

Rudi Vennekens

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101
papers

7,051
citations

46
h-index

83
g-index

122
ext. papers

7,945
ext. citations

7.2
avg, IF

5.42
L-index

#	Paper	IF	Citations
101	TRPA1 acts as a cold sensor in vitro and in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 1273-8	11.5	442
100	TRPM3 is a nociceptor channel involved in the detection of noxious heat. <i>Neuron</i> , 2011 , 70, 482-94	13.9	352
99	Inhibition of the cation channel TRPV4 improves bladder function in mice and rats with cyclophosphamide-induced cystitis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 19084-9	11.5	298
98	Voltage dependence of the Ca ²⁺ -activated cation channel TRPM4. <i>Journal of Biological Chemistry</i> , 2003 , 278, 30813-20	5.4	255
97	Permeation and gating properties of the novel epithelial Ca(2+) channel. <i>Journal of Biological Chemistry</i> , 2000 , 275, 3963-9	5.4	255
96	The Ca ²⁺ -activated cation channel TRPM4 is regulated by phosphatidylinositol 4,5-biphosphate. <i>EMBO Journal</i> , 2006 , 25, 467-78	13	235
95	TRPV4-mediated calcium influx regulates terminal differentiation of osteoclasts. <i>Cell Metabolism</i> , 2008 , 8, 257-65	24.6	222
94	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
93	A TRP channel trio mediates acute noxious heat sensing. <i>Nature</i> , 2018 , 555, 662-666	50.4	203
92	CaT1 and the calcium release-activated calcium channel manifest distinct pore properties. <i>Journal of Biological Chemistry</i> , 2001 , 276, 47767-70	5.4	193
91	Comparison of functional properties of the Ca ²⁺ -activated cation channels TRPM4 and TRPM5 from mice. <i>Cell Calcium</i> , 2005 , 37, 267-78	4	189
90	Function and expression of the epithelial Ca ²⁺ channel family: comparison of mammalian ECaC1 and 2. <i>Journal of Physiology</i> , 2001 , 537, 747-761	3.9	189
89	Nicotine activates the chemosensory cation channel TRPA1. <i>Nature Neuroscience</i> , 2009 , 12, 1293-9	25.5	186
88	The capsaicin receptor TRPV1 is a crucial mediator of the noxious effects of mustard oil. <i>Current Biology</i> , 2011 , 21, 316-21	6.3	167
87	De novo expression of Trpm4 initiates secondary hemorrhage in spinal cord injury. <i>Nature Medicine</i> , 2009 , 15, 185-91	50.5	163
86	Vanilloid transient receptor potential cation channels: an overview. <i>Current Pharmaceutical Design</i> , 2008 , 14, 18-31	3.3	163
85	Loss of high-frequency glucose-induced Ca ²⁺ oscillations in pancreatic islets correlates with impaired glucose tolerance in Trpm5 ^{-/-} mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 5208-13	11.5	150

