Andrew D Mcculloch

List of Publications by Year
in descending order

185 papers	10,666 citations	34105 52 h-index	36028 97 g-index
189 all docs	189 docs citations	189 times ranked	10083 citing authors

#	Article	IF	Citations
1	Isolation and reconstruction of cardiac mitochondria from SBEM images using a deep learning-based method. Journal of Structural Biology, 2022, 214, 107806.	2.8	3
2	Biomechanical signals regulating the structure of the heart. Current Opinion in Physiology, 2022, 25, 100482.	1.8	7
3	Subcellular Remodeling in Filamin C Deficient Mouse Hearts Impairs Myocyte Tension Development during Progression of Dilated Cardiomyopathy. International Journal of Molecular Sciences, 2022, 23, 871.	4.1	8
4	Three-dimensional transistor arrays for intra- and inter-cellular recording. Nature Nanotechnology, 2022, 17, 292-300.	31.5	30
5	Computational analysis of cardiac structure and function in congenital heart disease: Translating discoveries to clinical strategies. Journal of Computational Science, 2021, 52, 101211.	2.9	2
6	Atlas-based methods for efficient characterization of patient-specific ventricular activation patterns. Europace, 2021, 23, i88-i95.	1.7	5
7	Cardiac cell typeâ€"specific gene regulatory programs and disease risk association. Science Advances, 2021, 7, .	10.3	63
8	Computational models of cardiovascular regulatory mechanisms. Journal of Molecular and Cellular Cardiology, 2021, 155, 111.	1.9	1
9	Computational ECG mapping and respiratory gating to optimize stereotactic ablative radiotherapy workflow for refractory ventricular tachycardia. Heart Rhythm O2, 2021, 2, 511-520.	1.7	17
10	Right Ventricular Flow Vorticity Relationships With Biventricular Shape in Adult Tetralogy of Fallot. Frontiers in Cardiovascular Medicine, 2021, 8, 806107.	2.4	8
11	Predictions of hypertrophy and its regression in response to pressure overload. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1079-1089.	2.8	7
12	Predicting the effects of dATP on cardiac contraction using multiscale modeling of the sarcomere. Archives of Biochemistry and Biophysics, 2020, 695, 108582.	3.0	5
13	Prolonged Exposure to Microgravity Reduces Cardiac Contractility and Initiates Remodeling in Drosophila. Cell Reports, 2020, 33, 108445.	6.4	22
14	Atlas-based measures of left ventricular shape may improve characterization of adverse remodeling in anthracycline-exposed childhood cancer survivors: a cross-sectional imaging study. Cardio-Oncology, 2020, 6, 13.	1.7	1
15	Histamine-induced biphasic activation of RhoA allows for persistent RhoA signaling. PLoS Biology, 2020, 18, e3000866.	5.6	6
16	Methods and sensors for functional genomic studies of cell-cycle transitions in single cells. Physiological Genomics, 2020, 52, 468-477.	2.3	5
17	Mechano-Electric Coupling and Arrhythmogenic Current Generation in a Computational Model of Coupled Myocytes. Frontiers in Physiology, 2020, 11, 519951.	2.8	1
18	Cardiomyocyte Expression of ZO-1 Is Essential for Normal Atrioventricular Conduction but Does Not Alter Ventricular Function. Circulation Research, 2020, 127, 284-297.	4.5	8

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19	Improved compressed sensing and superâ€resolution of cardiac diffusion MRI with structureâ€guided total variation. Magnetic Resonance in Medicine, 2020, 84, 1868-1880.	3.0	13
20	Research Priorities for Heart Failure With Preserved Ejection Fraction. Circulation, 2020, 141, 1001-1026.	1.6	239
21	Direct 3D bioprinting of cardiac micro-tissues mimicking native myocardium. Biomaterials, 2020, 256, 120204.	11.4	72
