

Eszter Farkas

List of Publications by Year in descending order

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94
papers

6,494
citations

70961

41
h-index

69108

77
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98
all docs

98
docs citations

98
times ranked

7254
citing authors

#	ARTICLE	IF	CITATIONS
1	Cerebral microvascular pathology in aging and Alzheimer's disease. <i>Progress in Neurobiology</i> , 2001, 64, 575-611.	2.8	968
2	Permanent, bilateral common carotid artery occlusion in the rat: A model for chronic cerebral hypoperfusion-related neurodegenerative diseases. <i>Brain Research Reviews</i> , 2007, 54, 162-180.	9.1	606
3	The continuum of spreading depolarizations in acute cortical lesion development: Examining LeA's legacy. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 1571-1594.	2.4	297
4	Recording, analysis, and interpretation of spreading depolarizations in neurointensive care: Review and recommendations of the COSBID research group. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 1595-1625.	2.4	255
5	Vascular dysfunction in the pathogenesis of Alzheimer's disease – A review of endothelium-mediated mechanisms and ensuing vicious circles. <i>Neurobiology of Disease</i> , 2015, 82, 593-606.	2.1	219
6	Nicotinamide mononucleotide (NMN) supplementation rescues cerebrovascular endothelial function and neurovascular coupling responses and improves cognitive function in aged mice. <i>Redox Biology</i> , 2019, 24, 101192.	3.9	181
7	Experimental cerebral hypoperfusion induces white matter injury and microglial activation in the rat brain. <i>Acta Neuropathologica</i> , 2004, 108, 57-64.	3.9	160
8	Treatment with the mitochondrial-targeted antioxidant peptide <sc>SS</sc>1 rescues neurovascular coupling responses and cerebrovascular endothelial function and improves cognition in aged mice. <i>Aging Cell</i> , 2018, 17, e12731.	3.0	128
9	<sc>IGF</sc>1 deficiency impairs neurovascular coupling in mice: implications for cerebrovascular aging. <i>Aging Cell</i> , 2015, 14, 1034-1044.	3.0	121
10	Nrf2 deficiency in aged mice exacerbates cellular senescence promoting cerebrovascular inflammation. <i>GeroScience</i> , 2018, 40, 513-521.	2.1	114
11	Periaqueductal gray matter input to cardiac-related sympathetic premotor neurons. <i>Brain Research</i> , 1998, 792, 179-192.	1.1	113
12	Nrf2 Deficiency Exacerbates Obesity-Induced Oxidative Stress, Neurovascular Dysfunction, Blood-Brain Barrier Disruption, Neuroinflammation, Amyloidogenic Gene Expression, and Cognitive Decline in Mice, Mimicking the Aging Phenotype. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2018, 73, 853-863.	1.7	111
13	Pharmacologically-Induced Neurovascular Uncoupling is Associated with Cognitive Impairment in Mice. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2015, 35, 1871-1881.	2.4	105
14	Single-cell RNA sequencing identifies senescent cerebrovascular endothelial cells in the aged mouse brain. <i>GeroScience</i> , 2020, 42, 429-444.	2.1	102
15	Resveratrol preserves cerebrovascular density and cognitive function in aging mice. <i>Frontiers in Aging Neuroscience</i> , 2009, 1, 4.	1.7	101
16	Nicotinamide mononucleotide (NMN) treatment attenuates oxidative stress and rescues angiogenic capacity in aged cerebrovascular endothelial cells: a potential mechanism for the prevention of vascular cognitive impairment. <i>GeroScience</i> , 2019, 41, 619-630.	2.1	97
17	Microglia modulate blood flow, neurovascular coupling, and hypoperfusion via purinergic actions. <i>Journal of Experimental Medicine</i> , 2022, 219, .	4.2	94
18	Age-related microvascular degeneration in the human cerebral periventricular white matter. <i>Acta Neuropathologica</i> , 2006, 111, 150-157.	3.9	88