84	Current understanding of mammalian TRP homologues. <i>Cell Calcium</i> , 2002 , 31, 253-64	4	149
83	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
82	The single pore residue Asp542 determines Ca ²⁺ permeation and Mg ²⁺ block of the epithelial Ca ²⁺ channel. <i>Journal of Biological Chemistry</i> , 2001 , 276, 1020-5	5.4	139
81	Whole-cell and single channel monovalent cation currents through the novel rabbit epithelial Ca ²⁺ channel ECaC. <i>Journal of Physiology</i> , 2000 , 527 Pt 2, 239-48	3.9	134
80	Herbal compounds and toxins modulating TRP channels. <i>Current Neuropharmacology</i> , 2008 , 6, 79-96	7.6	133
79	Increased catecholamine secretion contributes to hypertension in TRPM4-deficient mice. <i>Journal of Clinical Investigation</i> , 2010 , 120, 3267-79	15.9	106
78	GLP-1 stimulates insulin secretion by PKC-dependent TRPM4 and TRPM5 activation. <i>Journal of Clinical Investigation</i> , 2015 , 125, 4714-28	15.9	106
77	Insights into TRPM4 function, regulation and physiological role. <i>Handbook of Experimental Pharmacology</i> , 2007 , 269-85	3.2	89
76	Steviol glycosides enhance pancreatic beta-cell function and taste sensation by potentiation of TRPM5 channel activity. <i>Nature Communications</i> , 2017 , 8, 14733	17.4	88
75	Pharmacological modulation of monovalent cation currents through the epithelial Ca ²⁺ channel ECaC1. <i>British Journal of Pharmacology</i> , 2001 , 134, 453-62	8.6	87
74	Modulation of the epithelial calcium channel, ECaC, by intracellular Ca ²⁺ . <i>Cell Calcium</i> , 2001 , 29, 417-28	4	84
73	TRPM4 regulates migration of mast cells in mice. <i>Cell Calcium</i> , 2009 , 45, 226-32	4	81
72	Fast and slow inactivation kinetics of the Ca ²⁺ channels ECaC1 and ECaC2 (TRPV5 and TRPV6). Role of the intracellular loop located between transmembrane segments 2 and 3. <i>Journal of Biological Chemistry</i> , 2002 , 277, 30852-8	5.4	80
71	Function and expression of the epithelial Ca(2+) channel family: comparison of mammalian ECaC1 and 2. <i>Journal of Physiology</i> , 2001 , 537, 747-61	3.9	77
70	Male fertility depends on Ca ²⁺ absorption by TRPV6 in epididymal epithelia. <i>Science Signaling</i> , 2011 , 4, ra27	8.8	76
69	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
68	Crucial role of transient receptor potential ankyrin 1 and mast cells in induction of nonallergic airway hyperreactivity in mice. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2013 , 187, 486-93	10.2	73
67	Pore properties and ionic block of the rabbit epithelial calcium channel expressed in HEK 293 cells. <i>Journal of Physiology</i> , 2001 , 530, 183-91	3.9	72

66	Opening of an alternative ion permeation pathway in a nociceptor TRP channel. <i>Nature Chemical Biology</i> , 2014 , 10, 188-95	11.7	64
65	Gustatory-mediated avoidance of bacterial lipopolysaccharides via TRPA1 activation in <i>Drosophila</i> . <i>ELife</i> , 2016 , 5,	8.9	63
64	Functional characterization of a chronic cyclophosphamide-induced overactive bladder model in mice. <i>Neurourology and Urodynamics</i> , 2011 , 30, 1659-65	2.3	56
63	SUR1-TRPM4 and AQP4 form a heteromultimeric complex that amplifies ion/water osmotic coupling and drives astrocyte swelling. <i>Glia</i> , 2018 , 66, 108-125	9	54
62	Increased β -adrenergic inotropy in ventricular myocardium from Trpm4 ^{-/-} mice. <i>Circulation Research</i> , 2014 , 114, 283-94	15.7	54
61	Functional role of TRPC proteins in vivo: lessons from TRPC-deficient mouse models. <i>Biochemical and Biophysical Research Communications</i> , 2004 , 322, 1352-8	3.4	53
60	TRPM4 inhibition promotes angiogenesis after ischemic stroke. <i>Pflugers Archiv European Journal of Physiology</i> , 2014 , 466, 563-76	4.6	50
59	The carboxyl terminus of the epithelial Ca(2+) channel ECaC1 is involved in Ca(2+)-dependent inactivation. <i>Pflugers Archiv European Journal of Physiology</i> , 2003 , 445, 584-8	4.6	50
58	The Sur1-Trpm4 channel regulates NOS2 transcription in TLR4-activated microglia. <i>Journal of Neuroinflammation</i> , 2016 , 13, 130	10.1	49
57	Transient receptor potential cation channels in pancreatic β cells. <i>Reviews of Physiology, Biochemistry and Pharmacology</i> , 2011 , 161, 87-110	2.9	49
56	Excision of Trpv6 gene leads to severe defects in epididymal Ca ²⁺ absorption and male fertility much like single D541A pore mutation. <i>Journal of Biological Chemistry</i> , 2012 , 287, 17930-41	5.4	47
55	Emerging concepts for the role of TRP channels in the cardiovascular system. <i>Journal of Physiology</i> , 2011 , 589, 1527-34	3.9	45
54	Modulation of the epithelial Ca ²⁺ channel ECaC by extracellular pH. <i>Pflugers Archiv European Journal of Physiology</i> , 2001 , 442, 237-42	4.6	45
53	TRPs in the Brain. <i>Reviews of Physiology, Biochemistry and Pharmacology</i> , 2012 , 163, 27-64	2.9	44
52	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
51	Inhibition of volume-regulated anion channels by expression of the cystic fibrosis transmembrane conductance regulator. <i>Journal of Physiology</i> , 1999 , 515 (Pt 1), 75-85	3.9	40
50	TRPM4. <i>Handbook of Experimental Pharmacology</i> , 2014 , 222, 461-87	3.2	40
49	On the putative role of transient receptor potential cation channels in asthma. <i>Clinical and Experimental Allergy</i> , 2009 , 39, 1456-66	4.1	38

