Wolfgang B Liedtke

List of Publications by Year
in descending order

122	15,551	18482 62	21540 114
papers	citations	h-index	g-index

132	132	132	15344
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Control of Stem Cell Fate by Physical Interactions with the Extracellular Matrix. Cell Stem Cell, 2009, 5, 17-26.	11.1	1,669
2	Vanilloid Receptorâ€“Related Osmotically Activated Channel (VR-OAC), a Candidate Vertebrate Osmoreceptor. Cell, 2000, 103, 525-535.	28.9	1,237
3	Role for Stearoyl-CoA Desaturase-1 in Leptin-Mediated Weight Loss. Science, 2002, 297, 240-243.	12.6	790
4	Abnormal osmotic regulation in trpv4-/- mice. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 13698-13703.	7.1	712
5	Elementary Ca ²⁺ Signals Through Endothelial TRPV4 Channels Regulate Vascular Function. Science, 2012, 336, 597-601.	12.6	479
6	GFAP Is Necessary for the Integrity of CNS White Matter Architecture and Long-Term Maintenance of Myelination. Neuron, 1996, 17, 607-615.	8.1	469
7	TRPV4-mediated mechanotransduction regulates the metabolic response of chondrocytes to dynamic loading. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1316-1321.	7.1	364
8	Protease-activated receptor 2 sensitizes the transient receptor potential vanilloid 4 ion channel to cause mechanical hyperalgesia in mice. Journal of Physiology, 2007, 578, 715-733.	2.9	338
9	Mutation in the Mismatch Repair Gene Msh6 Causes Cancer Susceptibility. Cell, 1997, 91, 467-477.	28.9	326
10	Synergy between Piezo1 and Piezo2 channels confers high-strain mechanosensitivity to articular cartilage. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E5114-22.	7.1	321
11	Mammalian TRPV4 (VR-OAC) directs behavioral responses to osmotic and mechanical stimuli in Caenorhabditis elegans. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 14531-14536.	7.1	310
12	TRPV4 Is a Regulator of Adipose Oxidative Metabolism, Inflammation, and Energy Homeostasis. Cell, 2012, 151, 96-110.	28.9	292
13	Deletion of the transient receptor potential cation channel TRPV4 impairs murine bladder voiding. Journal of Clinical Investigation, 2007, 117, 3453-3462.	8.2	283
14	Transient Receptor Potential Vanilloid 4â€“Mediated Disruption of the Alveolar Septal Barrier. Circulation Research, 2006, 99, 988-995.	4.5	272
15	Functional characterization of TRPV4 as an osmotically sensitive ion channel in porcine articular chondrocytes. Arthritis and Rheumatism, 2009, 60, 3028-3037.	6.7	265
16	Arterial Response to Shear Stress Critically Depends on Endothelial TRPV4 Expression. PLoS ONE, 2007, 2, e827.	2.5	232
17	Selective Role for TRPV4 Ion Channels in Visceral Sensory Pathways. Gastroenterology, 2008, 134, 2059-2069.	1.3	228
18	A Role for AQP5 in Activation of TRPV4 by Hypotonicity. Journal of Biological Chemistry, 2006, 281, 15485-15495.	3.4	221

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19	Regulation of Pain and Itch by TRP Channels. Neuroscience Bulletin, 2018, 34, 120-142.	2.9	213
20	UVB radiation generates sunburn pain and affects skin by activating epidermal TRPV4 ion channels and triggering endothelin-1 signaling. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3225-34.	7.1	208
21	TRPV4 mediates pain-related behavior induced by mild hypertonic stimuli in the presence of inflammatory mediator. Pain, 2005, 118, 70-79.	4.2	190