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19	Diazoxide and dimethyl sulphoxide prevent cerebral hypoperfusion-related learning dysfunction and brain damage after carotid artery occlusion. <i>Brain Research</i> , 2004, 1008, 252-260.	1.1	86
20	Traumatic brain injury-induced autoregulatory dysfunction and spreading depression-related neurovascular uncoupling: Pathomechanisms, perspectives, and therapeutic implications. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2016, 311, H1118-H1131.	1.5	85
21	Nicotinamide mononucleotide (NMN) supplementation promotes neurovascular rejuvenation in aged mice: transcriptional footprint of SIRT1 activation, mitochondrial protection, anti-inflammatory, and anti-apoptotic effects. <i>GeroScience</i> , 2020, 42, 527-546.	2.1	85
22	Treatment with the poly(ADP-ribose) polymerase inhibitor PJ-34 improves cerebromicrovascular endothelial function, neurovascular coupling responses and cognitive performance in aged mice, supporting the NAD ⁺ depletion hypothesis of neurovascular aging. <i>GeroScience</i> , 2019, 41, 533-542.	2.1	84
23	Cerebromicrovascular dysfunction predicts cognitive decline and gait abnormalities in a mouse model of whole brain irradiation-induced accelerated brain senescence. <i>GeroScience</i> , 2017, 39, 33-42.	2.1	78
24	Nicotinamide mononucleotide (NMN) supplementation promotes anti-aging miRNA expression profile in the aorta of aged mice, predicting epigenetic rejuvenation and anti-atherogenic effects. <i>GeroScience</i> , 2019, 41, 419-439.	2.1	75
25	Is Vasomotion in Cerebral Arteries Impaired in Alzheimer's Disease?. <i>Journal of Alzheimer's Disease</i> , 2015, 46, 35-53.	1.2	73
26	Local connections between the columns of the periaqueductal gray matter: a case for intrinsic neuromodulation. <i>Brain Research</i> , 1998, 784, 329-336.	1.1	72
27	Demonstration of impaired neurovascular coupling responses in TG2576 mouse model of Alzheimer's disease using functional laser speckle contrast imaging. <i>GeroScience</i> , 2017, 39, 465-473.	2.1	70
28	Periaqueductal gray matter projection to vagal preganglionic neurons and the nucleus tractus solitarius. <i>Brain Research</i> , 1997, 764, 257-261.	1.1	68
29	Role of endothelial NAD ⁺ deficiency in age-related vascular dysfunction. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2019, 316, H1253-H1266.	1.5	68
30	The effect of n-3 polyunsaturated fatty acid-rich diets on cognitive and cerebrovascular parameters in chronic cerebral hypoperfusion. <i>Brain Research</i> , 2002, 947, 166-173.	1.1	67
31	Direct, Live Imaging of Cortical Spreading Depression and Anoxic Depolarisation Using a Fluorescent, Voltage-Sensitive Dye. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2008, 28, 251-262.	2.4	60
32	Similar Ultrastructural Breakdown of Cerebrocortical Capillaries in Alzheimer's Disease, Parkinson's Disease, and Experimental Hypertension: What is the Functional Link?. <i>Annals of the New York Academy of Sciences</i> , 2000, 903, 72-82.	1.8	59
33	Role of age-related alterations of the cerebral venous circulation in the pathogenesis of vascular cognitive impairment. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2019, 316, H1124-H1140.	1.5	56
34	Imaging Reveals the Focal Area of Spreading Depolarizations and a Variety of Hemodynamic Responses in a Rat Microembolic Stroke Model. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2014, 34, 1695-1705.	2.4	54
35	Dietary long chain PUFAs differentially affect hippocampal muscarinic 1 and serotonergic 1A receptors in experimental cerebral hypoperfusion. <i>Brain Research</i> , 2002, 954, 32-41.	1.1	53
36	Multi-modal imaging of anoxic depolarization and hemodynamic changes induced by cardiac arrest in the rat cerebral cortex. <i>NeuroImage</i> , 2010, 51, 734-742.	2.1	53

