Stephen A Back

List of Publications by Year
in descending order

90 papers	10,540 citations	31976 53 h-index	54911 84 g-index
90 all docs	90 docs citations	90 times ranked	7841 citing authors

#	Article	IF	Citations
1	Late Oligodendrocyte Progenitors Coincide with the Developmental Window of Vulnerability for Human Perinatal White Matter Injury. Journal of Neuroscience, 2001, 21, 1302-1312.	3.6	855
2	Selective Vulnerability of Late Oligodendrocyte Progenitors to Hypoxiaâ€“Ischemia. Journal of Neuroscience, 2002, 22, 455-463.	3.6	706
3	Maturation-Dependent Vulnerability of Oligodendrocytes to Oxidative Stress-Induced Death Caused by Glutathione Depletion. Journal of Neuroscience, 1998, 18, 6241-6253.	3.6	544
4	Hyaluronan accumulates in demyelinated lesions and inhibits oligodendrocyte progenitor maturation. Nature Medicine, 2005, 11, 966-972.	30.7	529
5	Arrested preoligodendrocyte maturation contributes to myelination failure in premature infants. Annals of Neurology, 2012, 71, 93-109.	5.3	368
6	Maturation-Dependent Vulnerability of Perinatal White Matter in Premature Birth. Stroke, 2007, 38, 724-730.	2.0	310
7	White matter injury in the preterm infant: pathology and mechanisms. Acta Neuropathologica, 2017, 134, 331-349.	7.7	301
8	Arrested oligodendrocyte lineage maturation in chronic perinatal white matter injury. Annals of Neurology, 2008, 63, 520-530.	5.3	292
9	Perinatal white matter injury: The changing spectrum of pathology and emerging insights into pathogenetic mechanisms. Mental Retardation and Developmental Disabilities Research Reviews, 2006, 12, 129-140.	3.6	279
10	Brain injury in premature neonates: A primary cerebral dysmaturation disorder?. Annals of Neurology, 2014, 75, 469-486.	5.3	273
11	BDNF Blocks Caspase-3 Activation in Neonatal Hypoxiaâ€“Ischemia. Neurobiology of Disease, 2000, 7, 38-53.	4.4	251
12	Quantitative analysis of perinatal rodent oligodendrocyte lineage progression and its correlation with human. Experimental Neurology, 2003, 181, 231-240.	4.1	250
13	Isofluraneâ€induced apoptosis of oligodendrocytes in the neonatal primate brain. Annals of Neurology, 2012, 72, 525-535.	5.3	234
14	Selective vulnerability of preterm white matter to oxidative damage defined by F₂â€isoprostanes. Annals of Neurology, 2005, 58, 108-120.	5.3	216
15	Preterm Fetal Hypoxia-Ischemia Causes Hypertonia and Motor Deficits in the Neonatal Rabbit: A Model for Human Cerebral Palsy?. Journal of Neuroscience, 2004, 24, 24-34.	3.6	198
16	Isoflurane-induced Apoptosis of Neurons and Oligodendrocytes in the Fetal Rhesus Macaque Brain. Anesthesiology, 2014, 120, 626-638.	2.5	195
17	CD44 expression identifies astrocyte-restricted precursor cells. Developmental Biology, 2004, 276, 31-46.	2.0	193
18	Developmental Changes in Diffusion Anisotropy Coincide with Immature Oligodendrocyte Progression and Maturation of Compound Action Potential. Journal of Neuroscience, 2005, 25, 5988-5997.	3.6	181

