Daniel A Beard

List of Publications by Year
in descending order

177 papers	5,710 citations	71102 41 h-index	95266 68 g-index
189 all docs	189 docs citations	189 times ranked	6088 citing authors

#	Article	IF	Citations
1	Energy Balance for Analysis of Complex Metabolic Networks. Biophysical Journal, 2002, 83, 79-86.	0.5	346
2	Big Data Analytics in Healthcare. BioMed Research International, 2015, 2015, 1-16.	1.9	332
3	A Biophysical Model of the Mitochondrial Respiratory System and Oxidative Phosphorylation. PLoS Computational Biology, 2005, 1, e36.	3.2	213
4	Thermodynamics of stoichiometric biochemical networks in living systems far from equilibrium. Biophysical Chemistry, 2005, 114, 213-220.	2.8	189
5	Computer Modeling of Mitochondrial Tricarboxylic Acid Cycle, Oxidative Phosphorylation, Metabolite Transport, and Electrophysiology*. Journal of Biological Chemistry, 2007, 282, 24525-24537.	3.4	174
6	Thermodynamic constraints for biochemical networks. Journal of Theoretical Biology, 2004, 228, 327-333.	1.7	154
7	Minimum Information About a Simulation Experiment (MIASE). PLoS Computational Biology, 2011, 7, e1001122.	3.2	133
8	Relationship between Thermodynamic Driving Force and One-Way Fluxes in Reversible Processes. PLoS ONE, 2007, 2, e144.	2.5	125
9	Extreme Pathways and Kirchhoff's Second Law. Biophysical Journal, 2002, 83, 2879-2882.	0.5	122
10	Age-Associated Mitochondrial Dysfunction Accelerates Atherogenesis. Circulation Research, 2020, 126, 298-314.	4.5	118
11	The Fractal Nature of Myocardial Blood Flow Emerges from a Whole-Organ Model of Arterial Network. Journal of Vascular Research, 2000, 37, 282-296.	1.4	114
12	Endoplasmic reticulumâ€"associated degradation regulates mitochondrial dynamics in brown adipocytes. Science, 2020, 368, 54-60.	12.6	107
13	Phosphate metabolite concentrations and ATP hydrolysis potential in normal and ischaemic hearts. Journal of Physiology, 2008, 586, 4193-4208.	2.9	102
14	Crops In Silico: Generating Virtual Crops Using an Integrative and Multi-scale Modeling Platform. Frontiers in Plant Science, 2017, 8, 786.	3.6	102
15	Stoichiometric network theory for nonequilibrium biochemical systems. FEBS Journal, 2003, 270, 415-421.	0.2	101
16	Modeling Advection and Diffusion of Oxygen in Complex Vascular Networks. Annals of Biomedical Engineering, 2001, 29, 298-310.	2.5	100
17	Computational Modeling Predicts the Structure and Dynamics of Chromatin Fiber. Structure, 2001, 9, 105-114.	3.3	96
18	Region-Based Convolutional Neural Nets for Localization of Glomeruli in Trichrome-Stained Whole Kidney Sections. Journal of the American Society of Nephrology: JASN, 2018, 29, 2081-2088.	6.1	91

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19	Analysis of cardiac mitochondrial Na⁺â€“Ca²⁺ exchanger kinetics with a biophysical model of mitochondrial Ca²⁺ handing suggests a 3: 1 stoichiometry. Journal of Physiology, 2008, 586, 3267-3285.	2.9	89
20	Taylor dispersion of a solute in a microfluidic channel. Journal of Applied Physics, 2001, 89, 4667-4669.	2.5	79
21	Oxidative ATP synthesis in skeletal muscle is controlled by substrate feedback. American Journal of Physiology - Cell Physiology, 2007, 292, C115-C124.	4.6	76
22	Modeling of Oxygen Transport and Cellular Energetics Explains Observations on In Vivo Cardiac Energy Metabolism. PLoS Computational Biology, 2006, 2, e107.	3.2	75
23	Understanding Guyton's venous return curves. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 301, H629-H633.	3.2	73
24	Experimentally observed phenomena on cardiac energetics in heart failure emerge from simulations of cardiac metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7143-7148.	7.1	66
