Michael W Salter

List of Publications by Year
in descending order

140 papers	26,856 citations	11651 70 h-index	11052 137 g-index
145 all docs	145 docs citations	145 times ranked	22177 citing authors

#	Article	IF	Citations
1	Neuronal Plasticity: Increasing the Gain in Pain. Science, 2000, 288, 1765-1768.	12.6	3,771
2	BDNF from microglia causes the shift in neuronal anion gradient underlying neuropathic pain. Nature, 2005, 438, 1017-1021.	27.8	1,690
3	Regulation of NMDA receptor trafficking by amyloid-Î². Nature Neuroscience, 2005, 8, 1051-1058.	14.8	1,417
4	P2X4 receptors induced in spinal microglia gate tactile allodynia after nerve injury. Nature, 2003, 424, 778-783.	27.8	1,397
5	Microglia emerge as central players in brain disease. Nature Medicine, 2017, 23, 1018-1027.	30.7	1,208
6	Different immune cells mediate mechanical pain hypersensitivity in male and female mice. Nature Neuroscience, 2015, 18, 1081-1083.	14.8	1,041
7	Treatment of Ischemic Brain Damage by Perturbing NMDA Receptor- PSD-95 Protein Interactions. Science, 2002, 298, 846-850.	12.6	927
8	Neuropathic pain and spinal microglia: a big problem from molecules in â€˜smallâ€™ glia. Trends in Neurosciences, 2005, 28, 101-107.	8.6	716
9	Src kinases: a hub for NMDA receptor regulation. Nature Reviews Neuroscience, 2004, 5, 317-328.	10.2	692
10	Regulation of NMDA receptors by tyrosine kinases and phosphatases. Nature, 1994, 369, 233-235.	27.8	659
11	NMDA Channel Regulation by Channel-Associated Protein Tyrosine Kinase Src. Science, 1997, 275, 674-678.	12.6	595
12	Sublime Microglia: Expanding Roles for the Guardians of the CNS. Cell, 2014, 158, 15-24.	28.9	441
13	P2X4-Receptor-Mediated Synthesis and Release of Brain-Derived Neurotrophic Factor in Microglia Is Dependent on Calcium and p38-Mitogen-Activated Protein Kinase Activation. Journal of Neuroscience, 2009, 29, 3518-3528.	3.6	420
14	Spinal Cord Toll-Like Receptor 4 Mediates Inflammatory and Neuropathic Hypersensitivity in Male But Not Female Mice. Journal of Neuroscience, 2011, 31, 15450-15454.	3.6	394
15	Morphine hyperalgesia gated through microglia-mediated disruption of neuronal Clâˆ' homeostasis. Nature Neuroscience, 2013, 16, 183-192.	14.8	385
16	Glycine binding primes NMDA receptor internalization. Nature, 2003, 422, 302-307.	27.8	382
17	NMDA receptors in clinical neurology: excitatory times ahead. Lancet Neurology, The, 2008, 7, 742-755.	10.2	363
18	Regulation of Neuregulin Signaling by PSD-95 Interacting with ErbB4 at CNS Synapses. Neuron, 2000, 26, 443-455.	8.1	356

#	ARTICLE	IF	CITATIONS
19	Genetically determined P2X7 receptor pore formation regulates variability in chronic pain sensitivity. Nature Medicine, 2012, 18, 595-599.	30.7	335
20	P2X4R+ microglia drive neuropathic pain. Nature Neuroscience, 2012, 15, 1068-1073.	14.8	313
21	TRPV1+ Sensory Neurons Control Î² Cell Stress and Islet Inflammation in Autoimmune Diabetes. Cell, 2006, 127, 1123-1135.	28.9	308
22	Src Activation in the Induction of Long-Term Potentiation in CA1 Hippocampal Neurons. Science, 1998, 279, 1363-1368.	12.6	306
23	NMDA receptor regulation by Src kinase signalling in excitatory synaptic transmission and plasticity. Current Opinion in Neurobiology, 2001, 11, 336-342.	4.2	286
24	DREAM Is a Critical Transcriptional Repressor for Pain Modulation. Cell, 2002, 108, 31-43.	28.9	274
25	JAK-STAT3 pathway regulates spinal astrocyte proliferation and neuropathic pain maintenance in rats. Brain, 2011, 134, 1127-1139.	7.6	260
