Peter B Stathopulos

List of Publications by Year
in descending order

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76 papers	4,915 citations	101384 36 h-index	95083 68 g-index
84 all docs	84 docs citations	84 times ranked	5549 citing authors

#	Article	IF	Citations
1	Molecular nature and physiological role of the mitochondrial calcium uniporter channel. American Journal of Physiology - Cell Physiology, 2021, 320, C465-C482.	2.1	54
2	The p.E152K-STIM1 mutation deregulates Ca2+ signaling contributing to chronic pancreatitis. Journal of Cell Science, 2021, 134, .	1.2	4
3	The leucine zipper EFâ€hand containing transmembrane proteinâ€1 EFâ€hand is a tripartite calcium, temperature, and pH sensor. Protein Science, 2021, 30, 855-872.	3.1	3
4	Differential Domain Distribution of gnomAD- and Disease-Linked Connexin Missense Variants. International Journal of Molecular Sciences, 2021, 22, 7832.	1.8	7
5	An Amino Acid Polymorphism within the HIV-1 Nef Dileucine Motif Functionally Uncouples Cell Surface CD4 and SERINC5 Downregulation. Journal of Virology, 2021, 95, e0058821.	1.5	6
6	Coordination of a Single Calcium Ion in the EF-hand Maintains the Off State of the Stromal Interaction Molecule Luminal Domain. Journal of Molecular Biology, 2020, 432, 367-383.	2.0	12
7	The pancreas-specific form of secretory pathway calcium ATPase 2 regulates multiple pathways involved in calcium homeostasis. Biochimica Et Biophysica Acta - Molecular Cell Research, 2020, 1867, 118567.	1.9	8
8	Molecular basis for activation and biased signaling at the thrombin-activated GPCR proteinase activated receptor-4 (PAR4). Journal of Biological Chemistry, 2020, 295, 2520-2540.	1.6	24
9	Lactate Elicits ER-Mitochondrial Mg2+ Dynamics to Integrate Cellular Metabolism. Cell, 2020, 183, 474-489.e17.	13.5	84
10	Regulation of Ca2+ exchanges and signaling in mitochondria. Current Opinion in Physiology, 2020, 17, 197-206.	0.9	11
11	STIM1â€mediated calcium influx controls antifungal immunity and the metabolic function of nonâ€pathogenic Th17 cells. EMBO Molecular Medicine, 2020, 12, e11592.	3.3	26
12	Structural Mechanisms of Store-Operated and Mitochondrial Calcium Regulation: Initiation Points for Drug Discovery. International Journal of Molecular Sciences, 2020, 21, 3642.	1.8	5
13	Synergistic stabilization by nitrosoglutathione-induced thiol modifications in the stromal interaction molecule-2 luminal domain suppresses basal and store operated calcium entry. Scientific Reports, 2020, 10, 10177.	1.6	4
14	Identification of Critical MCUR1 Domains in the Mitochondrial Calcium Uniporter Complex that Regulates Cellular Metabolism. FASEB Journal, 2020, 34, 1-1.	0.2	2
15	Molecular Mechanisms of Leucine Zipper EF-Hand Containing Transmembrane Protein-1 Function in Health and Disease. International Journal of Molecular Sciences, 2019, 20, 286.	1.8	20
16	Sequential activation of STIM1 links Ca ²⁺ with luminal domain unfolding. Science Signaling, 2019, 12, .	1.6	32
17	Does stromal interaction molecule-1 have five senses?. Cell Calcium, 2019, 77, 79-80.	1.1	5
18	A Selective and Cell-Permeable Mitochondrial Calcium Uniporter (MCU) Inhibitor Preserves Mitochondrial Bioenergetics after Hypoxia/Reoxygenation Injury. ACS Central Science, 2019, 5, 153-166.	5.3	112