22	Quantification of model and data uncertainty in a network analysis of cardiac myocyte mechanosignalling. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190336.	3.4	12
23	Syndecanâ€4 Protects the Heart From the Profibrotic Effects of Thrombinâ€Cleaved Osteopontin. Journal of the American Heart Association, 2020, 9, e013518.	3.7	30
24	Regional variations in ex-vivo diffusion tensor anisotropy are associated with cardiomyocyte remodeling in rats after left ventricular pressure overload. Journal of Cardiovascular Magnetic Resonance, 2020, 22, 21.	3.3	8
25	Modulating the tension-time integral of the cardiac twitch prevents dilated cardiomyopathy in murine hearts. JCI Insight, 2020, 5, .	5.0	17
26	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. PLoS ONE, 2020, 15, e0241390.	2.5	21
27	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. , 2020, 15, e0241390.		0
28	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. , 2020, 15, e0241390.		0
29	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. , 2020, 15, e0241390.		0
30	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. , 2020, 15, e0241390.		0
31	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. , 2020, 15, e0241390.		0
32	Maintaining resting cardiac fibroblasts in vitro by disrupting mechanotransduction. , 2020, 15, e0241390.		0
33	A Stochastic Multiscale Model of Cardiac Thin Filament Activation Using Brownian-Langevin Dynamics. Biophysical Journal, 2019, 117, 2255-2272.	0.5	11
34	Multiscale models of cardiac muscle biophysics and tissue remodeling in hypertrophic cardiomyopathies. Current Opinion in Biomedical Engineering, 2019, 11, 35-44.	3.4	9
35	Optimization Framework for Patient-Specific Cardiac Modeling. Cardiovascular Engineering and Technology, 2019, 10, 553-567.	1.6	10
36	Mechanical regulation of gene expression in cardiac myocytes and fibroblasts. Nature Reviews Cardiology, 2019, 16, 361-378.	13.7	134

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37	Cardiac myosin activation with 2-deoxy-ATP via increased electrostatic interactions with actin. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11502-11507.	7.1	30
38	Properties of cardiac conduction in a cell-based computational model. PLoS Computational Biology, 2019, 15, e1007042.	3.2	44
39	Array atomic force microscopy for real-time multiparametric analysis. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5872-5877.	7.1	18
40	A demonstration of modularity, reuse, reproducibility, portability and scalability for modeling and simulation of cardiac electrophysiology using Kepler Workflows. PLoS Computational Biology, 2019, 15, e1006856.	3.2	4
41	3D printed micro-scale force gauge arrays to improve human cardiac tissue maturation and enable high throughput drug testing. Acta Biomaterialia, 2019, 95, 319-327.	8.3	46
42	Long QT syndrome caveolinâ€3 mutations differentially modulate K v 4 and Ca v 1.2 channels to contribute to action potential prolongation. Journal of Physiology, 2019, 597, 1531-1551.	2.9	19
43	Perspectives on Sharing Models and Related Resources in Computational Biomechanics Research. Journal of Biomechanical Engineering, 2018, 140, .	1.3	16
44	Atlas-Based Computational Analysis of Heart Shape and Function in Congenital Heart Disease. Journal of Cardiovascular Translational Research, 2018, 11, 123-132.	2.4	19
45	Tissue-Specific Optical Mapping Models of Swine Atria Informed by Optical Coherence Tomography. Biophysical Journal, 2018, 114, 1477-1489.	0.5	13
46	Efficient Computational Modeling of Human Ventricular Activation and Its Electrocardiographic Representation: A Sensitivity Study. Cardiovascular Engineering and Technology, 2018, 9, 447-467.	1.6	5