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37	Cerebral venous congestion promotes blood-brain barrier disruption and neuroinflammation, impairing cognitive function in mice. <i>GeroScience</i> , 2019, 41, 575-589.	2.1	47
38	Are Alzheimer's disease, hypertension, and cerebrocapillary damage related? <i>Neurobiology of Aging</i> , 2000, 21, 235-243.	1.5	45
39	Beta-amyloid peptide-induced blood-brain barrier disruption facilitates T-cell entry into the rat brain. <i>Acta Histochemica</i> , 2003, 105, 115-125.	0.9	45
40	Pharmacologically induced impairment of neurovascular coupling responses alters gait coordination in mice. <i>GeroScience</i> , 2017, 39, 601-614.	2.1	45
41	The effect of pre- and posttreatment with diazoxide on the early phase of chronic cerebral hypoperfusion in the rat. <i>Brain Research</i> , 2006, 1087, 168-174.	1.1	44
42	Simultaneous, live imaging of cortical spreading depression and associated cerebral blood flow changes, by combining voltage-sensitive dye and laser speckle contrast methods. <i>NeuroImage</i> , 2009, 45, 68-74.	2.1	44
43	Pre-treatment and post-treatment with α -tocopherol attenuates hippocampal neuronal damage in experimental cerebral hypoperfusion. <i>European Journal of Pharmacology</i> , 2007, 571, 120-128.	1.7	43
44	Spreading depolarization remarkably exacerbates ischemia-induced tissue acidosis in the young and aged rat brain. <i>Scientific Reports</i> , 2017, 7, 1154.	1.6	41
45	Which Spreading Depolarizations Are Deleterious To Brain Tissue?. <i>Neurocritical Care</i> , 2020, 32, 317-322.	1.2	40
46	Tissue Acidosis Associated with Ischemic Stroke to Guide Neuroprotective Drug Delivery. <i>Biology</i> , 2020, 9, 460.	1.3	40
47	Ageing-related decline in adenosine A1 receptor binding in the rat brain: An autoradiographic study. <i>Journal of Neuroscience Research</i> , 2004, 78, 742-748.	1.3	39
48	Effects of cyclooxygenase (COX) inhibition on memory impairment and hippocampal damage in the early period of cerebral hypoperfusion in rats. <i>European Journal of Pharmacology</i> , 2007, 574, 29-38.	1.7	38
49	Ischemia-induced depolarizations and associated hemodynamic responses in incomplete global forebrain ischemia in rats. <i>Neuroscience</i> , 2014, 260, 217-226.	1.1	38
50	Calcium antagonists decrease capillary wall damage in aging hypertensive rat brain. <i>Neurobiology of Aging</i> , 2001, 22, 299-309.	1.5	37
51	What Should a Clinician Do When Spreading Depolarizations are Observed in a Patient?. <i>Neurocritical Care</i> , 2020, 32, 306-310.	1.2	36
52	The Critical Role of Spreading Depolarizations in Early Brain Injury: Consensus and Contention. <i>Neurocritical Care</i> , 2022, 37, 83-101.	1.2	36
53	High incidence of adverse cerebral blood flow responses to spreading depolarization in the aged ischemic rat brain. <i>Neurobiology of Aging</i> , 2015, 36, 3269-3277.	1.5	34
54	Chronic cerebral hypoperfusion-related neuropathologic changes and compromised cognitive status: Window of treatment. <i>Drugs of Today</i> , 2002, 38, 365.	2.4	34

