Karl Messlinger

List of Publications by Year
in descending order

86 papers	3,464 citations	147801 31 h-index	144013 57 g-index
93 all docs	93 docs citations	93 times ranked	2729 citing authors

#	Article	IF	Citations
1	H2S and NO cooperatively regulate vascular tone by activating a neuroendocrine HNOâ€“TRPA1â€“CGRP signalling pathway. Nature Communications, 2014, 5, 4381.	12.8	324
2	Calcitonin receptorâ€like receptor (CLR), receptor activityâ€modifying protein 1 (RAMP1), and calcitonin geneâ€related peptide (CGRP) immunoreactivity in the rat trigeminovascular system: Differences between peripheral and central CGRP receptor distribution. Journal of Comparative Neurology, 2008, 507, 1277-1299.	1.6	287
3	Variable sensitivity to noxious heat is mediated by differential expression of the CGRP gene. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12938-12943.	7.1	151
4	Conduction velocity is regulated by sodium channel inactivation in unmyelinated axons innervating the rat cranial meninges. Journal of Physiology, 2008, 586, 1089-1103.	2.9	137
5	Increase of meningeal blood flow after electrical stimulation of rat dura mater encephali: mediation by calcitonin geneâ€related peptide. British Journal of Pharmacology, 1995, 114, 1397-1402.	5.4	130
6	Extracranial projections of meningeal afferents and their impact on meningeal nociception and headache. Pain, 2013, 154, 1622-1631.	4.2	125
7	The Nonpeptide Calcitonin Gene-Related Peptide Receptor Antagonist BIBN4096BS Lowers the Activity of Neurons with Meningeal Input in the Rat Spinal Trigeminal Nucleus. Journal of Neuroscience, 2005, 25, 5877-5883.	3.6	124
8	Migraine: where and how does the pain originate?. Experimental Brain Research, 2009, 196, 179-193.	1.5	124
9	Innervation of Rat and Human Dura Mater and Pericranial Tissues in the Parietoâ€Temporal Region by Meningeal Afferents. Headache, 2014, 54, 996-1009.	3.9	111
10	CGRP and NO in the Trigeminal System: Mechanisms and Role in Headache Generation. Headache, 2012, 52, 1411-1427.	3.9	108
11	Current understanding of trigeminal ganglion structure and function in headache. Cephalalgia, 2019, 39, 1661-1674.	3.9	97
12	Neuropeptide Effects in the Trigeminal System: Pathophysiology and Clinical Relevance in Migraine. Keio Journal of Medicine, 2011, 60, 82-89.	1.1	96
13	The big CGRP flood - sources, sinks and signalling sites in the trigeminovascular system. Journal of Headache and Pain, 2018, 19, 22.	6.0	94
14	Nitric Oxide Releases Calcitonin-Gene-Related Peptide from Rat Dura mater Encephali Promoting Increases in Meningeal Blood Flow. Journal of Vascular Research, 2002, 39, 489-496.	1.4	86
15	Calcitonin gene-related peptide receptor antagonist olcegepant acts in the spinal trigeminal nucleus. Brain, 2009, 132, 3134-3141.	7.6	86
16	Measurement of meningeal blood vessel diameter in vivo with a plug-in for ImageJ. Microvascular Research, 2010, 80, 258-266.	2.5	85
17	Cross-talk signaling in the trigeminal ganglion: role of neuropeptides and other mediators. Journal of Neural Transmission, 2020, 127, 431-444.	2.8	68
18	Biphasic Response to Nitric Oxide of Spinal Trigeminal Neurons With Meningeal Input in Ratâ€“Possible Implications for the Pathophysiology of Headaches. Journal of Neurophysiology, 2004, 92, 1320-1328.	1.8	66

