

# Murali Prakriya

## List of Publications by Year in descending order

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73  
papers

11,776  
citations

57758

44  
h-index

85541

71  
g-index

83  
all docs

83  
docs citations

83  
times ranked

10793  
citing authors

#	ARTICLE	IF	CITATIONS
1	A mutation in Orai1 causes immune deficiency by abrogating CRAC channel function. <i>Nature</i> , 2006, 441, 179-185.	27.8	2,016
2	Orai1 is an essential pore subunit of the CRAC channel. <i>Nature</i> , 2006, 443, 230-233.	27.8	1,223
3	Mitochondria Are Required for Antigen-Specific T Cell Activation through Reactive Oxygen Species Signaling. <i>Immunity</i> , 2013, 38, 225-236.	14.3	981
4	Store-Operated Calcium Channels. <i>Physiological Reviews</i> , 2015, 95, 1383-1436.	28.8	922
5	Dual functions for the endoplasmic reticulum calcium sensors STIM1 and STIM2 in T cell activation and tolerance. <i>Nature Immunology</i> , 2008, 9, 432-443.	14.5	528
6	Oligomerization of STIM1 couples ER calcium depletion to CRAC channel activation. <i>Nature</i> , 2008, 454, 538-542.	27.8	501
7	Potential and inhibition of Ca <sup>2+</sup> release-activated Ca <sup>2+</sup> channels by 2-aminoethyl diphenyl borate (2-APB) occurs independently of IP <sub>3</sub> receptors. <i>Journal of Physiology</i> , 2001, 536, 3-19.	2.9	463
8	Ion channels and transporters in lymphocyte function and immunity. <i>Nature Reviews Immunology</i> , 2012, 12, 532-547.	22.7	364
9	Hypoxia Triggers AMPK Activation through Reactive Oxygen Species-Mediated Activation of Calcium Release-Activated Calcium Channels. <i>Molecular and Cellular Biology</i> , 2011, 31, 3531-3545.	2.3	329
10	Hair Loss and Defective T- and B-Cell Function in Mice Lacking ORAI1. <i>Molecular and Cellular Biology</i> , 2008, 28, 5209-5222.	2.3	275
11	Separation and Characterization of Currents through Store-operated CRAC Channels and Mg <sup>2+</sup> -inhibited Cation (MIC) Channels. <i>Journal of General Physiology</i> , 2002, 119, 487-508.	1.9	262
12	A severe defect in CRAC Ca <sup>2+</sup> channel activation and altered K <sup>+</sup> channel gating in T cells from immunodeficient patients. <i>Journal of Experimental Medicine</i> , 2005, 202, 651-662.	8.5	220
13	Gated regulation of CRAC channel ion selectivity by STIM1. <i>Nature</i> , 2012, 482, 241-245.	27.8	198
14	STIM1-Orai1 interactions and Orai1 conformational changes revealed by live-cell FRET microscopy. <i>Journal of Physiology</i> , 2008, 586, 5383-5401.	2.9	195
15	ORAI2 modulates store-operated calcium entry and T cell-mediated immunity. <i>Nature Communications</i> , 2017, 8, 14714.	12.8	158
16	Regulation of neurogenesis by calcium signaling. <i>Cell Calcium</i> , 2016, 59, 124-134.	2.4	157
17	CRAC channels: activation, permeation, and the search for a molecular identity. <i>Cell Calcium</i> , 2003, 33, 311-321.	2.4	154
18	Epac2 induces synapse remodeling and depression and its disease-associated forms alter spines. <i>Nature Neuroscience</i> , 2009, 12, 1275-1284.	14.8	148