26	CAKÎ²/Pyk2 Kinase Is a Signaling Link for Induction of Long-Term Potentiation in CA1 Hippocampus. Neuron, 2001, 29, 485-496.	8.1	258
27	Calcium-Permeable Ion Channels in Pain Signaling. Physiological Reviews, 2014, 94, 81-140.	28.8	249
28	Transformation of the Output of Spinal Lamina I Neurons After Nerve Injury and Microglia Stimulation Underlying Neuropathic Pain. Molecular Pain, 2007, 3, 1744-8069-3-27.	2.1	221
29	Tyrosine Phosphatase STEP Is a Tonic Brake on Induction of Long-Term Potentiation. Neuron, 2002, 34, 127-138.	8.1	196
30	Treatment of inflammatory and neuropathic pain by uncoupling Src from the NMDA receptor complex. Nature Medicine, 2008, 14, 1325-1332.	30.7	195
31	P2Y₁Purinoceptor-Mediated Ca²⁺Signaling and Ca²⁺Wave Propagation in Dorsal Spinal Cord Astrocytes. Journal of Neuroscience, 2000, 20, 2800-2808.	3.6	193
32	Priming of adult pain responses by neonatal pain experience: maintenance by central neuroimmune activity. Brain, 2012, 135, 404-417.	7.6	185
33	PDZ Protein Interactions Underlying NMDA Receptor-Mediated Excitotoxicity and Neuroprotection by PSD-95 Inhibitors. Journal of Neuroscience, 2007, 27, 9901-9915.	3.6	180
34	Astroglia in Medullary Dorsal Horn (Trigeminal Spinal Subnucleus Caudalis) Are Involved in Trigeminal Neuropathic Pain Mechanisms. Journal of Neuroscience, 2009, 29, 11161-11171.	3.6	180
35	Effectiveness of PSD95 Inhibitors in Permanent and Transient Focal Ischemia in the Rat. Stroke, 2008, 39, 2544-2553.	2.0	175
36	Pain and Poppies: The Good, the Bad, and the Ugly of Opioid Analgesics. Journal of Neuroscience, 2015, 35, 13879-13888.	3.6	175

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37	Brain-derived neurotrophic factor from microglia: a molecular substrate for neuropathic pain. Neuron Glia Biology, 2011, 7, 99-108.	1.6	170
38	The role of the immune system in Alzheimer disease: Etiology and treatment. Ageing Research Reviews, 2017, 40, 84-94.	10.9	167
39	Microglial P2X4R-evoked pain hypersensitivity is sexually dimorphic in rats. Pain, 2018, 159, 1752-1763.	4.2	165
40	Sex differences in pain. Pain, 2016, 157, S2-S6.	4.2	158
41	Schizophrenia susceptibility pathway neuregulin 1â€"ErbB4 suppresses Src upregulation of NMDA receptors. Nature Medicine, 2011, 17, 470-478.	30.7	157
42	Physiological roles for adenosine and ATP in synaptic transmission in the spinal dorsal horn. Progress in Neurobiology, 1993, 41, 125-156.	5.7	153
43	Src in synaptic transmission and plasticity. Oncogene, 2004, 23, 8007-8016.	5.9	146
44	Dorsal horn neurons release extracellular ATP in a VNUT-dependent manner that underlies neuropathic pain. Nature Communications, 2016, 7, 12529.	12.8	142
45	Gain control of NMDA-receptor currents by intracellular sodium. Nature, 1998, 396, 469-474.	27.8	134
46	Stereological and somatotopic analysis of the spinal microglial response to peripheral nerve injury. Brain, Behavior, and Immunity, 2007, 21, 624-633.	4.1	127
47	Unique domain anchoring of Src to synaptic NMDA receptors via the mitochondrial protein NADH dehydrogenase subunit 2. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 6237-6242.	7.1	124
48	Ligand-Dependent Recruitment of the ErbB4 Signaling Complex into Neuronal Lipid Rafts. Journal of Neuroscience, 2003, 23, 3164-3175.	3.6	123
49	ATP receptors gate microglia signaling in neuropathic pain. Experimental Neurology, 2012, 234, 354-361.	4.1	123