47	Turning the Azimuthal Motions of Adjacent Tropomyosins into a CoupledÂN-body Problem in a Brownian Model of Cardiac Thin Filament Activation. Biophysical Journal, 2018, 114, 502a-503a.	0.5	3
48	Decreasing Compensatory Ability of Concentric Ventricular Hypertrophy in Aortic-Banded Rat Hearts. Frontiers in Physiology, 2018, 9, 37.	2.8	4
49	Combining Stiffness and Stretch to Study Cardiac Fibroblast Proâ€Fibrotic Activity. FASEB Journal, 2018, 32, 896.2.	0.5	0
50	Mechanical regulation of cardiac fibroblast profibrotic phenotypes. Molecular Biology of the Cell, 2017, 28, 1871-1882.	2.1	160
51	Transcriptomic analysis identifies a role of PI3Kâ€"Akt signalling in the responses of skeletal muscle to acute hypoxia <i>in vivo</i>. Journal of Physiology, 2017, 595, 5797-5813.	2.9	10
52	Rotors exhibit greater surface ECG variation during ventricular fibrillation than focal sources due to wavebreak, secondary rotors, and meander. Journal of Cardiovascular Electrophysiology, 2017, 28, 1158-1166.	1.7	10
53	Evaluation of nonâ€Gaussian diffusion in cardiac MRI. Magnetic Resonance in Medicine, 2017, 78, 1174-1186.	3.0	12
54	Insights and Challenges of Multi-Scale Modeling of Sarcomere Mechanics in cTn and Tm DCM Mutantsâ€"Genotype to Cellular Phenotype. Frontiers in Physiology, 2017, 8, 151.	2.8	8

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55	The Soft- and Hard-Heartedness of Cardiac Fibroblasts: Mechanotransduction Signaling Pathways in Fibrosis of the Heart. Journal of Clinical Medicine, 2017, 6, 53.	2.4	128
56	Model of Human Fetal Growth in Hypoplastic Left Heart Syndrome: Reduced Ventricular Growth Due to Decreased Ventricular Filling and Altered Shape. Frontiers in Pediatrics, 2017, 5, 25.	1.9	13
57	Predictive model identifies key network regulators of cardiomyocyte mechano-signaling. PLoS Computational Biology, 2017, 13, e1005854.	3.2	53
58	Bitopic Sphingosine 1-Phosphate Receptor 3 (S1P3) Antagonist Rescue from Complete Heart Block: Pharmacological and Genetic Evidence for Direct S1P3 Regulation of Mouse Cardiac Conduction. Molecular Pharmacology, 2016, 89, 176-186.	2.3	41
59	Transmural gradients of myocardial structure and mechanics: Implications for fiber stress and strain in pressure overload. Progress in Biophysics and Molecular Biology, 2016, 122, 215-226.	2.9	26
60	Electrophysiology and metabolism of caveolin-3-overexpressing mice. Basic Research in Cardiology, 2016, 111, 28.	5.9	15
61	Computing rates of Markov models of voltage-gated ion channels by inverting partial differential equations governing the probability density functions of the conducting and non-conducting states. Mathematical Biosciences, 2016, 277, 126-135.	1.9	12
62	Effects of Cardiac Troponin I Mutation P83S on Contractile Properties and the Modulation by PKA-Mediated Phosphorylation. Journal of Physical Chemistry B, 2016, 120, 8238-8253.	2.6	15
63	Desmosomal junctions are necessary for adult sinus node function. Cardiovascular Research, 2016, 111, 274-286.	3.8	33
64	Molecular Effects of cTnC DCM Mutations on Calcium Sensitivity and Myofilament Activationâ€"An Integrated Multiscale Modeling Study. Journal of Physical Chemistry B, 2016, 120, 8264-8275.	2.6	18
65	Multi-scale Modeling of the Cardiovascular System: Disease Development, Progression, and Clinical Intervention. Annals of Biomedical Engineering, 2016, 44, 2642-2660.	2.5	50
66	Atlas-based ventricular shape analysis for understanding congenital heart disease. Progress in Pediatric Cardiology, 2016, 43, 61-69.	0.4	20
