

Michael V Sofroniew

List of Publications by Year in descending order

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Version: 2024-02-01

98
papers

32,796
citations

16411

64
h-index

38300

95
g-index

108
all docs

108
docs citations

108
times ranked

29558
citing authors

#	ARTICLE	IF	CITATIONS
1	Loss-of-function manipulations to identify roles of diverse glia and stromal cells during CNS scar formation. <i>Cell and Tissue Research</i> , 2022, 387, 337-350.	1.5	12
2	Astrocyte plasticity in mice ensures continued endfoot coverage of cerebral blood vessels following injury and declines with age. <i>Nature Communications</i> , 2022, 13, 1794.	5.8	29
3	Divergent transcriptional regulation of astrocyte reactivity across disorders. <i>Nature</i> , 2022, 606, 557-564.	13.7	69
4	Reactive astrocyte nomenclature, definitions, and future directions. <i>Nature Neuroscience</i> , 2021, 24, 312-325.	7.1	1,098
5	Inflammation drives fibrotic scars in the CNS. <i>Nature Neuroscience</i> , 2021, 24, 157-159.	7.1	8
6	Meeting Proceedings for SCI 2020: Launching a Decade of Disruption in Spinal Cord Injury Research. <i>Journal of Neurotrauma</i> , 2021, 38, 1251-1266.	1.7	14
7	HepaCAM shapes astrocyte territories, stabilizes gap-junction coupling, and influences neuronal excitability. <i>Neuron</i> , 2021, 109, 2365-2367.	3.8	1
8	Molecular and functional properties of cortical astrocytes during peripherally induced neuroinflammation. <i>Cell Reports</i> , 2021, 36, 109508.	2.9	54
9	Engineering spinal cord repair. <i>Current Opinion in Biotechnology</i> , 2021, 72, 48-53.	3.3	18
10	Astrocyte Reactivity: Subtypes, States, and Functions in CNS Innate Immunity. <i>Trends in Immunology</i> , 2020, 41, 758-770.	2.9	344
11	Injectable diblock copolypeptide hydrogel provides platform to deliver effective concentrations of paclitaxel to an intracranial xenograft model of glioblastoma. <i>PLoS ONE</i> , 2020, 15, e0219632.	1.1	6
12	Foreign body responses in mouse central nervous system mimic natural wound responses and alter biomaterial functions. <i>Nature Communications</i> , 2020, 11, 6203.	5.8	38
13	The astrocyte transcriptome in EAE optic neuritis shows complement activation and reveals a sex difference in astrocytic C3 expression. <i>Scientific Reports</i> , 2019, 9, 10010.	1.6	55
14	Spinal cord repair: advances in biology and technology. <i>Nature Medicine</i> , 2019, 25, 898-908.	15.2	323
15	Astrocytes usurp neurons as a disease focus. <i>Nature Neuroscience</i> , 2019, 22, 512-513.	7.1	40
16	Cell-specific and region-specific transcriptomics in the multiple sclerosis model: Focus on astrocytes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E302-E309.	3.3	196
17	Stem-Cell-Derived Astrocytes Divulge Secrets of Mutant GFAP. <i>Cell Stem Cell</i> , 2018, 23, 630-631.	5.2	7
18	Required growth facilitators propel axon regeneration across complete spinal cord injury. <i>Nature</i> , 2018, 561, 396-400.	13.7	341