50	Potentiation of Synaptic GluN2B NMDAR Currents by Fyn Kinase Is Gated through BDNF-Mediated Disinhibition in Spinal Pain Processing. Cell Reports, 2016, 17, 2753-2765.	6.4	110
51	Differential Properties of Astrocyte Calcium Waves Mediated by P2Y1 and P2Y2 Receptors. Journal of Neuroscience, 2003, 23, 6728-6739.	3.6	109
52	SHANK2 mutations associated with autism spectrum disorder cause hyperconnectivity of human neurons. Nature Neuroscience, 2019, 22, 556-564.	14.8	109
53	Src, N-methyl-d-aspartate (NMDA) receptors, and synaptic plasticity. Biochemical Pharmacology, 1998, 56, 789-798.	4.4	107
54	Spinal microglia and neuropathic pain in young rats. Pain, 2007, 128, 215-224.	4.2	106

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55	Glucocorticoid regulation of ATP release from spinal astrocytes underlies diurnal exacerbation of neuropathic mechanical allodynia. Nature Communications, 2016, 7, 13102.	12.8	105
56	The Striatal-Enriched Protein Tyrosine Phosphatase Gates Long-Term Potentiation and Fear Memory in the Lateral Amygdala. Biological Psychiatry, 2007, 61, 1049-1061.	1.3	100
57	Neto2 is a KCC2 interacting protein required for neuronal Cl ^{âˆ’} regulation in hippocampal neurons. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3561-3566.	7.1	98
58	Deletion of the ubiquitin ligase Nedd4L in lung epithelia causes cystic fibrosis-like disease. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3216-3221.	7.1	97
59	Chloride Dysregulation through Downregulation of KCC2 Mediates Neuropathic Pain in Both Sexes. Cell Reports, 2019, 28, 590-596.e4.	6.4	96
60	Microglia and intractable chronic pain. Glia, 2013, 61, 55-61.	4.9	94
61	Interactions between Src family protein tyrosine kinases and PSD-95. Neuropharmacology, 2003, 45, 720-728.	4.1	92
62	MECP2e1 isoform mutation affects the form and function of neurons derived from Rett syndrome patient iPS cells. Neurobiology of Disease, 2015, 76, 37-45.	4.4	84
63	Microgliaâ€"neuronal signalling in neuropathic pain hypersensitivity 2.0. Current Opinion in Neurobiology, 2010, 20, 474-480.	4.2	82
64	Differential Frequency Dependence of P2Y1- and P2Y2- Mediated Ca2+Signaling in Astrocytes. Journal of Neuroscience, 2003, 23, 4437-4444.	3.6	81
65	Molecules in pain and sex: a developing story. Molecular Brain, 2017, 10, 9.	2.6	81
66	NMDA receptors are movinâ€™ in. Current Opinion in Neurobiology, 2004, 14, 353-361.	4.2	78
67	Neto1 Is an Auxiliary Subunit of Native Synaptic Kainate Receptors. Journal of Neuroscience, 2011, 31, 10009-10018.	3.6	78
68	Kindling-induced epilepsy alters calcium currents in granule cells of rat hippocampal slices. Brain Research, 1990, 531, 88-94.	2.2	76
69	Glutamate receptor phosphorylation and trafficking in pain plasticity in spinal cord dorsal horn. European Journal of Neuroscience, 2010, 32, 278-289.	2.6	76
70	Metaplasticity gated through differential regulation of GluN2A versus GluN2B receptors by Src family kinases. EMBO Journal, 2012, 31, 805-816.	7.8	73
71	Cellular Signalling Pathways of Spinal Pain Neuroplasticity as Targets for Analgesic Development. Current Topics in Medicinal Chemistry, 2005, 5, 557-567.	2.1	72
72	Purinoceptors in microglia and neuropathic pain. Pflugers Archiv European Journal of Physiology, 2006, 452, 645-652.	2.8	72

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73	ErbB4 is a suppressor of long-term potentiation in the adult hippocampus. NeuroReport, 2008, 19, 139-143.	1.2	72