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55	Dietary fatty acids alter blood pressure, behavior and brain membrane composition of hypertensive rats. <i>Brain Research</i> , 2003, 988, 9-19.	1.1	33
56	Large-conductance Ca ²⁺ -activated potassium channels are potently involved in the inverse neurovascular response to spreading depolarization. <i>Neurobiology of Disease</i> , 2018, 119, 41-52.	2.1	31
57	Changes in pro-oxidant and antioxidant enzyme levels during cerebral hypoperfusion in rats. <i>Brain Research</i> , 2010, 1321, 13-19.	1.1	30
58	Effects of early aging and cerebral hypoperfusion on spreading depression in rats. <i>Neurobiology of Aging</i> , 2011, 32, 1707-1715.	1.5	29
59	Microglia alter the threshold of spreading depolarization and related potassium uptake in the mouse brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2020, 40, S67-S80.	2.4	29
60	Post-ischemic administration of diazoxide attenuates long-term microglial activation in the rat brain after permanent carotid artery occlusion. <i>Neuroscience Letters</i> , 2005, 387, 168-172.	1.0	28
61	Hydrogen supplemented air inhalation reduces changes of prooxidant enzyme and gap junction protein levels after transient global cerebral ischemia in the rat hippocampus. <i>Brain Research</i> , 2011, 1404, 31-38.	1.1	27
62	Tumor necrosis factor-alpha increases cerebral blood flow and ultrastructural capillary damage through the release of nitric oxide in the rat brain. <i>Microvascular Research</i> , 2006, 72, 113-119.	1.1	25
63	Impact of aging on spreading depolarizations induced by focal brain ischemia in rats. <i>Neurobiology of Aging</i> , 2014, 35, 2803-2811.	1.5	25
64	Age or ischemia uncouples the blood flow response, tissue acidosis, and direct current potential signature of spreading depolarization in the rat brain. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2017, 313, H328-H337.	1.5	25
65	N,N-Dimethyltryptamine attenuates spreading depolarization and restrains neurodegeneration by sigma-1 receptor activation in the ischemic rat brain. <i>Neuropharmacology</i> , 2021, 192, 108612.	2.0	25
66	Diazoxide and dimethyl sulphoxide alleviate experimental cerebral hypoperfusion-induced white matter injury in the rat brain. <i>Neuroscience Letters</i> , 2005, 373, 195-199.	1.0	24
67	Susceptibility of the cerebral cortex to spreading depolarization in neurological disease states: The impact of aging. <i>Neurochemistry International</i> , 2019, 127, 125-136.	1.9	24
68	Diazoxide preserves hypercapnia-induced arteriolar vasodilation after global cerebral ischemia in piglets. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2005, 289, H368-H373.	1.5	23
69	Advancing age and ischemia elevate the electric threshold to elicit spreading depolarization in the cerebral cortex of young adult rats. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 1763-1775.	2.4	23
70	Preparation of novel tissue acidosis-responsive chitosan drug nanoparticles: Characterization and in vitro release properties of Ca ²⁺ channel blocker nimodipine drug molecules. <i>European Journal of Pharmaceutical Sciences</i> , 2018, 123, 79-88.	1.9	23
71	Chitosan nanoparticles release nimodipine in response to tissue acidosis to attenuate spreading depolarization evoked during forebrain ischemia. <i>Neuropharmacology</i> , 2020, 162, 107850.	2.0	23
72	Malignant astrocyte swelling and impaired glutamate clearance drive the expansion of injurious spreading depolarization foci. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2022, 42, 584-599.	2.4	21