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19	Dissecting spinal cord regeneration. <i>Nature</i> , 2018, 557, 343-350.	13.7	224
20	Ependymal cell contribution to scar formation after spinal cord injury is minimal, local and dependent on direct ependymal injury. <i>Scientific Reports</i> , 2017, 7, 41122.	1.6	108
21	Biological aspects of axonal damage in glaucoma: A brief review. <i>Experimental Eye Research</i> , 2017, 157, 5-12.	1.2	61
22	Seducing astrocytes to the dark side. <i>Cell Research</i> , 2017, 27, 726-727.	5.7	24
23	Conformation-Directed Formation of Self-Healing Diblock Copolypeptide Hydrogels via Polyion Complexation. <i>Journal of the American Chemical Society</i> , 2017, 139, 15114-15121.	6.6	72
24	Cell biology of spinal cord injury and repair. <i>Journal of Clinical Investigation</i> , 2017, 127, 3259-3270.	3.9	381
25	Astrocytic tight junctions control inflammatory CNS lesion pathogenesis. <i>Journal of Clinical Investigation</i> , 2017, 127, 3136-3151.	3.9	169
26	Traumatically injured astrocytes release a proteomic signature modulated by <sc>STAT</sc>-dependent cell survival. <i>Glia</i> , 2016, 64, 668-694.	2.5	50
27	Astrocyte scar formation aids central nervous system axon regeneration. <i>Nature</i> , 2016, 532, 195-200.	13.7	1,390
28	P2X4 Receptor Reporter Mice: Sparse Brain Expression and Feeding-Related Presynaptic Facilitation in the Arcuate Nucleus. <i>Journal of Neuroscience</i> , 2016, 36, 8902-8920.	1.7	47
29	Astrocytes: a central element in neurological diseases. <i>Acta Neuropathologica</i> , 2016, 131, 323-345.	3.9	597
30	Astrocyte roles in traumatic brain injury. <i>Experimental Neurology</i> , 2016, 275, 305-315.	2.0	562
31	Diversity of astrocyte functions and phenotypes in neural circuits. <i>Nature Neuroscience</i> , 2015, 18, 942-952.	7.1	892
32	Thermoresponsive Copolypeptide Hydrogel Vehicles for Central Nervous System Cell Delivery. <i>ACS Biomaterials Science and Engineering</i> , 2015, 1, 705-717.	2.6	35
33	Astrocyte barriers to neurotoxic inflammation. <i>Nature Reviews Neuroscience</i> , 2015, 16, 249-263.	4.9	880
34	Design and Synthesis of Nonionic Copolypeptide Hydrogels with Reversible Thermoresponsive and Tunable Physical Properties. <i>Biomacromolecules</i> , 2015, 16, 1331-1340.	2.6	61
35	Transcriptome analyses reveal molecular mechanisms underlying functional recovery after spinal cord injury. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13360-13365.	3.3	113
36	Astrogliosis. <i>Cold Spring Harbor Perspectives in Biology</i> , 2015, 7, a020420.	2.3	485

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37	Early Activation of STAT3 Regulates Reactive Astrogliosis Induced by Diverse Forms of Neurotoxicity. PLoS ONE, 2014, 9, e102003.	1.1	114
38	Imaging Intracellular Ca ²⁺ Signals in Striatal Astrocytes from Adult Mice Using Genetically-encoded Calcium Indicators. Journal of Visualized Experiments, 2014, , e51972.	0.2	24
39	Astrocyte Kir4.1 ion channel deficits contribute to neuronal dysfunction in Huntington's disease model mice. Nature Neuroscience, 2014, 17, 694-703.	7.1	486
40	Reactive Gliosis and the Multicellular Response to CNS Damage and Disease. Neuron, 2014, 81, 229-248.	3.8	1,097
41	Heterogeneity of reactive astrocytes. Neuroscience Letters, 2014, 565, 23-29.	1.0	363
42	Multiple Roles for Astrocytes as Effectors of Cytokines and Inflammatory Mediators. Neuroscientist, 2014, 20, 160-172.	2.6	264
43	Astrocyte CCL2 sustains immune cell infiltration in chronic experimental autoimmune encephalomyelitis. Journal of Neuroimmunology, 2014, 274, 53-61.	1.1	131
44	Glia in the pathogenesis of neurodegenerative diseases. Biochemical Society Transactions, 2014, 42, 1291-1301.	1.6	130
45	Memantine Enhances Recovery From Stroke. Stroke, 2014, 45, 2093-2100.	1.0	106
46	Tunable diblock copolypeptide hydrogel depots for local delivery of hydrophobic molecules in healthy and injured central nervous system. Biomaterials, 2014, 35, 1989-2000.	5.7	45
47	Traumatic brain injury reveals novel cell lineage relationships within the subventricular zone. Stem Cell Research, 2014, 13, 48-60.	0.3	18
48	Assessing the Role of STAT3 in DC Differentiation and Autologous DC Immunotherapy in Mouse Models of GBM. PLoS ONE, 2014, 9, e96318.	1.1	12
49	Glial Scar Borders Are Formed by Newly Proliferated, Elongated Astrocytes That Interact to Corral Inflammatory and Fibrotic Cells via STAT3-Dependent Mechanisms after Spinal Cord Injury. Journal of Neuroscience, 2013, 33, 12870-12886.	1.7	630
50	Estrogen Mediates Neuroprotection and Anti-Inflammatory Effects during EAE through ER α Signaling on Astrocytes But Not through ER α Signaling on Astrocytes or Neurons. Journal of Neuroscience, 2013, 33, 10924-10933.	1.7	154
51	Imaging calcium microdomains within entire astrocyte territories and endfeet with GCaMPs expressed using adeno-associated viruses. Journal of General Physiology, 2013, 141, 633-647.	0.9	312
52	Neurological Diseases as Primary Gliopathies: A Reassessment of Neurocentrism. ASN Neuro, 2012, 4, AN20120010.	1.5	217
53	Inflammatory Mediators Alter the Astrocyte Transcriptome and Calcium Signaling Elicited by Multiple G-Protein-Coupled Receptors. Journal of Neuroscience, 2012, 32, 14489-14510.	1.7	178
54	STAT3 α Mediated astrogliosis protects myelin development in neonatal brain injury. Annals of Neurology, 2012, 72, 750-765.	2.8	81