22	The Polymodal Ion Channel Transient Receptor Potential Vanilloid 4 Modulates Calcium Flux, Spiking Rate, and Apoptosis of Mouse Retinal Ganglion Cells. Journal of Neuroscience, 2011, 31, 7089-7101.	3.6	189
23	TRPV4 channel participates in receptor-operated calcium entry and ciliary beat frequency regulation in mouse airway epithelial cells. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12611-12616.	7.1	176
24	TRPV4 channels stimulate Ca ² ⁺ -induced Ca ²⁺ release in astrocytic endfeet and amplify neurovascular coupling responses. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 6157-6162.	7.1	175
25	TRPV4 initiates the acute calcium-dependent permeability increase during ventilator-induced lung injury in isolated mouse lungs. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2007, 293, L923-L932.	2.9	171
26	Chondroprotective role of the osmotically sensitive ion channel transient receptor potential vanilloid 4: Ageâ€•and sexâ€dependent progression of osteoarthritis in Trpv4â€deficient mice. Arthritis and Rheumatism, 2010, 62, 2973-2983.	6.7	163
27	TRPV4 channels augment macrophage activation and ventilator-induced lung injury. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2010, 299, L353-L362.	2.9	157
28	Cathepsin S Causes Inflammatory Pain via Biased Agonism of PAR2 and TRPV4. Journal of Biological Chemistry, 2014, 289, 27215-27234.	3.4	153
29	Transient Receptor Potential Vanilloid-4 Has a Major Role in Visceral Hypersensitivity Symptoms. Gastroenterology, 2008, 135, 937-946.e2.	1.3	146
30	A craniofacial-specific monosynaptic circuit enables heightened affective pain. Nature Neuroscience, 2017, 20, 1734-1743.	14.8	146
31	Protease-activated Receptor 2 (PAR2) Protein and Transient Receptor Potential Vanilloid 4 (TRPV4) Protein Coupling Is Required for Sustained Inflammatory Signaling*. Journal of Biological Chemistry, 2013, 288, 5790-5802.	3.4	140
32	Neutrophil Elastase Activates Protease-activated Receptor-2 (PAR2) and Transient Receptor Potential Vanilloid 4 (TRPV4) to Cause Inflammation and Pain. Journal of Biological Chemistry, 2015, 290, 13875-13887.	3.4	134
33	High Vascular Pressureâ€“Induced Lung Injury Requires P450 Epoxygenaseâ€“Dependent Activation of TRPV4. American Journal of Respiratory Cell and Molecular Biology, 2008, 38, 386-392.	2.9	131
34	Transient receptor potential vanilloid 4 mediates protease activated receptor 2-induced sensitization of colonic afferent nerves and visceral hyperalgesia. American Journal of Physiology - Renal Physiology, 2008, 294, G1288-G1298.	3.4	127
35	Negative-Feedback Loop Attenuates Hydrostatic Lung Edema via a cGMP-Dependent Regulation of Transient Receptor Potential Vanilloid 4. Circulation Research, 2008, 102, 966-974.	4.5	125
36	Type VI Collagen Regulates Pericellular Matrix Properties, Chondrocyte Swelling, and Mechanotransduction in Mouse Articular Cartilage. Arthritis and Rheumatology, 2015, 67, 1286-1294.	5.6	125

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37	TRPV4 channel opening mediates pressure-induced pancreatitis initiated by Piezo1 activation. Journal of Clinical Investigation, 2020, 130, 2527-2541.	8.2	119
38	Quantification and Potential Functions of Endogenous Agonists of Transient Receptor Potential Channels in Patients With Irritable Bowel Syndrome. Gastroenterology, 2015, 149, 433-444.e7.	1.3	116
39	Hypertonicity Sensing in Organum Vasculosum Lamina Terminalis Neurons: A Mechanical Process InvolvingTRPV1But NotTRPV4. Journal of Neuroscience, 2011, 31, 14669-14676.	3.6	110