25	CellML metadata standards, associated tools and repositories. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 1845-1867.	3.4	62
26	Theoretical models for coronary vascular biomechanics: Progress & challenges. Progress in Biophysics and Molecular Biology, 2011, 104, 49-76.	2.9	62
27	Bridging the genotypeâ€“phenotype gap: what does it take?. Journal of Physiology, 2013, 591, 2055-2066.	2.9	62
28	Fractal ¹⁵ O-Labeled Water Washout From the Heart. Circulation Research, 1995, 77, 1212-1221.	4.5	62
29	Advection and Diffusion of Substances in Biological Tissues With Complex Vascular Networks. Annals of Biomedical Engineering, 2000, 28, 253-268.	2.5	61
30	Thermodynamic-based computational profiling of cellular regulatory control in hepatocyte metabolism. American Journal of Physiology - Endocrinology and Metabolism, 2005, 288, E633-E644.	3.5	60
31	Catalytic Coupling of Oxidative Phosphorylation, ATP Demand, and Reactive Oxygen Species Generation. Biophysical Journal, 2016, 110, 962-971.	0.5	55
32	Constructing irregular surfaces to enclose macromolecular complexes for mesoscale modeling using the discrete surface charge optimization (DISCO) algorithm. Journal of Computational Chemistry, 2003, 24, 2063-2074.	3.3	54
33	Strong Inference for Systems Biology. PLoS Computational Biology, 2009, 5, e1000459.	3.2	51
34	Myocardial oxygenation in isolated hearts predicted by an anatomically realistic microvascular transport model. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 285, H1826-H1836.	3.2	50
35	Computational modeling of physiological systems. Physiological Genomics, 2005, 23, 1-3.	2.3	50
36	Multiscale Modeling and Data Integration in the Virtual Physiological Rat Project. Annals of Biomedical Engineering, 2012, 40, 2365-2378.	2.5	47

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37	The mechanical and metabolic basis of myocardial blood flow heterogeneity. Basic Research in Cardiology, 2001, 96, 582-594.	5.9	46
38	Computational biology of cardiac myocytes: proposed standards for the physiome. Journal of Experimental Biology, 2007, 210, 1576-1583.	1.7	45
39	A Biophysically Based Mathematical Model for the Kinetics of Mitochondrial Calcium Uniporter. Biophysical Journal, 2009, 96, 1318-1332.	0.5	44
40	Identifying physiological origins of baroreflex dysfunction in salt-sensitive hypertension in the Dahl SS rat. Physiological Genomics, 2010, 42, 23-41.	2.3	44
41	Ab initio prediction of thermodynamically feasible reaction directions from biochemical network stoichiometry. Metabolic Engineering, 2005, 7, 251-259.	7.0	43
42	Arterial Stiffening Provides Sufficient Explanation for Primary Hypertension. PLoS Computational Biology, 2014, 10, e1003634.	3.2	42
43	A Biophysically Based Mathematical Model for the Kinetics of Mitochondrial Na+-Ca2+ Antiporter. Biophysical Journal, 2010, 98, 218-230.	0.5	39
44	Estrogen maintains mitochondrial content and function in the right ventricle of rats with pulmonary hypertension. Physiological Reports, 2017, 5, e13157.	1.7	39
45	Detailed kinetics and regulation of mammalian NAD-linked isocitrate dehydrogenase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2008, 1784, 1641-1651.	2.3	37
46	Inertial stochastic dynamics. I. Long-time-step methods for Langevin dynamics. Journal of Chemical Physics, 2000, 112, 7313-7322.	3.0	36
47	Unbiased Rotational Moves for Rigid-Body Dynamics. Biophysical Journal, 2003, 85, 2973-2976.	0.5	36
48	Detailed kinetics and regulation of mammalian 2-oxoglutarate dehydrogenase. BMC Biochemistry, 2011, 12, 53.	4.4	35
49	A computational analysis of the long-term regulation of arterial pressure. F1000Research, 2013, 2, 208.	1.6	34
