Elias Aizenman

List of Publications by Year
in descending order

120 papers	7,472 citations	41258 49 h-index	56606 83 g-index
126 all docs	126 docs citations	126 times ranked	6054 citing authors

#	Article	IF	Citations
1	ZnT1 is a neuronal Zn2+/Ca2+ exchanger. Cell Calcium, 2022, 101, 102505.	1.1	12
2	SNAP23 regulates KCC2 membrane insertion and activity following mZnR/GPR39 activation in hippocampalneurons. IScience, 2022, 25, 103751.	1.9	7
3	The ZIP3 Zinc Transporter Is Localized to Mossy Fiber Terminals and Is Required for Kainate-Induced Degeneration of CA3 Neurons. Journal of Neuroscience, 2022, 42, 2824-2834.	1.7	7
4	Elucidating the Quality Control Pathway of KCC2, a Critical Synchronizer of Neuronal Development. FASEB Journal, 2022, 36, .	0.2	0
5	The Function and Regulation of Zinc in the Brain. Neuroscience, 2021, 457, 235-258.	1.1	67
6	The Multifaceted Roles of Zinc in Neuronal Mitochondrial Dysfunction. Biomedicines, 2021, 9, 489.	1.4	19
7	Evolutionary rate covariation identifies SLC30A9 (ZnT9) as a mitochondrial zinc transporter. Biochemical Journal, 2021, 478, 3205-3220.	1.7	17
8	Imprecision in Precision Medicine: Differential Response of a Disease-Linked GluN2A Mutant to NMDA Channel Blockers. Frontiers in Pharmacology, 2021, 12, 773455.	1.6	3
9	Synaptic zinc inhibition of NMDA receptors depends on the association of GluN2A with the zinc transporter ZnT1. Science Advances, 2020, 6, .	4.7	43
10	The Redox Biology of Excitotoxic Processes: The NMDA Receptor, TOPA Quinone, and the Oxidative Liberation of Intracellular Zinc. Frontiers in Neuroscience, 2020, 14, 778.	1.4	10
11	Lessons from Recent Advances in Ischemic Stroke Management and Targeting Kv2.1 for Neuroprotection. International Journal of Molecular Sciences, 2020, 21, 6107.	1.8	10
12	Targeted disruption of Kv2.1-VAPA association provides neuroprotection against ischemic stroke in mice by declustering Kv2.1 channels. Science Advances, 2020, 6, .	4.7	21
13	Defining the Kv2.1â€“syntaxin molecular interaction identifies a first-in-class small molecule neuroprotectant. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15696-15705.	3.3	8
14	Heterogeneous clinical and functional features of GRIN2D-related developmental and epileptic encephalopathy. Brain, 2019, 142, 3009-3027.	3.7	49
15	Zinc Signaling in theÂLife and Death of Neurons. , 2019, , 165-185.		1
16	Molecular Neuroprotection Induced by Zinc-Dependent Expression of Hepatitis Câ€“Derived Protein NS5A Targeting Kv2.1 Potassium Channels. Journal of Pharmacology and Experimental Therapeutics, 2018, 367, 348-355.	1.3	6
17	Targeting a Potassium Channel/Syntaxin Interaction Ameliorates Cell Death in Ischemic Stroke. Journal of Neuroscience, 2017, 37, 5648-5658.	1.7	33
18	Disruption of K V 2.1 somato-dendritic clusters prevents the apoptogenic increase of potassium currents. Neuroscience, 2017, 354, 158-167.	1.1	14

