Steven F Maier

List of Publications by Year
in descending order

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90 papers	7,594 citations	57758 44 h-index	54911 84 g-index
91 all docs	91 docs citations	91 times ranked	8695 citing authors

#	Article	IF	Citations
1	Pathological pain and the neuroimmune interface. Nature Reviews Immunology, 2014, 14, 217-231.	22.7	703
2	Stressor controllability and learned helplessness: The roles of the dorsal raphe nucleus, serotonin, and corticotropin-releasing factor. Neuroscience and Biobehavioral Reviews, 2005, 29, 829-841.	6.1	606
3	Learned helplessness at fifty: Insights from neuroscience.. Psychological Review, 2016, 123, 349-367.	3.8	424
4	Morphine paradoxically prolongs neuropathic pain in rats by amplifying spinal NLRP3 inflammasome activation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E3441-50.	7.1	292
5	Bi-directional immuneâ€“brain communication: Implications for understanding stress, pain, and cognition. Brain, Behavior, and Immunity, 2003, 17, 69-85.	4.1	254
6	Role of the medial prefrontal cortex in coping and resilience. Brain Research, 2010, 1355, 52-60.	2.2	237
7	Microglia inflammatory responses are controlled by an intrinsic circadian clock. Brain, Behavior, and Immunity, 2015, 45, 171-179.	4.1	207
8	Escapable and inescapable stress differentially alter extracellular levels of 5-HT in the basolateral amygdala of the rat. Brain Research, 1998, 812, 113-120.	2.2	188
9	Behavioral control, the medial prefrontal cortex, and resilience. Dialogues in Clinical Neuroscience, 2006, 8, 397-406.	3.7	182
10	Stress sounds the alarmin: The role of the danger-associated molecular pattern HMGB1 in stress-induced neuroinflammatory priming. Brain, Behavior, and Immunity, 2015, 48, 1-7.	4.1	178
11	Stress Induces the Danger-Associated Molecular Pattern HMGB-1 in the Hippocampus of Male Sprague Dawley Rats: A Priming Stimulus of Microglia and the NLRP3 Inflammasome. Journal of Neuroscience, 2015, 35, 316-324.	3.6	177
12	5-Hydroxytryptamine 2C Receptors in the Basolateral Amygdala Are Involved in the Expression of Anxiety After Uncontrollable Traumatic Stress. Biological Psychiatry, 2010, 67, 339-345.	1.3	173
13	Danger Signals and Inflammasomes: Stress-Evoked Sterile Inflammation in Mood Disorders. Neuropsychopharmacology, 2017, 42, 36-45.	5.4	160
14	Exposure to inescapable but not escapable shock increases extracellular levels of 5-HT in the dorsal raphe nucleus of the rat. Brain Research, 1998, 783, 115-120.	2.2	153
15	High-fat diet and aging interact to produce neuroinflammation and impair hippocampal- and amygdalar-dependent memory. Neurobiology of Aging, 2017, 58, 88-101.	3.1	138
16	Chronic exposure to exogenous glucocorticoids primes microglia to pro-inflammatory stimuli and induces NLRP3 mRNA in the hippocampus. Psychoneuroendocrinology, 2014, 40, 191-200.	2.7	136
17	The contribution of the vagus nerve in interleukin-1Î²-induced fever is dependent on dose. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2001, 280, R929-R934.	1.8	133
18	High-fat diet consumption disrupts memory and primes elevations in hippocampal IL-1Î², an effect that can be prevented with dietary reversal or IL-1 receptor antagonism. Brain, Behavior, and Immunity, 2014, 42, 22-32.	4.1	127

