

Lutz Birnbaumer

List of Publications by Year in descending order

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104
papers

5,002
citations

101384

36
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102304

66
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106
all docs

106
docs citations

106
times ranked

6130
citing authors

#	ARTICLE	IF	CITATIONS
1	Increased Vascular Smooth Muscle Contractility in TRPC6 ^{-/-} Mice. <i>Molecular and Cellular Biology</i> , 2005, 25, 6980-6989.	1.1	467
2	TRPC3 Channels Are Required for Synaptic Transmission and Motor Coordination. <i>Neuron</i> , 2008, 59, 392-398.	3.8	356
3	Quercetin alleviates acute kidney injury by inhibiting ferroptosis. <i>Journal of Advanced Research</i> , 2021, 28, 231-243.	4.4	279
4	Chronic stress promotes colitis by disturbing the gut microbiota and triggering immune system response. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E2960-E2969.	3.3	261
5	The TRPC Class of Ion Channels: A Critical Review of Their Roles in Slow, Sustained Increases in Intracellular Ca ²⁺ Concentrations. <i>Annual Review of Pharmacology and Toxicology</i> , 2009, 49, 395-426.	4.2	223
6	Pressure-induced and store-operated cation influx in vascular smooth muscle cells is independent of TRPC1. <i>Pflügers Archiv European Journal of Physiology</i> , 2007, 455, 465-477.	1.3	219
7	Innate Predator Odor Aversion Driven by Parallel Olfactory Subsystems that Converge in the Ventromedial Hypothalamus. <i>Current Biology</i> , 2015, 25, 1340-1346.	1.8	138
8	Expansion of signal transduction by G proteins. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 772-793.	1.4	134
9	Canonical Transient Receptor Channel 5 (TRPC5) and TRPC1/4 Contribute to Seizure and Excitotoxicity by Distinct Cellular Mechanisms. <i>Molecular Pharmacology</i> , 2013, 83, 429-438.	1.0	113
10	TRPV4, TRPC1, and TRPP2 assemble to form a flow-sensitive heteromeric channel. <i>FASEB Journal</i> , 2014, 28, 4677-4685.	0.2	104
11	TRPC6 is the endothelial calcium channel that regulates leukocyte transendothelial migration during the inflammatory response. <i>Journal of Experimental Medicine</i> , 2015, 212, 1883-1899.	4.2	96
12	A NOX4/TRPC6 Pathway in Podocyte Calcium Regulation and Renal Damage in Diabetic Kidney Disease. <i>Journal of the American Society of Nephrology: JASN</i> , 2018, 29, 1917-1927.	3.0	95
13	Melanopsin Phototransduction Is Repurposed by ipRGC Subtypes to Shape the Function of Distinct Visual Circuits. <i>Neuron</i> , 2018, 99, 754-767.e4.	3.8	88
14	Inhibition of TRPC6 channels ameliorates renal fibrosis and contributes to renal protection by soluble klotho. <i>Kidney International</i> , 2017, 91, 830-841.	2.6	84
15	Heteromeric Canonical Transient Receptor Potential 1 and 4 Channels Play a Critical Role in Epileptiform Burst Firing and Seizure-Induced Neurodegeneration. <i>Molecular Pharmacology</i> , 2012, 81, 384-392.	1.0	78
16	Inhibition of L-Type Ca ²⁺ Channels by TRPC1-STIM1 Complex Is Essential for the Protection of Dopaminergic Neurons. <i>Journal of Neuroscience</i> , 2017, 37, 3364-3377.	1.7	69
17	Soluble klotho binds monosialoganglioside to regulate membrane microdomains and growth factor signaling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 752-757.	3.3	68
18	TRPC6 Binds to and Activates Calpain, Independent of Its Channel Activity, and Regulates Podocyte Cytoskeleton, Cell Adhesion, and Motility. <i>Journal of the American Society of Nephrology: JASN</i> , 2019, 30, 1910-1924.	3.0	60