67	Non-invasive, model-based measures of ventricular electrical dyssynchrony for predicting CRT outcomes. Europace, 2016, 18, iv104-iv112.	1.7	23
68	Cardiac image modelling: Breadth and depth in heart disease. Medical Image Analysis, 2016, 33, 38-43.	11.6	23
69	Atrial-selective targeting of arrhythmogenic phase-3 early afterdepolarizations in human myocytes. Journal of Molecular and Cellular Cardiology, 2016, 96, 63-71.	1.9	46
70	A Microstructurally Based Multi-Scale Constitutive Model of Active Myocardial Mechanics. , 2016, , 439-460.		6
71	Systems Biophysics: Multiscale Biophysical Modeling of Organ Systems. Biophysical Journal, 2016, 110, 1023-1027.	0.5	20
72	Biomechanics simulations using cubic Hermite meshes with extraordinary nodes for isogeometric cardiac modeling. Computer Aided Geometric Design, 2016, 43, 27-38.	1.2	17

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73	A Computational Modeling and Simulation Approach to Investigate Mechanisms of Subcellular cAMP Compartmentation. PLoS Computational Biology, 2016, 12, e1005005.	3.2	43
74	Troponin I Mutations R146G and R21C Alter Cardiac Troponin Function, Contractile Properties, and Modulation by Protein Kinase A (PKA)-mediated Phosphorylation. Journal of Biological Chemistry, 2015, 290, 27749-27766.	3.4	36
75	High-order finite element methods for cardiac monodomain simulations. Frontiers in Physiology, 2015, 6, 217.	2.8	20
76	Bridging scales through multiscale modeling: a case study on protein kinase A. Frontiers in Physiology, 2015, 6, 250.	2.8	20
77	HIF1Î± Represses Cell Stress Pathways to Allow Proliferation of Hypoxic Fetal Cardiomyocytes. Developmental Cell, 2015, 33, 507-521.	7.0	123
78	A Protocol to Collect Specific Mouse Skeletal Muscles for Metabolomics Studies. Methods in Molecular Biology, 2015, 1375, 169-179.	0.9	2
79	Endothelin receptor B, a candidate gene from human studies at high altitude, improves cardiac tolerance to hypoxia in genetically engineered heterozygote mice. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10425-10430.	7.1	45
80	Increased Cell Membrane Capacitance is the Dominant Mechanism of Stretch-Dependent Conduction Slowing in the Rabbit Heart: A Computational Study. Cellular and Molecular Bioengineering, 2015, 8, 237-246.	2.1	12
81	Intramyocardial injection of hydrogel with high interstitial spread does not impact action potential propagation. Acta Biomaterialia, 2015, 26, 13-22.	8.3	28
82	Left Ventricular Diastolic and Systolic Material Property Estimation from Image Data. Lecture Notes in Computer Science, 2015, 8896, 63-73.	1.3	4
83	Calcium and IP3 dynamics in cardiac myocytes: experimental and computational perspectives and approaches. Frontiers in Pharmacology, 2014, 5, 35.	3.5	55
84	Structural contributions to fibrillatory rotors in a patient-derived computational model of the atria. Europace, 2014, 16, iv3-iv10.	1.7	70
85	Targeted Ablation of Nesprin 1 and Nesprin 2 from Murine Myocardium Results in Cardiomyopathy, Altered Nuclear Morphology and Inhibition of the Biomechanical Gene Response. PLoS Genetics, 2014, 10, e1004114.	3.5	120
86	Biomechanics of Cardiac Electromechanical Coupling and Mechanoelectric Feedback. Journal of Biomechanical Engineering, 2014, 136, 021007.	1.3	94
87	Toward a hierarchy of mechanisms in CaMKII-mediated arrhythmia. Frontiers in Pharmacology, 2014, 5, 110.	3.5	15
88	Using Markov State Models to Develop a Mechanistic Understanding of Protein Kinase A Regulatory Subunit RIÎ± Activation in Response to cAMP Binding. Journal of Biological Chemistry, 2014, 289, 30040-30051.	3.4	29