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19	Convergence of meningeal and facial afferents onto trigeminal brainstem neurons: an electrophysiological study in rat and man. Pain, 1999, 82, 229-237.	4.2	54
20	Meningeal blood flow is controlled by <scp>H₂Sâ€NO</scp> crosstalk activating a <scp>HNO</scp>â€<scp>TRPA</scp>1â€<scp>CGRP</scp> signalling pathway. British Journal of Pharmacology, 2016, 173, 431-445.	5.4	53
21	Increase in CGRP- and nNOS-immunoreactive neurons in the rat trigeminal ganglion after infusion of an NO donor. Cephalalgia, 2011, 31, 31-42.	3.9	49
22	Calcitonin gene-related peptide release from intact isolated dorsal root and trigeminal ganglia. Neuropeptides, 2008, 42, 311-317.	2.2	47
23	Repetitive activity slows axonal conduction velocity and concomitantly increases mechanical activation threshold in single axons of the rat cranial dura. Journal of Physiology, 2012, 590, 725-736.	2.9	46
24	Chapter 17. Functional morphology of nociceptive and other fine sensory endings (free nerve endings) in different tissues. Progress in Brain Research, 1996, 113, 273-298.	1.4	43
25	Release of CGRP from mouse brainstem slices indicates central inhibitory effect of triptans and kynurenate. Journal of Headache and Pain, 2014, 15, 7.	6.0	38
26	Modulation of neuronal activity in the nucleus raphÃ© magnus by the 5-HT1-receptor agonist naratriptan in rat. Pain, 2001, 90, 227-231.	4.2	37
27	Increases in Neuronal Activity in Rat Spinal Trigeminal Nucleus Following Changes in Barometric Pressureâ€"Relevance for Weatherâ€Associated Headaches?. Headache, 2010, 50, 1449-1463.	3.9	37
28	TRP Channels in the Focus of Trigeminal Nociceptor Sensitization Contributing to Primary Headaches. International Journal of Molecular Sciences, 2020, 21, 342.	4.1	37
29	Role of different proton-sensitive channels in releasing calcitonin gene-related peptide from isolated hearts of mutant mice. Cardiovascular Research, 2005, 65, 405-410.	3.8	36
30	Inhibition of stimulated meningeal blood flow by a calcitonin gene-related peptide binding mirror-image RNA oligonucleotide. British Journal of Pharmacology, 2006, 148, 536-543.	5.4	34
31	Evidence for CGRP reâ€uptake in rat dura mater encephali. British Journal of Pharmacology, 2010, 161, 1885-1898.	5.4	34
32	Changes in calcitonin gene-related peptide (CGRP) receptor component and nitric oxide receptor (sGC) immunoreactivity in rat trigeminal ganglion following glyceroltrinitrate pretreatment. Journal of Headache and Pain, 2013, 14, 74.	6.0	31
33	Effects of the 5-HT1 receptor agonists sumatriptan and CP 93,129 on dural arterial flow in the rat. European Journal of Pharmacology, 1997, 332, 173-181.	3.5	30
34	The calcitonin gene-related peptide (CGRP) receptor antagonist BIBN4096BS reduces neurogenic increases in dural blood flow. European Journal of Pharmacology, 2007, 562, 103-110.	3.5	30
35	The calcitonin gene-related peptide receptor antagonist MK-8825 decreases spinal trigeminal activity during nitroglycerin infusion. Journal of Headache and Pain, 2013, 14, 93.	6.0	26
36	Glyceroltrinitrate facilitates stimulated CGRP release but not gene expression of CGRP or its receptor components in rat trigeminal ganglia. Neuropeptides, 2009, 43, 483-489.	2.2	25