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19	A robust activity marking system for exploring active neuronal ensembles. ELife, 2016, 5, .	6.0	115
20	Stress-induced neuroinflammatory priming: A liability factor in the etiology of psychiatric disorders. Neurobiology of Stress, 2016, 4, 62-70.	4.0	112
21	Behavioral control blunts reactions to contemporaneous and future adverse events: Medial prefrontal cortex plasticity and a corticostriatal network. Neurobiology of Stress, 2015, 1, 12-22.	4.0	110
22	The redox state of the alarmin HMGB1 is a pivotal factor in neuroinflammatory and microglial priming: A role for the NLRP3 inflammasome. Brain, Behavior, and Immunity, 2016, 55, 215-224.	4.1	106
23	The Alarmin HMGB1 Mediates Age-Induced Neuroinflammatory Priming. Journal of Neuroscience, 2016, 36, 7946-7956.	3.6	103
24	Immune-to-central nervous system communication and its role in modulating pain and cognition: Implications for cancer and cancer treatment. Brain, Behavior, and Immunity, 2003, 17, 125-131.	4.1	100
25	Nitroxidative Signaling Mechanisms in Pathological Pain. Trends in Neurosciences, 2016, 39, 862-879.	8.6	93
26	Selective activation of dorsal raphe nucleusâ€projecting neurons in the ventral medial prefrontal cortex by controllable stress. European Journal of Neuroscience, 2009, 30, 1111-1116.	2.6	86
27	Microglia: Neuroimmune-sensors of stress. Seminars in Cell and Developmental Biology, 2019, 94, 176-185.	5.0	86
28	SARS-CoV-2 spike S1 subunit induces neuroinflammatory, microglial and behavioral sickness responses: Evidence of PAMP-like properties. Brain, Behavior, and Immunity, 2022, 100, 267-277.	4.1	86
29	Neuroinflammatory priming to stress is differentially regulated in male and female rats. Brain, Behavior, and Immunity, 2018, 70, 257-267.	4.1	85
30	DREADDed microglia in pain: Implications for spinal inflammatory signaling in male rats. Experimental Neurology, 2018, 304, 125-131.	4.1	79
31	Uncontrollable, But Not Controllable, Stress Desensitizes 5-HT_{1A}Receptors in the Dorsal Raphe Nucleus. Journal of Neuroscience, 2011, 31, 14107-14115.	3.6	74
32	Medial prefrontal cortical activation modulates the impact of controllable and uncontrollable stressor exposure on a social exploration test of anxiety in the rat. Stress, 2009, 12, 445-450.	1.8	73
33	Inescapable shock activates serotonergic neurons in all raphe nuclei of rat. Behavioural Brain Research, 2004, 153, 233-239.	2.2	66
34	Immunization with Mycobacterium vaccae induces an anti-inflammatory milieu in the CNS: Attenuation of stress-induced microglial priming, alarmins and anxiety-like behavior. Brain, Behavior, and Immunity, 2018, 73, 352-363.	4.1	66
35	Greater glucocorticoid receptor activation in hippocampus of aged rats sensitizes microglia. Neurobiology of Aging, 2015, 36, 1483-1495.	3.1	62
36	The danger-associated molecular pattern HMGB1 mediates the neuroinflammatory effects of methamphetamine. Brain, Behavior, and Immunity, 2016, 51, 99-108.	4.1	60

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37	Protraction of neuropathic pain by morphine is mediated by spinal damage associated molecular patterns (DAMPs) in male rats. Brain, Behavior, and Immunity, 2018, 72, 45-50.	4.1	60
38	Methamphetamine Activates Toll-Like Receptor 4 to Induce Central Immune Signaling within the Ventral Tegmental Area and Contributes to Extracellular Dopamine Increase in the Nucleus Accumbens Shell. ACS Chemical Neuroscience, 2019, 10, 3622-3634.	3.5	60
39	Morphine amplifies mechanical allodynia via TLR4 in a rat model of spinal cord injury. Brain, Behavior, and Immunity, 2016, 58, 348-356.	4.1	58
40	Stress-induced neuroinflammatory priming is time of day dependent. Psychoneuroendocrinology, 2016, 66, 82-90.	2.7	58
41	Stress disinhibits microglia via down-regulation of CD200R: A mechanism of neuroinflammatory priming. Brain, Behavior, and Immunity, 2018, 69, 62-73.	4.1	58
42	Stress and aging act through common mechanisms to elicit neuroinflammatory priming. Brain, Behavior, and Immunity, 2018, 73, 133-148.	4.1	57
43	Glucocorticoids Mediate Short-Term High-Fat Diet Induction of Neuroinflammatory Priming, the NLRP3 Inflammasome, and the Danger Signal HMGB1. ENeuro, 2016, 3, ENEURO.0113-16.2016.	1.9	54
44	Diminished circadian rhythms in hippocampal microglia may contribute to age-related neuroinflammatory sensitization. Neurobiology of Aging, 2016, 47, 102-112.	3.1	54
45	Behavioral assessment of neuropathic pain, fatigue, and anxiety in experimental autoimmune encephalomyelitis (EAE) and attenuation by interleukin-10 gene therapy. Brain, Behavior, and Immunity, 2017, 59, 49-54.	4.1	50
46	Activation of a Habenuloâ€“Raphe Circuit Is Critical for the Behavioral and Neurochemical Consequences of Uncontrollable Stress in the Male Rat. ENeuro, 2016, 3, ENEURO.0229-16.2016.	1.9	50
47	Posterior insular cortex is necessary for conditioned inhibition of fear. Neurobiology of Learning and Memory, 2016, 134, 317-327.	1.9	49
48	Systemic Administration of Propentofylline, Ibudilast, and (+)-Naltrexone Each Reverses Mechanical Allodynia in a Novel Rat Model of Central Neuropathic Pain. Journal of Pain, 2014, 15, 407-421.	1.4	45
49	Mycobacterium vaccae immunization protects aged rats from surgery-elicited neuroinflammation and cognitive dysfunction. Neurobiology of Aging, 2018, 71, 105-114.	3.1	45
50	Suppression of Voluntary Wheel Running in Rats Is Dependent onÂthe Site of Inflammation: Evidence for Voluntary Running as aÂMeasure of Hind Paw-Evoked Pain. Journal of Pain, 2014, 15, 121-128.	1.4	42
51	Exploring acute-to-chronic neuropathic pain in rats after contusion spinal cord injury. Experimental Neurology, 2017, 295, 46-54.	4.1	42
52	Running Reduces Uncontrollable Stress-Evoked Serotonin and Potentiates Stress-Evoked Dopamine Concentrations in the Rat Dorsal Striatum. PLoS ONE, 2015, 10, e0141898.	2.5	41
53	Controllable stress elicits circuit-specific patterns of prefrontal plasticity in males, but not females. Brain Structure and Function, 2019, 224, 1831-1843.	2.3	38
54	Behavioural and neural sequelae of stressor exposure are not modulated by controllability in females. European Journal of Neuroscience, 2018, 47, 959-967.	2.6	37