89	Nonequilibrium Reactivation of Na + Current Drives Early Afterdepolarizations in Mouse Ventricle. Circulation: Arrhythmia and Electrophysiology, 2014, 7, 1205-1213.	4.8	42
90	Computational modeling of subcellular transport and signaling. Current Opinion in Structural Biology, 2014, 25, 92-97.	5.7	15

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91	Connexin defects underlie arrhythmogenic right ventricular cardiomyopathy in a novel mouse model. Human Molecular Genetics, 2014, 23, 1134-1150.	2.9	78
92	Timing and magnitude of systolic stretch affect myofilament activation and mechanical work. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H353-H360.	3.2	12
93	Patient-specific modeling of ventricular activation pattern using surface ECG-derived vectorcardiogram in bundle branch block. Progress in Biophysics and Molecular Biology, 2014, 115, 305-313.	2.9	24
94	Caveolae in ventricular myocytes are required for stretch-dependent conduction slowing. Journal of Molecular and Cellular Cardiology, 2014, 76, 265-274.	1.9	49
95	Computational Studies of the Effect of the S23D/S24D Troponin I Mutation on Cardiac Troponin Structural Dynamics. Biophysical Journal, 2014, 107, 1675-1685.	0.5	48
96	PKA Phosphorylation of Cardiac Troponin I Modulates Activation andÂRelaxation Kinetics of Ventricular Myofibrils. Biophysical Journal, 2014, 107, 1196-1204.	0.5	45
97	Using Kepler for Tool Integration in Microarray Analysis Workflows. Procedia Computer Science, 2014, 29, 2162-2167.	2.0	2
98	Novel Role for Vinculin in Ventricular Myocyte Mechanics and Dysfunction. Biophysical Journal, 2013, 104, 1623-1633.	0.5	30
99	Patient-specific models of cardiac biomechanics. Journal of Computational Physics, 2013, 244, 4-21.	3.8	160
100	A three-dimensional finite element model of human atrial anatomy: New methods for cubic Hermite meshes with extraordinary vertices. Medical Image Analysis, 2013, 17, 525-537.	11.6	42
101	Myofiber prestretch magnitude determines regional systolic function during ectopic activation in the tachycardia-induced failing canine heart. American Journal of Physiology - Heart and Circulatory Physiology, 2013, 305, H192-H202.	3.2	6
102	Multi-core CPU or GPU-accelerated Multiscale Modeling for Biomolecular Complexes. Computational and Mathematical Biophysics, 2013, 1, 164-179.	1.1	20
103	A Novel Mechanism Involving Four-and-a-half LIM Domain Protein-1 and Extracellular Signal-regulated Kinase-2 Regulates Titin Phosphorylation and Mechanics. Journal of Biological Chemistry, 2012, 287, 29273-29284.	3.4	89
104	Mechanical discoordination increases continuously after the onset of left bundle branch block despite constant electrical dyssynchrony in a computational model of cardiac electromechanics and growth. Europace, 2012, 14, v65-v72.	1.7	40
105	MAAMD: A Workflow to Standardize Meta-Analyses of Affymetrix Microarray Data. , 2012, , .		0
106	A single strain-based growth law predicts concentric and eccentric cardiac growth during pressure and volume overload. Mechanics Research Communications, 2012, 42, 40-50.	1.8	102
107	Mouse and computational models link Mlc2v dephosphorylation to altered myosin kinetics in early cardiac disease. Journal of Clinical Investigation, 2012, 122, 1209-1221.	8.2	131
108	Incorporating Human Ventricular Fiber Architecture in Patientâ€Specific Computational Models. FASEB Journal, 2012, 26, 864.19.	0.5	0

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109	Cardiomyocyte Geometry and Stretch Effects on Longitudinal Conduction Velocity. FASEB Journal, 2012, 26, 1053.8.	0.5	0