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19	GNAI1 and GNAI3 Reduce Colitis-Associated Tumorigenesis in Mice by Blocking IL6 Signaling and Down-regulating Expression of GNAI2. <i>Gastroenterology</i> , 2019, 156, 2297-2312.	0.6	59
20	Evidence of a Role for Fibroblast Transient Receptor Potential Canonical 3 Ca ²⁺ Channel in Renal Fibrosis. <i>Journal of the American Society of Nephrology: JASN</i> , 2015, 26, 1855-1876.	3.0	56
21	TRPC6 channel translocation into phagosomal membrane augments phagosomal function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E6486-95.	3.3	56
22	Reinvigorating exhausted CD8 ⁺ cytotoxic T lymphocytes in the tumor microenvironment and current strategies in cancer immunotherapy. <i>Medicinal Research Reviews</i> , 2021, 41, 156-201.	5.0	56
23	Intrinsic phototransduction persists in melanopsin-expressing ganglion cells lacking diacylglycerol-sensitive TRPC subunits. <i>European Journal of Neuroscience</i> , 2011, 33, 856-867.	1.2	55
24	Regional Heterogeneity of D2-Receptor Signaling in the Dorsal Striatum and Nucleus Accumbens. <i>Neuron</i> , 2018, 98, 575-587.e4.	3.8	52
25	TRPC3 channels critically regulate hippocampal excitability and contextual fear memory. <i>Behavioural Brain Research</i> , 2015, 281, 69-77.	1.2	51
26	Central role of G protein G α 2 and G α 2 ⁺ vomeronasal neurons in balancing territorial and infant-directed aggression of male mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 5135-5143.	3.3	51
27	Antidepressant action of BDNF requires and is mimicked by G α 1/3 expression in the hippocampus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E3549-E3558.	3.3	50
28	M1 Macrophage Polarization Is Dependent on TRPC1-Mediated Calcium Entry. <i>IScience</i> , 2018, 8, 85-102.	1.9	50
29	The discovery of signal transduction by G proteins. A personal account and an overview of the initial findings and contributions that led to our present understanding. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 756-771.	1.4	49
30	Metabolism Regulates the Spontaneous Firing of Substantia Nigra Pars Reticulata Neurons via K ⁺ ATP and Nonselective Cation Channels. <i>Journal of Neuroscience</i> , 2014, 34, 16336-16347.	1.7	49
31	Depression promotes prostate cancer invasion and metastasis via a sympathetic-cAMP-FAK signaling pathway. <i>Oncogene</i> , 2018, 37, 2953-2966.	2.6	49
32	G α o is a major determinant of cAMP signaling in the pathophysiology of movement disorders. <i>Cell Reports</i> , 2021, 34, 108718.	2.9	48
33	Membrane translocation of TRPC6 channels and endothelial migration are regulated by calmodulin and PI3 kinase activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 2110-2115.	3.3	42
34	G α 1 and G α 3 regulate macrophage polarization by forming a complex containing CD14 and Gab1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4731-4736.	3.3	39
35	Molecular Diversity and Function of G Proteins and Calcium Channels1. <i>Biology of Reproduction</i> , 1991, 44, 207-224.	1.2	38
36	Thymopentin ameliorates dextran sulfate sodium-induced colitis by triggering the production of IL-22 in both innate and adaptive lymphocytes. <i>Theranostics</i> , 2019, 9, 7490-7505.	4.6	38