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73	Questioning Glutamate Excitotoxicity in Acute Brain Damage: The Importance of Spreading Depolarization. <i>Neurocritical Care</i> , 2022, 37, 11-30.	1.2	18
74	Systemic Effects of Dietary n-3 PUFA Supplementation Accompany Changes of CNS Parameters in Cerebral Hypoperfusion. <i>Annals of the New York Academy of Sciences</i> , 2002, 977, 77-86.	1.8	17
75	Spreading Depolarization in the Ischemic Brain: Does Aging Have an Impact?. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2014, 69, 1363-1370.	1.7	17
76	The impact of dihydropyridine derivatives on the cerebral blood flow response to somatosensory stimulation and spreading depolarization. <i>British Journal of Pharmacology</i> , 2019, 176, 1222-1234.	2.7	17
77	Capillary injury in the ischemic brain of hyperlipidemic, apolipoprotein B-100 transgenic mice. <i>Life Sciences</i> , 2009, 84, 935-939.	2.0	16
78	The Effect of Molecular Weight on the Solubility Properties of Biocompatible Poly(ethylene) Terephthalate. <i>Journal of Applied Polymer Science</i> , 2015, 115, 542-548.	2.0	15
79	Contribution of prostanoid signaling to the evolution of spreading depolarization and the associated cerebral blood flow response. <i>Scientific Reports</i> , 2016, 6, 31402.	1.6	13
80	Aging Impairs Cerebrovascular Reactivity at Preserved Resting Cerebral Arteriolar Tone and Vascular Density in the Laboratory Rat. <i>Frontiers in Aging Neuroscience</i> , 2019, 11, 301.	1.7	12
81	Potential of Aminoglycoside Lethality by C-4-Dicarboxylates Requires RpoN in Antibiotic-Tolerant <i>Pseudomonas aeruginosa</i> . <i>Antimicrobial Agents and Chemotherapy</i> , 2019, 63, .	1.4	9
82	An experimental investigation of the biopolymer organization of both recent and fossil sporoderms. <i>Grana</i> , 1993, 32, 40-48.	0.4	6
83	Neuroprotection by Diazoxide in Animal Models for Cerebrovascular Disorders. <i>Vascular Disease Prevention</i> , 2006, 3, 253-263.	0.2	6
84	Systemic administration of l-kynurenine sulfate induces cerebral hypoperfusion transients in adult C57Bl/6 mice. <i>Microvascular Research</i> , 2017, 114, 19-25.	1.1	6
85	The antagonism of prostaglandin FP receptors inhibits the evolution of spreading depolarization in an experimental model of global forebrain ischemia. <i>Neurobiology of Disease</i> , 2020, 137, 104780.	2.1	6
86	Transient Hypoperfusion to Ischemic/Anoxic Spreading Depolarization is Related to Autoregulatory Failure in the Rat Cerebral Cortex. <i>Neurocritical Care</i> , 2022, 37, 112-122.	1.2	6
87	Heart-cutting two-dimensional liquid chromatography coupled to quadrupole-orbitrap high resolution mass spectrometry for determination of N,N-dimethyltryptamine in rat plasma and brain; Method development and application. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2020, 191, 113615.	1.4	5
88	Comparative analysis of spreading depolarizations in brain slices exposed to osmotic or metabolic stress. <i>BMC Neuroscience</i> , 2021, 22, 33.	0.8	5
89	Biocompatible poly(ethylene succinate) polyester with molecular weight dependent drug release properties. <i>International Journal of Pharmaceutics</i> , 2022, 618, 121653.	2.6	4
90	Spectral and Multifractal Signature of Cortical Spreading Depolarisation in Aged Rats. <i>Frontiers in Physiology</i> , 2018, 9, 1512.	1.3	2

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91	Astrocyte Ca ²⁺ Waves and Subsequent Non-Synchronized Ca ²⁺ Oscillations Coincide with Arteriole Diameter Changes in Response to Spreading Depolarization. <i>International Journal of Molecular Sciences</i> , 2021, 22, 3442.	1.8	1
92	NMN Rescues Endothelial Function and Neurovascular Coupling, Improving Cognitive Function in Aged Mice. <i>Innovation in Aging</i> , 2020, 4, 121-121.	0.0	1
93	Interaction of obesity and Nrf2 deficiency exacerbates vascular aging: potential role of endothelial senescence. <i>FASEB Journal</i> , 2019, 33, 518.9.	0.2	0
94	Nrf2 deficiency in aged mice exacerbates cellular senescence promoting cerebrovascular inflammation. <i>FASEB Journal</i> , 2019, 33, 518.8.	0.2	0