110	Multi-scale computational models of familial hypertrophic cardiomyopathy: genotype to phenotype. Journal of the Royal Society Interface, 2011, 8, 1550-1561.	3.4	30
111	Patient-specific modeling of dyssynchronous heart failure: A case study. Progress in Biophysics and Molecular Biology, 2011, 107, 147-155.	2.9	113
112	Determination of threeâ€dimensional ventricular strain distributions in geneâ€targeted mice using tagged MRI. Magnetic Resonance in Medicine, 2010, 64, 1281-1288.	3.0	29
113	Systems approaches and algorithms for discovery of combinatorial therapies. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2010, 2, 181-193.	6.6	91
114	Ventricular Dilation and Electrical Dyssynchrony Synergistically Increase Regional Mechanical Nonuniformity But Not Mechanical Dyssynchrony. Circulation: Heart Failure, 2010, 3, 528-536.	3.9	49
115	Coupling of Adjacent Tropomyosins Enhances Cross-Bridge-Mediated Cooperative Activation in a Markov Model of the Cardiac Thin Filament. Biophysical Journal, 2010, 98, 2254-2264.	0.5	79
116	A Computational Framework for Patient-Specific Multi-Scale Cardiac Modeling. , 2010, , 203-223.		3
117	Mechanostransduction in Cardiac and Stem-Cell Derived Cardiac Cells. , 2010, , 99-139.		3
118	Myocardial material parameter estimation from inâ€vivo myocardial strain measurements. FASEB Journal, 2010, 24, 782.8.	0.5	0
119	Systems biology and multi-scale modeling of the heart. , 2009, , .		2
120	Effect of transmurally heterogeneous myocyte excitationâ€"contraction coupling on canine left ventricular electromechanics. Experimental Physiology, 2009, 94, 541-552.	2.0	43
121	Cai et al. reply. Nature, 2009, 458, E9-E10.	27.8	22
122	Effects of biventricular pacing and scar size in a computational model of the failing heart with left bundle branch block. Medical Image Analysis, 2009, 13, 362-369.	11.6	78
123	ROLE OF STRUCTURAL AND SIGNALING MOLECULES IN CARDIAC MECHANOTRANSDUCTION. , 2009, , 65-80.		0
124	Integrating metabolomics and phenomics with systems models of cardiac hypoxia. Progress in Biophysics and Molecular Biology, 2008, 96, 209-225.	2.9	17
125	Cell cultures as models of cardiac mechanoelectric feedback. Progress in Biophysics and Molecular Biology, 2008, 97, 367-382.	2.9	33
126	The role of mechanoelectric feedback in vulnerability to electric shock. Progress in Biophysics and Molecular Biology, 2008, 97, 461-478.	2.9	24

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127	Mechanisms of conduction slowing during myocardial stretch by ventricular volume loading in the rabbit. American Journal of Physiology - Heart and Circulatory Physiology, 2008, 295, H1270-H1278.	3.2	40
128	Systems Approach to Understanding Electromechanical Activity in the Human Heart. Circulation, 2008, 118, 1202-1211.	1.6	66
129	An FHL1-containing complex within the cardiomyocyte sarcomere mediates hypertrophic biomechanical stress responses in mice. Journal of Clinical Investigation, 2008, 118, 3870-3880.	8.2	211
130	Differences in I to and myofilament protein expression may underlie transmurallyâ€varying electromechanics in the canine left ventricle. FASEB Journal, 2008, 22, 751.3.	0.5	0
131	Model-based development of four-dimensional wall motion measures. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3061-3069.	6.6	3
132	Ventricular interaction quantified with a novel multi-scale cardiovascular model. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1141201-1141201.	0.2	0
133	Effect of Pacing Site and Infarct Location on Regional Mechanics and Global Hemodynamics in a Model Based Study of Heart Failure. Lecture Notes in Computer Science, 2007, , 350-360.	1.3	7