50	Effect of P2X4 and P2X7 receptor antagonism on the pressure diuresis relationship in rats. Frontiers in Physiology, 2013, 4, 305.	2.8	33
51	Determining the origins of superoxide and hydrogen peroxide in the mammalian NADH:ubiquinone oxidoreductase. Free Radical Biology and Medicine, 2014, 77, 121-129.	2.9	33
52	Mitochondrial Free [Ca2+] Increases during ATP/ADP Antiport and ADP Phosphorylation: Exploration of Mechanisms. Biophysical Journal, 2010, 99, 997-1006.	0.5	30
53	Thermodynamic Calculations for Biochemical Transport and Reaction Processes in Metabolic Networks. Biophysical Journal, 2010, 99, 3139-3144.	0.5	30
54	Characterization of Mg2+ Inhibition of Mitochondrial Ca2+ Uptake by a Mechanistic Model of Mitochondrial Ca2+ Uniporter. Biophysical Journal, 2011, 101, 2071-2081.	0.5	29

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55	A database of thermodynamic properties of the reactions of glycolysis, the tricarboxylic acid cycle, and the pentose phosphate pathway. Database: the Journal of Biological Databases and Curation, 2011, 2011, bar005-bar005.	3.0	28
56	Identification of the Catalytic Mechanism and Estimation of Kinetic Parameters for Fumarase. Journal of Biological Chemistry, 2011, 286, 21100-21109.	3.4	28
57	Human Cardiac 31P-MR Spectroscopy at 3 Tesla Cannot Detect Failing Myocardial Energy Homeostasis during Exercise. Frontiers in Physiology, 2017, 8, 939.	2.8	28
58	Inertial stochastic dynamics. II. Influence of inertia on slow kinetic processes of supercoiled DNA. Journal of Chemical Physics, 2000, 112, 7323-7338.	3.0	27
59	The Role of Theoretical Modeling in Microcirculation Research. Microcirculation, 2008, 15, 693-698.	1.8	27
60	Feedback Regulation and Time Hierarchy of Oxidative Phosphorylation in Cardiac Mitochondria. Biophysical Journal, 2016, 110, 972-980.	0.5	26
61	Dynamics of cross-bridge cycling, ATP hydrolysis, force generation, and deformation in cardiac muscle. Journal of Molecular and Cellular Cardiology, 2016, 96, 11-25.	1.9	26
62	Influence of metabolic dysfunction on cardiac mechanics in decompensated hypertrophy and heart failure. Journal of Molecular and Cellular Cardiology, 2016, 94, 162-175.	1.9	25
63	Computational Framework for Generating Transport Models from Databases of Microvascular Anatomy. Annals of Biomedical Engineering, 2001, 29, 837-843.	2.5	24
64	Analysis of the Kinetics and Bistability of Ubiquinol:Cytochrome c Oxidoreductase. Biophysical Journal, 2013, 105, 343-355.	0.5	24
65	Analysis of cardiovascular dynamics in pulmonary hypertensive C57BL6/J mice. Frontiers in Physiology, 2013, 4, 355.	2.8	24
66	Metabolic Dynamics in Skeletal Muscle during Acute Reduction in Blood Flow and Oxygen Supply to Mitochondria: In-Silico Studies Using a Multi-Scale, Top-Down Integrated Model. PLoS ONE, 2008, 3, e3168.	2.5	23
67	Power-Law Kinetics of Tracer Washout from Physiological Systems. Annals of Biomedical Engineering, 1998, 26, 775-779.	2.5	22
68	Stimulatory Effects of Calcium on Respiration and NAD(P)H Synthesis in Intact Rat Heart Mitochondria Utilizing Physiological Substrates Cannot Explain Respiratory Control in Vivo. Journal of Biological Chemistry, 2011, 286, 30816-30822.	3.4	22
69	Characterization of Membrane Potential Dependency of Mitochondrial Ca2+ Uptake by an Improved Biophysical Model of Mitochondrial Ca2+ Uniporter. PLoS ONE, 2010, 5, e13278.	2.5	21
70	Kinetic Analysis and Design of Experiments to Identify the Catalytic Mechanism of the Monocarboxylate Transporter Isoforms 4 and 1. Biophysical Journal, 2011, 100, 369-380.	0.5	21
71	Mitochondrial structure and function are not different between nonfailing donor and endâ€stage failing human hearts. FASEB Journal, 2016, 30, 2698-2707.	0.5	21