40	Bisphenol A delays the perinatal chloride shift in cortical neurons by epigenetic effects on the Kcc2 promoter. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4315-4320.	7.1	107
41	Transient Receptor Potential Vanilloid 4 Ion Channel Functions as a Pruriceptor in Epidermal Keratinocytes to Evoke Histaminergic Itch. Journal of Biological Chemistry, 2016, 291, 10252-10262.	3.4	107
42	TRPV4-Mediated Calcium Influx into Human Bronchial Epithelia upon Exposure to Diesel Exhaust Particles. Environmental Health Perspectives, 2011, 119, 784-793.	6.0	105
43	TRPV4 plays an evolutionary conserved role in the transduction of osmotic and mechanical stimuli in live animals. Journal of Physiology, 2005, 567, 53-58.	2.9	101
44	Temporomandibular joint pain: A critical role for Trpv4 in the trigeminal ganglion. Pain, 2013, 154, 1295-1304.	4.2	101
45	Cartilage-Specific Knockout of the Mechanosensory Ion Channel TRPV4 Decreases Age-Related Osteoarthritis. Scientific Reports, 2016, 6, 29053.	3.3	101
46	Inflammatory signaling sensitizes Piezo1 mechanotransduction in articular chondrocytes as a pathogenic feed-forward mechanism in osteoarthritis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	99
47	Upregulation of osmo-mechanosensitive TRPV4 channel facilitates chronic hypoxia-induced myogenic tone and pulmonary hypertension. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2012, 302, L555-L568.	2.9	98
48	Stathmin-Deficient Mice Develop an Age-Dependent Axonopathy of the Central and Peripheral Nervous Systems. American Journal of Pathology, 2002, 160, 469-480.	3.8	96
49	Role of Transient Receptor Potential Vanilloid 4 in Neutrophil Activation and Acute Lung Injury. American Journal of Respiratory Cell and Molecular Biology, 2016, 54, 370-383.	2.9	95
50	Transient receptor potential vanilloid 4. Annals of the New York Academy of Sciences, 2010, 1192, 404-409.	3.8	94
51	Arresting a Transient Receptor Potential (TRP) Channel. Journal of Biological Chemistry, 2010, 285, 30115-30125.	3.4	92
52	Novel Repression ofKcc2Transcription by RESTâ€“RE-1 Controls Developmental Switch in Neuronal Chloride. Journal of Neuroscience, 2009, 29, 14652-14662.	3.6	80
53	Increased susceptibility ofTrpv4-deficient mice to obesity and obesity-induced osteoarthritis with very high-fat diet. Annals of the Rheumatic Diseases, 2013, 72, 300-304.	0.9	80
54	Human herpesvirus 6 polymerase chain reaction findings in human immunodeficiency virus associated neurological disease and multiple sclerosis. Journal of NeuroVirology, 1995, 1, 253-258.	2.1	79

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55	Ca²⁺ entry via Î±_{1G} and TRPV4 channels differentially regulates surface expression of P-selectin and barrier integrity in pulmonary capillary endothelium. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2009, 297, L650-L657.	2.9	78
56	TRPV4 as a therapeutic target for joint diseases. Naunyn-Schmiedeberg's Archives of Pharmacology, 2015, 388, 437-450.	3.0	78
57	Transient receptor potential ion channels V4 and A1 contribute to pancreatitis pain in mice. American Journal of Physiology - Renal Physiology, 2010, 299, G556-G571.	3.4	76
58	Molecular Mechanisms of TRPV4â€Mediated Neural Signaling. Annals of the New York Academy of Sciences, 2008, 1144, 42-52.	3.8	75
59	TRPV4 is necessary for trigeminal irritant pain and functions as a cellular formalin receptor. Pain, 2014, 155, 2662-2672.	4.2	72