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19	Structural determinants of ion permeation in CRAC channels. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22516-22521.	7.1	137
20	Regulation of CRAC Channel Activity by Recruitment of Silent Channels to a High Open-probability Gating Mode. Journal of General Physiology, 2006, 128, 373-386.	1.9	133
21	Store-Operated Ca <sup>2+</sup> Entry through ORAI1 Is Critical for T Cell-Mediated Autoimmunity and Allograft Rejection. Journal of Immunology, 2010, 185, 5845-5858.	0.8	133
22	Hypoxia Leads to Na,K-ATPase Downregulation via Ca <sup>2+</sup> Release-Activated Ca <sup>2+</sup> Channels and AMPK Activation. Molecular and Cellular Biology, 2011, 31, 3546-3556.	2.3	127
23	Store-Operated CRAC Channels Regulate Gene Expression and Proliferation in Neural Progenitor Cells. Journal of Neuroscience, 2014, 34, 9107-9123.	3.6	123
24	Orai1 Mutations Alter Ion Permeation and Ca <sup>2+</sup> -dependent Fast Inactivation of CRAC Channels: Evidence for Coupling of Permeation and Gating. Journal of General Physiology, 2007, 130, 525-540.	1.9	114
25	The molecular physiology of CRAC channels. Immunological Reviews, 2009, 231, 88-98.	6.0	111
26	The C <sup>2</sup> and N <sup>2</sup> terminal STIM1 binding sites on Orai1 are required for both trapping and gating CRAC channels. Journal of Physiology, 2013, 591, 2833-2850.	2.9	111
27	Selective Depression of Low <sup>Ca</sup> Release Probability Excitatory Synapses by Sodium Channel Blockers. Neuron, 2000, 26, 671-682.	8.1	100
28	Activation of GPCRs modulates quantal size in chromaffin cells through G <sub>i</sub> <sup>2</sup> and PKC. Nature Neuroscience, 2005, 8, 1160-1168.	14.8	97
29	BK Channel Activation by Brief Depolarizations Requires Ca <sup>2+</sup> Influx Through L- and Q-Type Ca <sup>2+</sup> Channels in Rat Chromaffin Cells. Journal of Neurophysiology, 1999, 81, 2267-2278.	1.8	94
30	STIM1 activates CRAC channels through rotation of the pore helix to open a hydrophobic gate. Nature Communications, 2017, 8, 14512.	12.8	87
31	Structural and Functional Mechanisms of CRAC Channel Regulation. Journal of Molecular Biology, 2015, 427, 77-93.	4.2	79
32	Molecular pharmacology of store-operated CRAC channels. Channels, 2013, 7, 402-414.	2.8	77
33	Metformin Targets Mitochondrial Electron Transport to Reduce Air-Pollution-Induced Thrombosis. Cell Metabolism, 2019, 29, 335-347.e5.	16.2	75
34	CRAC channels regulate astrocyte Ca <sup>2+</sup> signaling and gliotransmitter release to modulate hippocampal GABAergic transmission. Science Signaling, 2019, 12, .	3.6	68
35	Activation of BK Channels in Rat Chromaffin Cells Requires Summation of Ca <sup>2+</sup> Influx From Multiple Ca <sup>2+</sup> Channels. Journal of Neurophysiology, 2000, 84, 1123-1135.	1.8	66
36	Store-Operated Orai Channels. Current Topics in Membranes, 2013, 71, 1-32.	0.9	66

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37	[Ca <sup>2+</sup> ] <sub>i</sub> Elevations Detected by BK Channels during Ca <sup>2+</sup> Influx and Muscarine-Mediated Release of Ca <sup>2+</sup> from Intracellular Stores in Rat Chromaffin Cells. <i>Journal of Neuroscience</i> , 1996, 16, 4344-4359.	3.6	55
38	The calcium ATPase SERCA2 regulates desmoplakin dynamics and intercellular adhesive strength through modulation of PKC $\epsilon$ signaling. <i>FASEB Journal</i> , 2011, 25, 990-1001.	0.5	55
39	Molecular basis of allosteric Orai1 channel activation by STIM1. <i>Journal of Physiology</i> , 2020, 598, 1707-1723.	2.9	55
40	Missense mutation in immunodeficient patients shows the multifunctional roles of coiled-coil domain 3 (CC3) in STIM1 activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 6206-6211.	7.1	52
41	Mapping the functional anatomy of Orai1 transmembrane domains for CRAC channel gating. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E5193-E5202.	7.1	52
42	Permeation, selectivity and gating in store-operated CRAC channels. <i>Journal of Physiology</i> , 2012, 590, 4179-4191.	2.9	51
43	Enantioselective Blockade of T-type Ca <sup>2+</sup> Current in Adult Rat Sensory Neurons by a Steroid That Lacks $\beta$ -Aminobutyric Acid-Modulatory Activity. <i>Molecular Pharmacology</i> , 1998, 54, 918-927.	2.3	50
44	Competitive Modulation of Ca <sup>2+</sup> Release-activated Ca <sup>2+</sup> Channel Gating by STIM1 and 2-Aminoethyl-diphenyl Borate. <i>Journal of Biological Chemistry</i> , 2011, 286, 9429-9442.	3.4	50
45	Store-Operated Ca <sup>2+</sup> Release-Activated Ca <sup>2+</sup> Channels Regulate PAR2-Activated Ca <sup>2+</sup> Signaling and Cytokine Production in Airway Epithelial Cells. <i>Journal of Immunology</i> , 2015, 195, 2122-2133.	0.8	47
46	Allergens stimulate store-operated calcium entry and cytokine production in airway epithelial cells. <i>Scientific Reports</i> , 2016, 6, 32311.	3.3	44
47	Depletion of H <sub>2</sub> S during obesity enhances store-operated Ca <sup>2+</sup> entry in adipose tissue macrophages to increase cytokine production. <i>Science Signaling</i> , 2015, 8, ra128.	3.6	40
48	Conformational Changes in the Orai1 C-Terminus Evoked by STIM1 Binding. <i>PLoS ONE</i> , 2015, 10, e0128622.	2.5	38
49	Conformational dynamics of STIM1 activation. <i>Nature Structural and Molecular Biology</i> , 2013, 20, 918-919.	8.2	35
50	Pore opening mechanism of CRAC channels. <i>Cell Calcium</i> , 2017, 63, 14-19.	2.4	33
51	Divergence of Ca <sup>2+</sup> selectivity and equilibrium Ca <sup>2+</sup> blockade in a Ca <sup>2+</sup> release-activated Ca <sup>2+</sup> channel. <i>Journal of General Physiology</i> , 2014, 143, 325-343.	1.9	30
52	Orai1 Channels Are Essential for Amplification of Glutamate-Evoked Ca <sup>2+</sup> Signals in Dendritic Spines to Regulate Working and Associative Memory. <i>Cell Reports</i> , 2020, 33, 108464.	6.4	24
53	The basic residues in the Orai1 channel inner pore promote opening of the outer hydrophobic gate. <i>Journal of General Physiology</i> , 2020, 152, .	1.9	21
54	Cav $\beta$ 1 regulates T cell expansion and apoptosis independently of voltage-gated Ca <sup>2+</sup> channel function. <i>Nature Communications</i> , 2022, 13, 2033.	12.8	18