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19	Arrested Oligodendrocyte Lineage Progression During Human Cerebral White Matter Development: Dissociation Between the Timing of Progenitor Differentiation and Myelinogenesis. Journal of Neuropathology and Experimental Neurology, 2002, 61, 197-211.	1.7	175
20	Protective effects of caffeine on chronic hypoxia-induced perinatal white matter injury. Annals of Neurology, 2006, 60, 696-705.	5.3	173
21	Emerging concepts in periventricular white matter injury. Seminars in Perinatology, 2004, 28, 405-414.	2.5	170
22	Spatial Heterogeneity in Oligodendrocyte Lineage Maturation and Not Cerebral Blood Flow Predicts Fetal Ovine Periventricular White Matter Injury. Journal of Neuroscience, 2006, 26, 3045-3055.	3.6	170
23	Pathophysiology of glia in perinatal white matter injury. Glia, 2014, 62, 1790-1815.	4.9	169
24	Human oligodendroglial development: Relationship to periventricular leukomalacia. Seminars in Pediatric Neurology, 1998, 5, 180-189.	2.0	162
25	Cell therapy for neonatal hypoxiaâ€“ischemia and cerebral palsy. Annals of Neurology, 2012, 71, 589-600.	5.3	153
26	Prenatal Cerebral Ischemia Disrupts MRI-Defined Cortical Microstructure Through Disturbances in Neuronal Arborization. Science Translational Medicine, 2013, 5, 168ra7.	12.4	149
27	Which Neuroprotective Agents are Ready for Bench to Bedside Translation in the Newborn Infant?. Journal of Pediatrics, 2012, 160, 544-552.e4.	1.8	147
28	The Instrumented Fetal Sheep as a Model of Cerebral White Matter Injury in the Premature Infant. Neurotherapeutics, 2012, 9, 359-370.	4.4	141
29	Mature myelin basic protein-expressing oligodendrocytes are insensitive to kainate toxicity. Journal of Neuroscience Research, 2003, 71, 237-245.	2.9	130
30	Histopathological correlates of magnetic resonance imagingâ€“defined chronic perinatal white matter injury. Annals of Neurology, 2011, 70, 493-507.	5.3	117
31	Cystine Deprivation Induces Oligodendroglial Death: Rescue by Free Radical Scavengers and by a Diffusible Glial Factor. Journal of Neurochemistry, 1996, 67, 566-573.	3.9	114
32	Human Neural Stem Cells Induce Functional Myelination in Mice with Severe Dysmyelination. Science Translational Medicine, 2012, 4, 155ra136.	12.4	111
33	Translational Stroke Research. Stroke, 2017, 48, 2632-2637.	2.0	108
34	Towards improved animal models of neonatal white matter injury associated with cerebral palsy. DMM Disease Models and Mechanisms, 2010, 3, 678-688.	2.4	106
35	White matter lesions defined by diffusion tensor imaging in older adults. Annals of Neurology, 2011, 70, 465-476.	5.3	104
36	Topical Review: Role of Instrumented Fetal Sheep Preparations in Defining the Pathogenesis of Human Periventricular White-Matter Injury. Journal of Child Neurology, 2006, 21, 582-589.	1.4	103

