Saleet Jafri

List of Publications by Year
in descending order

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85 papers	3,791 citations	147801 31 h-index	128289 60 g-index
86 all docs	86 docs citations	86 times ranked	3025 citing authors

#	Article	IF	Citations
1	Mechanisms of Altered Excitation-Contraction Coupling in Canine Tachycardia-Induced Heart Failure, II. Circulation Research, 1999, 84, 571-586.	4.5	557
2	Cardiac Ca2+ Dynamics: The Roles of Ryanodine Receptor Adaptation and Sarcoplasmic Reticulum Load. Biophysical Journal, 1998, 74, 1149-1168.	0.5	300
3	Termination of Cardiac Ca2+ Sparks: An Investigative Mathematical Model of Calcium-Induced Calcium Release. Biophysical Journal, 2002, 83, 59-78.	0.5	286
4	Stimulated Emission Depletion Live-Cell Super-Resolution Imaging Shows Proliferative Remodeling of T-Tubule Membrane Structures After Myocardial Infarction. Circulation Research, 2012, 111, 402-414.	4.5	179
5	Subcellular [Ca ²⁺] _i Gradients During Excitation-Contraction Coupling in Newborn Rabbit Ventricular Myocytes. Circulation Research, 1999, 85, 415-427.	4.5	158
6	On the roles of Ca2+ diffusion, Ca2+ buffers, and the endoplasmic reticulum in IP3-induced Ca2+ waves. Biophysical Journal, 1995, 69, 2139-2153.	0.5	129
7	Mechanisms of Myofascial Pain. International Scholarly Research Notices, 2014, 2014, 1-16.	0.9	127
8	Dynamics of Calcium Sparks and Calcium Leak in the Heart. Biophysical Journal, 2011, 101, 1287-1296.	0.5	112
9	Electrophysiological Modeling of Cardiac Ventricular Function: From Cell to Organ. Annual Review of Biomedical Engineering, 2000, 2, 119-155.	12.3	110
10	The Ca2+ leak paradox and â€œrogue ryanodine receptorsâ€ SR Ca2+ efflux theory and practice. Progress in Biophysics and Molecular Biology, 2006, 90, 172-185.	2.9	110
11	Modeling Gain and Gradedness of Ca2+ Release in the Functional Unit of the Cardiac Diadic Space. Biophysical Journal, 1999, 77, 1871-1884.	0.5	105
12	The connection between inner membrane topology and mitochondrial function. Journal of Molecular and Cellular Cardiology, 2013, 62, 51-57.	1.9	101
13	Local Ca2+ Signaling and EC Coupling in Heart: Ca2+ Sparks and the Regulation of the [Ca2+]i Transient. Journal of Molecular and Cellular Cardiology, 2002, 34, 941-950.	1.9	99
14	Superresolution Modeling of Calcium Release in the Heart. Biophysical Journal, 2014, 107, 3018-3029.	0.5	96
15	Ryanodine receptor cluster fragmentation and redistribution in persistent atrial fibrillation enhance calcium release. Cardiovascular Research, 2015, 108, 387-398.	3.8	93
16	Cardiac Energy Metabolism: Models of Cellular Respiration. Annual Review of Biomedical Engineering, 2001, 3, 57-81.	12.3	81
17	Cardiac Sodium Channel Markov Model with Temperature Dependence and Recovery from Inactivation. Biophysical Journal, 1999, 76, 1868-1885.	0.5	70
18	A Probability Density Approach to Modeling Local Control of Calcium-Induced Calcium Release in Cardiac Myocytes. Biophysical Journal, 2007, 92, 2311-2328.	0.5	62