74	Circulating NOD1 Activators and Hematopoietic NOD1 Contribute to Metabolic Inflammation and Insulin Resistance. Cell Reports, 2017, 18, 2415-2426.	6.4	70
75	A method for isolating and patch-clamping single mammalian taste receptor cells. Brain Research, 1989, 503, 326-329.	2.2	67
76	A novel P₂â€purinoceptor expressed by a subpopulation of astrocytes from the dorsal spinal cord of the rat. British Journal of Pharmacology, 1995, 116, 2909-2918.	5.4	67
77	The Lurcher Mutation of an Î±-Amino-3-hydroxy-5-methyl- 4-isoxazolepropionic Acid Receptor Subunit Enhances Potency of Glutamate and Converts an Antagonist to an Agonist. Journal of Biological Chemistry, 2000, 275, 8475-8479.	3.4	64
78	Priming of Adult Incision Response by Early-Life Injury: Neonatal Microglial Inhibition Has Persistent But Sexually Dimorphic Effects in Adult Rats. Journal of Neuroscience, 2019, 39, 3081-3093.	3.6	62
79	Single-cell RNA sequencing reveals time- and sex-specific responses of mouse spinal cord microglia to peripheral nerve injury and links ApoE to chronic pain. Nature Communications, 2022, 13, 843.	12.8	62
80	Synaptic Dysfunction in Human Neurons With Autism-Associated Deletions in PTCHD1-AS. Biological Psychiatry, 2020, 87, 139-149.	1.3	57
81	PSD-95 is a negative regulator of the tyrosine kinase Src in the NMDA receptor complex. EMBO Journal, 2006, 25, 4971-4982.	7.8	56
82	Dysregulated Src upregulation of NMDA receptor activity: a common link in chronic pain and schizophrenia. FEBS Journal, 2012, 279, 2-11.	4.7	56
83	Src Potentiation of NMDA Receptors in Hippocampal and Spinal Neurons Is Not Mediated by Reducing Zinc Inhibition. Journal of Neuroscience, 1999, 19, RC37-RC37.	3.6	55
84	Neto Auxiliary Protein Interactions Regulate Kainate and NMDA Receptor Subunit Localization at Mossy Fiberâ€“CA3 Pyramidal Cell Synapses. Journal of Neuroscience, 2014, 34, 622-628.	3.6	55
85	GluN2B and GluN2D NMDARs dominate synaptic responses in the adult spinal cord. Scientific Reports, 2014, 4, 4094.	3.3	55
86	Requirement of NMDA receptor/channels for intracellular high-energy phosphates and the extent of intraneuronal calcium buffering in cultured mouse hippocampal neurons. Neuroscience Letters, 1988, 93, 73-78.	2.1	54
87	P2X4 purinoceptor signaling in chronic pain. Purinergic Signalling, 2012, 8, 621-628.	2.2	54
88	Î±5 Subunit-containing GABAA receptors mediate a slowly decaying inhibitory synaptic current in CA1 pyramidal neurons following Schaffer collateral activation. Neuropharmacology, 2010, 58, 668-675.	4.1	44
89	Whole-cell voltage-clamp recordings in granule cells acutely isolated from hippocampal slices of adult or aged rats. Neuroscience Letters, 1989, 96, 70-75.	2.1	42
90	Neto Auxiliary Subunits Regulate Interneuron Somatodendritic and Presynaptic Kainate Receptors to Control Network Inhibition. Cell Reports, 2017, 20, 2156-2168.	6.4	41

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91	Sex-Dependent Mechanisms of Chronic Pain: A Focus on Microglia and P2X4R. Journal of Pharmacology and Experimental Therapeutics, 2020, 375, 202-209.	2.5	36
92	Neto2 Interacts with the Scaffolding Protein GRIP and Regulates Synaptic Abundance of Kainate Receptors. PLoS ONE, 2012, 7, e51433.	2.5	35
93	SnapShot: Microglia in Disease. Cell, 2016, 165, 1294-1294.e1.	28.9	34
94	Tripartite signalling by NMDA receptors. Molecular Brain, 2020, 13, 23.	2.6	34
