Marc Freichel

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

 115
 6,052
 47
 76

 papers
 citations
 h-index
 g-index

 125
 6,896
 8.7
 5.15

 ext. papers
 ext. citations
 avg, IF
 L-index

#	Paper	IF	Citations
115	Novel Nongenetic Murine Model of Hyperglycemia and Hyperlipidemia-Associated Aggravated Atherosclerosis <i>Frontiers in Cardiovascular Medicine</i> , 2022 , 9, 813215	5.4	1
114	Boosting targeted genome editing using the hei-tag ELife, 2022, 11,	8.9	2
113	Emergent Temporal Signaling in Human Trabecular Meshwork Cells: Role of TRPV4-TRPM4 Interactions <i>Frontiers in Immunology</i> , 2022 , 13, 805076	8.4	2
112	Deep Metabolic Profiling Assessment of Tissue Extraction Protocols for Three Model Organisms <i>Frontiers in Chemistry</i> , 2022 , 10, 869732	5	O
111	Activity of Glyoxylase 1 is regulated by a glucose-responsive phosphorylation on Tyr136. <i>Molecular Metabolism</i> , 2021 , 101406	8.8	
110	Trophectoderm cell failure leads to peri-implantation lethality in Trpm7-deficient mouse embryos. <i>Cell Reports</i> , 2021 , 37, 109851	10.6	О
109	Odontoblast TRPC5 channels signal cold pain in teeth. <i>Science Advances</i> , 2021 , 7,	14.3	12
108	Transcriptional signatures regulated by TRPC1/C4-mediated Background Ca entry after pressure-overload induced cardiac remodelling. <i>Progress in Biophysics and Molecular Biology</i> , 2021 , 159, 86-104	4.7	0
107	Development of an AAV9-RNAi-mediated silencing strategy to abrogate TRPM4 expression in the adult heart. <i>Pflugers Archiv European Journal of Physiology</i> , 2021 , 473, 533-546	4.6	2
106	Enhancing mitochondrial activity in neurons protects against neurodegeneration in a mouse model of multiple sclerosis. <i>ELife</i> , 2021 , 10,	8.9	4
105	L-type blocker STIMulate Ca entry in synthetic VSMCs. <i>Cell Calcium</i> , 2020 , 91, 102279	4	
104	Cardiomyocyte-Specific Deletion of Orai1 Reveals Its Protective Role in Angiotensin-II-Induced Pathological Cardiac Remodeling. <i>Cells</i> , 2020 , 9,	7.9	7
103	TRPC1/4/5 channels contribute to morphine-induced analgesic tolerance and hyperalgesia by enhancing spinal synaptic potentiation and structural plasticity. <i>FASEB Journal</i> , 2020 , 34, 8526-8543	0.9	5
102	Cyclic regulation of Trpm4 expression in female vomeronasal neurons driven by ovarian sex hormones. <i>Molecular and Cellular Neurosciences</i> , 2020 , 105, 103495	4.8	5
101	Contribution of NAADP to Glutamate-Evoked Changes in Ca Homeostasis in Mouse Hippocampal Neurons. <i>Frontiers in Cell and Developmental Biology</i> , 2020 , 8, 496	5.7	7
100	Saraf-dependent activation of mTORC1 regulates cardiac growth. <i>Journal of Molecular and Cellular Cardiology</i> , 2020 , 141, 30-42	5.8	6
99	TRPM4 Modulates Right Ventricular Remodeling Under Pressure Load Accompanied With Decreased Expression Level. <i>Journal of Cardiac Failure</i> , 2020 , 26, 599-609	3.3	6

(2018-2020)