72	Chapter 2 Multiple Ion Binding Equilibria, Reaction Kinetics, and Thermodynamics in Dynamic Models of Biochemical Pathways. Methods in Enzymology, 2009, 454, 29-68.	1.0	20

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73	Analysis of the diffusion of Ras2 in<i>Saccharomyces cerevisiae</i>using fluorescence recovery after photobleaching. Physical Biology, 2010, 7, 026011.	1.8	20
74	Kinetics and Regulation of Mammalian NADH-Ubiquinone Oxidoreductase (Complex I). Biophysical Journal, 2010, 99, 1426-1436.	0.5	19
75	Determination of the Catalytic Mechanism for Mitochondrial Malate Dehydrogenase. Biophysical Journal, 2015, 108, 408-419.	0.5	19
76	Detailed Enzyme Kinetics in Terms of Biochemical Species: Study of Citrate Synthase. PLoS ONE, 2008, 3, e1825.	2.5	18
77	Physiologically Based Pharmacokinetic Tissue Compartment Model Selection in Drug Development and Risk Assessment. Journal of Pharmaceutical Sciences, 2012, 101, 424-435.	3.3	18
78	Tautology vs. Physiology in the Etiology of Hypertension. Physiology, 2013, 28, 270-271.	3.1	18
79	Modelling the impact of changes in the extracellular environment on the cytosolic free NAD+/NADH ratio during cell culture. PLoS ONE, 2018, 13, e0207803.	2.5	18
80	The Effects of Reversibility and Noise on Stochastic Phosphorylation Cycles and Cascades. Biophysical Journal, 2008, 95, 2183-2192.	0.5	17
81	Simulation of cellular biochemical system kinetics. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2011, 3, 136-146.	6.6	17
82	Mechanisms of pressure-diuresis and pressure-natriuresis in Dahl salt-resistant and Dahl salt-sensitive rats. BMC Physiology, 2012, 12, 6.	3.6	17
83	High salt diet impairs cerebral blood flow regulation via saltâ€induced angiotensin <scp>II</scp> suppression. Microcirculation, 2019, 26, e12518.	1.8	17
84	Open-Loop Control of Oxidative Phosphorylation in Skeletal and Cardiac Muscle Mitochondria by Ca2+. Biophysical Journal, 2016, 110, 954-961.	0.5	16
85	Phenotyping heart failure using modelâ€based analysis and physiologyâ€informed machine learning. Journal of Physiology, 2021, 599, 4991-5013.	2.9	16
86	Modeling of Cellular Metabolism and Microcirculatory Transport. Microcirculation, 2008, 15, 777-793.	1.8	15
87	Computational analyses of intravascular tracer washout reveal altered capillaryâ€level flow distributions in obese Zucker rats. Journal of Physiology, 2011, 589, 4527-4543.	2.9	15
88	Identification of the kinetic mechanism of succinyl-CoA synthetase. Bioscience Reports, 2013, 33, 145-63.	2.4	15
89	Fluorescence dilution technique for measurement of albumin reflection coefficient in isolated glomeruli. American Journal of Physiology - Renal Physiology, 2015, 309, F1049-F1059.	2.7	15
90	Apparent Diffusivity and Taylor Dispersion of Water andÂSolutes in Capillary Beds. Bulletin of Mathematical Biology, 2009, 71, 1366-1377.	1.9	14

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91	Open-loop (feed-forward) and feedback control of coronary blood flow during exercise, cardiac pacing, and pressure changes. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 310, H1683-H1694.	3.2	14
92	A parallel algorithm for reverse engineering of biological networks. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70	1.3	13
93	Modeling to Link Regional Myocardial Work, Metabolism and Blood Flows. Annals of Biomedical Engineering, 2012, 40, 2379-2398.	2.5	13
94	Thermodynamically based profiling of drug metabolism and drugâ€“drug metabolic interactions: A case study of acetaminophen and ethanol toxic interaction. Biophysical Chemistry, 2006, 120, 121-134.	2.8	12