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37	A â€˜GAGâ€™ reflex prevents repair of the damaged CNS. Trends in Neurosciences, 2008, 31, 44-52.	8.6	100
38	Hypoxiaâ€"Ischemia Preferentially Triggers Glutamate Depletion from Oligodendroglia and Axons in Perinatal Cerebral White Matter. Journal of Cerebral Blood Flow and Metabolism, 2007, 27, 334-347.	4.3	94
39	Digestion products of the PH20 hyaluronidase inhibit remyelination. Annals of Neurology, 2013, 73, 266-280.	5.3	94
40	Timing of Appearance of Late Oligodendrocyte Progenitors Coincides with Enhanced Susceptibility of Preterm Rabbit Cerebral White Matter to Hypoxia-Ischemia. Journal of Cerebral Blood Flow and Metabolism, 2010, 30, 1053-1065.	4.3	87
41	Brain Injury in the Preterm Infant: New Horizons for Pathogenesis and Prevention. Pediatric Neurology, 2015, 53, 185-192.	2.1	85
42	Cerebral White and Gray Matter Injury in Newborns. Clinics in Perinatology, 2014, 41, 1-24.	2.1	81
43	Strain-Specific Differences in Perinatal Rodent Oligodendrocyte Lineage Progression and Its Correlation with Human. Developmental Neuroscience, 2011, 33, 251-260.	2.0	80
44	Intracellular Redox State Determines Whether Nitric Oxide Is Toxic or Protective to Rat Oligodendrocytes in Culture. Journal of Neurochemistry, 1999, 73, 476-484.	3.9	76
45	A new Alamar Blue viability assay to rapidly quantify oligodendrocyte death. Journal of Neuroscience Methods, 1999, 91, 47-54.	2.5	75
46	Cellular and molecular pathogenesis of periventricular white matter injury. Mental Retardation and Developmental Disabilities Research Reviews, 1997, 3, 96-107.	3.6	64
47	Prenatal cerebral ischemia triggers dysmaturation of caudate projection neurons. Annals of Neurology, 2014, 75, 508-524.	5.3	63
48	Differential Susceptibility to Axonopathy in Necrotic and Non-Necrotic Perinatal White Matter Injury. Stroke, 2012, 43, 178-184.	2.0	61
49	Astrocytes in aged nonhuman primate brain gray matter synthesize excess hyaluronan. Neurobiology of Aging, 2012, 33, 830.e13-830.e24.	3.1	61
50	Hyaluronan Synthesis, Catabolism, and Signaling in Neurodegenerative Diseases. International Journal of Cell Biology, 2015, 2015, 1-10.	2.5	58
51	Controversies in preterm brain injury. Neurobiology of Disease, 2016, 92, 90-101.	4.4	57
52	Transient Hypoxemia Chronically Disrupts Maturation of Preterm Fetal Ovine Subplate Neuron Arborization and Activity. Journal of Neuroscience, 2017, 37, 11912-11929.	3.6	55
53	Cerebral Blood Flow Heterogeneity in Preterm Sheep: Lack of Physiologic Support for Vascular Boundary Zones in Fetal Cerebral White Matter. Journal of Cerebral Blood Flow and Metabolism, 2008, 28, 995-1008.	4.3	54
54	What brakes the preterm brain? An arresting story. Pediatric Research, 2014, 75, 227-233.	2.3	52

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55	Disease specific therapies in leukodystrophies and leukoencephalopathies. Molecular Genetics and Metabolism, 2015, 114, 527-536.	1.1	45
56	Central axons preparing to myelinate are highly sensitivity to ischemic injury. Annals of Neurology, 2012, 72, 936-951.	5.3	39
57	A TLR/AKT/FoxO3 immune toleranceâ€"like pathway disrupts the repair capacity of oligodendrocyte progenitors. Journal of Clinical Investigation, 2018, 128, 2025-2041.	8.2	38
58	Role of Recurrent Hypoxia-Ischemia in Preterm White Matter Injury Severity. PLoS ONE, 2014, 9, e112800.	2.5	32
59	Diffusion characteristics associated with neuronal injury and glial activation following hypoxiaâ€ischemia in the immature brain. Magnetic Resonance in Medicine, 2011, 66, 839-845.	3.0	31
60	Recent advances in human perinatal white matter injury. Progress in Brain Research, 2001, 132, 131-147.	1.4	30
61	Large-scale generation of highly enriched neural stem-cell-derived oligodendroglial cultures: maturation-dependent differences in insulin-like growth factor-mediated signal transduction. Journal of Neurochemistry, 2007, 100, 628-638.	3.9	29
62	Volumetric Brain Differences in Children with Periventricular T2-Signal Hyperintensities. American Journal of Roentgenology, 2001, 177, 695-702.	2.2	28
63	Cortical Dysmaturation in Congenital Heart Disease. Trends in Neurosciences, 2019, 42, 192-204.	8.6	28
64	An organotypic slice culture model of chronic white matter injury with maturation arrest of oligodendrocyte progenitors. Molecular Neurodegeneration, 2011, 6, 46.	10.8	27
65	Unmyelinated axon loss with postnatal hypertonia after fetal hypoxia. Annals of Neurology, 2014, 75, 533-541.	5.3	26
66	Vasodilator dysfunction and oligodendrocyte dysmaturation in aging white matter. Annals of Neurology, 2018, 83, 142-152.	5.3	25
67	Differential isoform profiles of Î±2-macroglobulin from plasma of patients with chronic-progressive or relapsing-remitting multiple sclerosis. Clinica Chimica Acta, 1992, 211, 27-36.	1.1	18
68	Fluorescent histochemical localization of neutral endopeptidase-24.11 (enkephalinase) in the rat brainstem. Journal of Comparative Neurology, 1990, 296, 130-158.	1.6	17
69	Transient Hypoxemia Disrupts Anatomical and Functional Maturation of Preterm Fetal Ovine CA1 Pyramidal Neurons. Journal of Neuroscience, 2019, 39, 7853-7871.	3.6	17
70	Unbiased Stereological Analysis of Reactive Astrogliosis to Estimate Age-Associated Cerebral White Matter Injury. Journal of Neuropathology and Experimental Neurology, 2016, 75, 539-554.	1.7	16
71	Fluorescent histochemical localization of neutral endopeptidase-24.11 (enkephalinase) in the rat spinal cord. Journal of Comparative Neurology, 1989, 280, 436-450.	1.6	15
72	Dysregulation of Hyaluronan Homeostasis During White Matter Injury. Neurochemical Research, 2020, 45, 672-683.	3.3	15