98	Angiotensin-II-Evoked Ca Entry in Murine Cardiac Fibroblasts Does Not Depend on TRPC Channels. <i>Cells</i> , 2020 , 9,	7.9	4	
97	RNA-seq analysis reveals TRPC genes to impact an unexpected number of metabolic and regulatory pathways. <i>Scientific Reports</i> , 2020 , 10, 7227	4.9	4	
96	Variants That Affect Function of Calcium Channel TRPV6 Are Associated With Early-Onset Chronic Pancreatitis. <i>Gastroenterology</i> , 2020 , 158, 1626-1641.e8	13.3	32	
95	TRPV4-Mediated Regulation of the Blood Brain Barrier Is Abolished During Inflammation. <i>Frontiers in Cell and Developmental Biology</i> , 2020 , 8, 849	5.7	3	
94	TPC1 deficiency or blockade augments systemic anaphylaxis and mast cell activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 18068-18078	11.5	17	
93	A Global Cndp1-Knock-Out Selectively Increases Renal Carnosine and Anserine Concentrations in an Age- and Gender-Specific Manner in Mice. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	2	
92	Genetic background influences expression and function of the cation channel TRPM4 in the mouse heart. <i>Basic Research in Cardiology</i> , 2020 , 115, 70	11.8	4	
91	Analysis of Mrgprb2 Receptor-Evoked Ca Signaling in Bone Marrow Derived (BMMC) and Peritoneal (PMC) Mast Cells of TRPC-Deficient Mice. <i>Frontiers in Immunology</i> , 2020 , 11, 564	8.4	7	
90	Contribution of TRPC Channels in Neuronal Excitotoxicity Associated With Neurodegenerative Disease and Ischemic Stroke. <i>Frontiers in Cell and Developmental Biology</i> , 2020 , 8, 618663	5.7	1	
89	TRPC channels regulate Ca2+-signaling and short-term plasticity of fast glutamatergic synapses. <i>PLoS Biology</i> , 2019 , 17, e3000445	9.7	12	
88	Lipid-independent control of endothelial and neuronal TRPC3 channels by light. <i>Chemical Science</i> , 2019 , 10, 2837-2842	9.4	14	
87	TRPC channels are not required for graded persistent activity in entorhinal cortex neurons. <i>Hippocampus</i> , 2019 , 29, 1038-1048	3.5	5	
86	Regulation of the pleiotropic effects of tissue-resident mast cells. <i>Journal of Allergy and Clinical Immunology</i> , 2019 , 144, S31-S45	11.5	29	
85	Trpc5 deficiency causes hypoprolactinemia and altered function of oscillatory dopamine neurons in the arcuate nucleus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 15236-15243	11.5	11	
84	Assessment of PEEP-Ventilation and the Time Point of Parallel-Conductance Determination for Pressure-Volume Analysis Under I-Adrenergic Stimulation in Mice. <i>Frontiers in Cardiovascular Medicine</i> , 2019 , 6, 36	5.4	2	
83	Maternal Transient Receptor Potential Vanilloid 6 (Trpv6) Is Involved In Offspring Bone Development. <i>Journal of Bone and Mineral Research</i> , 2019 , 34, 699-710	6.3	13	
82	Methylglyoxal evokes acute Ca transients in distinct cell types and increases agonist-evoked Ca entry in endothelial cells via CRAC channels. <i>Cell Calcium</i> , 2019 , 78, 66-75	4	10	
81	TRPC proteins contribute to development of diabetic retinopathy and regulate glyoxalase 1 activity and methylglyoxal accumulation. <i>Molecular Metabolism</i> , 2018 , 9, 156-167	8.8	18	