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19	Molecular Mechanism of Disease-Associated Mutations in the Pre-M1 Helix of NMDA Receptors and Potential Rescue Pharmacology. PLoS Genetics, 2017, 13, e1006536.	1.5	117
20	Zn²⁺â€induced Ca²⁺ release via ryanodine receptors triggers calcineurinâ€dependent redistribution of cortical neuronal Kv2.1 K⁺ channels. Journal of Physiology, 2016, 594, 2647-2659.	1.3	16
21	Synthesis and Evaluation of Potent KCNQ2/3-Specific Channel Activators. Molecular Pharmacology, 2016, 89, 667-677.	1.0	51
22	GRIN2D Recurrent De Novo Dominant Mutation Causes a Severe Epileptic Encephalopathy Treatable with NMDA Receptor Channel Blockers. American Journal of Human Genetics, 2016, 99, 802-816.	2.6	138
23	Regulation of neuronal pH by the metabotropic Zn²⁺â€sensing Gqâ€coupled receptor, mZnR/GPR39. Journal of Neurochemistry, 2015, 135, 897-907.	2.1	20
24	Regulation of Pro-Apoptotic Phosphorylation of Kv2.1 K+ Channels. PLoS ONE, 2015, 10, e0129498.	1.1	15
25	Metals and neurodegeneration. Neurobiology of Disease, 2015, 81, 1-3.	2.1	19
26	Seashells by the zinc shore: a meeting report of the International Society for Zinc Biology, Asilomar, CA 2014. Metallomics, 2015, 7, 1299-1304.	1.0	0
27	Homeostatic regulation of KCC2 activity by the zinc receptor mZnR/GPR39 during seizures. Neurobiology of Disease, 2015, 81, 4-13.	2.1	66
28	Critical role of Casein kinase 2 in hepatitis C NS5A-mediated inhibition of Kv2.1 K + channel function. Neuroscience Letters, 2015, 609, 48-52.	1.0	4
29	Cyclin E1 Regulates Kv2.1 Channel Phosphorylation and Localization in Neuronal Ischemia. Journal of Neuroscience, 2014, 34, 4326-4331.	1.7	14
30	Voltage-Gated Potassium Channels at the Crossroads of Neuronal Function, Ischemic Tolerance, and Neurodegeneration. Translational Stroke Research, 2014, 5, 38-58.	2.3	130
31	Syntaxinâ€binding domain of Kv2.1 is essential for the expression of apoptotic K⁺ currents. Journal of Physiology, 2014, 592, 3511-3521.	1.3	17
32	The role of intracellular zinc release in aging, oxidative stress, and AlzheimerÃ¢â‚¬â„¢s disease. Frontiers in Aging Neuroscience, 2014, 6, 77.	1.7	112
33	Oxidative Stress and Neuronal Zinc Signaling. , 2014, , 55-87.		3
34	Glutamate transporter expression and function in a striatal neuronal model of Huntingtonâ€™s disease. Neurochemistry International, 2013, 62, 973-981.	1.9	11
35	Synaptic Zn²⁺Inhibits Neurotransmitter Release by Promoting Endocannabinoid Synthesis. Journal of Neuroscience, 2013, 33, 9259-9272.	1.7	73
36	Convergent Ca ²⁺ and Zn ²⁺ signaling regulates apoptotic Kv2.1 K ⁺ currents. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13988-13993.	3.3	66

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37	Regulation of Neuronal Proapoptotic Potassium Currents by the Hepatitis C Virus Nonstructural Protein 5A. Journal of Neuroscience, 2012, 32, 8865-8870.	1.7	16
38	SNARE-dependent upregulation of potassium chloride co-transporter 2 activity after metabotropic zinc receptor activation in rat cortical neurons in vitro. Neuroscience, 2012, 210, 38-46.	1.1	50
39	Targeted single-neuron infection with rabies virus for transneuronal multisynaptic tracing. Journal of Neuroscience Methods, 2012, 209, 367-370.	1.3	9
40	The Neurophysiology and Pathology of Brain Zinc. Journal of Neuroscience, 2011, 31, 16076-16085.	1.7	291
41	Redox Regulation of Intracellular Zinc: Molecular Signaling in the Life and Death of Neurons. Antioxidants and Redox Signaling, 2011, 15, 2249-2263.	2.5	56
42	Inhibitory effects of chalcone glycosides isolated from Brassica rapa L. â€˜hidabeniâ€™ and their synthetic derivatives on LPS-induced NO production in microglia. Bioorganic and Medicinal Chemistry, 2011, 19, 5559-5568.	1.4	18
43	Upregulation of KCC2 Activity by Zinc-Mediated Neurotransmission via the mZnR/GPR39 Receptor. Journal of Neuroscience, 2011, 31, 12916-12926.	1.7	125
44	ERK signaling leads to mitochondrial dysfunction in extracellular zincâ€induced neurotoxicity. Journal of Neurochemistry, 2010, 114, 452-461.	2.1	65
45	Complex role of zinc in methamphetamine toxicity in vitro. Neuroscience, 2010, 171, 31-39.	1.1	15
46	NMDA potentiation by visible light in the presence of a fluorescent neurosteroid analogue. Journal of Physiology, 2009, 587, 2937-2947.	1.3	6
47	Regulation of apoptotic potassium currents by coordinated zincâ€dependent signalling. Journal of Physiology, 2009, 587, 4393-4404.	1.3	68
48	Intracellular zinc inhibits KCC2 transporter activity. Nature Neuroscience, 2009, 12, 725-727.	7.1	59
49	Zn²⁺ regulates Kv2.1 voltageâ€dependent gating and localization following ischemia. European Journal of Neuroscience, 2009, 30, 2250-2257.	1.2	29
50	Protein kinase C regulation of neuronal zinc signaling mediates survival during preconditioning. Journal of Neurochemistry, 2009, 110, 106-117.	2.1	53
51	A Zincâ€”Potassium Continuum in Neuronal Apoptosis. Contemporary Clinical Neuroscience, 2009, , 97-115.	0.3	1
52	Microglia induce neurotoxicity via intraneuronal Zn²⁺ release and a K⁺ current surge. Glia, 2008, 56, 89-96.	2.5	54
53	Assessment of Cell Viability in Primary Neuronal Cultures. Current Protocols in Neuroscience, 2008, 44, Unit 7.18.	2.6	63
54	Selective Inhibition of Mitogen-Activated Protein Kinase Phosphatases by Zinc Accounts for Extracellular Signal-Regulated Kinase 1/2-Dependent Oxidative Neuronal Cell Death. Molecular Pharmacology, 2008, 74, 1141-1151.	1.0	80