95	Human induced pluripotent stem cell derived neurons as a model for Williams-Beuren syndrome. Molecular Brain, 2015, 8, 77.	2.6	33
96	D1 and NMDA receptors hook up: expanding on an emerging theme. Trends in Neurosciences, 2003, 26, 235-237.	8.6	32
97	Control of Long-Term Synaptic Potentiation and Learning by Alternative Splicing of the NMDA Receptor Subunit GluN1. Cell Reports, 2019, 29, 4285-4294.e5.	6.4	32
98	The Tâ€type calcium channel antagonist, Z944, reduces spinal excitability and pain hypersensitivity. British Journal of Pharmacology, 2021, 178, 3517-3532.	5.4	27
99	Vertebrate Intersectin1 Is Repurposed to Facilitate Cortical Midline Connectivity and Higher Order Cognition. Journal of Neuroscience, 2013, 33, 4055-4065.	3.6	25
100	Fyn Kinase regulates GluN2B subunit-dominant NMDA receptors in human induced pluripotent stem cell-derived neurons. Scientific Reports, 2016, 6, 23837.	3.3	25
101	TRPV1 Gates Tissue Access and Sustains Pathogenicity in Autoimmune Encephalitis. Molecular Medicine, 2013, 19, 149-159.	4.4	24
102	Defective place cell activity in nociceptin receptor knockout mice with elevated NMDA receptor-dependent long-term potentiation. Journal of Physiology, 2005, 565, 579-591.	2.9	22
103	Purinergic signalling in spinal pain processing. Purinergic Signalling, 2021, 17, 49-54.	2.2	21
104	Temporomandibular pain and dysfunction syndrome: The relationship of clinical and psychological data to outcome. Journal of Behavioral Medicine, 1986, 9, 97-109.	2.1	18
105	Spatial gene expression analysis of neuroanatomical differences in mouse models. NeuroImage, 2017, 163, 220-230.	4.2	18
106	Src and Fyn regulation of NMDA receptors in health and disease. Neuropharmacology, 2021, 193, 108615.	4.1	18
107	ATP-Sensitive K+ channels mediate an IPSP in dorsal horn neurones elicited by sensory stimulation. Synapse, 1992, 11, 214-220.	1.2	16
108	Substance P released endogenously by high-intensity sensory stimulation potentiates purinergic inhibition of nociceptive dorsal horn neurons induced by peripheral vibration. Neuroscience Letters, 1994, 176, 128-132.	2.1	16

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109	The Neurobiology of Central Sensitization. Journal of Musculoskeletal Pain, 2002, 10, 23-33.	0.3	16
110	Microglia-independent peripheral neuropathic pain in male and female mice. Pain, 2022, 163, e1129-e1144.	4.2	15
111	Neuropathic pain: symptoms, models, and mechanisms. Drug Development Research, 2006, 67, 289-301.	2.9	14
112	Identification of Sodium Channel Isoforms That Mediate Action Potential Firing in Lamina I/II Spinal Cord Neurons. Molecular Pain, 2011, 7, 1744-8069-7-67.	2.1	14
113	Identification of a single amino acid in GluN1 that is critical for glycine-primed internalization of NMDA receptors. Molecular Brain, 2013, 6, 36.	2.6	14
114	Rundown of NMDA-receptor mediated currents is resistant to lowering intracellular [Ca2+] and is prevented by ATP in rat spinal dorsal horn neurons. Neuroscience Letters, 1993, 157, 183-186.	2.1	13
115	An ambiguous fast synapse: a new twist in the tale of two transmitters. Nature Neuroscience, 1999, 2, 199-200.	14.8	12
116	Plasticity of synaptic glun receptors is required for the Srcâ€dependent induction of longâ€term potentiation at CA3â€CA1 synapses. Hippocampus, 2011, 21, 1053-1061.	1.9	12
117	Intracellular Calcium Responses Encode Action Potential Firing in Spinal Cord Lamina I Neurons. Journal of Neuroscience, 2020, 40, 4439-4456.	3.6	12