80	Deletion of Orai2 augments endogenous CRAC currents and degranulation in mast cells leading to enhanced anaphylaxis. <i>Cell Calcium</i> , 2018 , 71, 24-33	4	24
79	Isolation of Peritoneum-derived Mast Cells and Their Functional Characterization with Ca2+-imaging and Degranulation Assays. <i>Journal of Visualized Experiments</i> , 2018 ,	1.6	3
78	A proteolytic fragment of histone deacetylase 4 protects the heart from failure by regulating the hexosamine biosynthetic pathway. <i>Nature Medicine</i> , 2018 , 24, 62-72	50.5	59
77	TRPC4/TRPC5 channels mediate adverse reaction to the cancer cell cytotoxic agent (-)-Englerin A. <i>Oncotarget</i> , 2018 , 9, 29634-29643	3.3	17
76	Compensatory mechanisms for methylglyoxal detoxification in experimental & clinical diabetes. <i>Molecular Metabolism</i> , 2018 , 18, 143-152	8.8	28
75	Loss of Glyoxalase 1 Induces Compensatory Mechanism to Achieve Dicarbonyl Detoxification in Mammalian Schwann Cells. <i>Journal of Biological Chemistry</i> , 2017 , 292, 3224-3238	5.4	48
74	Functional Characterization of Transient Receptor Potential (TRP) Channel C5 in Female Murine Gonadotropes. <i>Endocrinology</i> , 2017 , 158, 887-902	4.8	11
73	9-Phenanthrol enhances the generation of an CD8 T cell response following transcutaneous immunization with imiquimod in mice. <i>Journal of Dermatological Science</i> , 2017 , 87, 260-267	4.3	3
72	Heteromeric channels formed by TRPC1, TRPC4 and TRPC5 define hippocampal synaptic transmission and working memory. <i>EMBO Journal</i> , 2017 , 36, 2770-2789	13	72
71	Does Erythropoietin Regulate TRPC Channels in Red Blood Cells?. <i>Cellular Physiology and Biochemistry</i> , 2017 , 41, 1219-1228	3.9	12
70	Dicarbonyls and Advanced Glycation End-Products in the Development of Diabetic Complications and Targets for Intervention. <i>International Journal of Molecular Sciences</i> , 2017 , 18,	6.3	104
69	The Sur1-Trpm4 channel regulates NOS2 transcription in TLR4-activated microglia. <i>Journal of Neuroinflammation</i> , 2016 , 13, 130	10.1	49
68	TRPM4-mediated control of FcRI-evoked Ca(2+) elevation comprises enhanced plasmalemmal trafficking of TRPM4 channels in connective tissue type mast cells. <i>Scientific Reports</i> , 2016 , 6, 32981	4.9	9
67	The Gq signalling pathway inhibits brown and beige adipose tissue. <i>Nature Communications</i> , 2016 , 7, 10895	17.4	73
66	TRPM4-dependent post-synaptic depolarization is essential for the induction of NMDA receptor-dependent LTP in CA1 hippocampal neurons. <i>Pflugers Archiv European Journal of Physiology</i> , 2016 , 468, 593-607	4.6	23
65	Novel Endothelial Cell-Specific AQP1 Knockout Mice Confirm the Crucial Role of Endothelial AQP1 in Ultrafiltration during Peritoneal Dialysis. <i>PLoS ONE</i> , 2016 , 11, e0145513	3.7	12
64	The Ca(2+)-activated cation channel TRPM4 is a negative regulator of angiotensin II-induced cardiac hypertrophy. <i>Basic Research in Cardiology</i> , 2015 , 110, 43	11.8	40
63	Essential roles for Cav ^[2] and Cav1 channels in thymocyte development and T cell homeostasis. <i>Science Signaling</i> , 2015 , 8, ra103	8.8	14

(2012-2015)

62	Contractility Measurements on Isolated Papillary Muscles for the Investigation of Cardiac Inotropy in Mice. <i>Journal of Visualized Experiments</i> , 2015 ,	1.6	8
61	A background Ca2+ entry pathway mediated by TRPC1/TRPC4 is critical for development of pathological cardiac remodelling. <i>European Heart Journal</i> , 2015 , 36, 2257-66	9.5	73
60	Increased 🖟 adrenergic inotropy in ventricular myocardium from Trpm4-/- mice. <i>Circulation Research</i> , 2014 , 114, 283-94	15.7	54
59	Adenylyl cyclase-mediated effects contribute to increased Isoprenaline-induced cardiac contractility in TRPM4-deficient mice. <i>Journal of Molecular and Cellular Cardiology</i> , 2014 , 74, 307-17	5.8	12
58	Dual depolarization responses generated within the same lateral septal neurons by TRPC4-containing channels. <i>Pflugers Archiv European Journal of Physiology</i> , 2014 , 466, 1301-16	4.6	16
57	Increase in cytosolic Ca2+ produced by hypoxia and other depolarizing stimuli activates a non-selective cation channel in chemoreceptor cells of rat carotid body. <i>Journal of Physiology</i> , 2014 , 592, 1975-92	3.9	22
56	TRPC4- and TRPC4-containing channels. Handbook of Experimental Pharmacology, 2014, 222, 85-128	3.2	34
55	Canonical transient receptor channel 5 (TRPC5) and TRPC1/4 contribute to seizure and excitotoxicity by distinct cellular mechanisms. <i>Molecular Pharmacology</i> , 2013 , 83, 429-38	4.3	92
54	Synaptobrevin2 is the v-SNARE required for cytotoxic T-lymphocyte lytic granule fusion. <i>Nature Communications</i> , 2013 , 4, 1439	17.4	49
53	The role of cGMP/cGKI signalling and Trpc channels in regulation of vascular tone. <i>Cardiovascular Research</i> , 2013 , 100, 280-7	9.9	19
52	Transient receptor potential channels function as a coincidence signal detector mediating phosphatidylserine exposure. <i>Science Signaling</i> , 2013 , 6, ra50	8.8	58
51	Crucial role of TRPC1 and TRPC4 in cystitis-induced neuronal sprouting and bladder overactivity. <i>PLoS ONE</i> , 2013 , 8, e69550	3.7	18
50	The transient receptor potential channel TRPV6 is dynamically expressed in bone cells but is not crucial for bone mineralization in mice. <i>Journal of Cellular Physiology</i> , 2012 , 227, 1951-9	7	33
49	Mechanism of stretch-induced activation of the mechanotransducer zyxin in vascular cells. <i>Science Signaling</i> , 2012 , 5, ra91	8.8	39
48	Activation of TRPC6 channels is essential for lung ischaemia-reperfusion induced oedema in mice. <i>Nature Communications</i> , 2012 , 3, 649	17.4	137
47	Lung endothelial Ca2+ and permeability response to platelet-activating factor is mediated by acid sphingomyelinase and transient receptor potential classical 6. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2012 , 185, 160-70	10.2	66
46	TRPM4 cation channel mediates axonal and neuronal degeneration in experimental autoimmune encephalomyelitis and multiple sclerosis. <i>Nature Medicine</i> , 2012 , 18, 1805-11	50.5	140
45	Functional TRPV6 channels are crucial for transepithelial Ca2+ absorption. <i>American Journal of Physiology - Renal Physiology</i> , 2012 , 303, G879-85	5.1	49

