, 736151.	1.1	15
113	Effects of Maximal Sodium and Potassium Conductance on the Stability of Hodgkin-Huxley Model. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-9.	0.7	14
114	Altered Left Ventricular Ion Channel Transcriptome in a High-Fat-Fed Rat Model of Obesity: Insight into Obesity-Induced Arrhythmogenesis. Journal of Obesity, 2016, 2016, 1-12.	1.1	14
115	Modelling the effects of quinidine, disopyramide, and E-4031 on short QT syndrome variant 3 in the human ventricles. Physiological Measurement, 2017, 38, 1859-1873.	1.2	14
116	Arrhythmogenic Mechanisms in Hypokalaemia: Insights From Pre-clinical Models. Frontiers in Cardiovascular Medicine, 2021, 8, 620539.	1.1	14
117	Modelling the effects of chloroquine on KCNJ2-linked short QT syndrome. Oncotarget, 2017, 8, 106511-106526.	0.8	14
118	In silico Assessment of Pharmacotherapy for Human Atrial Patho-Electrophysiology Associated With hERG-Linked Short QT Syndrome. Frontiers in Physiology, 2018, 9, 1888.	1.3	13
119	Integration of Genetics into a Systems Model of Electrocardiographic Traits Using HumanCVD BeadChip. Circulation: Cardiovascular Genetics, 2012, 5, 630-638.	5.1	12
120	Effects of amiodarone on short QT syndrome variant 3 in human ventricles: a simulation study. BioMedical Engineering OnLine, 2017, 16, 69.	1.3	12
121	PITX2 upregulation increases the risk of chronic atrial fibrillation in a dose-dependent manner by modulating IKs and ICaLâ€"insights from human atrial modelling. Annals of Translational Medicine, 2020, 8, 191-191.	0.7	12
122	Electrophysiological models for the heterogeneous canine atria: Computational platform for studying rapid atrial arrhythmias. , 2011, 2011, 1693-6.		11
123	Mitogen-activated Protein Kinase Kinase 4 Deficiency in Cardiomyocytes Causes Connexin 43 Reduction and Couples Hypertrophic Signals to Ventricular Arrhythmogenesis. Journal of Biological Chemistry, 2011, 286, 17821-17830.	1.6	11
124	Optimal Iodine Staining of Cardiac Tissue for X-Ray Computed Tomography. PLoS ONE, 2014, 9, e105552.	1.1	11
125	Reducing false arrhythmia alarms in the ICU using novel signal quality indices assessment method. , 2015, , .		11
126	Mechanistic insight into spontaneous transition from cellular alternans to arrhythmiaâ€"A simulation study. PLoS Computational Biology, 2018, 14, e1006594.	1.5	11

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127	Proarrhythmia in the p.Met207Val PITX2c-Linked Familial Atrial Fibrillation-Insights From Modeling. Frontiers in Physiology, 2019, 10, 1314.	1.3	11
128	Mechanistic insights from targeted molecular profiling of repolarization alternans in the intact human heart. Europace, 2019, 21, 981-989.	0.7	11
129	Remodelling of cellular excitation (reaction) and intercellular coupling (diffusion) by chronic atrial fibrillation represented by a reaction-diffusion system. Physica D: Nonlinear Phenomena, 2009, 238, 976-983.	1.3	10
130	Characterization and influence of cardiac background sodium current in the atrioventricular node. Journal of Molecular and Cellular Cardiology, 2016, 97, 114-124.	0.9	10
131	Mechanism underlying impaired cardiac pacemaking rhythm during ischemia: A simulation study. Chaos, 2017, 27, 093934.	1.0	10
132	Electro-mechanical dynamics of spiral waves in a discrete 2D model of human atrial tissue. PLoS ONE, 2017, 12, e0176607.	1.1	10
133	Investigation of hERG1b Influence on hERG Channel Pharmacology at Physiological Temperature. Journal of Pharmacology and Pharmacotherapeutics, 2018, 9, 92-103.	0.2	10
134	Modelling propagation and re-entry in anisotropic and smoothly heterogeneous cardiac tissue. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 2833.	1.7	9
135	Recent progress in multi-scale models of the human atria. Drug Discovery Today: Disease Models, 2014, 14, 23-32.	1.2	9
136	A 2D Electromechanical Model of Human Atrial Tissue Using the Discrete Element Method. BioMed Research International, 2015, 2015, 1-12.	0.9	9
137	Influence of the distribution of fibrosis within an area of myocardial infarction on wave propagation in ventricular tissue. Scientific Reports, 2019, 9, 14151.	1.6	9
138	In Silico Assessment of Class I Antiarrhythmic Drug Effects on Pitx2-Induced Atrial Fibrillation: Insights from Populations of Electrophysiological Models of Human Atrial Cells and Tissues. International Journal of Molecular Sciences, 2021, 22, 1265.	1.8	9