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19	Modeling short-term interval-force relations in cardiac muscle. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 278, H913-H931.	3.2	60
20	A membrane model for cytosolic calcium oscillations. A study using Xenopus oocytes. Biophysical Journal, 1992, 63, 235-246.	0.5	59
21	NFAT and NFÎºB Activation in T Lymphocytes: A Model of Differential Activation of Gene Expression. Annals of Biomedical Engineering, 2006, 34, 1712-1728.	2.5	59
22	Effect of Ca2+ on cardiac mitochondrial energy production is modulated by Na+ and H+ dynamics. American Journal of Physiology - Cell Physiology, 2007, 292, C2004-C2020.	4.6	57
23	Models of cardiac excitationâ€“contraction coupling in ventricular myocytes. Mathematical Biosciences, 2010, 226, 1-15.	1.9	53
24	Disulfide bonding patterns and protein topologies. Protein Science, 1993, 2, 41-54.	7.6	51
25	Mitochondrial Calcium Signaling and Energy Metabolism. Annals of the New York Academy of Sciences, 2005, 1047, 127-137.	3.8	48
26	Moment Closure for Local Control Models of Calcium-Induced Calcium Release in Cardiac Myocytes. Biophysical Journal, 2008, 95, 1689-1703.	0.5	44
27	Diffusion of inositol 1,4,5-trisphosphate but not Ca2+ is necessary for a class of inositol 1,4,5-trisphosphate-induced Ca2+ waves.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 9485-9489.	7.1	41
28	lncRNAKB, a knowledgebase of tissue-specific functional annotation and trait association of long noncoding RNA. Scientific Data, 2020, 7, 326.	5.3	40
29	Ionotropic and Metabotropic Mechanisms of Allosteric Modulation of <i>Î±</i>7 Nicotinic Receptor Intracellular Calcium. Molecular Pharmacology, 2018, 93, 601-611.	2.3	39
30	Ryanodine receptor sensitivity governs the stability and synchrony of local calcium release during cardiac excitation-contraction coupling. Journal of Molecular and Cellular Cardiology, 2016, 92, 82-92.	1.9	37
31	Modeling the cellular basis of altered excitationâ€“contraction coupling in heart failure. Progress in Biophysics and Molecular Biology, 1998, 69, 497-514.	2.9	35
32	Predicting Local SR Ca2+ Dynamics during Ca2+ Wave Propagation in Ventricular Myocytes. Biophysical Journal, 2010, 98, 2515-2523.	0.5	34
33	Modeling Local X-ROS and Calcium Signaling in the Heart. Biophysical Journal, 2015, 109, 2037-2050.	0.5	28
34	Effect of crista morphology on mitochondrial ATP output: A computational study. Current Research in Physiology, 2021, 4, 163-176.	1.7	28
35	A theoretical study of cytosolic calcium waves in xenopus oocytes. Journal of Theoretical Biology, 1995, 172, 209-216.	1.7	23
36	A membrane potential model with counterions for cytosolic calcium oscillations. Cell Calcium, 1994, 16, 9-19.	2.4	22

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37	Modeling the mechanism of metabolic oscillations in ischemic cardiac myocytes. Journal of Theoretical Biology, 2006, 242, 801-817.	1.7	21
38	Application of machine learning to determine top predictors of noncalcified coronary burden in psoriasis: An observational cohort study. Journal of the American Academy of Dermatology, 2020, 83, 1647-1653.	1.2	20
39	Models of Excitationâ€"Contraction Coupling in Cardiac Ventricular Myocytes. Methods in Molecular Biology, 2012, 910, 309-335.	0.9	19
40	Agonist-induced calcium waves in oscillatory cells: A biological example of Burgers' equation. Bulletin of Mathematical Biology, 1997, 59, 1125-1144.	1.9	18
41	Calcium sparks in the heart: dynamics and regulation. Research and Reports in Biology, 2015, 6, 203.	0.2	18
42	Ca2+ signaling in T lymphocytes: the interplay of the endoplasmic reticulum, mitochondria, membrane potential, and CRAC channels on transcription factor activation. Heliyon, 2020, 6, e03526.	3.2	18
43	Predicting Genetic Variation Severity Using Machine Learning to Interpret Molecular Simulations. Biophysical Journal, 2021, 120, 189-204.	0.5	15
44	Application of machine learning in understanding atherosclerosis: Emerging insights. APL Bioengineering, 2021, 5, 011505.	6.2	14
45	Using phase relations to identify potential mechanisms for metabolic oscillations in isolated Î²-cell mitochondria. Islets, 2009, 1, 87-94.	1.8	11
46	Modeling Mitochondrial Function and Its Role in Disease. Progress in Molecular Biology and Translational Science, 2014, 123, 103-125.	1.7	9
47	Cardiac Alternans Occurs through the Synergy of Voltage- and Calcium-Dependent Mechanisms. Membranes, 2021, 11, 794.	3.0	9
48	A Stochastic Spatiotemporal Model of Rat Ventricular Myocyte Calcium Dynamics Demonstrated Necessary Features for Calcium Wave Propagation. Membranes, 2021, 11, 989.	3.0	9
49	Machine learning-based prediction of drug and ligand binding in BCL-2 variants through molecular dynamics. Computers in Biology and Medicine, 2022, 140, 105060.	7.0	8
50	Modeling Short-Term Interval-Force Relations in Cardiac Muscle. Annals of the New York Academy of Sciences, 1998, 853, 345-349.	3.8	7
51	SNP2SIM: a modular workflow for standardizing molecular simulation and functional analysis of protein variants. BMC Bioinformatics, 2019, 20, 171.	2.6	7
52	Agonist-induced calcium waves in oscillatory cells: A biological example of Burgers' equation. Bulletin of Mathematical Biology, 1997, 59, 1125-1144.	1.9	6
53	T lymphocytes from malignant hyperthermia-susceptible mice display aberrations in intracellular calcium signaling and mitochondrial function. Cell Calcium, 2021, 93, 102325.	2.4	5
54	X-ROS Signaling Depends on Length-Dependent Calcium Buffering by Troponin. Cells, 2021, 10, 1189.	4.1	5