44	TRPC3 and TRPC6 are essential for normal mechanotransduction in subsets of sensory neurons and cochlear hair cells. <i>Open Biology</i> , 2012 , 2, 120068	7	106
43	Excision of Trpv6 gene leads to severe defects in epididymal Ca2+ absorption and male fertility much like single D541A pore mutation. <i>Journal of Biological Chemistry</i> , 2012 , 287, 17930-41	5.4	47
42	NMDA receptor-dependent synaptic activation of TRPC channels in olfactory bulb granule cells. <i>Journal of Neuroscience</i> , 2012 , 32, 5737-46	6.6	51
41	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, 384-92	4.3	63
40	The Role of TRP Proteins in Mast Cells. Frontiers in Immunology, 2012, 3, 150	8.4	51
39	The Ca(2+) sensor stromal interaction molecule 1 (STIM1) is necessary and sufficient for the store-operated Ca(2+) entry function of transient receptor potential canonical (TRPC) 1 and 4 channels in endothelial cells. <i>Molecular Pharmacology</i> , 2012 , 81, 510-26	4.3	106
38	Male fertility depends on Call+ absorption by TRPV6 in epididymal epithelia. <i>Science Signaling</i> , 2011 , 4, ra27	8.8	76
37	A cardiac pathway of cyclic GMP-independent signaling of guanylyl cyclase A, the receptor for atrial natriuretic peptide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 18500-5	11.5	40
36	Heart rate contributes to the vascular effects of chronic mental stress: effects on endothelial function and ischemic brain injury in mice. <i>Stroke</i> , 2011 , 42, 1742-9	6.7	60
35	Moderate calcium channel dysfunction in adult mice with inducible cardiomyocyte-specific excision of the cacnb2 gene. <i>Journal of Biological Chemistry</i> , 2011 , 286, 15875-82	5.4	44
34	Novel insights into the mechanisms mediating the local antihypertrophic effects of cardiac atrial natriuretic peptide: role of cGMP-dependent protein kinase and RGS2. <i>Basic Research in Cardiology</i> , 2010 , 105, 583-95	11.8	60
33	Increased catecholamine secretion contributes to hypertension in TRPM4-deficient mice. <i>Journal of Clinical Investigation</i> , 2010 , 120, 3267-79	15.9	106
32	Diversity and developmental expression of L-type calcium channel beta2 proteins and their influence on calcium current in murine heart. <i>Journal of Biological Chemistry</i> , 2009 , 284, 30129-37	5.4	42
31	Ca2+ entry via TRPC channels is necessary for thrombin-induced NF-kappaB activation in endothelial cells through AMP-activated protein kinase and protein kinase Cdelta. <i>Journal of Biological Chemistry</i> , 2009 , 284, 563-574	5.4	60
30	TRPM4 regulates migration of mast cells in mice. Cell Calcium, 2009, 45, 226-32	4	81
29	Defective survival of naive CD8+ T lymphocytes in the absence of the beta3 regulatory subunit of voltage-gated calcium channels. <i>Nature Immunology</i> , 2009 , 10, 1275-82	19.1	50
28	De novo expression of Trpm4 initiates secondary hemorrhage in spinal cord injury. <i>Nature Medicine</i> , 2009 , 15, 185-91	50.5	163
27	Deletion of TRPC4 and TRPC6 in mice impairs smooth muscle contraction and intestinal motility in vivo. <i>Gastroenterology</i> , 2009 , 137, 1415-24	13.3	134

(2003-2009)