134	Coupling of a 3D Finite Element Model of Cardiac Ventricular Mechanics to Lumped Systems Models of the Systemic and Pulmonic Circulation. Annals of Biomedical Engineering, 2006, 35, 1-18.	2.5	226
135	Systems analysis of PKA-mediated phosphorylation gradients in live cardiac myocytes. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12923-12928.	7.1	132
136	Cardiac Systems Biology. Annals of the New York Academy of Sciences, 2005, 1047, 283-295.	3.8	24
137	A more efficient search strategy for aging genes based on connectivity. Bioinformatics, 2005, 21, 338-348.	4.1	95
138	An ionic model of stretch-activated and stretch-modulated currents in rabbit ventricular myocytes. Europace, 2005, 7, S128-S134.	1.7	52
139	Functionally and Structurally Integrated Computational Modeling of Ventricular Physiology. The Japanese Journal of Physiology, 2004, 54, 531-539.	0.9	13
140	Computational Methods for Cardiac Electrophysiology. Handbook of Numerical Analysis, 2004, 12, 129-187.	1.8	10
141	Proarrhythmic Consequences of a KCNQ1 AKAP-Binding Domain Mutation. Circulation Research, 2004, 95, 1216-1224.	4.5	110
142	Mechanistic systems models of cell signaling networks: a case study of myocyte adrenergic regulation. Progress in Biophysics and Molecular Biology, 2004, 85, 261-278.	2.9	66
143	Effects of Magnesium on Cardiac Excitation-Contraction Coupling. Journal of the American College of Nutrition, 2004, 23, 514S-517S.	1.8	16
144	Electromechanical model of cardiac resynchronization in the dilated failing heart with left bundle branch block. Journal of Electrocardiology, 2003, 36, 57-61.	0.9	55

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145	Anisotropic stretch-induced hypertrophy in neonatal ventricular myocytes micropatterned on deformable elastomers. Biotechnology and Bioengineering, 2003, 81, 578-587.	3.3	183
146	Ventricular Filling Slows Epicardial Conduction and Increases Action Potential Duration in an Optical Mapping Study of the Isolated Rabbit Heart. Journal of Cardiovascular Electrophysiology, 2003, 14, 739-749.	1.7	57
147	Relationship Between Regional Shortening and Asynchronous Electrical Activation in a Threeâ€Dimensional Model of Ventricular Electromechanics. Journal of Cardiovascular Electrophysiology, 2003, 14, S196-S202.	1.7	62
148	Modeling Î²-Adrenergic Control of Cardiac Myocyte Contractility in Silico. Journal of Biological Chemistry, 2003, 278, 47997-48003.	3.4	202
149	Glycated collagen cross-linking alters cardiac mechanics in volume-overload hypertrophy. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 284, H1277-H1284.	3.2	83
150	Computational Methods for Soft Tissue Biomechanics. , 2003, , 273-342.		18
151	The Cardiac Mechanical Stretch Sensor Machinery Involves a Z Disc Complex that Is Defective in a Subset of Human Dilated Cardiomyopathy. Cell, 2002, 111, 943-955.	28.9	712
152	Computational model of three-dimensional cardiac electromechanics. Computing and Visualization in Science, 2002, 4, 249-257.	1.2	141
153	Integrative biological modelling in silico. Novartis Foundation Symposium, 2002, 247, 4-19; discussion 20-5, 84-90, 244-52.	1.1	2
154	Model Study of ATP and ADP Buffering, Transport of Ca2+ and Mg2+,and Regulation of Ion Pumps in Ventricular Myocyte. Biophysical Journal, 2001, 81, 614-629.	0.5	59
155	Flux-balance analysis of mitochondrial energy metabolism: consequences of systemic stoichiometric constraints. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2001, 280, R695-R704.	1.8	136
