Axel Montagne

List of Publications by Year
in descending order

62 papers	9,733 citations	126708 33 h-index	149479 56 g-index
69 all docs	69 docs citations	69 times ranked	11346 citing authors

#	Article	IF	Citations
1	Blood-Brain Barrier Breakdown in the Aging Human Hippocampus. Neuron, 2015, 85, 296-302.	3.8	1,436
2	Blood-Brain Barrier: From Physiology to Disease and Back. Physiological Reviews, 2019, 99, 21-78.	13.1	1,232
3	Bloodâ€“brain barrier breakdown is an early biomarker of human cognitive dysfunction. Nature Medicine, 2019, 25, 270-276.	15.2	987
4	Cerebral blood flow regulation and neurovascular dysfunction in Alzheimer disease. Nature Reviews Neuroscience, 2017, 18, 419-434.	4.9	842
5	APOE4 leads to bloodâ€“brain barrier dysfunction predicting cognitive decline. Nature, 2020, 581, 71-76.	13.7	705
6	The role of brain vasculature in neurodegenerative disorders. Nature Neuroscience, 2018, 21, 1318-1331.	7.1	612
7	Alzheimerâ€™s disease: A matter of bloodâ€“brain barrier dysfunction?. Journal of Experimental Medicine, 2017, 214, 3151-3169.	4.2	467
8	Vascular dysfunctionâ€”The disregarded partner of Alzheimer's disease. Alzheimer's and Dementia, 2019, 15, 158-167.	0.4	454
9	Perivascular spaces in the brain: anatomy, physiology and pathology. Nature Reviews Neurology, 2020, 16, 137-153.	4.9	405
10	Pericyte loss leads to circulatory failure and pleiotrophin depletion causing neuron loss. Nature Neuroscience, 2019, 22, 1089-1098.	7.1	246
11	Brain imaging of neurovascular dysfunction in Alzheimerâ€™s disease. Acta Neuropathologica, 2016, 131, 687-707.	3.9	160
12	Impact of Tissue Plasminogen Activator on the Neurovascular Unit: From Clinical Data to Experimental Evidence. Journal of Cerebral Blood Flow and Metabolism, 2011, 31, 2119-2134.	2.4	96
13	Ultra-Sensitive Molecular MRI of Vascular Cell Adhesion Molecule-1 Reveals a Dynamic Inflammatory Penumbra After Strokes. Stroke, 2013, 44, 1988-1996.	1.0	92
14	Cranial Suture Regeneration Mitigates Skull and Neurocognitive Defects in Craniosynostosis. Cell, 2021, 184, 243-256.e18.	13.5	88
15	Optimal acquisition and modeling parameters for accurate assessment of low K_{trans} blood-brain barrier permeability using dynamic contrast-enhanced MRI. Magnetic Resonance in Medicine, 2016, 75, 1967-1977.	1.9	87
16	Regional early and progressive loss of brain pericytes but not vascular smooth muscle cells in adult mice with disrupted platelet-derived growth factor receptor-Î² signaling. PLoS ONE, 2017, 12, e0176225.	1.1	85
17	Alzheimerâ€™s pathogenic mechanisms and underlying sex difference. Cellular and Molecular Life Sciences, 2021, 78, 4907-4920.	2.4	82
18	Blood-Brain Barrier Permeability and Gadolinium. JAMA Neurology, 2016, 73, 13.	4.5	77

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19	APOE4 accelerates advanced-stage vascular and neurodegenerative disorder in old Alzheimerâ€™s mice via cyclophilin A independently of amyloid-Î². Nature Aging, 2021, 1, 506-520.	5.3	77
20	Tissue plasminogen activator prevents white matter damage following stroke. Journal of Experimental Medicine, 2011, 208, 1229-1242.	4.2	72
21	Glutamate Controls tPA Recycling by Astrocytes, Which in Turn Influences Glutamatergic Signals. Journal of Neuroscience, 2012, 32, 5186-5199.	1.7	67
22	Molecular magnetic resonance imaging of brainÃ¢â‚¬â€œimmune interactions. Frontiers in Cellular Neuroscience, 2014, 8, 389.	1.8	65
23	Ultra-sensitive molecular MRI of cerebrovascular cell activation enables early detection of chronic central nervous system disorders. NeuroImage, 2012, 63, 760-770.	2.1	64
24	GpIbÎ±-VWF blockade restores vessel patency by dissolving platelet aggregates formed under very high shear rate in mice. Blood, 2014, 123, 3354-3363.	0.6	64
25	ROCKETSHIP: a flexible and modular software tool for the planning, processing and analysis of dynamic MRI studies. BMC Medical Imaging, 2015, 15, 19.	1.4	63
26	Unveiling an exceptional zymogen: the single-chain form of tPA is a selective activator of NMDA receptor-dependent signaling and neurotoxicity. Cell Death and Differentiation, 2012, 19, 1983-1991.	5.0	60
27	Endothelial LRP1 protects against neurodegeneration by blocking cyclophilin A. Journal of Experimental Medicine, 2021, 218, .	4.2	59
28	NR2D-containing NMDA receptors mediate tissue plasminogen activator-promoted neuronal excitotoxicity. Cell Death and Differentiation, 2010, 17, 860-871.	5.0	51
29	Interplay between Brain Pericytes and Endothelial Cells in Dementia. American Journal of Pathology, 2021, 191, 1917-1931.	1.9	46
30	Urokinase versus Alteplase for intraventricular hemorrhage fibrinolysis. Neuropharmacology, 2014, 85, 158-165.	2.0	45
31	Bloodâ€“brain barrier link to human cognitive impairment and Alzheimerâ€™s disease. , 2022, 1, 108-115.		45
32	A novel sensitive assay for detection of a biomarker of pericyte injury in cerebrospinal fluid. Alzheimer's and Dementia, 2020, 16, 821-830.	0.4	43
33	Tissue Plasminogen Activator Expression Is Restricted to Subsets of Excitatory Pyramidal Glutamatergic Neurons. Molecular Neurobiology, 2016, 53, 5000-5012.	1.9	36
34	Magnetic Resonance Imaging of Bloodâ€“Brain Barrier permeability in Dementia. Neuroscience, 2021, 474, 14-29.	1.1	35
35	Selective inhibition of GluN2D-containing N-methyl-D-aspartate receptors prevents tissue plasminogen activator-promoted neurotoxicity both in vitro and in vivo. Molecular Neurodegeneration, 2011, 6, 68.	4.4	33
36	Memantine Improves Safety of Thrombolysis for Stroke. Stroke, 2012, 43, 2774-2781.	1.0	32