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55	A computerized grid walking system for evaluating the accuracy of locomotion in rats. <i>Journal of Neuroscience Methods</i> , 1993, 48, 15-25.	2.5	16
56	Calcium and cell function. <i>Journal of Physiology</i> , 2020, 598, 1647-1648.	2.9	14
57	Permeation and gating mechanisms in store-operated CRAC channels. <i>Frontiers in Bioscience - Landmark</i> , 2012, 17, 1613.	3.0	13
58	A sulfur-aromatic gate latch is essential for opening of the Orai1 channel pore. <i>ELife</i> , 2020, 9, .	6.0	13
59	Differential Regulation of ATP- and UTP-Evoked Prostaglandin E2 and IL-6 Production from Human Airway Epithelial Cells. <i>Journal of Immunology</i> , 2021, 207, 1275-1287.	0.8	12
60	Regulation of chemoconvulsant-induced seizures by store-operated Orai1 channels. <i>Journal of Physiology</i> , 2020, 598, 5391-5409.	2.9	9
61	The exquisitely cooperative nature of Orai1 channel activation. <i>Journal of General Physiology</i> , 2018, 150, 1352-1355.	1.9	8
62	Mapping interactions between the CRAC activation domain and CC1 regulating the activity of the ER Ca <sup>2+</sup> sensor STIM1. <i>Journal of Biological Chemistry</i> , 2022, 298, 102157.	3.4	8
63	Store-operated calcium channels: properties, functions and the search for a molecular mechanism. <i>Advances in Molecular and Cell Biology</i> , 2004, 32, 121-140.	0.1	7
64	Calcium release-activated calcium (CRAC) channels mediate the $Ca^{2+}$ -adrenergic regulation of Na,K-ATPase. <i>FEBS Letters</i> , 2014, 588, 4686-4693.	2.8	6
65	Preface. <i>Current Topics in Membranes</i> , 2013, 71, xi-xii.	0.9	3
66	MCU meets cardiolipin: Calcium and disease follow form. <i>Cell Calcium</i> , 2020, 92, 102287.	2.4	2
67	Orai1 is in neurons: Reply to "where have all the Orais gone?". <i>Cell Calcium</i> , 2021, 96, 102389.	2.4	2
68	Interrogating permeation and gating of Orai channels using chemical modification of cysteine residues. <i>Methods in Enzymology</i> , 2021, 652, 213-239.	1.0	1
69	An open pore structure of the Orai channel, finally. <i>Cell Calcium</i> , 2021, 94, 102366.	2.4	1
70	Distinct Functional Roles of the N- and C-Terminal STIM1 Binding Sites in Orai1 for Trapping and Gating of CRAC Channels. <i>Biophysical Journal</i> , 2013, 104, 101a.	0.5	0
71	16th FASEB Science Research Conference on Calcium and Cell Function: Calcium channels and signaling in health and disease. <i>Journal of General Physiology</i> , 2016, 148, 359-365.	1.9	0
72	Interactions between Transmembrane Helices in Orai1 Regulate CRAC Channel Gating. <i>Biophysical Journal</i> , 2017, 112, 537a-538a.	0.5	0

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73	Extracellular Nucleotides and Histamine Suppress TLR3- and RIG-I-mediated Release of Antiviral IFNs from Human Airway Epithelial Cells. <i>Journal of Immunology</i> , 2022, 208, 2390-2402.	0.8	0