Rudi Vennekens

List of Publications by Year
in descending order

115 papers	8,729 citations	38660 50 h-index	45213 90 g-index

122 all docs	122 docs citations	122 times ranked	7570 citing authors

#	Article	IF	Citations
1	TRPA1 acts as a cold sensor in vitro and in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1273-1278.	3.3	503
2	TRPM3 Is a Nociceptor Channel Involved in the Detection of Noxious Heat. Neuron, 2011, 70, 482-494.	3.8	454
3	Inhibition of the cation channel TRPV4 improves bladder function in mice and rats with cyclophosphamide-induced cystitis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19084-19089.	3.3	351
4	A TRP channel trio mediates acute noxious heat sensing. Nature, 2018, 555, 662-666.	13.7	329
5	Voltage Dependence of the Ca2+-activated Cation Channel TRPM4. Journal of Biological Chemistry, 2003, 278, 30813-30820.	1.6	302
6	Permeation and Gating Properties of the Novel Epithelial Ca2+ Channel. Journal of Biological Chemistry, 2000, 275, 3963-3969.	1.6	288
7	The Ca2+-activated cation channel TRPM4 is regulated by phosphatidylinositol 4,5-biphosphate. EMBO Journal, 2006, 25, 467-478.	3.5	268
8	TRPV4-Mediated Calcium Influx Regulates Terminal Differentiation of Osteoclasts. Cell Metabolism, 2008, 8, 257-265.	7.2	260
9	Increased IgE-dependent mast cell activation and anaphylactic responses in mice lacking the calcium-activated nonselective cation channel TRPM4. Nature Immunology, 2007, 8, 312-320.	7.0	245
10	Comparison of functional properties of the Ca2+-activated cation channels TRPM4 and TRPM5 from mice. Cell Calcium, 2005, 37, 267-278.	1.1	215
11	Nicotine activates the chemosensory cation channel TRPA1. Nature Neuroscience, 2009, 12, 1293-1299.	7.1	214
12	CaT1 and the Calcium Release-activated Calcium Channel Manifest Distinct Pore Properties. Journal of Biological Chemistry, 2001, 276, 47767-47770.	1.6	212
13	Function and expression of the epithelial Ca2+ channel family: comparison of mammalian ECaC1 and 2. Journal of Physiology, 2001, 537, 747-761.	1.3	206
14	De novo expression of Trpm4 initiates secondary hemorrhage in spinal cord injury. Nature Medicine, 2009, 15, 185-191.	15.2	199
15	The Capsaicin Receptor TRPV1 Is a Crucial Mediator of the Noxious Effects of Mustard Oil. Current Biology, 2011, 21, 316-321.	1.8	189
16	Loss of high-frequency glucose-induced Ca ²⁺ oscillations in pancreatic islets correlates with impaired glucose tolerance in Trpm5 ^{â^'/â^'} mice. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 5208-5213.	3.3	187
17	TRPM4 cation channel mediates axonal and neuronal degeneration in experimental autoimmune encephalomyelitis and multiple sclerosis. Nature Medicine, 2012, 18, 1805-1811.	15.2	181
18	Vanilloid Transient Receptor Potential Cation Channels: An Overview. Current Pharmaceutical Design, 2008, 14, 18-31.	0.9	180