156	In vivo finite element model-based image analysis of pacemaker lead mechanics. Medical Image Analysis, 2001, 5, 255-270.	11.6	20
157	Mechanoelectric Feedback in a Model of the Passively Inflated Left Ventricle. Annals of Biomedical Engineering, 2001, 29, 414-426.	2.5	43
158	Phase Shifting Prior to Spatial Filtering Enhances Optical Recordings of Cardiac Action Potential Propagation. Annals of Biomedical Engineering, 2001, 29, 854-861.	2.5	10
159	Regional myocardial mechanics: Integrative computational models of flow-function relations. Journal of Nuclear Cardiology, 2001, 8, 506-519.	2.1	18
160	Age-Associated Cardiac Dysfunction in <i>Drosophila melanogaster</i>. Circulation Research, 2001, 88, 1053-1058.	4.5	118
161	Title is missing!. Journal of Elasticity, 2000, 61, 143-164.	1.9	185
162	Three-Dimensional Stress and Strain in Passive Rabbit Left Ventricle: A Model Study. Annals of Biomedical Engineering, 2000, 28, 781-792.	2.5	114

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163	Integrative Models for Understanding the Structural Basis of Regional Mechanical Dysfunction in Ischemic Myocardium. Annals of Biomedical Engineering, 2000, 28, 979-990.	2.5	21
164	Modeling the human cardiome in silico. Journal of Nuclear Cardiology, 2000, 7, 496-499.	2.1	13
165	Model-Based Analysis of Optically Mapped Epicardial Activation Patterns and Conduction Velocity. Annals of Biomedical Engineering, 2000, 28, 1085-1092.	2.5	20
166	Myocardial Mechanics and Collagen Structure in the Osteogenesis Imperfecta Murine (<i>oim</i>). Circulation Research, 2000, 87, 663-669.	4.5	137
167	Laminar fiber architecture and three-dimensional systolic mechanics in canine ventricular myocardium. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 276, H595-H607.	3.2	204
168	Measurement of Orientation and Distribution of Cellular Alignment and Cytoskeletal Organization. Annals of Biomedical Engineering, 1999, 27, 712-720.	2.5	93
169	Differential Responses of Adult Cardiac Fibroblasts to in vitro Biaxial Strain Patterns. Journal of Molecular and Cellular Cardiology, 1999, 31, 1833-1843.	1.9	139
170	Regional Myocardial Perfusion and Mechanics: A Model-Based Method of Analysis. Annals of Biomedical Engineering, 1998, 26, 743-755.	2.5	26
171	Three-dimensional analysis of regional cardiac function: a model of rabbit ventricular anatomy. Progress in Biophysics and Molecular Biology, 1998, 69, 157-183.	2.9	248
172	Automated measurement of myofiber disarray in transgenic mice with ventricular expression ofras. , 1998, 252, 612-625.		139
173	Flowâ€“function relations during graded coronary occlusions in the dog: effects of transmural location and segment orientation. Cardiovascular Research, 1998, 37, 636-645.	3.8	24
174	Mechanisms of length history-dependent tension in an ionic model of the cardiac myocyte. American Journal of Physiology - Heart and Circulatory Physiology, 1998, 274, H1032-H1040.	3.2	26
175	Three-dimensional residual strain in midanterior canine left ventricle. American Journal of Physiology - Heart and Circulatory Physiology, 1997, 273, H1968-H1976.	3.2	62
176	Finite element stress analysis of left ventricular mechanics in the beating dog heart. Journal of Biomechanics, 1995, 28, 1167-1177.	2.1	298
177	Angiotensin II stimulates the autocrine production of transforming growth factor-Î²1 in adult rat cardiac fibroblasts. Journal of Molecular and Cellular Cardiology, 1995, 27, 2347-2357.	1.9	239
178	Stress-dependent finite growth in soft elastic tissues. Journal of Biomechanics, 1994, 27, 455-467.	2.1	1,225
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