95	Characterization of the Kinetics of Cardiac Cytosolic Malate Dehydrogenase and Comparative Analysis of Cytosolic and Mitochondrial Isoforms. Biophysical Journal, 2015, 108, 420-430.	0.5	12
96	Impaired Myocardial Energetics Causes Mechanical Dysfunction in Decompensated Failing Hearts. Function, 2020, 1, zqaa018.	2.3	12
97	A Biophysical Model of the Mitochondrial ATP-Mg/Pi Carrier. Biophysical Journal, 2012, 103, 1616-1625.	0.5	11
98	Heterogeneous mechanics of the mouse pulmonary arterial network. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1245-1261.	2.8	11
99	Effects of altered pyruvate dehydrogenase activity on contracting skeletal muscle bioenergetics. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2019, 316, R76-R86.	1.8	11
100	Response to â€œComment on â€˜Taylor dispersion of a solute in a microfluidic channelâ€™ [J. Appl. Phys. 90, 6553 (2001)]â€• Journal of Applied Physics, 2001, 90, 6555-6556.	2.5	10
101	Differential expression of cardiac mitochondrial proteins. Proteomics, 2008, 8, 446-462.	2.2	10
102	Computational model-based assessment of baroreflex function from response to Valsalva maneuver. Journal of Applied Physiology, 2018, 125, 1944-1967.	2.5	10
103	Systems analysis of the mechanisms governing the cardiovascular response to changes in posture and in peripheral demand during exercise. Journal of Molecular and Cellular Cardiology, 2022, 163, 33-55.	1.9	10
104	A pH-Dependent Kinetic Model of Dihydrolipoamide Dehydrogenase from Multiple Organisms. Biophysical Journal, 2014, 107, 2993-3007.	0.5	9
105	Assessing the Validity and Utility of the Guyton Model of Arterial Blood Pressure Control. Hypertension, 2018, 72, 1272-1273.	2.7	9
106	Quantification of Myocardial Creatine and Triglyceride Content in the Human Heart: Precision and Accuracy of in vivo Proton Magnetic Resonance Spectroscopy. Journal of Magnetic Resonance Imaging, 2021, 54, 411-420.	3.4	9
107	The Inferred Cardiogenic Gene Regulatory Network in the Mammalian Heart. PLoS ONE, 2014, 9, e100842.	2.5	8
108	Global Kinetic Analysis of Mammalian E3 Reveals pH-dependent NAD+/NADH Regulation, Physiological Kinetic Reversibility, and Catalytic Optimum. Journal of Biological Chemistry, 2016, 291, 2712-2730.	3.4	8

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109	Multiscale Computational Analysis of Right Ventricular Mechanoenergetics. Journal of Biomechanical Engineering, 2018, 140, .	1.3	8
110	Letter to the Editor: Mitochondrial cytochrome <i>c</i> oxidase: mechanism of action and role in regulating oxidative phosphorylation. Journal of Applied Physiology, 2015, 119, 157-157.	2.5	7
111	Markov chain Monte Carlo based analysis of post-translationally modified VDAC gating kinetics. Frontiers in Physiology, 2014, 5, 513.	2.8	7
112	Cardiac Metabolic Limitations Contribute to Diminished Performance of the Heart in Aging. Biophysical Journal, 2019, 117, 2295-2302.	0.5	7
113	Potential role of intermittent functioning of baroreflexes in the etiology of hypertension in spontaneously hypertensive rats. JCI Insight, 2020, 5, .	5.0	7
114	OPTICAL SPECTROSCOPY DEMONSTRATES ELEVATED INTRACELLULAR OXYGENATION IN AN ENDOTOXIC MODEL OF SEPSIS IN THE PERFUSED HEART. Shock, 2007, 27, 695-700.	2.1	6
115	Comments on Point:Counterpoint: Muscle lactate and H+ production do/do not have a 1:1 association in skeletal muscle. Journal of Applied Physiology, 2011, 110, 1493-1496.	2.5	6
116	Tautological Nature of Guytonâ€™s Theory of Blood Pressure Control. American Journal of Hypertension, 2017, 30, e5-e5.	2.0	6
117	Impaired Myofilament Contraction Drives Right Ventricular Failure Secondary to Pressure Overload: Model Simulations, Experimental Validation, and Treatment Predictions. Frontiers in Physiology, 2018, 9, 731.	2.8	6