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55	Electrolytic lesions and pharmacological inhibition of the dorsal raphe nucleus prevent stressor potentiation of morphine conditioned place preference in rats. Psychopharmacology, 2004, 171, 191-198.	3.1	34
56	Repeated Morphine Prolongs Postoperative Pain in Male Rats. Anesthesia and Analgesia, 2019, 128, 161-167.	2.2	33
57	Postoperative cognitive dysfunction is made persistent with morphine treatment in aged rats. Neurobiology of Aging, 2021, 98, 214-224.	3.1	33
58	Spinal Cord Injury in Rats Disrupts the Circadian System. ENeuro, 2018, 5, ENEURO.0328-18.2018.	1.9	32
59	Pattern recognition receptors mediate pro-inflammatory effects of extracellular mitochondrial transcription factor A (TFAM). Molecular and Cellular Neurosciences, 2018, 89, 71-79.	2.2	30
60	Sustained reversal of central neuropathic pain induced by a single intrathecal injection of adenosine A 2A receptor agonists. Brain, Behavior, and Immunity, 2018, 69, 470-479.	4.1	29
61	Learned stressor resistance requires extracellular signal-regulated kinase in the prefrontal cortex. Frontiers in Behavioral Neuroscience, 2014, 8, 348.	2.0	28
62	A novel platform for in vivo detection of cytokine release within discrete brain regions. Brain, Behavior, and Immunity, 2018, 71, 18-22.	4.1	28
63	Acute stress induces chronic neuroinflammatory, microglial and behavioral priming: A role for potentiated NLRP3 inflammasome activation. Brain, Behavior, and Immunity, 2020, 89, 32-42.	4.1	28
64	Aging and miR-155 in mice influence survival and neuropathic pain after spinal cord injury. Brain, Behavior, and Immunity, 2021, 97, 365-370.	4.1	28
65	Two models of inescapable stress increase tph2 mRNA expression in the anxiety-related dorsomedial part of the dorsal raphe nucleus. Neurobiology of Stress, 2018, 8, 68-81.	4.0	26
66	MicroRNA-124 and microRNA-146a both attenuate persistent neuropathic pain induced by morphine in male rats. Brain Research, 2018, 1692, 9-11.	2.2	25
67	Could Probiotics Be Used to Mitigate Neuroinflammation?. ACS Chemical Neuroscience, 2019, 10, 13-15.	3.5	25
68	Supradural inflammatory soup in awake and freely moving rats induces facial allodynia that is blocked by putative immune modulators. Brain Research, 2017, 1664, 87-94.	2.2	20
69	Glucocorticoids mediate stress induction of the alarmin HMGB1 and reduction of the microglia checkpoint receptor CD200R1 in limbic brain structures. Brain, Behavior, and Immunity, 2019, 80, 678-687.	4.1	18
70	Oxycodone, fentanyl, and morphine amplify established neuropathic pain in male rats. Pain, 2019, 160, 2634-2640.	4.2	18
71	Effects of Adolescent Caffeine Consumption on Cocaine Sensitivity. Neuropsychopharmacology, 2015, 40, 813-821.	5.4	17
72	Spinal Cord Injury in Rats Dysregulates Diurnal Rhythms of Fecal Output and Liver Metabolic Indicators. Journal of Neurotrauma, 2019, 36, 1923-1934.	3.4	16