48	From cardiac cation channels to the molecular dissection of the transient receptor potential channel TRPM4. <i>Pflugers Archiv European Journal of Physiology</i> , 2006 , 453, 313-21	4.6	37
47	Epithelial Ca(2+) channel (ECAC1) in autosomal dominant idiopathic hypercalciuria. <i>Nephrology Dialysis Transplantation</i> , 2002 , 17, 1614-20	4.3	36
46	VAMP7 regulates constitutive membrane incorporation of the cold-activated channel TRPM8. <i>Nature Communications</i> , 2016 , 7, 10489	17.4	32
45	Intravesical Activation of the Cation Channel TRPV4 Improves Bladder Function in a Rat Model for Detrusor Underactivity. <i>European Urology</i> , 2018 , 74, 336-345	10.2	30
44	Essential role of transient receptor potential M8 (TRPM8) in a model of acute cold-induced urinary urgency. <i>European Urology</i> , 2015 , 68, 655-61	10.2	29
43	Enhanced β -adrenergic cardiac reserve in <i>Trpm4</i> ^{-/-} mice with ischaemic heart failure. <i>Cardiovascular Research</i> , 2015 , 105, 330-9	9.9	25
42	Muscling in on TRP channels in vascular smooth muscle cells and cardiomyocytes. <i>Cell Calcium</i> , 2017 , 66, 48-61	4	24
41	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
40	Characterisation of explanted endothelial cells from mouse aorta: electrophysiology and Ca ²⁺ signalling. <i>Pflugers Archiv European Journal of Physiology</i> , 1999 , 438, 612-620	4.6	23
39	Increase in cytosolic Ca ²⁺ 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
38	TRPM5 in the battle against diabetes and obesity. <i>Acta Physiologica</i> , 2018 , 222, e12949	5.6	21
37	Chronic administration of anticholinergics in rats induces a shift from muscarinic to purinergic transmission in the bladder wall. <i>European Urology</i> , 2013 , 64, 502-10	10.2	19
36	Crucial role of TRPC1 and TRPC4 in cystitis-induced neuronal sprouting and bladder overactivity. <i>PLoS ONE</i> , 2013 , 8, e69550	3.7	18
35	Insulin downregulates the expression of the Ca ²⁺ -activated nonselective cation channel TRPM5 in pancreatic islets from leptin-deficient mouse models. <i>Pflugers Archiv European Journal of Physiology</i> , 2014 , 466, 611-21	4.6	17
34	Transient receptor potential (TRP) cation channels in diabetes. <i>Current Topics in Medicinal Chemistry</i> , 2013 , 13, 258-69	3	16
33	Definition of two agonist types at the mammalian cold-activated channel TRPM8. <i>ELife</i> , 2016 , 5,	8.9	15
32	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
31	Disentangling the role of TRPM4 in hippocampus-dependent plasticity and learning: an electrophysiological, behavioral and fMRI approach. <i>Brain Structure and Function</i> , 2018 , 223, 3557-3576	4	12