26	Ba2+ currents in inner and outer hair cells of mice lacking the voltage-dependent Ca2+ channel subunits beta3 or beta4. <i>Channels</i> , 2009 , 3, 366-76	3	11
25	TRPC3 channels are required for synaptic transmission and motor coordination. <i>Neuron</i> , 2008 , 59, 392-	8 13.9	314
24	Isoform-specific inhibition of TRPC4 channel by phosphatidylinositol 4,5-bisphosphate. <i>Journal of Biological Chemistry</i> , 2008 , 283, 10026-36	5.4	136
23	TRPC4 and TRPC4-Deficient Mice. Novartis Foundation Symposium, 2008, 189-203		16
22	Increased IgE-dependent mast cell activation and anaphylactic responses in mice lacking the calcium-activated nonselective cation channel TRPM4. <i>Nature Immunology</i> , 2007 , 8, 312-20	19.1	212
21	Ca2+ channel currents and contraction in CaVbeta3-deficient ileum smooth muscle from mouse. <i>Cell Calcium</i> , 2007 , 42, 477-87	4	8
20	Murine ORAI2 splice variants form functional Ca2+ release-activated Ca2+ (CRAC) channels. <i>Journal of Biological Chemistry</i> , 2007 , 282, 19375-84	5.4	79
19	The auxiliary subunit gamma 1 of the skeletal muscle L-type Ca2+ channel is an endogenous Ca2+ antagonist. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 17885-90	11.5	29
18	Reduced cardiac L-type Ca2+ current in Ca(V)beta2-/- embryos impairs cardiac development and contraction with secondary defects in vascular maturation. <i>Circulation Research</i> , 2006 , 99, 749-57	15.7	84
17	Critical role for the beta regulatory subunits of Cav channels in T lymphocyte function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 15529-34	11.5	89
16	Functional role of TRPC proteins in native systems: implications from knockout and knock-down studies. <i>Journal of Physiology</i> , 2005 , 567, 59-66	3.9	74
15	Specific detection and semi-quantitative analysis of TRPC4 protein expression by antibodies. <i>Pflugers Archiv European Journal of Physiology</i> , 2005 , 451, 81-6	4.6	30
14	Modulation of Ca2+ signaling by Na+/Ca2+ exchangers in mast cells. <i>Journal of Immunology</i> , 2005 , 174, 119-30	5.3	51
13	Altered inactivation of Ca2+ current and Ca2+ release in mouse muscle fibers deficient in the DHP receptor gamma1 subunit. <i>Journal of General Physiology</i> , 2004 , 124, 605-18	3.4	27
12	Removal of Ca2+ channel beta3 subunit enhances Ca2+ oscillation frequency and insulin exocytosis. <i>Cell</i> , 2004 , 119, 273-84	56.2	100
11	The TRPV6 gene, cDNA and protein. <i>Cell Calcium</i> , 2003 , 33, 509-18	4	66
10	Contribution of transient receptor potential channels to the control of GABA release from dendrites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 16065-70	11.5	97
9	Voltage dependence of the Ca2+-activated cation channel TRPM4. <i>Journal of Biological Chemistry</i> , 2003 , 278, 30813-20	5.4	255

8	Pain perception in mice lacking the beta3 subunit of voltage-activated calcium channels. <i>Journal of Biological Chemistry</i> , 2002 , 277, 40342-51	5.4	57
7	Impairment of store-operated Ca2+ entry in TRPC4(-/-) mice interferes with increase in lung microvascular permeability. <i>Circulation Research</i> , 2002 , 91, 70-6	15.7	325
6	Functional interaction between TRP4 and CFTR in mouse aorta endothelial cells. <i>BMC Physiology</i> , 2001 , 1, 3	О	17
5	Lack of an endothelial store-operated Ca2+ current impairs agonist-dependent vasorelaxation in TRP4-/- mice. <i>Nature Cell Biology</i> , 2001 , 3, 121-7	23.4	492
4	Paradoxical block of parathormone secretion is mediated by increased activity of G alpha subunits. Journal of Biological Chemistry, 2001 , 276, 6763-9	5.4	69
3	Modulation of recombinant transient-receptor-potential-like (TRPL) channels by cytosolic Ca2+. <i>Pflugers Archiv European Journal of Physiology</i> , 2000 , 440, 409-17	4.6	11
2	Trp12, a novel Trp related protein from kidney. FEBS Letters, 2000, 485, 127-34	3.8	243
1	Store-operated cation channels in the heart and cells of the cardiovascular system. <i>Cellular Physiology and Biochemistry</i> , 1999 , 9, 270-83	3.9	53