60	Local Peroxynitrite Impairs Endothelial Transient Receptor Potential Vanilloid 4 Channels and Elevates Blood Pressure in Obesity. Circulation, 2020, 141, 1318-1333.	1.6	71
61	Chronic IL-1Î² Signaling Potentiates Voltage-Dependent Sodium Currents in Trigeminal Nociceptive Neurons. Journal of Neurophysiology, 2006, 95, 1478-1490.	1.8	68
62	Transient receptor potential vanilloid channels functioning in transduction of osmotic stimuli. Journal of Endocrinology, 2006, 191, 515-523.	2.6	67
63	Î”N-TRPV1: A Molecular Co-detector of Body Temperature and Osmotic Stress. Cell Reports, 2015, 13, 23-30.	6.4	66
64	Mouse Keratin 4 Is Necessary for Internal Epithelial Integrity. Journal of Biological Chemistry, 1998, 273, 23904-23911.	3.4	61
65	TRPV4-mediated calcium signaling in mesenchymal stem cells regulates aligned collagen matrix formation and vinculin tension. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1992-1997.	7.1	60
66	TRPV4 Is Required for Hypoxic Pulmonary Vasoconstriction. Anesthesiology, 2015, 122, 1338-1348.	2.5	59
67	Small molecule dual-inhibitors of TRPV4 and TRPA1 for attenuation of inflammation and pain. Scientific Reports, 2016, 6, 26894.	3.3	58
68	TRPV4 as osmosensor: a transgenic approach. Pflugers Archiv European Journal of Physiology, 2005, 451, 176-180.	2.8	57
69	Epithelia-Sensory Neuron Cross Talk Underlies Cholestatic Itch Induced by Lysophosphatidylcholine. Gastroenterology, 2021, 161, 301-317.e16.	1.3	57
70	How irritating: the role of TRPA1 in sensing cigarette smoke and aerogenic oxidants in the airways. Journal of Clinical Investigation, 2008, 118, 2383-6.	8.2	54
71	The antiâ€migraine component of butterbur extracts, isopetasin, desensitizes peptidergic nociceptors by acting on TRPA1 cation channel. British Journal of Pharmacology, 2017, 174, 2897-2911.	5.4	53
72	Urgent reconsideration of lung edema as a preventable outcome in COVID-19: inhibition of TRPV4 represents a promising and feasible approach. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2020, 318, L1239-L1243.	2.9	53

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73	Role of TRPV ion channels in sensory transduction of osmotic stimuli in mammals. Experimental Physiology, 2007, 92, 507-512.	2.0	49
74	Relation of addiction genes to hypothalamic gene changes subserving genesis and gratification of a classic instinct, sodium appetite. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 12509-12514.	7.1	49
75	Emerging Mechanistic Targets in Lung Injury Induced by Combustion-Generated Particles. Toxicological Sciences, 2013, 132, 253-267.	3.1	49
76	Transient Receptor Potential Vanilloid 4 and Serum Glucocorticoidâ€“regulated Kinase 1 Are Critical Mediators of Lung Injury in Overventilated MiceIn Vivo. Anesthesiology, 2017, 126, 300-311.	2.5	46
77	Changes in Osmolality Sensitize the Response to Capsaicin in Trigeminal Sensory Neurons. Journal of Neurophysiology, 2007, 97, 2001-2015.	1.8	45
78	A synthetic mechanogenetic gene circuit for autonomous drug delivery in engineered tissues. Science Advances, 2021, 7, .	10.3	40
79	Diesel Exhaust Particles Activate the Matrix-Metalloproteinase-1 Gene in Human Bronchial Epithelia in a Î²-Arrestinâ€“Dependent Manner via Activation of RAS. Environmental Health Perspectives, 2009, 117, 400-409.	6.0	39
80	P2Y1 Receptor Activation of the TRPV4 Ion Channel Enhances Purinergic Signaling in Satellite Glial Cells. Journal of Biological Chemistry, 2015, 290, 29051-29062.	3.4	39