118	Specification, construction, and exact reduction of state transition system models of biochemical processes. Journal of Chemical Physics, 2012, 137, 154108.	3.0	5
119	The feasibility of genome-scale biological network inference using Graphics Processing Units. Algorithms for Molecular Biology, 2017, 12, 8.	1.2	5
120	Hypoxic pulmonary vasoconstriction as a regulator of alveolar-capillary oxygen flux: A computational model of ventilation-perfusion matching. PLoS Computational Biology, 2021, 17, e1008861.	3.2	5
121	Quantitative analysis of mitochondrial ATP synthesis. Mathematical Biosciences, 2021, 340, 108646.	1.9	5
122	Improving the physiological realism of experimental models. Interface Focus, 2016, 6, 20150076.	3.0	4
123	Systems-level computational modeling demonstrates fuel selection switching in high capacity running and low capacity running rats. PLoS Computational Biology, 2018, 14, e1005982.	3.2	4
124	Computational Modeling of Coupled Energetics and Mechanics in the Rat Ventricular Myocardium. Physiome, 2020, , .	0.3	4
125	Conventions and calculations for biochemical systems. , 2008, , 24-40.		3
126	An improved algorithm and its parallel implementation for solving a general blood-tissue transport and metabolism model. Journal of Computational Physics, 2009, 228, 7850-7861.	3.8	3

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127	Universal relation between thermodynamic driving force and one-way fluxes in a nonequilibrium chemical reaction with complex mechanism. Physical Review Research, 2020, 2, .	3.6	3
128	Multiscale model of the physiological control of myocardial perfusion to delineate putative metabolic feedback mechanisms. Journal of Physiology, 2022, 600, 1913-1932.	2.9	3
129	Biochemical reaction networks. , 0, , 128-161.		2
130	Quantitative Analysis of Mitochondrial Membrane Potential Measurements with JCâ€1. FASEB Journal, 2007, 21, A1351.	0.5	2
131	The Pathway for Oxygen: Tutorial Modelling on Oxygen Transport from Air to Mitochondrion. Advances in Experimental Medicine and Biology, 2016, 876, 103-110.	1.6	2
132	Heart Failure as a Limitation of Cardiac Power Output. Function, 2021, 3, zqab066.	2.3	2
133	Constraint-based modeling of metabolomic systems. , 2005, , .		1
134	Enzyme-catalyzed reactions. , 0, , 69-104.		1
135	Calcium has no stimulatory effect on respiration or NADH synthesis in intact rat heart mitochondria utilizing physiological substrates. FASEB Journal, 2011, 25, 1033.2.	0.5	1
136	Stochastic biochemical systems and the chemical master equation. , 0, , 261-281.		0
137	Biomacromolecular structure and molecular association. , 0, , 240-260.		0
138	Concepts from physical chemistry. , 0, , 7-23.		0
139	Chemical kinetics and transport processes. , 0, , 41-66.		0
140	Biochemical signaling modules. , 0, , 105-127.		0
141	Coupled biochemical systems and membrane transport. , 0, , 162-192.		0
142	Spatially distributed systems and reactionâ€“diffusion modeling. , 0, , 195-219.		0
143	Constraint-based analysis of biochemical systems. , 0, , 220-239.		0
144	Appendix: the statistical basis of thermodynamics. , 0, , 282-295.		0

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145	Creatine and phosphate pools are maintained at energetically optimal levels in the heart during hypertrophic remodeling and heart failure. , 2009, 2009, 4487-90.		0
146	Diffusion and Exchange of Non-Integral Membrane Associated Fluorophores During Fluorescence Recovery After Photobleaching with the Confocal Laser Scanning Microscope: ROI Size Analysis of EGFP:Ras2 Plasma Membrane Diffusion in Saccharomyces cerevisiae. Biophysical Journal, 2009, 96, 32a-33a.	0.5	0