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19	A dual mechanism promotes switching of the Stormorken STIM1 R304W mutant into the activated state. Nature Communications, 2018, 9, 825.	5.8	45
20	A charge-sensing region in the stromal interaction molecule 1 luminal domain confers stabilization-mediated inhibition of SOCE in response to S-nitrosylation. Journal of Biological Chemistry, 2018, 293, 8900-8911.	1.6	16
21	ORAI1 mutations abolishing store-operated Ca2+ entry cause anhidrotic ectodermal dysplasia with immunodeficiency. Journal of Allergy and Clinical Immunology, 2018, 142, 1297-1310.e11.	1.5	62
22	Phosphorylation-mediated structural changes within the SOAR domain of stromal interaction molecule 1 enable specific activation of distinct Orai channels. Journal of Biological Chemistry, 2018, 293, 3145-3155.	1.6	11
23	MIRO-1 Determines Mitochondrial Shape Transition upon GPCR Activation and Ca2+ Stress. Cell Reports, 2018, 23, 1005-1019.	2.9	80
24	Structural elements of stromal interaction molecule function. Cell Calcium, 2018, 73, 88-94.	1.1	30
25	The 2Î² Splice Variation Alters the Structure and Function of the Stromal Interaction Molecule Coiled-Coil Domains. International Journal of Molecular Sciences, 2018, 19, 3316.	1.8	9
26	S -Nitrosylation of STIM1 by Neuronal Nitric Oxide Synthase Inhibits Store-Operated Ca 2+ Entry. Journal of Molecular Biology, 2018, 430, 1773-1785.	2.0	21
27	Mitochondrial Ca2+ Uniporter Is a Mitochondrial Luminal Redox Sensor that Augments MCU Channel Activity. Molecular Cell, 2017, 65, 1014-1028.e7.	4.5	179
28	Structural perturbations induced by Asn131 and Asn171 glycosylation converge within the EFSAM core and enhance stromal interaction molecule-1 mediated store operated calcium entry. Biochimica Et Biophysica Acta - Molecular Cell Research, 2017, 1864, 1054-1063.	1.9	19
29	Targeting Cysteine Thiols for in Vitro Site-specific Glycosylation of Recombinant Proteins. Journal of Visualized Experiments, 2017, , .	0.2	1
30	The STIM-Orai Pathway: STIM-Orai Structures: Isolated and in Complex. Advances in Experimental Medicine and Biology, 2017, 993, 15-38.	0.8	5
31	Mitochondrial Ca ²⁺ transport in the endothelium: regulation by ions, redox signalling and mechanical forces. Journal of the Royal Society Interface, 2017, 14, 20170672.	1.5	25
32	Store operated calcium entry: From concept to structural mechanisms. Cell Calcium, 2017, 63, 3-7.	1.1	39
33	From Stores to Sinks: Structural Mechanisms of Cytosolic Calcium Regulation. Advances in Experimental Medicine and Biology, 2017, 981, 215-251.	0.8	8
34	Structural Insights into Mitochondrial Calcium Uniporter Regulation by Divalent Cations. Cell Chemical Biology, 2016, 23, 1157-1169.	2.5	65
35	MCUR1 Is a Scaffold Factor for the MCU Complex Function and Promotes Mitochondrial Bioenergetics. Cell Reports, 2016, 15, 1673-1685.	2.9	170
36	Atp2c2 Is Transcribed From a Unique Transcriptional Start Site in Mouse Pancreatic Acinar Cells. Journal of Cellular Physiology, 2016, 231, 2768-2778.	2.0	9

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37	Cholesterol modulates Orai1 channel function. Science Signaling, 2016, 9, ra10.	1.6	80
38	Calmodulin and STIM proteins: Two major calcium sensors in the cytoplasm and endoplasmic reticulum. Biochemical and Biophysical Research Communications, 2015, 460, 5-21.	1.0	61
39	Missense mutation in immunodeficient patients shows the multifunctional roles of coiled-coil domain 3 (CC3) in STIM1 activation. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6206-6211.	3.3	52
40	Oncogenic and RASopathy-associated K-RAS mutations relieve membrane-dependent occlusion of the effector-binding site. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6625-6630.	3.3	191
41	Structural insights into endoplasmic reticulum stored calcium regulation by inositol 1,4,5-trisphosphate and ryanodine receptors. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 1980-1991.	1.9	57
42	A Coiled-coil Clamp Controls Both Conformation and Clustering of Stromal Interaction Molecule 1 (STIM1). Journal of Biological Chemistry, 2014, 289, 33231-33244.	1.6	105
43	Intracellular calcium channels: Inositol-1,4,5-trisphosphate receptors. European Journal of Pharmacology, 2014, 739, 39-48.	1.7	38
44	Cholesterol Regulates Orai1 Function. Biophysical Journal, 2014, 106, 317a.	0.2	0
45	Structure and Function of Endoplasmic Reticulum STIM Calcium Sensors. Current Topics in Membranes, 2013, 71, 59-93.	0.5	24
46	Initial activation of STIM1, the regulator of store-operated calcium entry. Nature Structural and Molecular Biology, 2013, 20, 973-981.	3.6	175
47	Type 2 Ryanodine Receptor Domain A Contains a Unique and Dynamic Î±-Helix That Transitions to a Î²-Strand in a Mutant Linked with a Heritable Cardiomyopathy. Journal of Molecular Biology, 2013, 425, 4034-4046.	2.0	38
48	Ryanodine receptor calcium release channels: lessons from structureâ€“function studies. FEBS Journal, 2013, 280, 5456-5470.	2.2	54
49	Energetics of oligomeric protein folding and association. Archives of Biochemistry and Biophysics, 2013, 531, 44-64.	1.4	47
50	Membrane-Dependent Modulation of the mTOR Activator Rheb: NMR Observations of a GTPase Tethered to a Lipid-Bilayer Nanodisc. Journal of the American Chemical Society, 2013, 135, 3367-3370.	6.6	64
51	STIM1/Orai1 coiled-coil interplay in the regulation of store-operated calcium entry. Nature Communications, 2013, 4, 2963.	5.8	179
52	CaBP1, a neuronal Ca ² ⁺ sensor protein, inhibits inositol trisphosphate receptors by clamping intersubunit interactions. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8507-8512.	3.3	37
53	Structural aspects of calcium-release activated calcium channel function. Channels, 2013, 7, 344-353.	1.5	29
54	Themes and Variations in ER/SR Calcium Release Channels: Structure and Function. Physiology, 2012, 27, 331-342.	1.6	23