139	Dynamically constructed network with error correction for accurate ventricle volume estimation. Medical Image Analysis, 2020, 64, 101723.	7.0	9
140	Simulating the effects of atrial fibrillation induced electrical remodeling: A comprehensive simulation study. , 2008, 2008, 593-6.		8
141	An efficient and fast GPU-based algorithm for visualizing large volume of 4D data from virtual heart simulations. Biomedical Signal Processing and Control, 2017, 35, 8-18.	3.5	8
142	Novel non-invasive algorithm to identify the origins of re-entry and ectopic foci in the atria from 64-lead ECGs: A computational study. PLoS Computational Biology, 2017, 13, e1005270.	1.5	8
143	Serine mutation of a conserved threonine in the hERG K+ channel S6-pore region leads to loss-of-function through trafficking impairment. Biochemical and Biophysical Research Communications, 2020, 526, 1085-1091.	1.0	8
144	The corrected left ventricular ejection fraction: a potential new measure of ventricular function. International Journal of Cardiovascular Imaging, 2021, 37, 1987-1997.	0.7	8

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145	Modelling changes in transmural propagation and susceptibility to arrhythmia induced by volatile anaesthetics in ventricular tissue. Journal of Theoretical Biology, 2009, 257, 279-291.	0.8	7
146	Development of biophysically detailed electrophysiological models for pacemaking and non-pacemaking human pulmonary vein cardiomyocytes. , 2012, 2012, 199-202.		7
147	Cardiac left ventricular volumes prediction method based on atlas location and deep learning. , 2016, , .		7
148	Three-dimensional image reconstruction of distribution of Pnmt+ cell-derived cells in murine heart. Scientific Data, 2017, 4, 170134.	2.4	7
149	A computational model of excitation and contraction in uterine myocytes from the pregnant rat. Scientific Reports, 2018, 8, 9159.	1.6	7
150	Pro-arrhythmic Effects of Hydrogen Sulfide in Healthy and Ischemic Cardiac Tissues: Insight From a Simulation Study. Frontiers in Physiology, 2019, 10, 1482.	1.3	7
151	A Mathematical Model of the Mouse Atrial Myocyte With Inter-Atrial Electrophysiological Heterogeneity. Frontiers in Physiology, 2020, 11, 972.	1.3	7
152	Investigation of the Effects of the Short QT Syndrome D172N Kir2.1 Mutation on Ventricular Action Potential Profile Using Dynamic Clamp. Frontiers in Pharmacology, 2021, 12, 794620.	1.6	7
153	Mechanisms of defibrillation by standing waves in the bidomain ventricular tissue with voltage applied in an external bath. Physica D: Nonlinear Phenomena, 2009, 238, 984-991.	1.3	6
154	Myofiber orientation and electrical activation in human and sheep atrial models. , 2012, 2012, 6365-8.		6
155	Multi-boundary cardiac data visualization based on multidimensional transfer function with ray distance. Bio-Medical Materials and Engineering, 2014, 24, 3025-3032.	0.4	6
156	EFFECTS OF ACUTE GLOBAL ISCHEMIA ON RE-ENTRANT ARRHYTHMOGENESIS: A SIMULATION STUDY. Journal of Biological Systems, 2015, 23, 213-230.	0.5	6
157	Physiological Roles of the Rapidly Activated Delayed Rectifier K+ Current in Adult Mouse Heart Primary Pacemaker Activity. International Journal of Molecular Sciences, 2021, 22, 4761.	1.8	6
158	Understanding PITX2-Dependent Atrial Fibrillation Mechanisms through Computational Models. International Journal of Molecular Sciences, 2021, 22, 7681.	1.8	6
159	Electrophysiological and Proarrhythmic Effects of Hydroxychloroquine Challenge in Guinea-Pig Hearts. ACS Pharmacology and Translational Science, 2021, 4, 1639-1653.	2.5	6
160	Threeâ€dimensional electron microscopic reconstruction of intracellular organellar arrangements in vascular smooth muscle â€“ further evidence of nanospaces and contacts. Journal of Cellular and Molecular Medicine, 2009, 13, 995-998.	1.6	5
161	The Short QT Syndrome. , 2011, , 431-449.		5
162	Effective transfer function for interactive visualization and multivariate volume data. , 2011, , .		5

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163	Arrhythmogenic substrate for atrial fibrillation: Insights from an integrative computational model of pulmonary veins. , 2012, 2012, 203-6.		5