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73	Circadian misalignment has differential effects on affective behavior following exposure to controllable or uncontrollable stress. Behavioural Brain Research, 2019, 359, 440-445.	2.2	16
74	Experimental autoimmune encephalopathy (EAE)-induced hippocampal neuroinflammation and memory deficits are prevented with the non-opioid TLR2/TLR4 antagonist (+)-naltrexone. Behavioural Brain Research, 2021, 396, 112896.	2.2	16
75	Anxiogenic effects of brief swim stress are sensitive to stress history. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2013, 44, 17-22.	4.8	15
76	Aging and an Immune Challenge Interact to Produce Prolonged, but Not Permanent, Reductions in Hippocampal L-LTP and mBDNF in a Rodent Model with Features of Delirium. ENeuro, 2018, 5, ENEURO.0009-18.2018.	1.9	15
77	Adenosine 2A receptor agonism: A single intrathecal administration attenuates motor paralysis in experimental autoimmune encephalopathy in rats. Brain, Behavior, and Immunity, 2015, 46, 50-54.	4.1	14
78	A single peri-sciatic nerve administration of the adenosine 2A receptor agonist ATL313 produces long-lasting anti-allodynia and anti-inflammatory effects in male rats. Brain, Behavior, and Immunity, 2019, 76, 116-125.	4.1	14
79	New tools for understanding coping and resilience. Neuroscience Letters, 2019, 693, 54-57.	2.1	14
80	Select steroid hormone glucuronide metabolites can cause toll-like receptor 4 activation and enhanced pain. Brain, Behavior, and Immunity, 2015, 44, 128-136.	4.1	13
81	Preconditioning by voluntary wheel running attenuates later neuropathic pain via nuclear factor E2â€“related factor 2 antioxidant signaling in rats. Pain, 2022, 163, 1939-1951.	4.2	13
82	Comparing the effects of two different strains of mycobacteria, Mycobacterium vaccae NCTC 11659 and M. vaccae ATCC 15483, on stress-resilient behaviors and lipid-immune signaling in rats. Brain, Behavior, and Immunity, 2021, 91, 212-229.	4.1	12
83	Toll-like receptor 2 and 4 antagonism for the treatment of experimental autoimmune encephalomyelitis (EAE)-related pain. Brain, Behavior, and Immunity, 2021, 93, 80-95.	4.1	11
84	Acute stress induces the rapid and transient induction of caspase-1, gasdermin D and release of constitutive IL-1Î² protein in dorsal hippocampus. Brain, Behavior, and Immunity, 2020, 90, 70-80.	4.1	9
85	Suppression of active phase voluntary wheel running in male rats by unilateral chronic constriction injury: Enduring therapeutic effects of a brief treatment of morphine combined with TLR4 or P2X7 antagonists. Journal of Neuroscience Research, 2022, 100, 265-277.	2.9	8
86	The role of hepatic and splenic macrophages in E. coli-induced memory impairments in aged rats. Brain, Behavior, and Immunity, 2015, 43, 60-67.	4.1	7
87	Stable, long-term, spatial memory in young and aged rats achieved with a one day Morris water maze training protocol. Learning and Memory, 2016, 23, 699-702.	1.3	7
88	The behavioral and neurochemical effects of an inescapable stressor are time of day dependent. Stress, 2020, 23, 405-416.	1.8	5
89	Constriction of the buccal branch of the facial nerve produces unilateral craniofacial allodynia. Brain, Behavior, and Immunity, 2017, 64, 59-64.	4.1	4
90	Alzheimerâ€™s Disease: Protective Effects of Mycobacterium vaccae, a Soil-Derived Mycobacterium with Anti-Inflammatory and Anti-Tubercular Properties, on the Proteomic Profiles of Plasma and Cerebrospinal Fluid in Rats. Journal of Alzheimer's Disease, 2020, 78, 965-987.	2.6	4