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37	Possible role of histamine (H1 - and H2 -) receptors in the regulation of meningeal blood flow. British Journal of Pharmacology, 2002, 137, 874-880.	5.4	23
38	Calcitonin gene-related peptide receptors in rat trigeminal ganglion do not control spinal trigeminal activity. Journal of Neurophysiology, 2012, 108, 431-440.	1.8	23
39	Putative role of 5-HT_{2B} receptors in migraine pathophysiology. Cephalalgia, 2017, 37, 365-371.	3.9	23
40	Stimulation of rat cranial dura mater with potassium chloride causes CGRP release into the cerebrospinal fluid and increases medullary blood flow. Neuropeptides, 2017, 64, 61-68.	2.2	23
41	Meningeal nociception: Electrophysiological studies related to headache and referred pain. Microscopy Research and Technique, 2001, 53, 129-137.	2.2	22
42	Release of immunoreactive substance P in the brain stem upon stimulation of the cranial dura mater with low pH - inhibition by the serotonin (5-HT1) receptor agonist CP 93,129. British Journal of Pharmacology, 1998, 125, 1726-1732.	5.4	21
43	Effects of acetylsalicylic acid and morphine on neurons of the rostral ventromedial medulla in rat. Neuroscience Research, 2003, 47, 391-397.	1.9	19
44	Hydrogen sulfide determines HNO-induced stimulation of trigeminal afferents. Neuroscience Letters, 2015, 602, 104-109.	2.1	19
45	Hydrogen Sulfide Mediating both Excitatory and Inhibitory Effects in a Rat Model of Meningeal Nociception and Headache Generation. Frontiers in Neurology, 2017, 8, 336.	2.4	19
46	Activation of the trigeminal system as a likely target of SARS-CoV-2 may contribute to anosmia in COVID-19. Cephalalgia, 2022, 42, 176-180.	3.9	19
47	Afferent input to the medullary dorsal horn from the contralateral face in rat. Brain Research, 1999, 826, 321-324.	2.2	16
48	Migraine and aura triggered by normobaric hypoxia. Cephalalgia, 2020, 40, 1561-1573.	3.9	16
49	Possible role of calcitonin geneâ€related peptide in trigeminal modulation of glomerular microcircuits of the rodent olfactory bulb. European Journal of Neuroscience, 2017, 45, 587-600.	2.6	15
50	Cyclic changes in sensations to painful stimuli in migraine patients. Cephalalgia, 2019, 39, 585-596.	3.9	14
51	CGRP measurements in human plasma â€“ a methodological study. Cephalalgia, 2021, 41, 1359-1373.	3.9	13
52	Release of calcitonin gene-related peptide from the isolated mouse heart: Methodological validation of a new model. Neuropeptides, 2006, 40, 107-113.	2.2	12
53	Petasin and isopetasin reduce CGRP release from trigeminal afferents indicating an inhibitory effect on TRPA1 and TRPV1 receptor channels. Journal of Headache and Pain, 2021, 22, 23.	6.0	12
54	The Anti-CGRP Antibody Fremanezumab Lowers CGRP Release from Rat Dura Mater and Meningeal Blood Flow. Cells, 2022, 11, 1768.	4.1	12

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55	ATP-sensitive muscle afferents activate spinal trigeminal neurons with meningeal afferent input in rat â€“ pathophysiological implications for tension-type headache. Journal of Headache and Pain, 2016, 17, 75.	6.0	11
56	Highâ€dose phenylephrine increases meningeal blood flow through TRPV1 receptor activation and release of calcitonin geneâ€related peptide. European Journal of Pain, 2020, 24, 383-397.	2.8	10
57	Effect of a calcitonin gene-related peptide-binding L-RNA aptamer on neuronal activity in the rat spinal trigeminal nucleus. Journal of Headache and Pain, 2018, 19, 3.	6.0	9
58	Release of calcitonin gene-related peptide from the jugularâ€“nodose ganglion complex in rats â€“ A new model to examine the role of cardiac peptidergic and nitrergic innervation. Neuropeptides, 2008, 42, 543-550.	2.2	8
59	Activity-dependent sensory signal processing in mechanically responsive slowly conducting meningeal afferents. Journal of Neurophysiology, 2014, 112, 3077-3085.	1.8	8
60	Cardio- and cerebrovascular safety of erenumab, a monoclonal antibody targeting CGRP receptors â€“ important studies on human isolated arteries. Cephalalgia, 2019, 39, 1731-1734.	3.9	8
61	Temperatureâ€dependent neuronal regulation of arterial blood flow in rat cranial dura mater. Journal of Neuroscience Research, 2008, 86, 158-164.	2.9	7
62	Pre- and postoperative headache in patients with meningioma. Cephalalgia, 2019, 39, 533-543.	3.9	7
63	Anatomy of Headache. Headache, 2015, , 1-29.	0.4	7
64	Chronic adriamycin treatment impairs CGRP-mediated functions of meningeal sensory nerves. Neuropeptides, 2018, 69, 46-52.	2.2	6
65	Why is the therapeutic effect of acute antimigraine drugs delayed? A review of controlled trials and hypotheses about the delay of effect. British Journal of Clinical Pharmacology, 2019, 85, 2487-2498.	2.4	6
66	Excitatory Effects of Calcitonin Gene-Related Peptide (CGRP) on Superficial Sp5C Neurons in Mouse Medullary Slices. International Journal of Molecular Sciences, 2021, 22, 3794.	4.1	6
67	CGRP outflow into jugular blood and cerebrospinal fluid and permeance for CGRP of rat dura mater. Journal of Headache and Pain, 2021, 22, 105.	6.0	6
68	Histological demonstration of increased vascular permeability in the dura mater of the rat. Microscopy Research and Technique, 2001, 53, 229-231.	2.2	5
69	Altered thermal sensitivity in neurons injured by infraorbital nerve lesion. Neuroscience Letters, 2011, 488, 168-172.	2.1	5
70	Vessel diameter measurements at the medullary brainstem in vivo as an index of trigeminal activity. Brain Research, 2016, 1632, 51-57.	2.2	5
71	Transient activation of spinal trigeminal neurons in a rat model of hypoxia-induced headache. Pain, 2021, 162, 1153-1162.	4.2	5
72	Stimulated release of calcitonin gene-related peptide from the human right atrium in patients with and without diabetes mellitus. Peptides, 2006, 27, 3255-3260.	2.4	4