30	Targeting TRP Channels - Valuable Alternatives to Combat Pain, Lower Urinary Tract Disorders, and Type 2 Diabetes?. <i>Trends in Pharmacological Sciences</i> , 2019 , 40, 669-683	13.2	11
29	TRPV4 participates in pressure-induced inhibition of renin secretion by juxtaglomerular cells. <i>Journal of Physiology</i> , 2016 , 594, 7327-7340	3.9	7
28	AAV9-Mediated Overexpression of TRPM4 Increases the Incidence of Stress-Induced Ventricular Arrhythmias in Mice. <i>Frontiers in Physiology</i> , 2019 , 10, 802	4.6	7
27	Low frequency pulse stimulation of Schaffer collaterals in Trpm4 knockout rats differently affects baseline BOLD signals in target regions of the right hippocampus but not BOLD responses at the site of stimulation. <i>NeuroImage</i> , 2019 , 188, 347-356	7.9	7
26	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
25	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
24	TRPM4 links calcium signaling to membrane potential in pancreatic acinar cells. <i>Journal of Biological Chemistry</i> , 2021 , 297, 101015	5.4	5
23	Recent insights on the role of TRP channels in cardiac muscle. <i>Current Opinion in Physiology</i> , 2018 , 1, 172-184	18.4	4
22	The Role of TRP Channels in the Pancreatic Beta-Cell 2017 , 229-250		4
21	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
20	The emerging role of the apelinergic system in kidney physiology and disease. <i>Nephrology Dialysis Transplantation</i> , 2021 ,	4.3	4
19	The Ca-activated cation channel TRPM4 is a positive regulator of pressure overload-induced cardiac hypertrophy. <i>ELife</i> , 2021 , 10,	8.9	4
18	Bax inhibitor-1 deficiency leads to obesity by increasing Ca-dependent insulin secretion. <i>Journal of Molecular Medicine</i> , 2020 , 98, 849-862	5.5	3
17	Transient Receptor Potential (TRP) Cation Channels in Diabetes 2015 , 343-363		2
16	A Thallium-Based Screening Procedure to Identify Molecules That Modulate the Activity of Ca-Activated Monovalent Cation-Selective Channels. <i>SLAS Discovery</i> , 2018 , 23, 341-352	3.4	2
15	The Ca ²⁺ -Activated Monovalent Cation-Selective Channels TRPM4 and TRPM5. <i>Methods in Pharmacology and Toxicology</i> , 2012 , 103-125	1.1	2
14	Enhanced MCP-1 Release in Early Autosomal Dominant Polycystic Kidney Disease. <i>Kidney International Reports</i> , 2021 , 6, 1687-1698	4.1	2
13	Functional properties of the epithelial Ca ²⁺ channel, ECaC. <i>General Physiology and Biophysics</i> , 2001 , 20, 239-53	2.1	2

12	Stevioside Potentiates Calcium Activity and Insulin Secretion in Human Pancreatic Islets Through Potentiation of TRPM5. <i>FASEB Journal</i> , 2021 , 35,	0.9	1
11	Fundamental insights into autosomal dominant polycystic kidney disease from human-based cell models. <i>Pediatric Nephrology</i> , 2019 , 34, 1697-1715	3.2	1
10	Continuous glucose monitoring during pregnancy in healthy mice. <i>Scientific Reports</i> , 2021 , 11, 4450	4.9	1
9	On Methods for the Measurement of the Apelin Receptor Ligand Apelin.. <i>Scientific Reports</i> , 2022 , 12, 7763	4.9	0
8	Retraction of: abstract P134, Increased beta-adrenergic inotropy in ventricular myocardium from Trpm4 knockout mice. <i>Cardiovascular Research</i> , 2014 , 104, 382	9.9	
7	Continuous Glucose Monitoring Implemented in Pregnant Mice. <i>FASEB Journal</i> , 2020 , 34, 1-1	0.9	
6	TRPM5 Activity is Potentiated with Glimepiride and Acts in Tandem with KATP Channels to Stimulate Glucose-Induced Insulin Secretion. <i>FASEB Journal</i> , 2020 , 34, 1-1	0.9	
5	Potentiation of TRPM5 with Stevioside in the Beta Cells Stimulates Insulin Secretion. <i>Diabetes</i> , 2018 , 67, 316-LB	0.9	
4	Ubiquitous inactivation of TRPM4 leads to elevated blood pressure in mice. <i>FASEB Journal</i> , 2009 , 23, 580.9	0.9	
3	Putting the pressure on endocytosis in the kidney. <i>Cell Calcium</i> , 2021 , 94, 102338	4	
2	Cytopenia in autosomal dominant polycystic kidney disease (ADPKD): merely an association or a disease-related feature with prognostic implications?. <i>Pediatric Nephrology</i> , 2021 , 36, 3505-3514	3.2	
1	TRP Channels and Human Diseases1-67		