81	Follistatin in chondrocytes: the link between TRPV4 channelopathies and skeletal malformations. FASEB Journal, 2014, 28, 2525-2537.	0.5	38
82	Pleiotropic function of TRPV4 ion channels in the central nervous system. Experimental Physiology, 2016, 101, 1472-1476.	2.0	37
83	Endothelial TRPV4 channels prevent tumor growth and metastasis via modulation of tumor angiogenesis and vascular integrity. Angiogenesis, 2021, 24, 647-656.	7.2	35
84	Functional TRPV4 channels are expressed in mouse skeletal muscle and can modulate resting Ca2+ influx and muscle fatigue. Pflugers Archiv European Journal of Physiology, 2011, 461, 115-122.	2.8	33
85	Functional Coupling of TRPV4, IK, and SK Channels Contributes to Ca²⁺â€Dependent Endothelial Injury in Rodent Lung. Pulmonary Circulation, 2015, 5, 279-290.	1.7	31
86	TRPV4 activation of endothelial nitric oxide synthase resists nonalcoholic fatty liver disease by blocking CYP2E1-mediated redox toxicity. Free Radical Biology and Medicine, 2017, 102, 260-273.	2.9	31
87	TRPV4 Moves toward Center-Fold inÂRosacea Pathogenesis. Journal of Investigative Dermatology, 2017, 137, 801-804.	0.7	28
88	Dual contribution of TRPV4 antagonism in the regulatory effect of vasoinhibins on blood-retinal barrier permeability: diabetic milieu makes a difference. Scientific Reports, 2017, 7, 13094.	3.3	28
89	Isolated Deep Ear Canal Pain: Possible Role of Auricular Branch of Vagus Nerveâ€”Case Illustrations with Cadaveric Correlation. World Neurosurgery, 2016, 96, 293-301.	1.3	26
90	The multifunctional peptide DNâ€9 produced peripherally acting antinociception in inflammatory and neuropathic pain via Î¼â€•and Îºâ€opioid receptors. British Journal of Pharmacology, 2020, 177, 93-109.	5.4	26

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91	Deconstructing mammalian thermoregulation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1765-1767.	7.1	23
92	Highly Conductive Carbon Nanotube Matrix Accelerates Developmental Chloride Extrusion in Central Nervous System Neurons by Increased Expression of Chloride Transporter KCC2. Small, 2013, 9, 1066-1075.	10.0	22
93	Unraveling the mechanism by which TRPV4 mutations cause skeletal dysplasias. Rare Diseases (Austin,) Tj ETQq1 1 0.784314 rgBT /O	1.8	21
94	Decoding the language of epigenetics during neural development is key for understanding development as well as developmental neurotoxicity. Epigenetics, 2013, 8, 1128-1132.	2.7	20
95	Phenotypic profile clustering pragmatically identifies diagnostically and mechanistically informative subgroups of chronic pain patients. Pain, 2021, 162, 1528-1538.	4.2	19
96	TRPV channel-mediated calcium transients in nociceptor neurons are dispensable for avoidance behaviour. Nature Communications, 2014, 5, 4734.	12.8	17
97	Transient Receptor Potential Vanilloid 4 Channel Deficiency Aggravates Tubular Damage after Acute Renal Ischaemia Reperfusion. Scientific Reports, 2018, 8, 4878.	3.3	17
98	TRPV4 inhibition prevents increased water diffusion and blood-retina barrier breakdown in the retina of streptozotocin-induced diabetic mice. PLoS ONE, 2019, 14, e0212158.	2.5	17
99	Repurposing cancer drugs identifies kenpaullone which ameliorates pathologic pain in preclinical models via normalization of inhibitory neurotransmission. Nature Communications, 2021, 12, 6208.	12.8	16