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19	The Single Pore Residue Asp542 Determines Ca2+ Permeation and Mg2+ Block of the Epithelial Ca2+ Channel. Journal of Biological Chemistry, 2001, 276, 1020-1025.	1.6	161
20	Current understanding of mammalian TRP homologues. Cell Calcium, 2002, 31, 253-264.	1.1	156
21	Herbal Compounds and Toxins Modulating TRP Channels. Current Neuropharmacology, 2008, 6, 79-96.	1.4	155
22	Wholeâ€cell and single channel monovalent cation currents through the novel rabbit epithelial Ca 2+ channel ECaC. Journal of Physiology, 2000, 527, 239-248.	1.3	145
23	GLP-1 stimulates insulin secretion by PKC-dependent TRPM4 and TRPM5 activation. Journal of Clinical Investigation, 2015, 125, 4714-4728.	3.9	145
24	Steviol glycosides enhance pancreatic beta-cell function and taste sensation by potentiation of TRPM5 channel activity. Nature Communications, 2017, 8, 14733.	5.8	136
25	Increased catecholamine secretion contributes to hypertension in TRPM4-deficient mice. Journal of Clinical Investigation, 2010, 120, 3267-3279.	3.9	134
26	Insights into TRPM4 Function, Regulation and Physiological Role. , 2007, , 269-285.		123
27	Pharmacological modulation of monovalent cation currents through the epithelial Ca2+ channel ECaC1. British Journal of Pharmacology, 2001, 134, 453-462.	2.7	106
28	TRPM4 regulates migration of mast cells in mice. Cell Calcium, 2009, 45, 226-232.	1.1	99
29	Function and expression of the epithelial Ca(2+) channel family: comparison of mammalian ECaC1 and 2. Journal of Physiology, 2001, 537, 747-61.	1.3	96
30	Male Fertility Depends on Ca ²⁺ Absorption by TRPV6 in Epididymal Epithelia. Science Signaling, 2011, 4, ra27.	1.6	95
31	Fast and Slow Inactivation Kinetics of the Ca2+Channels ECaC1 and ECaC2 (TRPV5 and TRPV6). Journal of Biological Chemistry, 2002, 277, 30852-30858.	1.6	92
32	SUR1â€TRPM4 and AQP4 form a heteromultimeric complex that amplifies ion/water osmotic coupling and drives astrocyte swelling. Glia, 2018, 66, 108-125.	2.5	92
33	Modulation of the epithelial calcium channel, ECaC, by intracellular Ca2+. Cell Calcium, 2001, 29, 417-428.	1.1	91
34	Functional role of TRPC proteins in native systems: implications from knockout and knock-down studies. Journal of Physiology, 2005, 567, 59-66.	1.3	90
35	Gustatory-mediated avoidance of bacterial lipopolysaccharides via TRPA1 activation in Drosophila. ELife, 2016, 5, .	2.8	88
36	Opening of an alternative ion permeation pathway in a nociceptor TRP channel. Nature Chemical Biology, 2014, 10, 188-195.	3.9	86

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37	Crucial Role of Transient Receptor Potential Ankyrin 1 and Mast Cells in Induction of Nonallergic Airway Hyperreactivity in Mice. American Journal of Respiratory and Critical Care Medicine, 2013, 187, 486-493.	2.5	85
38	Increased Î²-Adrenergic Inotropy in Ventricular Myocardium From Trpm4 ^{â^'/â^'} Mice. Circulation Research, 2014, 114, 283-294.	2.0	81
39	The Sur1-Trpm4 channel regulates NOS2 transcription in TLR4-activated microglia. Journal of Neuroinflammation, 2016, 13, 130.	3.1	75
40	Pore properties and ionic block of the rabbit epithelial calcium channel expressed in HEK 293 cells. Journal of Physiology, 2001, 530, 183-191.	1.3	73
41	Functional characterization of a chronic cyclophosphamideâ€induced overactive bladder model in mice. Neurourology and Urodynamics, 2011, 30, 1659-1665.	0.8	73
42	TRPM4 inhibition promotes angiogenesis after ischemic stroke. Pflugers Archiv European Journal of Physiology, 2014, 466, 563-576.	1.3	68
43	Transient Receptor Potential Cation Channels in Pancreatic Î² Cells. Reviews of Physiology, Biochemistry and Pharmacology, 2011, 161, 87-110.	0.9	61
44	Excision of Trpv6 Gene Leads to Severe Defects in Epididymal Ca2+ Absorption and Male Fertility Much Like Single D541A Pore Mutation. Journal of Biological Chemistry, 2012, 287, 17930-17941.	1.6	61
45	Functional role of TRPC proteins in vivo: lessons from TRPC-deficient mouse models. Biochemical and Biophysical Research Communications, 2004, 322, 1352-1358.	1.0	60
46	TRPs in the Brain. , 2012, 163, 27-64.		59
47	The carboxyl terminus of the epithelial Ca2+ channel ECaC1 is involved in Ca2+-dependent inactivation. Pflugers Archiv European Journal of Physiology, 2003, 445, 584-588.	1.3	56
48	TRPM4. Handbook of Experimental Pharmacology, 2014, 222, 461-487.	0.9	56
49	The Ca2+-activated cation channel TRPM4 is a negative regulator of angiotensin II-induced cardiac hypertrophy. Basic Research in Cardiology, 2015, 110, 43.	2.5	55
50	Inhibition of volume-regulated anion channels by expression of the cystic fibrosis transmembrane conductance regulator. Journal of Physiology, 1999, 515, 75-85.	1.3	53
51	Modulation of the epithelial Ca 2+ channel ECaC by extracellular pH. Pflugers Archiv European Journal of Physiology, 2001, 442, 237-242.	1.3	51
52	Emerging concepts for the role of TRP channels in the cardiovascular system. Journal of Physiology, 2011, 589, 1527-1534.	1.3	51
53	From cardiac cation channels to the molecular dissection of the transient receptor potential channel TRPM4. Pflugers Archiv European Journal of Physiology, 2006, 453, 313-321.	1.3	46
54	On the putative role of transient receptor potential cation channels in asthma. Clinical and Experimental Allergy, 2009, 39, 1456-1466.	1.4	45