118	Targeting NMDA receptors in neuropsychiatric disorders by drug screening on human neurons derived from pluripotent stem cells. Translational Psychiatry, 2022, 12, .	4.8	12
119	Deepening understanding of the neural substrates of chronic pain. Brain, 2014, 137, 651-653.	7.6	11
120	An evolutionary switch in ND2 enables Src kinase regulation of NMDA receptors. Nature Communications, 2017, 8, 15220.	12.8	11
121	The impact of postsynaptic density 95 blocking peptide (Tatâ€NR2B9c) and an iNOS inhibitor (1400W) on proteomic profile of the hippocampus in C57BL/6J mouse model of kainateâ€induced epileptogenesis. Journal of Neuroscience Research, 2019, 97, 1378-1392.	2.9	11
122	Src deficient mice demonstrate behavioral and electrophysiological alterations relevant to psychiatric and developmental disease. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2019, 93, 84-92.	4.8	11
123	Sodium channels develop a tyrosine phosphatase complex. Nature Neuroscience, 2000, 3, 417-419.	14.8	8
124	LTP gets culture. Trends in Neurosciences, 2001, 24, 560-561.	8.6	8
125	Regulation of intracellular calcium and preprotachykinin neurotransmitter precursor gene expression by patterned electrical stimulation in rat sympathetic neurons. Neuroscience Letters, 1995, 185, 195-198.	2.1	7
126	Alternative splicing of GluN1 gates glycine siteâ€"dependent nonionotropic signaling by NMDAR receptors. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	7

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127	A Brief Educational Intervention About Pain and Aging for Older Members of the Community and Health Care Workers. Journal of Pain, 2012, 13, 849-856.	1.4	6
128	Regulated internalization of NMDA receptors drives PKD1-mediated suppression of the activity of residual cell-surface NMDA receptors. Molecular Brain, 2015, 8, 75.	2.6	6
129	Chapter 25 Nucleotide receptor signalling in spinal cord astrocytes: Findings and functional implications. Progress in Brain Research, 1999, 120, 311-322.	1.4	5
130	Taking two cuts at pain. Nature Medicine, 2008, 14, 243-244.	30.7	4
131	Hippocampal protein kinase D1 is necessary for DHPG-induced learning and memory impairments in rats. PLoS ONE, 2018, 13, e0195095.	2.5	3
132	Strangers in strange lands: mitochondrial proteins found at extra-mitochondrial locations. Biochemical Journal, 2019, 476, 25-37.	3.7	3
133	An inhibitory postsynaptic potential in spinal nociceptive neurones is mediated by adenosine through activation of ATP-sensitive K+ channels. Drug Development Research, 1993, 28, 416-422.	2.9	2
134	Multiple roles of ATP and adenosine in somatosensory processing: Therapeutic implications. Drug Development Research, 1996, 39, 279-288.	2.9	2
135	VIP cortical conductors set the tone for chronic pain. Nature Neuroscience, 2017, 20, 1037-1038.	14.8	2
136	A Straightjacket for Pain?. Cell, 2010, 143, 505-507.	28.9	1
137	Cholinergic modulation is independent of T lymphocytes in a mouse model of neuropathic pain. Molecular Pain, 2022, 18, 174480692210766.	2.1	1
138	Chapter 3.2.5 Application of recombinant proteins, peptides and antibodies in exploring the role of Src in regulating synaptic function. Handbook of Behavioral Neuroscience, 1999, 13, 438-454.	0.0	0
139	Characterization of Key Sexually Dimorphic Regulators in Pain Processing. Canadian Journal of Pain, 0, , .	1.7	0
140	Glial-modulating agents for the treatment of pain: protocol for a systematic review. BMJ Open, 2022, 12, e055713.	1.9	0