Eric A Newman

List of Publications by Year
in descending order

75 papers	12,890 citations	57758 44 h-index	88630 70 g-index
75 all docs	75 docs citations	75 times ranked	9863 citing authors

#	Article	IF	Citations
1	Glial and neuronal control of brain blood flow. Nature, 2010, 468, 232-243.	27.8	2,003
2	The MÃ¼ller cell: a functional element of the retina. Trends in Neurosciences, 1996, 19, 307-312.	8.6	713
3	Potassium buffering in the central nervous system. Neuroscience, 2004, 129, 1043-1054.	2.3	700
4	Glial Cells Dilate and Constrict Blood Vessels: A Mechanism of Neurovascular Coupling. Journal of Neuroscience, 2006, 26, 2862-2870.	3.6	547
5	New roles for astrocytes: Regulation of synaptic transmission. Trends in Neurosciences, 2003, 26, 536-542.	8.6	543
6	Cellular and physiological mechanisms underlying blood flow regulation in the retina and choroid in health and disease. Progress in Retinal and Eye Research, 2012, 31, 377-406.	15.5	514
7	Control of Extracellular Potassium Levels by Retinal Glial Cell K ⁺ Siphoning. Science, 1984, 225, 1174-1175.	12.6	449
8	Calcium Waves in Retinal Glial Cells. Science, 1997, 275, 844-847.	12.6	437
9	Propagation of Intercellular Calcium Waves in Retinal Astrocytes and MÃ¼ller Cells. Journal of Neuroscience, 2001, 21, 2215-2223.	3.6	429
10	Glial Cell Inhibition of Neurons by Release of ATP. Journal of Neuroscience, 2003, 23, 1659-1666.	3.6	410
11	Genetic Inactivation of an Inwardly Rectifying Potassium Channel (Kir4.1 Subunit) in Mice: Phenotypic Impact in Retina. Journal of Neuroscience, 2000, 20, 5733-5740.	3.6	404
12	Does the release of potassium from astrocyte endfeet regulate cerebral blood flow?. Science, 1987, 237, 896-898.	12.6	391
13	Modulation of Neuronal Activity by Glial Cells in the Retina. Journal of Neuroscience, 1998, 18, 4022-4028.	3.6	341
14	High potassium conductance in astrocyte endfeet. Science, 1986, 233, 453-454.	12.6	283
15	Inward-rectifying potassium channels in retinal glial (Muller) cells. Journal of Neuroscience, 1993, 13, 3333-3345.	3.6	276
16	Regional specialization of retinal glial cell membrane. Nature, 1984, 309, 155-157.	27.8	266
17	D-serine and serine racemase are present in the vertebrate retina and contribute to the physiological activation of NMDA receptors. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6789-6794.	7.1	250
18	Astrocyte Regulation of Blood Flow in the Brain. Cold Spring Harbor Perspectives in Biology, 2015, 7, a020388.	5.5	249

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19	Voltage-dependent calcium and potassium channels in retinal glial cells. Nature, 1985, 317, 809-811.	27.8	213
20	Spatial Buffering of Light-Evoked Potassium Increases by Retinal MÃ¼ller (Glial) Cells. Science, 1989, 244, 578-580.	12.6	204
21	Model of electroretinogram b-wave generation: a test of the K+ hypothesis. Journal of Neurophysiology, 1984, 51, 164-182.	1.8	191
22	Functional Hyperemia and Mechanisms of Neurovascular Coupling in the Retinal Vasculature. Journal of Cerebral Blood Flow and Metabolism, 2013, 33, 1685-1695.	4.3	181
23	Calcium Increases in Retinal Glial Cells Evoked by Light-Induced Neuronal Activity. Journal of Neuroscience, 2005, 25, 5502-5510.	3.6	170
24	Distribution of potassium conductance in mammalian MÃ¼ller (glial) cells: a comparative study. Journal of Neuroscience, 1987, 7, 2423-32.	3.6	157
25	Regulation of Blood Flow in the Retinal Trilaminar Vascular Network. Journal of Neuroscience, 2014, 34, 11504-11513.	3.6	153
26	Glial cell regulation of neuronal activity and blood flow in the retina by release of gliotransmitters. Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20140195.	4.0	146
27	Signalling within the neurovascular unit in the mammalian retina. Experimental Physiology, 2007, 92, 635-640.	2.0	139
28	Glial modulation of synaptic transmission in the retina. Glia, 2004, 47, 268-274.	4.9	127
29	Glial Cell Calcium Signaling Mediates Capillary Regulation of Blood Flow in the Retina. Journal of Neuroscience, 2016, 36, 9435-9445.	3.6	121
30	Current source-density analysis of the b-wave of frog retina.. Journal of Neurophysiology, 1980, 43, 1355-1366.	1.8	100
31	Inhibition of inducible nitric oxide synthase reverses the loss of functional hyperemia in diabetic retinopathy. Glia, 2010, 58, 1996-2004.	4.9	95
32	Acid efflux from retinal glial cells generated by sodium bicarbonate cotransport. Journal of Neuroscience, 1996, 16, 159-168.	3.6	93
33	Asymmetric gap junctional coupling between glial cells in the rat retina. , 1997, 20, 10-22.		89
34	Calcium signaling in specialized glial cells. Glia, 2006, 54, 650-655.	4.9	89
35	Mechanisms Mediating Functional Hyperemia in the Brain. Neuroscientist, 2018, 24, 73-83.	3.5	88
36	Light-evoked increases in extracellular K+ in the plexiform layers of amphibian retinas.. Journal of General Physiology, 1985, 86, 189-213.	1.9	80