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55	Essential Role of Transient Receptor Potential M8 (TRPM8) in a Model of Acute Cold-induced Urinary Urgency. European Urology, 2015, 68, 655-661.	0.9	45
56	VAMP7 regulates constitutive membrane incorporation of the cold-activated channel TRPM8. Nature Communications, 2016, 7, 10489.	5.8	44
57	Epithelial Ca2+ channel (ECAC1) in autosomal dominant idiopathic hypercalciuria. Nephrology Dialysis Transplantation, 2002, 17, 1614-1620.	0.4	42
58	Intravesical Activation of the Cation Channel TRPV4 Improves Bladder Function in a Rat Model for Detrusor Underactivity. European Urology, 2018, 74, 336-345.	0.9	42
59	TRPM4-dependent post-synaptic depolarization is essential for the induction of NMDA receptor-dependent LTP in CA1 hippocampal neurons. Pflugers Archiv European Journal of Physiology, 2016, 468, 593-607.	1.3	38
60	TRPM5 in the battle against diabetes and obesity. Acta Physiologica, 2018, 222, e12949.	1.8	38
61	Muscling in on TRP channels in vascular smooth muscle cells and cardiomyocytes. Cell Calcium, 2017, 66, 48-61.	1.1	37
62	Enhanced Î²-adrenergic cardiac reserve in Trpm4â^'/â^' mice with ischaemic heart failure. Cardiovascular Research, 2015, 105, 330-339.	1.8	36
63	Definition of two agonist types at the mammalian cold-activated channel TRPM8. ELife, 2016, 5, .	2.8	25
64	Increase in cytosolic Ca²⁺ produced by hypoxia and other depolarizing stimuli activates a nonâ€selective cation channel in chemoreceptor cells of rat carotid body. Journal of Physiology, 2014, 592, 1975-1992.	1.3	24
65	Crucial Role of TRPC1 and TRPC4 in Cystitis-Induced Neuronal Sprouting and Bladder Overactivity. PLoS ONE, 2013, 8, e69550.	1.1	24
66	Characterisation of explanted endothelial cells from mouse aorta: electrophysiology and Ca 2+ signalling. Pflugers Archiv European Journal of Physiology, 1999, 438, 612-620.	1.3	23
67	Chronic Administration of Anticholinergics in Rats Induces a Shift from Muscarinic to Purinergic Transmission in the Bladder Wall. European Urology, 2013, 64, 502-510.	0.9	22
68	Insulin downregulates the expression of the Ca2+-activated nonselective cation channel TRPM5 in pancreatic islets from leptin-deficient mouse models. Pflugers Archiv European Journal of Physiology, 2014, 466, 611-621.	1.3	22
69	Targeting TRP Channels â€“ Valuable Alternatives to Combat Pain, Lower Urinary Tract Disorders, and Type 2 Diabetes?. Trends in Pharmacological Sciences, 2019, 40, 669-683.	4.0	20
70	Transient Receptor Potential (TRP) Cation Channels in Diabetes. Current Topics in Medicinal Chemistry, 2013, 13, 258-269.	1.0	20
71	Disentangling the role of TRPM4 in hippocampus-dependent plasticity and learning: an electrophysiological, behavioral and FMRI approach. Brain Structure and Function, 2018, 223, 3557-3576.	1.2	19
72	The Ca2+-activated cation channel TRPM4 is a positive regulator of pressure overload-induced cardiac hypertrophy. ELife, 2021, 10, .	2.8	19