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37	TRPC3/6/7 Knockdown Protects the Brain from Cerebral Ischemia Injury via Astrocyte Apoptosis Inhibition and Effects on NF- κ B Translocation. <i>Molecular Neurobiology</i> , 2017, 54, 7555-7566.	1.9	37
38	Platelet G α protein G_{i2} is an essential mediator of thrombo-inflammatory organ damage in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 6491-6496.	3.3	35
39	Store-operated interactions between plasmalemmal STIM1 and TRPC1 proteins stimulate PLC β 1 to induce TRPC1 channel activation in vascular smooth muscle cells. <i>Journal of Physiology</i> , 2017, 595, 1039-1058.	1.3	35
40	The RNA-Binding Protein, ZFP36L2, Influences Ovulation and Oocyte Maturation. <i>PLoS ONE</i> , 2014, 9, e97324.	1.1	35
41	The contribution of TRPC1, TRPC3, TRPC5 and TRPC6 to touch and hearing. <i>Neuroscience Letters</i> , 2016, 610, 36-42.	1.0	34
42	Insulin secretion stimulated by α -arginine and its metabolite α -ornithine depends on G_{i2} . <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2014, 307, E800-E812.	1.8	33
43	Critical role of canonical transient receptor potential channel 7 in initiation of seizures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 11533-11538.	3.3	32
44	The TRPM1 channel in ON-bipolar cells is gated by both the G_{i1} and the G_{i3} subunits of the G-protein G_o . <i>Scientific Reports</i> , 2016, 6, 20940.	1.6	30
45	TRPC proteins contribute to development of diabetic retinopathy and regulate glyoxalase 1 activity and methylglyoxal accumulation. <i>Molecular Metabolism</i> , 2018, 9, 156-167.	3.0	30
46	Increased size and cellularity of advanced atherosclerotic lesions in mice with endothelial overexpression of the human TRPC3 channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E2201-6.	3.3	29
47	Blunted apoptosis of erythrocytes in mice deficient in the heterotrimeric G-protein subunit G_{i2} . <i>Scientific Reports</i> , 2016, 6, 30925.	1.6	29
48	Evidence for constitutive bone morphogenetic protein-2 secretion by M1 macrophages: Constitutive auto/paracrine osteogenic signaling by BMP-2 in M1 macrophages. <i>Biochemical and Biophysical Research Communications</i> , 2017, 491, 154-158.	1.0	29
49	Reduced endoplasmic reticulum stress-induced apoptosis and impaired unfolded protein response in TRPC3-deficient M1 macrophages. <i>American Journal of Physiology - Cell Physiology</i> , 2014, 307, C521-C531.	2.1	28
50	Lipid-independent control of endothelial and neuronal TRPC3 channels by light. <i>Chemical Science</i> , 2019, 10, 2837-2842.	3.7	28
51	Transient Receptor Potential Canonical 3 (TRPC3) Channels Are Required for Hypothalamic Glucose Detection and Energy Homeostasis. <i>Diabetes</i> , 2017, 66, 314-324.	0.3	27
52	TRPC6 regulates phenotypic switching of vascular smooth muscle cells through plasma membrane potential-dependent coupling with PTEN. <i>FASEB Journal</i> , 2019, 33, 9785-9796.	0.2	27
53	Transient Receptor Potential Canonical Type 3 Channels Control the Vascular Contractility of Mouse Mesenteric Arteries. <i>PLoS ONE</i> , 2014, 9, e110413.	1.1	26
54	Store depletion induces G_{i2} -mediated PLC β 1 activity to stimulate TRPC1 channels in vascular smooth muscle cells. <i>FASEB Journal</i> , 2016, 30, 702-715.	0.2	25