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55	Structural and functional conservation of key domains in InsP3 and ryanodine receptors. Nature, 2012, 483, 108-112.	13.7	163
56	Themes and Variations in Endoplasmic Reticulum Calcium Release Channels: Structure and Function. Seibutsu Butsuri, 2012, 52, 266-271.	0.0	0
57	STIM1 couples to ORAI1 via an intramolecular transition into an extended conformation. EMBO Journal, 2011, 30, 1678-1689.	3.5	204
58	Auto-inhibitory role of the EF-SAM domain of STIM proteins in store-operated calcium entry. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1337-1342.	3.3	121
59	Secretion of human superoxide dismutase in Escherichia coli using the condensed singleâ€proteinâ€production system. Protein Science, 2010, 19, 2330-2335.	3.1	4
60	Nonamyloid Aggregates Arising from Mature Copper/Zinc Superoxide Dismutases Resemble Those Observed in Amyotrophic Lateral Sclerosis. Journal of Biological Chemistry, 2010, 285, 41701-41711.	1.6	47
61	Partial unfolding and oligomerization of stromal interaction molecules as an initiation mechanism of store operated calcium entryThis paper is one of a selection of papers published in this special issue entitled â€œCanadian Society of Biochemistry, Molecular & Cellular Biology 52nd Annual Meeting â€” Protein Folding: Principles and Diseasesâ€•and has undergone the Journal's usual peer review process.. Biochemistry and Cell Biology, 2010, 88, 175-183.	0.9	25
62	Stromal Interaction Molecule (STIM) 1 and STIM2 Calcium Sensing Regions Exhibit Distinct Unfolding and Oligomerization Kinetics. Journal of Biological Chemistry, 2009, 284, 728-732.	1.6	162
63	Structurally delineating stromal interaction molecules as the endoplasmic reticulum calcium sensors and regulators of calcium releaseâ€activated calcium entry. Immunological Reviews, 2009, 231, 113-131.	2.8	21
64	A novel member of the YchN-like fold: Solution structure of the hypothetical protein Tm0979 from Thermotoga maritima. Protein Science, 2009, 14, 216-223.	3.1	8
65	Folding and Association of Thermophilic Dimeric and Trimeric DsrEFH Proteins: Tm0979 and Mth1491. Biochemistry, 2009, 48, 2891-2906.	1.2	12
66	Sonication of proteins causes formation of aggregates that resemble amyloid. Protein Science, 2008, 13, 3017-3027.	3.1	341
67	Biophysical characterization of the EF-hand and SAM domain containing Ca2+ sensory region of STIM1 and STIM2. Biochemical and Biophysical Research Communications, 2008, 369, 240-246.	1.0	133
68	Structural and Mechanistic Insights into STIM1-Mediated Initiation of Store-Operated Calcium Entry. Cell, 2008, 135, 110-122.	13.5	402
69	Structural aspects of calcium-binding proteins and their interactions with targets. New Comprehensive Biochemistry, 2007, , 95-123.	0.1	1
70	Equilibrium Thermodynamic Analysis of Amyotrophic Lateral Sclerosis-Associated Mutant Apo Cu,Zn Superoxide Dismutasesâ€,â€¡. Biochemistry, 2006, 45, 7366-7379.	1.2	47
71	Mechanism and Thermodynamics of Guanidinium Chloride-induced Denaturation of ALS-associated Mutant Cu,Zn Superoxide Dismutases. Journal of Molecular Biology, 2006, 355, 106-123.	2.0	64
72	Calorimetric Analysis of Thermodynamic Stability and Aggregation for Apo and Holo Amyotrophic Lateral Sclerosis-associated Gly-93 Mutants of Superoxide Dismutase. Journal of Biological Chemistry, 2006, 281, 6184-6193.	1.6	69

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73	Stored Ca2+ Depletion-induced Oligomerization of Stromal Interaction Molecule 1 (STIM1) via the EF-SAM Region. Journal of Biological Chemistry, 2006, 281, 35855-35862.	1.6	353
74	Non-linear Effects of Temperature and Urea on the Thermodynamics and Kinetics of Folding and Unfolding of Hisactophilin. Journal of Molecular Biology, 2004, 344, 1089-1107.	2.0	16
75	Taking the good out of the bad: lentiviral-based gene therapy of the hemoglobinopathies. Biotechnology Advances, 2003, 21, 513-526.	6.0	8
76	Cu/Zn superoxide dismutase mutants associated with amyotrophic lateral sclerosis show enhanced formation of aggregates in vitro. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7021-7026.	3.3	244