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55	Sustained local delivery of bioactive nerve growth factor in the central nervous system via tunable diblock copolypeptide hydrogel depots. <i>Biomaterials</i> , 2012, 33, 9105-9116.	5.7	85
56	Astrocyte-derived VEGF-A drives blood-brain barrier disruption in CNS inflammatory disease. <i>Journal of Clinical Investigation</i> , 2012, 122, 2454-2468.	3.9	533
57	Juvenile neurogenesis makes essential contributions to adult brain structure and plays a sex-dependent role in fear memories. <i>Frontiers in Behavioral Neuroscience</i> , 2012, 6, 3.	1.0	42
58	Transgenic Techniques for Cell Ablation or Molecular Deletion to Investigate Functions of Astrocytes and Other GFAP-Expressing Cell Types. <i>Methods in Molecular Biology</i> , 2012, 814, 531-544.	0.4	17
59	Neuroprotection mediated through estrogen receptor- α in astrocytes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 8867-8872.	3.3	199
60	Deletion of Astroglial Dicer Causes Non-Cell-Autonomous Neuronal Dysfunction and Degeneration. <i>Journal of Neuroscience</i> , 2011, 31, 8306-8319.	1.7	154
61	Neuromyelitis optica. <i>Neurology</i> , 2011, 76, 1202-1203.	1.5	0
62	Reactive Astrocytes As Therapeutic Targets for CNS Disorders. <i>Neurotherapeutics</i> , 2010, 7, 494-506.	2.1	291
63	Astrocytes: biology and pathology. <i>Acta Neuropathologica</i> , 2010, 119, 7-35.	3.9	3,978
64	Adenomatous Polyposis Coli Is Essential for Both Neuronal Differentiation and Maintenance of Adult Neural Stem Cells in Subventricular Zone and Hippocampus. <i>Stem Cells</i> , 2010, 28, 2053-2064.	1.4	36
65	A genetically targeted optical sensor to monitor calcium signals in astrocyte processes. <i>Nature Neuroscience</i> , 2010, 13, 759-766.	7.1	214
66	Disruption of Astrocyte STAT3 Signaling Decreases Mitochondrial Function and Increases Oxidative Stress In Vitro. <i>PLoS ONE</i> , 2010, 5, e9532.	1.1	138
67	Reactive Astrocytes Form Scar-Like Perivascular Barriers to Leukocytes during Adaptive Immune Inflammation of the CNS. <i>Journal of Neuroscience</i> , 2009, 29, 11511-11522.	1.7	385
68	<i>Pten</i> Deletion in Adult Neural Stem/Progenitor Cells Enhances Constitutive Neurogenesis. <i>Journal of Neuroscience</i> , 2009, 29, 1874-1886.	1.7	245
69	PTEN dosage is essential for neurofibroma development and malignant transformation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 19479-19484.	3.3	102
70	Biocompatibility of amphiphilic diblock copolypeptide hydrogels in the central nervous system. <i>Biomaterials</i> , 2009, 30, 2881-2898.	5.7	128
71	Transformation of nonfunctional spinal circuits into functional states after the loss of brain input. <i>Nature Neuroscience</i> , 2009, 12, 1333-1342.	7.1	620
72	Molecular dissection of reactive astrogliosis and glial scar formation. <i>Trends in Neurosciences</i> , 2009, 32, 638-647.	4.2	2,095