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55	GÎ±1 Proteins are Indispensable for Hearing. Cellular Physiology and Biochemistry, 2018, 47, 1509-1532.	1.1	25
56	<sc>TRPC</sc>3 channels play a critical role in the theta component of pilocarpine-induced status epilepticus in mice. Epilepsia, 2017, 58, 247-254.	2.6	24
57	T<sc>RPC</sc>1 and <sc>TRPC</sc>3-dependent <sc>C</sc>a²⁺ signaling in mouse cortical astrocytes affects injury-evoked astrogliosis <i>in vivo</i>. Glia, 2017, 65, 1535-1549.	2.5	24
58	GÎ±2- and GÎ±3-Deficient Mice Display Opposite Severity of Myocardial Ischemia Reperfusion Injury. PLoS ONE, 2014, 9, e98325.	1.1	24
59	Simultaneous deletion of floxed genes mediated by CaMKIIÎ±-Cre in the brain and in male germ cells: application to conditional and conventional disruption of GoÎ±. Experimental and Molecular Medicine, 2014, 46, e93-e93.	3.2	23
60	From GTP and G proteins to TRPC channels: a personal account. Journal of Molecular Medicine, 2015, 93, 941-953.	1.7	22
61	Development of the main olfactory system and main olfactory epithelium-dependent male mating behavior are altered in G _o-deficient mice. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10974-10979.	3.3	22
62	Evidence for a regulated Ca2+ entry in proximal tubular cells and its implication in calcium stone formation. Journal of Cell Science, 2019, 132, .	1.2	22
63	Reduced Necrosis and Content of Apoptotic M1 Macrophages in Advanced Atherosclerotic Plaques of Mice With Macrophage-Specific Loss of Trpc3. Scientific Reports, 2017, 7, 42526.	1.6	20
64	Reduced calcification and osteogenic features in advanced atherosclerotic plaques of mice with macrophage-specific loss of TRPC3. Atherosclerosis, 2018, 270, 199-204.	0.4	20
65	Increased glomerular filtration rate and impaired contractile function of mesangial cells in TRPC6 knockout mice. Scientific Reports, 2017, 7, 4145.	1.6	19
66	Evidence that Orail does not contribute to store-operated TRPC1 channels in vascular smooth muscle cells. Channels, 2017, 11, 329-339.	1.5	18
67	Hepatic interferon regulatory factor 8 expression suppresses hepatocellular carcinoma progression and enhances the response to anti-“programmed cell death protein-1 therapy. Hepatology, 2022, 76, 1602-1616.	3.6	18
68	An essential role for GÎ± _{i2} in Smoothed-stimulated epithelial cell proliferation in the mammary gland. Science Signaling, 2015, 8, ra92.	1.6	17
69	Integration of TRPC6 and NADPH oxidase activation in lysophosphatidylcholine-induced TRPC5 externalization. American Journal of Physiology - Cell Physiology, 2017, 313, C541-C555.	2.1	17
70	GPCR-dependent biasing of GIRK channel signaling dynamics by RGS6 in mouse sinoatrial nodal cells. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14522-14531.	3.3	17
71	Analysis of Mrgprb2 Receptor-Evoked Ca2+ Signaling in Bone Marrow Derived (BMMC) and Peritoneal (PMC) Mast Cells of TRPC-Deficient Mice. Frontiers in Immunology, 2020, 11, 564.	2.2	17
72	TRPC3 and NALCN channels drive pacemaking in substantia nigra dopaminergic neurons. ELife, 2021, 10, .	2.8	17

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73	On the roles of Mg in the activation of G proteins. <i>Journal of Receptor and Signal Transduction Research</i> , 2010, 30, 372-375.	1.3	16
74	TRPC3 determines osmosensitive $[Ca^{2+}]_i$ signaling in the collecting duct and contributes to urinary concentration. <i>PLoS ONE</i> , 2019, 14, e0226381.	1.1	16
75	Resistance to pathologic cardiac hypertrophy and reduced expression of CaV1.2 in <i>Trpc3</i> -depleted mice. <i>Molecular and Cellular Biochemistry</i> , 2016, 421, 55-65.	1.4	15
76	Sensory Detection by the Vomeronasal Organ Modulates Experience-Dependent Social Behaviors in Female Mice. <i>Frontiers in Cellular Neuroscience</i> , 2021, 15, 638800.	1.8	14
77	Insulin-activated store-operated Ca^{2+} entry via <i>Orai1</i> induces podocyte actin remodeling and causes proteinuria. <i>Nature Communications</i> , 2021, 12, 6537.	5.8	14
78	Ca^{2+} vomeronasal neurons govern the initial outcome of an acute social competition. <i>Scientific Reports</i> , 2020, 10, 894.	1.6	13
79	Deletion of diacylglycerol-responsive TRPC genes attenuates diabetic nephropathy by inhibiting activation of the $TGF\beta^2$ signaling pathway. <i>American Journal of Translational Research (discontinued)</i> , 2017, 9, 5619-5630.	0.0	13
80	Neutrophil Cytochrome B598 Suppressing Tumor Metastasis via Inhibiting Hypoxia-Inducible Factor-1 α in Circulating Breast Cancer Cells. <i>Advanced Healthcare Materials</i> , 2022, 11, e2101761.	3.9	13
81	Murine cardiac growth, TRPC channels, and cGMP kinase I. <i>Pflugers Archiv European Journal of Physiology</i> , 2015, 467, 2229-2234.	1.3	12
82	Differential effects of inhibitory G protein isoforms on G protein-gated inwardly rectifying K^{+} currents in adult murine atria. <i>American Journal of Physiology - Cell Physiology</i> , 2018, 314, C616-C626.	2.1	12
83	Heteromeric TRPV4/TRPC1 channels mediate calcium-sensing receptor-induced relaxations and nitric oxide production in mesenteric arteries: comparative study using wild-type and <i>TRPC1</i> ^{-/-} mice. <i>Channels</i> , 2019, 13, 410-423.	1.5	12
84	TRPC channels are not required for graded persistent activity in entorhinal cortex neurons. <i>Hippocampus</i> , 2019, 29, 1038-1048.	0.9	12
85	Transient Receptor Potential Canonical 3 and Nuclear Factor of Activated T Cells C3 Signaling Pathway Critically Regulates Myocardial Fibrosis. <i>Antioxidants and Redox Signaling</i> , 2019, 30, 1851-1879.	2.5	12
86	Implication of TRPC3 channel in gustatory perception of dietary lipids. <i>Acta Physiologica</i> , 2021, 231, e13554.	1.8	12
87	Deletion of the β subunit of the heterotrimeric G α protein impairs cerebellar cortical development in mice. <i>Molecular Brain</i> , 2019, 12, 57.	1.3	11
88	RNA-seq analysis reveals TRPC genes to impact an unexpected number of metabolic and regulatory pathways. <i>Scientific Reports</i> , 2020, 10, 7227.	1.6	11
89	Ca^{2+} entry via TRPC1 is essential for cellular differentiation and modulates secretion via the SNARE complex. <i>Journal of Cell Science</i> , 2019, 132, .	1.2	10
90	Lack of Ca^{2+} proteins in adipocytes attenuates diet-induced obesity. <i>Molecular Metabolism</i> , 2020, 40, 101029.	3.0	10