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73	Hemodynamic and Metabolic Correlates of Perinatal White Matter Injury Severity. PLoS ONE, 2013, 8, e82940.	2.5	14
74	The Vannucci Model of Hypoxic-Ischemic Injury in the Neonatal Rodent: 40 years Later. Developmental Neuroscience, 2022, 44, 186-193.	2.0	13
75	Association of cerebral microvascular dysfunction and white matter injury in Alzheimerâ€™s disease. GeroScience, 2022, 44, 1-14.	4.6	13
76	A modified flavonoid accelerates oligodendrocyte maturation and functional remyelination. Glia, 2020, 68, 263-279.	4.9	10
77	Differential response of neutral endopeptidase 24.11 (?enkephalinase?), and cholinergic and opioidergic markers to hypoglossal axotomy. Journal of Comparative Neurology, 1994, 340, 149-160.	1.6	8
78	Encephalopathy of Prematurity. , 2018, , 405-424.e8.		8
79	Differential isoelectric focusing properties of crude and purified human Î±2-macroglobulin and Î±2-macroglobulinâ€"proteinase complexes. Biomedical Applications, 1983, 278, 43-51.	1.7	7
80	Characterization of Î±2-macroglobulin from plasma of cystic fibrosis patients and controls. Biochemical Medicine, 1983, 30, 34-42.	0.5	2
81	Altered isoelectric focusing of Î±2-macroglobulin from plasma of patients with diabetes mellitus. Clinica Chimica Acta, 1985, 150, 21-29.	1.1	2
82	Ventral mesencephalic and cortical transplants into the rat striatum display enhanced activity for neutral endopeptidase 24.11 (â€˜enkephalinaseâ€™; CALLA). Brain Research, 1993, 612, 85-95.	2.2	2
83	Developmental Physiology of the Central Nervous System. , 2012, , 811-815.		2
84	Advances in Neonatal Neurology. Clinics in Perinatology, 2014, 41, xvii-xix.	2.1	2
85	Comment on: PH20 is not expressed in murine CNS and oligodendrocyte precursor cells. Annals of Clinical and Translational Neurology, 2017, 4, 608-609.	3.7	2
86	Brain Injury in the Preterm Infant. , 2018, , 879-896.e6.		2
87	The Sheep as a Model of Brain Injury in the Premature Infant. Neuromethods, 2015, , 107-128.	0.3	2
88	Pathophysiology of Neonatal White Matter Injury. , 2017, , 1695-1703.e4.		1
89	Golgi: A Biography of the Founder of Modern Neuroscience. Archives of Neurology, 2011, 68, 538.	4.5	0
90	Prenatal Determinants of Brain Development: Recent Studies and Methodological Advances. Neuromethods, 2016, , 303-326.	0.3	0