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73	Recovery of supraspinal control of stepping via indirect propriospinal relay connections after spinal cord injury. <i>Nature Medicine</i> , 2008, 14, 69-74.	15.2	690
74	Glia get excited. <i>Nature Neuroscience</i> , 2008, 11, 379-380.	7.1	14
75	Two Forms of Astrocyte Calcium Excitability Have Distinct Effects on NMDA Receptor-Mediated Slow Inward Currents in Pyramidal Neurons. <i>Journal of Neuroscience</i> , 2008, 28, 6659-6663.	1.7	231
76	STAT3 is a Critical Regulator of Astroglial Scar Formation after Spinal Cord Injury. <i>Journal of Neuroscience</i> , 2008, 28, 7231-7243.	1.7	770
77	Selective ablation of proliferating astrocytes does not affect disease outcome in either acute or chronic models of motor neuron degeneration. <i>Experimental Neurology</i> , 2008, 211, 423-432.	2.0	77
78	Paradoxical influence of hippocampal neurogenesis on working memory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 4642-4646.	3.3	218
79	Enteric Glia Regulate Intestinal Barrier Function and Inflammation Via Release of S-Nitrosoglutathione. <i>Gastroenterology</i> , 2007, 132, 1344-1358.	0.6	349
80	Starring roles for astroglia in barrier pathologies of gut and brain. <i>Laboratory Investigation</i> , 2007, 87, 731-736.	1.7	111
81	Phenotypic and functional heterogeneity of GFAP-expressing cells in vitro: Differential expression of LeX/CD15 by GFAP-expressing multipotent neural stem cells and non-neurogenic astrocytes. <i>Glia</i> , 2006, 53, 277-293.	2.5	109
82	Essential protective roles of reactive astrocytes in traumatic brain injury. <i>Brain</i> , 2006, 129, 2761-2772.	3.7	511
83	Ablation of hippocampal neurogenesis impairs contextual fear conditioning and synaptic plasticity in the dentate gyrus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 17501-17506.	3.3	915
84	Maternal embryonic leucine zipper kinase (MELK) regulates multipotent neural progenitor proliferation. <i>Journal of Cell Biology</i> , 2005, 170, 413-427.	2.3	136
85	Reactive Astrocytes in Neural Repair and Protection. <i>Neuroscientist</i> , 2005, 11, 400-407.	2.6	644
86	Reactive Astrocytes Protect Tissue and Preserve Function after Spinal Cord Injury. <i>Journal of Neuroscience</i> , 2004, 24, 2143-2155.	1.7	1,347
87	GFAP-expressing progenitors are the principal source of constitutive neurogenesis in adult mouse forebrain. <i>Nature Neuroscience</i> , 2004, 7, 1233-1241.	7.1	860
88	The ablation of glial fibrillary acidic protein-positive cells from the adult central nervous system results in the loss of forebrain neural stem cells but not retinal stem cells. <i>European Journal of Neuroscience</i> , 2003, 18, 76-84.	1.2	206
89	The Predominant Neural Stem Cell Isolated from Postnatal and Adult Forebrain But Not Early Embryonic Forebrain Expresses GFAP. <i>Journal of Neuroscience</i> , 2003, 23, 2824-2832.	1.7	331
90	Nerve Growth Factor Signaling, Neuroprotection, and Neural Repair. <i>Annual Review of Neuroscience</i> , 2001, 24, 1217-1281.	5.0	1,146

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91	Targeting Expression of hsp70i to Discrete Neuronal Populations Using the Lmo-1 Promoter: Assessment of the Neuroprotective Effects of hsp70i In vivo and In vitro. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2001, 21, 972-981.	2.4	53
92	Leukocyte Infiltration, Neuronal Degeneration, and Neurite Outgrowth after Ablation of Scar-Forming, Reactive Astrocytes in Adult Transgenic Mice. <i>Neuron</i> , 1999, 23, 297-308.	3.8	957
93	Hippocampal neurotrophin and trk receptor mRNA levels are altered by local administration of nicotine, carbachol and pilocarpine. <i>Molecular Brain Research</i> , 1999, 67, 124-136.	2.5	116
94	Neuronal Responses to Axotomy. , 1999, , 3-1.		6
95	Fulminant Jejuno-Ileitis following Ablation of Enteric Glia in Adult Transgenic Mice. <i>Cell</i> , 1998, 93, 189-201.	13.5	530
96	NMDA potentiates NGF-induced sprouting of septal cholinergic fibres. <i>NeuroReport</i> , 1994, 5, 413-416.	0.6	24
97	On the possibility of positive-feedback in trophic interactions between afferent and target neurons. <i>Seminars in Neuroscience</i> , 1993, 5, 309-312.	2.3	6
98	CHAPTER 19. Smart Materials for Central Nervous System Cell Delivery and Tissue Engineering. <i>RSC Smart Materials</i> , 0, , 529-557.	0.1	7