164	A Pipeline for Neuron Reconstruction Based on Spatial Sliding Volume Filter Seeding. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-8.	0.7	5
165	Effects of amiodarone on ventricular excitation associated with the KCNJ2-linked short QT syndrome: Insights from a modelling study. , 2015, , .		5
166	Learning from studying very rare cardiac conditions: the example of short QT syndrome. Journal of Congenital Cardiology, 2019, 3, .	0.5	5
167	Heart failure-induced atrial remodelling promotes electrical and conduction alternans. PLoS Computational Biology, 2020, 16, e1008048.	1.5	5
168	Role of Oxidation-Dependent CaMKII Activation in the Genesis of Abnormal Action Potentials in Atrial Cardiomyocytes: A Simulation Study. BioMed Research International, 2020, 2020, 1-13.	0.9	5
169	A model model: a commentary on DiFrancesco and Noble (1985) â€˜A model of cardiac electrical activity incorporating ionic pumps and concentration changesâ€™. Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20140316.	1.8	4
170	Computational Analysis of the Action of Chloroquine on Short QT Syndrome Variant 1 and Variant 3 in Human Ventricles. , 2018, 2018, 5462-5465.		4
171	ECG Imaging to Detect the Site of Ventricular Ischemia Using Torso Electrodes: A Computational Study. Frontiers in Physiology, 2019, 10, 50.	1.3	4
172	FWAVina: A novel optimization algorithm for protein-ligand docking based on the fireworks algorithm. Computational Biology and Chemistry, 2020, 88, 107363.	1.1	4
173	Biological pacemaker: from biological experiments to computational simulation. Journal of Zhejiang University: Science B, 2020, 21, 524-536.	1.3	4
174	The Role of CaMKII Overexpression and Oxidation in Atrial Fibrillationâ€”A Simulation Study. Frontiers in Physiology, 2020, 11, 607809.	1.3	4
175	Reciprocal interaction between IK1 and If in biological pacemakers: A simulation study. PLoS Computational Biology, 2021, 17, e1008177.	1.5	4
176	Identification through action potential clamp of proarrhythmic consequences of the short QT syndrome T618I hERG â€˜hotspotâ€™ mutation. Biochemical and Biophysical Research Communications, 2022, 596, 49-55.	1.0	4
177	To the Editorâ€“Altered in vivo systolic function in the short QT syndrome anticipated in silico. Heart Rhythm, 2015, 12, e115.	0.3	3
178	Pacemaker Created in Human Ventricle by Depressing Inward-Rectifier K+Current: A Simulation Study. BioMed Research International, 2016, 2016, 1-9.	0.9	3
179	Synergistic effect of bioactive lipid and condition medium on cardiac differentiation of human mesenchymal stem cells from different tissues. Cell Biochemistry and Function, 2016, 34, 163-172.	1.4	3
180	A composite visualization method for electrophysiology-morphous merging of human heart. BioMedical Engineering OnLine, 2017, 16, 70.	1.3	3

#	Article	IF	Citations
181	Morphological Substrates for Atrial Arrhythmogenesis in a Heart With Atrioventricular Septal Defect. Frontiers in Physiology, 2018, 9, 1071.	1.3	3
182	Generalizable Beat-by-Beat Arrhythmia Detection by Using Weakly Supervised Deep Learning. Frontiers in Physiology, 2022, 13, 850951.	1.3	3
183	Inter-subject registration-based one-shot segmentation with alternating union network for cardiac MRI images. Medical Image Analysis, 2022, 79, 102455.	7.0	3
184	Mechanisms of ventricular arrhythmias elicited by coexistence of multiple electrophysiological remodeling in ischemia: A simulation study. PLoS Computational Biology, 2022, 18, e1009388.	1.5	3
185	STRUCTURE-FUNCTION RELATIONSHIPS OF THE SINOATRIAL NODE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3621-3629.	0.7	2
186	A Novel Approach to Extract Sublingual Vein from Color Image. , 0, , .		2
187	Investigation of the functional effects of KCNJ2-linked short QT syndrome on electrical conduction at purkinje-ventricle junction at low- and high- frequencies. , 2015, , .		2
188	Letter by Monfredi et al Regarding Article, â€œPhysical Activity and Heart Rate Variability in Older Adults: The Cardiovascular Health Studyâ€• Circulation, 2015, 131, e348.	1.6	2
189	Depth Attenuation Degree Based Visualization for Cardiac Ischemic Electrophysiological Feature Exploration. BioMed Research International, 2016, 2016, 1-8.	0.9	2
190	Mechanistic Insights Into the Reduced Pacemaking Rate of the Rabbit Sinoatrial Node During Postnatal Development: A Simulation Study. Frontiers in Physiology, 2020, 11, 547577.	1.3	2