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37	Vascular Plasticity and Cognition During Normal Aging and Dementia. JAMA Neurology, 2015, 72, 495.	4.5	30
38	Comparison Between Blood-Brain Barrier Water Exchange Rate and Permeability to Gadolinium-Based Contrast Agent in an Elderly Cohort. Frontiers in Neuroscience, 2020, 14, 571480.	1.4	30
39	Permeability imaging as a predictor of delayed cerebral ischemia after aneurysmal subarachnoid hemorrhage. Journal of Cerebral Blood Flow and Metabolism, 2018, 38, 973-979.	2.4	24
40	Undetectable gadolinium brain retention in individuals with an ageâ€dependent bloodâ€brain barrier breakdown in the hippocampus and mild cognitive impairment. Alzheimer's and Dementia, 2019, 15, 1568-1575.	0.4	22
41	Air Pollution Particulate Matter Exposure and Chronic Cerebral Hypoperfusion and Measures of White Matter Injury in a Murine Model. Environmental Health Perspectives, 2021, 129, 87006.	2.8	22
42	A Review of Translational Magnetic Resonance Imaging in Human and Rodent Experimental Models of Small Vessel Disease. Translational Stroke Research, 2021, 12, 15-30.	2.3	18
43	New Mechanistic Insights, Novel Treatment Paradigms, and Clinical Progress in Cerebrovascular Diseases. Frontiers in Aging Neuroscience, 2021, 13, 623751.	1.7	17
44	Imaging subtle leaks in the bloodâ€“brain barrier in the aging human brain: potential pitfalls, challenges, and possible solutions. GeroScience, 2022, 44, 1339-1351.	2.1	17
45	Immunotherapy blocking the tissue plasminogen activator-dependent activation of N-methyl-d-aspartate glutamate receptors improves hemorrhagic stroke outcome. Neuropharmacology, 2013, 67, 267-271.	2.0	16
46	APOE4 Accelerates Development of Dementia After Stroke. Stroke, 2020, 51, 699-700.	1.0	16
47	Intracerebral Hematomas Disappear on T2*-Weighted Images During Normobaric Oxygen Therapy. Stroke, 2013, 44, 3482-3489.	1.0	15
48	Prenatal disruption of bloodâ€“brain barrier formation via cyclooxygenase activation leads to lifelong brain inflammation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2113310119.	3.3	15
49	Air Pollution Particulate Matter Amplifies White Matter Vascular Pathology and Demyelination Caused by Hypoperfusion. Frontiers in Immunology, 2021, 12, 785519.	2.2	14
50	Evidence that bloodâ€“CSF barrier transport, but not inflammatory biomarkers, change in migraine, while CSF sVCAM1 associates with migraine frequency and CSF fibrinogen. Headache, 2021, 61, 536-545.	1.8	13
51	Protection of ischemic white matter and oligodendrocytes in mice by 3K3A-activated protein C. Journal of Experimental Medicine, 2022, 219, .	4.2	12
52	Impact of Alcohol Consumption on the Outcome of Ischemic Stroke and Thrombolysis. Stroke, 2015, 46, 1641-1650.	1.0	11
53	7T multi-shell hybrid diffusion imaging (HYDI) for mapping brain connectivity in mice. Proceedings of SPIE, 2015, 9413, .	0.8	9
54	Atp13a5 Marker Reveals Pericytes of the Central Nervous System in Mice. SSRN Electronic Journal, 0, , .	0.4	4

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55	Reconstruction of major fibers using 7T multi-shell Hybrid Diffusion Imaging in mice. Proceedings of SPIE, 2015, , .	0.8	0
56	Abstract P750: 3K3A-APC Restores Oligodendrocyte Pools in Models of White Matter Stroke via PAR1 Signaling. Stroke, 2021, 52, .	1.0	0
57	Abstract WP90: Activate Protein C Analog Protects Ischemic Injury of Subcortical White Matter in Mice. Stroke, 2018, 49, .	1.0	0
58	Abstract WP139: MRI Evaluation and Functional Assessment of Brain Injury Improvement After 3K3A-Activated Protein C Treatment for Murine White Matter Stroke. Stroke, 2019, 50, .	1.0	0
59	Abstract WP134: 3K3A-APC Protects Pericyte-deficient Mice From Ischemic Brain Injury. Stroke, 2020, 51, .	1.0	0
60	Abstract TMP27: Par1 Mediates Protective Effect of 3K3K-APC After White Matter Stroke in Mice. Stroke, 2020, 51, .	1.0	0
61	The relationship between bloodâ€brain barrier permeability and cerebral blood flow in cognitive impairment. Alzheimer's and Dementia, 2021, 17, .	0.4	0
62	Editorial: Multifaceted Interactions Between Immunity and the Diseased Brain. Frontiers in Cellular Neuroscience, 0, 16, .	1.8	0