147	Cardiovascular systems simulation. , 0, , 105-144.		0
148	Chemical reaction systems: thermodynamics and chemical equilibrium. , 0, , 145-177.		0
149	Introduction to simulation of biological systems. , 0, , 1-20.		0
150	Transport and reaction of solutes in biological systems. , 0, , 21-65.		0
151	Chemical reaction systems: kinetics. , 0, , 178-204.		0
152	Chemical reaction systems: large-scale systems simulation. , 0, , 205-229.		0
153	Cellular electrophysiology. , 0, , 230-261.		0
154	Appendices: mathematical and computational techniques. , 0, , 262-298.		0
155	Physiologically based pharmacokinetic modeling. , 0, , 66-104.		0
156	Rebuttal from Daniel Beard and Eric Feigl. Journal of Physiology, 2013, 591, 5801-5801.	2.9	0
157	Do computers dream of electric glomeruli?. Kidney International, 2018, 94, 635.	5.2	0
158	Cardiovascular System Model-Based Phenotyping of Heart Failure with Preserved Ejection Fraction. Journal of Cardiac Failure, 2019, 25, S33.	1.7	0
159	The Heart by Numbers. Biophysical Journal, 2019, 117, E1-E3.	0.5	0
160	ADP and CCCP â€induced increases in mitochondrial free Ca 2+ : greater contribution of matrix Ca 2+ buffering by ATP/ADP. FASEB Journal, 2008, 22, 756.6.	0.5	0
161	Emergent Critical Phenomena in the Evolution of Heart Failure. FASEB Journal, 2009, 23, 362.10.	0.5	0
162	A Thermodynamically Balanced Kinetic Model of the Mitochondrial Na + â€Ca 2+ Antiporter. FASEB Journal, 2009, 23, 994.1.	0.5	0

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163	Computational Analysis of Cardiac Energetics during Ischemia and Reperfusion in Bufferâ€Perfused Rabbit Hearts. FASEB Journal, 2009, 23, 763.4.	0.5	0
164	Mathematical Characterization of the Inhibitory Effect of Mg 2+ on the Kinetics of Mitochondrial Ca 2+ Uniporter. FASEB Journal, 2010, 24, 1065.6.	0.5	0
165	Altered Spatioâ€Temporal Microvascular Blood Flow Distribution Patterns in Skeletal Muscle with Metabolic Syndrome. FASEB Journal, 2010, 24, 978.1.	0.5	0
166	A Stochastic Model of Flow Bifurcation Predicts Altered Spatial Flow Distributions in Obese Zucker Rats. FASEB Journal, 2010, 24, 978.2.	0.5	0
167	Classification and quantitative description of human embryonic stem cellâ€derived cardiomyocyte action potentials during postâ€differentiation maturation. FASEB Journal, 2010, 24, 1058.11.	0.5	0
168	Isoflurane Increases Mitochondrial Free Ca 2+ by Attenuating the Na + /Ca 2+ Exchanger Activity. FASEB Journal, 2012, 26, 888.4.	0.5	0
169	Analysis of renal hemodynamics and pressureâ€natriuresis in Dahl saltâ€sensitive rats. FASEB Journal, 2012, 26, 1098.3.	0.5	0
170	Elucidation of mechanisms of biochemical regulation of fumarase activity under physiological conditions. FASEB Journal, 2012, 26, 963.14.	0.5	0
171	Transient myogenic response provides insight to mechanotransductive pathways in vascular smooth muscle cells. FASEB Journal, 2012, 26, 853.1.	0.5	0
172	Kidney blood flow modeled from structural morphology of renal vasculature in the rat. FASEB Journal, 2013, 27, 1217.13.	0.5	0
173	Characterization of Different Modes of Ca 2+ Uptake under Physiological Conditions in Heart Mitochondria. FASEB Journal, 2013, 27, 1209.20.	0.5	0
174	Measurement of cardiac function using dual catheterization in the Dahl SS rat on low salt. FASEB Journal, 2013, 27, 1184.6.	0.5	0
175	Control of Cardiac Mitochondrial Fuel Selection by Calcium. FASEB Journal, 2019, 33, lb313.	0.5	0
176	Towards a Multiâ€Scale Model of Ventilationâ€Perfusion Matching. FASEB Journal, 2019, 33, lb455.	0.5	0
177	Kinetic and thermodynamic regulation of mitochondrial energy metabolism and ROS production. Biophysical Journal, 2022, 121, 121a.	0.5	0