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73	TRPV4 participates in pressureâ€induced inhibition of renin secretion by juxtaglomerular cells. Journal of Physiology, 2016, 594, 7327-7340.	1.3	16
74	Adenylyl cyclase-mediated effects contribute to increased Isoprenaline-induced cardiac contractility in TRPM4-deficient mice. Journal of Molecular and Cellular Cardiology, 2014, 74, 307-317.	0.9	15
75	AAV9-Mediated Overexpression of TRPM4 Increases the Incidence of Stress-Induced Ventricular Arrhythmias in Mice. Frontiers in Physiology, 2019, 10, 802.	1.3	15
76	TRPM4 inhibition by meclofenamate suppresses Ca2+-dependent triggered arrhythmias. European Heart Journal, 2022, 43, 4195-4207.	1.0	15
77	Genetic background influences expression and function of the cation channel TRPM4 in the mouse heart. Basic Research in Cardiology, 2020, 115, 70.	2.5	13
78	Enhanced MCP-1 Release in Early Autosomal Dominant Polycystic Kidney Disease. Kidney International Reports, 2021, 6, 1687-1698.	0.4	12
79	TRPM4 links calcium signaling to membrane potential in pancreatic acinar cells. Journal of Biological Chemistry, 2021, 297, 101015.	1.6	12
80	Cyclic regulation of Trpm4 expression in female vomeronasal neurons driven by ovarian sex hormones. Molecular and Cellular Neurosciences, 2020, 105, 103495.	1.0	11
81	TRPM4 Modulates Right Ventricular Remodeling Under Pressure Load Accompanied With Decreased Expression Level. Journal of Cardiac Failure, 2020, 26, 599-609.	0.7	11
82	Low frequency pulse stimulation of Schaffer collaterals in Trpm4â^'/â^' knockout rats differently affects baseline BOLD signals in target regions of the right hippocampus but not BOLD responses at the site of stimulation. NeuroImage, 2019, 188, 347-356.	2.1	9
83	<scp>VRAC</scp> s swallow platinum drugs. EMBO Journal, 2015, 34, 2985-2987.	3.5	8
84	The emerging role of the apelinergic system in kidney physiology and disease. Nephrology Dialysis Transplantation, 2022, 37, 2314-2326.	0.4	8
85	Bax inhibitor-1 deficiency leads to obesity by increasing Ca2+-dependent insulin secretion. Journal of Molecular Medicine, 2020, 98, 849-862.	1.7	6
86	Interdependent Regulation of Polycystin Expression Influences Starvation-Induced Autophagy and Cell Death. International Journal of Molecular Sciences, 2021, 22, 13511.	1.8	6
87	A Thallium-Based Screening Procedure to Identify Molecules That Modulate the Activity of Ca2+-Activated Monovalent Cation-Selective Channels. SLAS Discovery, 2018, 23, 341-352.	1.4	5
88	Recent insights on the role of TRP channels in cardiac muscle. Current Opinion in Physiology, 2018, 1, 172-184.	0.9	5
89	The Role of TRP Channels in the Pancreatic Beta-Cell. , 2017, , 229-250.		5
90	Fundamental insights into autosomal dominant polycystic kidney disease from human-based cell models. Pediatric Nephrology, 2019, 34, 1697-1715.	0.9	4