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55	Apoptotic surge of potassium currents is mediated by p38 phosphorylation of Kv2.1. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3568-3573.	3.3	115
56	Intracellular Zinc Release, 12-Lipoxygenase Activation and MAPK Dependent Neuronal and Oligodendroglial Death. Molecular Medicine, 2007, 13, 350-355.	1.9	75
57	A vital role for voltage-dependent potassium channels in dopamine transporter-mediated 6-hydroxydopamine neurotoxicity. Neuroscience, 2006, 143, 1-6.	1.1	42
58	Apoptotic surface delivery of K+ channels. Cell Death and Differentiation, 2006, 13, 661-667.	5.0	80
59	Methylisothiazolinone, A Neurotoxic Biocide, Disrupts the Association of Src Family Tyrosine Kinases with Focal Adhesion Kinase in Developing Cortical Neurons. Journal of Pharmacology and Experimental Therapeutics, 2006, 317, 1320-1329.	1.3	37
60	Zinc accumulation after target loss: an early event in retrograde degeneration of thalamic neurons. European Journal of Neuroscience, 2005, 21, 647-657.	1.2	37
61	KCC2 expression in immature rat cortical neurons is sufficient to switch the polarity of GABA responses. European Journal of Neuroscience, 2005, 21, 2593-2599.	1.2	109
62	Obligatory role of ASK1 in the apoptotic surge of K+ currents. Neuroscience Letters, 2005, 387, 136-140.	1.0	26
63	Novel Neuroprotective K+ Channel Inhibitor Identified by High-Throughput Screening in Yeast. Molecular Pharmacology, 2004, 65, 214-219.	1.0	69
64	Peroxynitrite-Induced Neuronal Apoptosis Is Mediated by Intracellular Zinc Release and 12-Lipoxygenase Activation. Journal of Neuroscience, 2004, 24, 10616-10627.	1.7	169
65	Elevation of intracellular cAMP evokes activity-dependent release of adenosine in cultured rat forebrain neurons. European Journal of Neuroscience, 2004, 19, 2669-2681.	1.2	14
66	Amino terminal domain regulation of NMDA receptor function. European Journal of Pharmacology, 2004, 500, 101-111.	1.7	49
67	Nitrosative stress and potassium channel-mediated neuronal apoptosis: is zinc the link?. Pflugers Archiv European Journal of Physiology, 2004, 448, 296-303.	1.3	50
68	A molecular technique for detecting the liberation of intracellular zinc in cultured neurons. Journal of Neuroscience Methods, 2004, 137, 175-180.	1.3	18
69	Reversible modulation of GABAAreceptor-mediated currents by light is dependent on the redox state of the receptor. European Journal of Neuroscience, 2003, 17, 2077-2083.	1.2	18
70	Caspase 3 activation is essential for neuroprotection in preconditioning. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 715-720.	3.3	261
71	Mediation of Neuronal Apoptosis by Kv2.1-Encoded Potassium Channels. Journal of Neuroscience, 2003, 23, 4798-4802.	1.7	227
72	Protein kinases and light: unlikely partners in a receptor localization puzzle. Physiology and Behavior, 2002, 77, 533-536.	1.0	5