191	Automatic Detection for Multi-Labeled Cardiac Arrhythmia Based on Frame Blocking Preprocessing and Residual Networks. Frontiers in Cardiovascular Medicine, 2021, 8, 616585.	1.1	2
192	Effects of long-term fasting and confinement on the cardiovascular activity. Medical and Biological Engineering and Computing, 2021, 59, 1901-1915.	1.6	2
193	Response: Optimal Velocity Can Arise from Various Discontinuities. Biophysical Journal, 2010, 98, 3104-3105.	0.2	1
194	Simulating the role of anisotropy in human atrial cardioversion. , 2013, 2013, 6838-41.		1
195	A novel genetic modifier for clarithromycin-related cardiac arrhythmia risk?. Therapeutic Advances in Infectious Disease, 2014, 2, 71-72.	1.1	1
196	Effects of early afterdepolarizations on ventricular tachycardia in human heart. , 2015, , .		1
197	Investigation of the mechanisms underlying cardiac alternans - insights from a computational study. , 2015, , .		1
198	Simulation of effects of TBX18 on the pacemaker activity of human ventricular cells. , 2015, , .		1

#	Article	IF	Citations
199	Effects of propafenone on KCNH2-linked short QT syndrome: A modelling study. , 2016, , .		1
200	Alternans in Mouse Atrial Cardiomyocytes: A Computational Study on the Influence of Cell-Cell Coupling and Î²-Adrenergic Stimulation. IEEE Access, 2020, 8, 84806-84820.	2.6	1
201	The Functional Role of Hyperpolarization Activated Current (If) on Cardiac Pacemaking in Human vs. in the Rabbit Sinoatrial Node: A Simulation and Theoretical Study. Frontiers in Physiology, 2021, 12, 582037.	1.3	1
202	Effect of Blocking IKur on the Genesis of Action Potential Alternans in Canine Atrium. , 0, , .		1
203	Frequency-Dependent Properties of the Hyperpolarization-Activated Cation Current, If, in Adult Mouse Heart Primary Pacemaker Myocytes. International Journal of Molecular Sciences, 2022, 23, 4299.	1.8	1
204	Pro-Arrhythmic Effects of Discontinuous Conduction at the Purkinje Fiber-Ventricle Junction Arising From Heart Failure-Induced Ionic Remodeling â€“ Insights From Computational Modelling. Frontiers in Physiology, 2022, 13, 877428.	1.3	1
205	Construction of 3D Realistic Purkinje System: A Locally Linear Embedding-Based Method. Journal of Biological Systems, 2010, 18, 133-147.	0.5	0
206	Reply to Matelot, Schnell, Kervio, Thillaye du Boullay, and Carre. Journal of Applied Physiology, 2013, 114, 1757-1757.	1.2	0
207	Proarrhythmic effects of cisapride: Insights from a simulation study. , 2014, , .		0
208	Investigation of the pro-arrhythmic effects of domperidone by a simulation study. , 2015, , .		0
209	In silico investigation of the functional effects of KCNQ1-G269S mutation in human ventricles. , 2015, , .		0
210	Quantification of the effects of electrical remodeling due to hypertrophic cardiomyopathy on human ventricular electromechanical activity and energetics. , 2015, , .		0
211	Calcium leak induced sinus bradycardia. , 2015, , .		0
212	Multi-scale cardiac modelling reveal tachyarrhythmias induced by abrupt rate accelerations in long QT syndrome. , 2016, , .		0
213	A Novel Reconstruction Method of 3D Heart Geometry Atlas Based on Visible Human. , 2017, , .		0
214	Different Effects of Species-dependent Funny Channel Current on Engineered Biological Pacemaking Activity. , 2019, , .		0
215	Pharmacotherapeutic Effects of Quinidine on Short QT Syndrome by Using Purkinje-Ventricle Model: A Simulation Study. , 2019, 2019, 2856-2859.		0
216	In silico investigation of pro-arrhythmic effects of azithromycin on the human ventricle. Biochemistry and Biophysics Reports, 2021, 27, 101043.	0.7	0

#	Article	IF	Citations
217	A Multiscale Investigation of Global Electrical Heterogeneity: Effects of Body Habitus, Respiration, and Tissue Conductivity. , 2018, 45, .		0
218	Computational Analysis of the Effects of KCNJ2-linked E299V Mutation Short QT Syndrome and Its Potential Therapeutic Targets. , 2021, , .		0
219	Modeling the Chronotropic Effect of Isoprenaline on Bio-pacemaker: A Simulation Study. , 2021, , .		0
220	Alternans and 2-D Spiral Wave Dynamics in Human Atria with Short QT Syndrome Variant 3: A Simulation Study. , 2021, , .		0
221	Editorial: Multi-Scale Computational Cardiology. Frontiers in Physiology, 2022, 13, 847118.	1.3	0