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91	Continuous glucose monitoring during pregnancy in healthy mice. Scientific Reports, 2021, 11, 4450.	1.6	4
92	Is autosomal dominant polycystic kidney disease an early sweet disease?. Pediatric Nephrology, 2022, 37, 1945-1955.	0.9	4
93	On Methods for the Measurement of the Apelin Receptor Ligand Apelin. Scientific Reports, 2022, 12, 7763.	1.6	4
94	Transient Receptor Potential (TRP) Cation Channels in Diabetes. , 2015, , 343-363.		3
95	Horizontal Hippocampal Slices of the Mouse Brain. Journal of Visualized Experiments, 2020, , .	0.2	3
96	Functional properties of the epithelial Ca2+ channel, ECaC. General Physiology and Biophysics, 2001, 20, 239-53.	0.4	3
97	The Ca2+-Activated Monovalent Cation-Selective Channels TRPM4 and TRPM5. Methods in Pharmacology and Toxicology, 2012, , 103-125.	0.1	2
98	A TRiP to heart failure. Cardiovascular Research, 2013, 99, 590-591.	1.8	1
99	Stevioside Potentiates Calcium Activity and Insulin Secretion in Human Pancreatic Islets Through Potentiation of TRPM5. FASEB Journal, 2021, 35, .	0.2	1
100	Cytopenia in autosomal dominant polycystic kidney disease (ADPKD): merely an association or a disease-related feature with prognostic implications?. Pediatric Nephrology, 2021, 36, 3505-3514.	0.9	1
101	A Reduction of Glucose-Induced Bursting Frequency in Pancreatic Islets Correlates with Decreased Insulin Release and Impaired Glucose Tolerance in TRPM5-/- Mice. Biophysical Journal, 2010, 98, 345a.	0.2	0
102	820 THE FUNCTIONAL ROLE OF TRPA1 AS A POLYMODAL SENSOR IN THE URINARY BLADDER. European Urology Supplements, 2011, 10, 259-260.	0.1	0
103	821 HC-067047, A TRPV4-SELECTIVE ANTAGONIST, IMPROVES BLADDER FUNCTION IN MICE WITH CYCLOPHOSPHAMIDE-INDUCED CYSTITIS. European Urology Supplements, 2011, 10, 260.	0.1	0
104	115 WHY ANTICHOLINERGICS FAIL: CHRONIC OXYBUTYNIN AND FESOTERODINE INDUCE A SHIFT FROM MUSCARINERGIC TO PURINERGIC TRANSMISSION IN THE RAT BLADDER. Journal of Urology, 2013, 189, .	0.2	0
105	Stevia Sweetener Enhances Pancreatic Beta-Cell Function by Potentiating TRPM5 Channel Activity. Canadian Journal of Diabetes, 2017, 41, S74.	0.4	0
106	Putting the pressure on endocytosis in the kidney. Cell Calcium, 2021, 94, 102338.	1.1	0
107	FC 008INTERDEPENDENT REGULATION OF POLYCYSTIN EXPRESSION INFLUENCES STARVATION-INDUCED AUTOPHAGY AND CELL DEATH. Nephrology Dialysis Transplantation, 2021, 36, .	0.4	0
108	MO020AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE, CYTOPENIA AND POSTTRANSPLANT OUTCOMES: A RETROSPECTIVE ANALYSIS. Nephrology Dialysis Transplantation, 2021, 36, .	0.4	0

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109	Differences in Intracellular Calcium Oscillations in Response to Glucose in Pancreatic Islets of Pregnant and Nonâ€pregnant Mice. FASEB Journal, 2021, 35, .	0.2	0
110	MO021ENHANCED MCP-1 RELEASE IN EARLY AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE. Nephrology Dialysis Transplantation, 2021, 36, .	0.4	0
111	Ubiquitous inactivation of TRPM4 leads to elevated blood pressure in mice. FASEB Journal, 2009, 23, 580.9.	0.2	0
112	Potentiation of TRPM5 with Stevioside in the Beta Cells Stimulates Insulin Secretion. Diabetes, 2018, 67, 316-LB.	0.3	0
113	Continuous Glucose Monitoring Implemented in Pregnant Mice. FASEB Journal, 2020, 34, 1-1.	0.2	0
114	TRPM5 Activity is Potentiated with Glimepiride and Acts in Tandem with K ATP Channels to Stimulate Glucoseâ€induced Insulin Secretion. FASEB Journal, 2020, 34, 1-1.	0.2	0
115	MO1037: Insulin Sensitivity in Children with Autosomal Dominant Polycystic Kidney Disease. Nephrology Dialysis Transplantation, 2022, 37, .	0.4	0