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55	In Silico Prediction of the Phosphorylation of NS3 as an Essential Mechanism for Dengue Virus Replication and the Antiviral Activity of Quercetin. Biology, 2021, 10, 1067.	2.8	5
56	Optimizing peptide inhibitors of SARS-Cov-2 nsp10/nsp16 methyltransferase predicted through molecular simulation and machine learning. Informatics in Medicine Unlocked, 2022, 29, 100886.	3.4	5
57	Models of Cardiac Ca 2+-Induced Ca 2+ Release and Ca 2+ Sparks. Lecture Notes in Physics, 0, , 97-114.	0.7	3
58	Stochastic simulation of cardiac ventricular myocyte calcium dynamics and waves. , 2011, 2011, 4677-80.		3
59	Translational Applications of Protein Structure Simulation: Predicting Phenotype of Missense Variants. Biophysical Journal, 2019, 116, 13a.	0.5	3
60	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. PLoS ONE, 2020, 15, e0243205.	2.5	3
61	Understanding the Dynamics of the Transient and Permanent Opening Events of the Mitochondrial Permeability Transition Pore with a Novel Stochastic Model. Membranes, 2022, 12, 494.	3.0	3
62	Critical Requirements for the Initiation of a Cardiac Arrhythmia in Rat Ventricle: How Many Myocytes?. Cells, 2022, 11, 1878.	4.1	3
63	A Small Number of Cells is Sufficient to Trigger a Cardiac Arrhythmia: Stochastic Computational Studies. Biophysical Journal, 2014, 106, 112a.	0.5	2
64	Data Mining of Molecular Simulations Suggest Key Amino Acid Residues for Aggregation, Signaling and Drug Action. Biomolecules, 2021, 11, 1541.	4.0	2
65	DYNAMICS OF CARDIAC INTRACELLULAR Ca2+ HANDLING â€" FROM EXPERIMENTS TO VIRTUAL CELLS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3535-3560.	1.7	1
66	Ionic Regulation of Mitochondrial ROS Dynamics: A Computational Modeling Study. Biophysical Journal, 2013, 104, 305a.	0.5	1
67	Mitochondrial Permeability Transition Pore and Number of Openings. Biophysical Journal, 2017, 112, 440a.	0.5	1
68	Transcriptomic analysis of Multiple Sclerosis patient-derived monocytes by RNA-Sequencing for candidate gene discovery. Informatics in Medicine Unlocked, 2021, 23, 100563.	3.4	1
69	The Phase Lag between Agonist-Induced Oscillatory Ca and IP Signals Does Not Imply Causality (December 2015). Calcium Signaling, 2015, 2, 1-10.	0.0	1
70	Active site prediction of phosphorylated SARS-CoV-2 N-Protein using molecular simulation. Informatics in Medicine Unlocked, 2022, 29, 100889.	3.4	1
71	Computational Modeling of Mitochondria to Understand the Dynamics of Oxidative Stress. Methods in Molecular Biology, 2022, , 363-422.	0.9	1
72	A Technique to Accelerate Stochastic Markov Chain Monte Carlo Simulations of Calcium-Induced Calcium Release in Cardiac Myocytes. Biophysical Journal, 2010, 98, 295a.	0.5	0

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73	Dynamics of Calcium Sparks and SR Calcium Leak During Excitation-Contraction Coupling in Mouse Heart Cells. Biophysical Journal, 2014, 106, 320a-321a.	0.5	0
74	Cardiac Calcium Signaling and Mitochondrial Metabolic Function. Biophysical Journal, 2019, 116, 270a.	0.5	0
75	Slow-Rapid-Slow Pacing in the Heart Having CASQ2G112+5X Gene Mutation Produces Eads as the Mechanism of CPVT During Adrenergic Stimulation. Biophysical Journal, 2020, 118, 566a.	0.5	0
76	Identifying Top Predictors of Change in Noncalcified Coronary Burden in Psoriasis by Machine Learning Over 1-Year. Journal of Psoriasis and Psoriatic Arthritis, 2021, 6, 113-117.	0.7	0
77	NON-SPATIAL WHOLE CELL MODELS OF GLOBAL CALCIUM RESPONSES THAT ACCOUNT FOR HETEROGENEOUS DOMAIN CALCIUM CONCENTRATIONS. , 2008, , .		0
78	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
79	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
80	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
81	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
82	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
83	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
84	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0
85	Neuropeptide S receptor gene Asn107 polymorphism in obese male individuals in Pakistan. , 2020, 15, e0243205.		0