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73	Comparison of the Potency of Competitive NMDA Antagonists Against the Neurotoxicity of Glutamate and NMDA. Journal of Neurochemistry, 2002, 63, 879-885.	2.1	19
74	<i>In Vitro</i>Neurotoxicity of Methylisothiazolinone, a Commonly Used Industrial and Household Biocide, Proceeds via a Zinc and Extracellular Signal-Regulated Kinase Mitogen-Activated Protein Kinase-Dependent Pathway. Journal of Neuroscience, 2002, 22, 7408-7416.	1.7	77
75	The selective p38 inhibitor SB-239063 protects primary neurons from mild to moderate excitotoxic injury. European Journal of Pharmacology, 2002, 447, 37-42.	1.7	57
76	Induction of Neuronal Apoptosis by Thiol Oxidation. Journal of Neurochemistry, 2002, 75, 1878-1888.	2.1	347
77	A role for the redox site in the modulation of the NMDA receptor by light. Journal of Physiology, 2002, 545, 435-440.	1.3	8
78	p38 Activation Is Required Upstream of Potassium Current Enhancement and Caspase Cleavage in Thiol Oxidant-Induced Neuronal Apoptosis. Journal of Neuroscience, 2001, 21, 3303-3311.	1.7	156
79	The neuroprotective agent ebselen modifies NMDA receptor function via the redox modulatory site. Journal of Neurochemistry, 2001, 78, 1307-1314.	2.1	50
80	Enhancement of NMDA receptorâ€mediated currents by light in rat neurones in vitro. Journal of Physiology, 2000, 524, 365-374.	1.3	34
81	Novel Role for the NMDA Receptor Redox Modulatory Site in the Pathophysiology of Seizures. Journal of Neuroscience, 2000, 20, 2409-2417.	1.7	54
82	NMDA and Glutamate Evoke Excitotoxicity at Distinct Cellular Locations in Rat Cortical Neurons<i>In Vitro</i>. Journal of Neuroscience, 2000, 20, 8831-8837.	1.7	75
83	Lack of interaction between nitric oxide and the redox modulatory site of the NMDA receptor. British Journal of Pharmacology, 1999, 126, 296-300.	2.7	26
84	Dihydrokainate-sensitive neuronal glutamate transport is required for protection of rat cortical neurons in culture against synaptically released glutamate. European Journal of Neuroscience, 1998, 10, 2523-2531.	1.2	39
85	Subunit-specific Interactions of Cyanide with the N-Methyl-d-aspartate Receptor. Journal of Biological Chemistry, 1998, 273, 21505-21511.	1.6	25
86	Chapter 5 Why is the role of nitric oxide in NMDA receptor function and dysfunction so controversial?. Progress in Brain Research, 1998, 118, 53-71.	0.9	25
87	Reverse Na⁺/Ca²⁺Exchange Contributes to Glutamate-Induced Intracellular Ca²⁺Concentration Increases in Cultured Rat Forebrain Neurons. Molecular Pharmacology, 1998, 53, 742-749.	1.0	126
88	Dihydrokainate-sensitive neuronal glutamate transport is required for protection of rat cortical neurons in culture against synaptically released glutamate. , 1998, 10, 2523.		1
89	Functional consequences of NR2 subunit composition in single recombinant N-methyl-D-aspartate receptors. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 11019-11024.	3.3	99
90	Effects of pyrroloquinoline quinone on glutamate-induced production of reactive oxygen species in neurons. European Journal of Pharmacology, 1997, 326, 67-74.	1.7	41