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91	The Retinal Basis of Light Aversion in Neonatal Mice. <i>Journal of Neuroscience</i> , 2022, 42, 4101-4115.	1.7	10
92	Deep Transcriptomic Profiling of M1 Macrophages Lacking Trpc3. <i>Scientific Reports</i> , 2017, 7, 39867.	1.6	8
93	TRPC4 and GIRK channels underlie neuronal coding of firing patterns that reflect G _{q/11} -G _{i/o} coincidence signals of variable strengths. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2120870119.	3.3	7
94	Heterotrimeric G-protein subunit G _{i2} contributes to agonist-sensitive apoptosis and degranulation in murine platelets. <i>Physiological Reports</i> , 2018, 6, e13841.	0.7	5
95	The role of G _O -mediated signaling in the rostral ventrolateral medulla oblongata in cardiovascular reflexes and control of cardiac ventricular excitability. <i>Physiological Reports</i> , 2016, 4, e12860.	0.7	4
96	Balance of Go ₁ and Go ₂ expression regulates motor function via the striatal dopaminergic system. <i>Journal of Neurochemistry</i> , 2018, 146, 374-389.	2.1	1
97	Canonical transient receptor potential 6 channel deficiency promotes smooth muscle cells dedifferentiation and increased proliferation after arterial injury. <i>JVS Vascular Science</i> , 2020, 1, 136-150.	0.4	1
98	Antagonism between G _{i2} and G _{i3} in CXCR3-mediated signaling. <i>FASEB Journal</i> , 2006, 20, LB77.	0.2	1
99	Endothelial TRPC1 and TRPC3 channels contribute to ATP-mediated relaxation in mouse cerebral arteries. <i>FASEB Journal</i> , 2011, 25, 1024.8.	0.2	1
100	TRPC6 and TRPC1 functionally interact to mediate Ca ₂₊ entry in endothelial cells to induce lung vascular permeability. <i>FASEB Journal</i> , 2010, 24, 598.16.	0.2	0
101	Role of TRPC1 and TRPC3 channels in constriction and relaxation of mouse thoracic aorta. <i>FASEB Journal</i> , 2012, 26, 853.6.	0.2	0
102	Sustained ATP-mediated vasodilation of cerebral arteries requires Ca ₂₊ influx via TRPC3 channels to produce endothelial SKCa channel activation and hyperpolarization. <i>FASEB Journal</i> , 2013, 27, 925.4.	0.2	0
103	Acute effects of angiotensin II on calcium influx in the podocytes of the freshly isolated glomeruli of the wild type and TRPC6-deficient mice (892.1). <i>FASEB Journal</i> , 2014, 28, 892.1.	0.2	0
104	Deletion of transient receptor potential canonical channel 1 prevents pulmonary vascular hyperpermeability and edema formation secondary to cAMP activation of SPHK1 (847.4). <i>FASEB Journal</i> , 2014, 28, 847.4.	0.2	0