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73	Neurogenic Vascular Responses in the Dura Mater and their Relevance for the Pathophysiology of Headaches. NeuroImmune Biology, 2009, 8, 191-209.	0.2	4
74	Photoactivation of olfactory sensory neurons does not affect action potential conduction in individual trigeminal sensory axons innervating the rodent nasal cavity. PLoS ONE, 2019, 14, e0211175.	2.5	4
75	Reactive dicarbonyl compounds cause Calcitonin Gene-Related Peptide release and synergize with inflammatory conditions in mouse skin and peritoneum. Journal of Biological Chemistry, 2020, 295, 6330-6343.	3.4	4
76	Differential conduction and CGRP release in visceral versus cutaneous peripheral nerves in the mouse. Journal of Neuroscience Research, 2018, 96, 1398-1405.	2.9	3
77	Craniofacial sensations induced by transient changes of barometric pressure in healthy subjects â€“ A crossover pilot study. Cephalalgia Reports, 2021, 4, 251581632110003.	0.7	3
78	The chicken and egg problem: CGRP release due to trigeminal activation or vice versa?. Cephalalgia, 2021, , 033310242110423.	3.9	3
79	Responses of spinal trigeminal neurons to noxious stimulation of paranasal cavities â€“ a rat model of rhinosinusitis headache. Cephalalgia, 2021, 41, 535-545.	3.9	2
80	Petasites for Migraine Prevention: New Data on Mode of Action, Pharmacology and Safety. A Narrative Review. Frontiers in Neurology, 2022, 13, 864689.	2.4	2
81	Sumatriptan activates TRPA1. Cephalalgia Reports, 2019, 2, 251581631984715.	0.7	1
82	Cyclic changes of sensory parameters in migraine patients. Cephalalgia, 2022, 42, 1148-1159.	3.9	1
83	Calcitonin receptor-like receptor (CLR), receptor activity-modifying protein 1 (RAMP1), and calcitonin gene-related peptide (CGRP) immunoreactivity in the rat trigeminovascular system: Differences between peripheral and central CGRP receptor distribution. Journal of Comparative Neurology, 2008, 507, spc1-spc1.	1.6	0
84	Calcitonin receptor-like receptor (CLR), receptor activity-modifying protein 1 (RAMP1), and calcitonin gene-related peptide (CGRP) immunoreactivity in the rat trigeminovascular system: Differences between peripheral and central CGRP receptor distribution. Journal of Comparative Neurology, 2008, 507, spc1-spc1.	1.6	0
85	Commentary: Cholinergic Nociceptive Mechanisms in Rat Meninges and Trigeminal Ganglia: Potential Implications for Migraine Pain. Frontiers in Neurology, 2017, 8, 623.	2.4	0
86	Nitroxyl Delivered by Angeliâ€™s Salt Causes Short-Lasting Activation Followed by Long-Lasting Deactivation of Meningeal Afferents in Models of Headache Generation. International Journal of Molecular Sciences, 2022, 23, 2330.	4.1	0