100	Lack of Evidence for Ectopic Sprouting of Genetically Labeled AÎ² Touch Afferents in Inflammatory and Neuropathic Trigeminal Pain. Molecular Pain, 2015, 11, s12990-015-0017.	2.1	15
101	Functional coupling between TRPV4 channel and TMEM16F modulates human trophoblast fusion. ELife, 0, 11, .	6.0	13
102	Transient Receptor Potential Vanilloid 4 as a Regulator of Induced Pluripotent Stem Cell Chondrogenesis. Stem Cells, 2021, 39, 1447-1456.	3.2	12
103	TRPV4-Mediated Regulation of the Blood Brain Barrier Is Abolished During Inflammation. Frontiers in Cell and Developmental Biology, 2020, 8, 849.	3.7	11
104	Keratinocyte Growth Regulation TRP-ed Up Over Downregulated TRPV4?. Journal of Investigative Dermatology, 2014, 134, 2310-2312.	0.7	7
105	Modeling TMJD pain in the laboratory mouse: role of TRP ion channels. Molecular Pain, 2014, 10, O8.	2.1	4
106	STING-ing Pain: How Can Pro-inflammatory Signaling Attenuate Pain?. Neuroscience Bulletin, 2021, 37, 1075-1078.	2.9	3
107	Transient receptor potential cation channel vanilloid (TRPV) 4 in ventilatorâ€induced lung injury (VILI). FASEB Journal, 2013, 27, 914.12.	0.5	3
108	A Precisely Defined Role for the Tip Link-Associated Protein TMIE in the Mechanoelectrical Transduction Channel Complex of Inner Ear Hair Cells. Neuron, 2014, 84, 889-891.	8.1	2

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109	Genetic and environmental regulators of Kcc2/KCC2 gene expression. , 2020, , 307-325.		2
110	TRPV4: An Underappreciated Target to Control Alveolar Lung Edema in Severe SARS-CoV-2 Infections. SSRN Electronic Journal, 2020, , 3558887.	0.4	2
111	Activation of TRPV4 increases endothelial permeability in lung septal capillaries. FASEB Journal, 2006, 20, A747.	0.5	2
112	A TRP that makes us feel hyper. Journal of Physiology, 2012, 590, 1779-1780.	2.9	1
113	High vascular pressure leads to P450 epoxygenaseâ€dependent TRPV4 activation and endothelial injury in mouse lung. FASEB Journal, 2007, 21, A1201.	0.5	1
114	Upregulation of TRPV4 channels in pulmonary arteries (PAs) contribute to chronic hypoxia induced myogenic tone and pulmonary hypertension. FASEB Journal, 2008, 22, 1213.5.	0.5	1
115	Long March Toward Safe and Effective Analgesia by Enhancing Gene Expression of Kcc2: First Steps Taken. Frontiers in Molecular Neuroscience, 2022, 15, .	2.9	1
116	Osmotic or Chemical Activation of the TRPV4 Ion Channel Enhances the Development of Chondrocyte-Based Tissue Engineered Cartilage. , 2013, , .		0
117	Deficiency of TRPV4 abolishes shear stressâ€induced vasodilation in mice.. FASEB Journal, 2008, 22, 937.3.	0.5	0
118	14,15â€Epoxyeicosatrienoic acid increases endothelial permeability via TRPV4 and KCa channel activation in mouse lung. FASEB Journal, 2008, 22, 1213.7.	0.5	0
119	Ca 2+ entry via Î±1G and TRPV4 channels differentially regulates alveolar capillary endothelium. FASEB Journal, 2009, 23, 999.9.	0.5	0
120	Serum/glucocorticoidâ€regulated kinase (SGK) 1 and transient receptor potential vanilloid channel (TRPV) 4 mediate ventilationâ€induced endothelial Ca ²⁺ influx and barrier failure. FASEB Journal, 2015, 29, 863.8.	0.5	0
121	Loss of Endothelial CFTR Drives Barrier Failure and Edema Formation in Lung Infection and Can Be Targeted by CFTR Potentiation. FASEB Journal, 2022, 36, .	0.5	0
122	Mechanistic contribution of CaV3.2 calcium channels to trigeminal neuralgia pathophysiology not clarified. F1000Research, 0, 11, 718.	1.6	0