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91	Trapping Channel Block of NMDA-Activated Responses By Amantadine and Memantine. Journal of Neurophysiology, 1997, 77, 309-323.	0.9	217
92	Intrinsic redox properties of N-methyl-d-aspartate receptor can determine the developmental expression of excitotoxicity in rat cortical neurons in vitro. Brain Research, 1997, 747, 297-303.	1.1	33
93	Modulation of N-methyl-d-aspartate receptors by hydroxyl radicals in rat cortical neurons in vitro. Neuroscience Letters, 1995, 189, 57-59.	1.0	45
94	Ironâ€Mediated Oxidation of 3,4â€Dihydroxyphenylalanine to an Excitotoxin. Journal of Neurochemistry, 1995, 64, 1742-1748.	2.1	24
95	Stable transfection of the NR1 subunit in Chinese hamster ovary cells fails to produce a functional receptor. Neuroscience Letters, 1994, 173, 189-192.	1.0	25
96	Further evidence that pyrroloquinoline quinone interacts with the receptor redox site in rat cortical neurons in vitro. Neuroscience Letters, 1994, 168, 189-192.	1.0	30
97	The putative essential nutrient pyrroloquinoline quinone is neuroprotective in a rodent model of hypoxic/ischemic brain injury. Neuroscience, 1994, 62, 399-406.	1.1	66
98	Nonenzymatic Conversion of 3,4-Dihydroxyphenylalanine to 2,4,5-Trihydroxyphenylalanine and 2,4,5-Trihydroxyphenylalanine Quinone in Physiological Solutions. Journal of Neurochemistry, 1993, 61, 911-920.	2.1	21
99	Studies on the effects of several pentamidine analogues on the NMDA receptor. European Journal of Pharmacology, 1993, 244, 175-179.	2.7	9
100	Allosteric modulation of the NMDA receptor by dihydrolipoic and lipoic acid in rat cortical neurons in vitro. Neuron, 1993, 11, 857-863.	3.8	45
101	The modulation of Nâ€methylâ€Dâ€aspartate receptors by redox and alkylating reagents in rat cortical neurones in vitro.. Journal of Physiology, 1993, 465, 303-323.	1.3	117
102	Glutathione prevents 2,4,5-trihydroxyphenylalanine excitotoxicity by maintaining it in a reduced, non-active form. Neuroscience Letters, 1992, 144, 233-236.	1.0	21
103	Modulation of NMDA Excitotoxicity by Redox Reagents. Annals of the New York Academy of Sciences, 1992, 648, 125-131.	1.8	4
104	The action of CGS-19755 on the redox enhancement of NMDA toxicity in rat cortical neurons in vitro. Brain Research, 1992, 585, 28-34.	1.1	30
105	Nitric oxide modulates NMDA-induced increases in intracellular Ca2+ in cultured rat forebrain neurons. Brain Research, 1992, 592, 310-316.	1.1	154
106	Oxidized glutathione modulates and depolarization-induced increases in intracellular Ca2+ in cultured rat forebrain neurons. Neuroscience Letters, 1991, 133, 11-14.	1.0	54
107	Effects of nicotinic agonists on the NMDA receptor. Brain Research, 1991, 551, 355-357.	1.1	49
108	2,4,5-trihydroxyphenylalanine in solution forms a non-N-methyl-D-aspartate glutamatergic agonist and neurotoxin.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 4865-4869.	3.3	50

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109	A 3,4-dihydroxyphenylalanine oxidation product is a glutamatergic agonist in rat cortical neurons. Neuroscience Letters, 1990, 116, 168-171.	1.0	34
110	Oxygen free radicals regulate NMDA receptor function via a redox modulatory site. Neuron, 1990, 5, 841-846.	3.8	194
111	Blockade of nicotinic responses in rat retinal ganglion cells by neuronal bungarotoxin. Brain Research, 1990, 517, 209-214.	1.1	21
112	Reduction of NMDA receptors with dithiothreitol increases [³H]â€MKâ€801 binding and NMDAâ€induced Ca²⁺ fluxes. British Journal of Pharmacology, 1990, 101, 178-182.	2.7	76
113	Hundred-fold increase in neuronal vulnerability to glutamate toxicity in astrocyte-poor cultures of rat cerebral cortex. Neuroscience Letters, 1989, 103, 162-168.	1.0	379
114	Two pharmacological classes of quisqualate-induced electrical responses in rat retinal ganglion cells in vitro. European Journal of Pharmacology, 1989, 174, 9-22.	1.7	8
115	Selective modulation of NMDA responses by reduction and oxidation. Neuron, 1989, 2, 1257-1263.	3.8	432
116	Central mammalian neurons normally resistant to glutamate toxicity are made sensitive by elevated extracellular Ca2+: toxicity is blocked by the N-methyl-D-aspartate antagonist MK-801.. Proceedings of the National Academy of Sciences of the United States of America, 1988, 85, 6556-6560.	3.3	138
117	Responses mediated by excitatory amino acid receptors in solitary retinal ganglion cells from rat.. Journal of Physiology, 1988, 396, 75-91.	1.3	124
118	Neural nicotinic acetylcholine responses in solitary mammalian retinal ganglion cells. Pflugers Archiv European Journal of Physiology, 1987, 410, 37-43.	1.3	113
119	Axonal transport of Î±-bungarotoxin binding sites in rat sciatic nerve. Brain Research, 1985, 340, 269-276.	1.1	14
120	Selective retrograde axonal transport of free glycine in identified neurons ofAplysia. Cellular and Molecular Neurobiology, 1984, 4, 231-247.	1.7	5