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37	Mechanisms and Distribution of Ion Channels in Retinal Ganglion Cells: Using Temperature as an Independent Variable. Journal of Neurophysiology, 2010, 103, 1357-1374.	1.8	80
38	Sodium-bicarbonate cotransport in retinal Muller (glial) cells of the salamander. Journal of Neuroscience, 1991, 11, 3972-3983.	3.6	79
39	Neurovascular Coupling Is Not Mediated by Potassium Siphoning from Glial Cells. Journal of Neuroscience, 2007, 27, 2468-2471.	3.6	78
40	Oxygen modulation of neurovascular coupling in the retina. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17827-17831.	7.1	78
41	Imaging retinal blood flow with laser speckle flowmetry. Frontiers in Neuroenergetics, 2010, 2, .	5.3	66
42	Regulation of potassium levels by glial cells in the retina. Trends in Neurosciences, 1985, 8, 156-159.	8.6	64
43	Purinergic control of vascular tone in the retina. Journal of Physiology, 2014, 592, 491-504.	2.9	58
44	Potassium conductance block by barium in amphibian MuÂ¨ller cells. Brain Research, 1989, 498, 308-314.	2.2	56
45	Regional Specialization of the Membrane of Retinal Glial Cells and Its Importance to K+Spatial Buffering. Annals of the New York Academy of Sciences, 1986, 481, 273-286.	3.8	50
46	Spontaneous Glial Calcium Waves in the Retina Develop over Early Adulthood. Journal of Neuroscience, 2009, 29, 11339-11346.	3.6	46
47	A dialogue between glia and neurons in the retina: modulation of neuronal excitability. Neuron Glia Biology, 2004, 1, 245-252.	1.6	44
48	A physiological measure of carbonic anhydrase in mÃ¼ller cells. Glia, 1994, 11, 291-299.	4.9	42
49	B-wave currents in the frog retina. Vision Research, 1979, 19, 227-234.	1.4	41
50	Adenosine-Evoked Hyperpolarization of Retinal Ganglion Cells Is Mediated by G-Protein-Coupled Inwardly Rectifying K⁺and Small Conductance Ca²⁺-Activated K⁺Channel Activation. Journal of Neuroscience, 2009, 29, 11237-11245.	3.6	39
51	Asymmetric gap junctional coupling between glial cells in the rat retina. Glia, 1997, 20, 10-22.	4.9	38
52	Measurement of Retinal Blood Flow Using Fluorescently Labeled Red Blood Cells. ENeuro, 2015, 2, ENEURO.0005-15.2015.	1.9	33
53	Sodium-bicarbonate cotransport in retinal astrocytes and Mï¿½ller cells of the rat. , 1999, 26, 302-308.		32
54	Electrical coupling between glial cells in the rat retina. Glia, 2001, 35, 1-13.	4.9	32

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55	Calcium signaling in retinal glial cells and its effect on neuronal activity. Progress in Brain Research, 2001, 132, 241-254.	1.4	30
56	Aminoguanidine Reverses the Loss of Functional Hyperemia in a Rat Model of Diabetic Retinopathy. Frontiers in Neuroenergetics, 2011, 3, 10.	5.3	29
57	THE MÃœLLER CELL. , 1986, , 149-171.		27
58	An eyecup preparation for the rat and mouse. Journal of Neuroscience Methods, 1999, 93, 169-175.	2.5	23
59	Potassium conductance in MÃ¼ller cells of fish. Glia, 1988, 1, 275-281.	4.9	22
60	A Purinergic Dialogue between Glia and Neurons in the Retina. Novartis Foundation Symposium, 0, , 193-207.	1.1	21
61	Dilation of cortical capillaries is not related to astrocyte calcium signaling. Glia, 2022, 70, 508-521.	4.9	19
62	Electrophysiology of retinal glial cells. Progress in Retinal and Eye Research, 1988, 8, 153-171.	0.8	15
63	Regulation of blood flow in diabetic retinopathy. Visual Neuroscience, 2020, 37, E004.	1.0	15
64	Light adaptation does not prevent early retinal abnormalities in diabetic rats. Scientific Reports, 2016, 6, 21075.	3.3	13
65	Ischemia-induced spreading depolarization in the retina. Journal of Cerebral Blood Flow and Metabolism, 2016, 36, 1579-1591.	4.3	12
66	A purinergic dialogue between glia and neurons in the retina. Novartis Foundation Symposium, 2006, 276, 193-202; discussion 202-7, 233-7, 275-81.	1.1	12
67	Spatial Organization and Dynamics of the Extracellular Space in the Mouse Retina. Journal of Neuroscience, 2020, 40, 7785-7794.	3.6	11
68	Assessment of Glial Function in the In Vivo Retina. Methods in Molecular Biology, 2012, 814, 499-514.	0.9	10
69	Keeping the Brain Well Fed: The Role of Capillaries and Arterioles in Orchestrating Functional Hyperemia. Neuron, 2018, 99, 248-250.	8.1	9
70	Astrocyte regulation of cerebral blood flow during hypoglycemia. Journal of Cerebral Blood Flow and Metabolism, 2022, 42, 1534-1546.	4.3	9
71	Physiological properties and possible functions of Muller cells. Neuroscience Research, 1986, 4, S209-S220.	1.9	6
72	Regulation of potassium by glial cells in the centralnervous system. , 2009, , 151-175.		4

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73	Cellular mechanisms mediating activityâ€dependent extracellular space shrinkage in the retina. Glia, 2022, 70, 1927-1937.	4.9	3
74	A micro-advancer device for vitreal injection and retinal recording and stimulation. Experimental Eye Research, 2011, 93, 767-770.	2.6	2
75	Physiological properties and possible functions of muller cells. Neuroscience Research Supplement: the Official Journal of the Japan Neuroscience Society, 1986, 4, S209-S220.	0.0	1