

Elias Aizenman

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2207998/publications.pdf>

Version: 2024-02-01

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	Selective modulation of NMDA responses by reduction and oxidation. <i>Neuron</i> , 1989, 2, 1257-1263.	3.8	432
2	Hundred-fold increase in neuronal vulnerability to glutamate toxicity in astrocyte-poor cultures of rat cerebral cortex. <i>Neuroscience Letters</i> , 1989, 103, 162-168.	1.0	379
3	Induction of Neuronal Apoptosis by Thiol Oxidation. <i>Journal of Neurochemistry</i> , 2002, 75, 1878-1888.	2.1	347
4	The Neurophysiology and Pathology of Brain Zinc. <i>Journal of Neuroscience</i> , 2011, 31, 16076-16085.	1.7	291
5	Caspase 3 activation is essential for neuroprotection in preconditioning. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 715-720.	3.3	261
6	Mediation of Neuronal Apoptosis by Kv2.1-Encoded Potassium Channels. <i>Journal of Neuroscience</i> , 2003, 23, 4798-4802.	1.7	227
7	Trapping Channel Block of NMDA-Activated Responses By Amantadine and Memantine. <i>Journal of Neurophysiology</i> , 1997, 77, 309-323.	0.9	217
8	Oxygen free radicals regulate NMDA receptor function via a redox modulatory site. <i>Neuron</i> , 1990, 5, 841-846.	3.8	194
9	Peroxynitrite-Induced Neuronal Apoptosis Is Mediated by Intracellular Zinc Release and 12-Lipoxygenase Activation. <i>Journal of Neuroscience</i> , 2004, 24, 10616-10627.	1.7	169
10	p38 Activation Is Required Upstream of Potassium Current Enhancement and Caspase Cleavage in Thiol Oxidant-Induced Neuronal Apoptosis. <i>Journal of Neuroscience</i> , 2001, 21, 3303-3311.	1.7	156
11	Nitric oxide modulates NMDA-induced increases in intracellular Ca ²⁺ in cultured rat forebrain neurons. <i>Brain Research</i> , 1992, 592, 310-316.	1.1	154
12	Central mammalian neurons normally resistant to glutamate toxicity are made sensitive by elevated extracellular Ca ²⁺ : toxicity is blocked by the N-methyl-D-aspartate antagonist MK-801.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1988, 85, 6556-6560.	3.3	138
13	GRIN2D Recurrent De Novo Dominant Mutation Causes a Severe Epileptic Encephalopathy Treatable with NMDA Receptor Channel Blockers. <i>American Journal of Human Genetics</i> , 2016, 99, 802-816.	2.6	138
14	Voltage-Gated Potassium Channels at the Crossroads of Neuronal Function, Ischemic Tolerance, and Neurodegeneration. <i>Translational Stroke Research</i> , 2014, 5, 38-58.	2.3	130
15	Reverse Na ⁺ /Ca ²⁺ Exchange Contributes to Glutamate-Induced Intracellular Ca ²⁺ Concentration Increases in Cultured Rat Forebrain Neurons. <i>Molecular Pharmacology</i> , 1998, 53, 742-749.	1.0	126
16	Upregulation of KCC2 Activity by Zinc-Mediated Neurotransmission via the mZnR/GPR39 Receptor. <i>Journal of Neuroscience</i> , 2011, 31, 12916-12926.	1.7	125
17	Responses mediated by excitatory amino acid receptors in solitary retinal ganglion cells from rat.. <i>Journal of Physiology</i> , 1988, 396, 75-91.	1.3	124
18	The modulation of N-methyl-D-aspartate receptors by redox and alkylating reagents in rat cortical neurones in vitro.. <i>Journal of Physiology</i> , 1993, 465, 303-323.	1.3	117

#	ARTICLE	IF	CITATIONS
19	Molecular Mechanism of Disease-Associated Mutations in the Pre-M1 Helix of NMDA Receptors and Potential Rescue Pharmacology. <i>PLoS Genetics</i> , 2017, 13, e1006536.	1.5	117
20	Apoptotic surge of potassium currents is mediated by p38 phosphorylation of Kv2.1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 3568-3573.	3.3	115
21	Neural nicotinic acetylcholine responses in solitary mammalian retinal ganglion cells. <i>Pflugers Archiv European Journal of Physiology</i> , 1987, 410, 37-43.	1.3	113
22	The role of intracellular zinc release in aging, oxidative stress, and Alzheimer's disease. <i>Frontiers in Aging Neuroscience</i> , 2014, 6, 77.	1.7	112
23	KCC2 expression in immature rat cortical neurons is sufficient to switch the polarity of GABA responses. <i>European Journal of Neuroscience</i> , 2005, 21, 2593-2599.	1.2	109
24	Functional consequences of NR2 subunit composition in single recombinant N-methyl-D-aspartate receptors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997, 94, 11019-11024.	3.3	99
25	Apoptotic surface delivery of K ⁺ channels. <i>Cell Death and Differentiation</i> , 2006, 13, 661-667.	5.0	80
26	Selective Inhibition of Mitogen-Activated Protein Kinase Phosphatases by Zinc Accounts for Extracellular Signal-Regulated Kinase 1/2-Dependent Oxidative Neuronal Cell Death. <i>Molecular Pharmacology</i> , 2008, 74, 1141-1151.	1.0	80
27	<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. <i>Journal of Neuroscience</i> , 2002, 22, 7408-7416.	1.7	77
28	Reduction of NMDA receptors with dithiothreitol increases [³ H]MK801 binding and NMDA-induced Ca ²⁺ fluxes. <i>British Journal of Pharmacology</i> , 1990, 101, 178-182.	2.7	76
29	NMDA and Glutamate Evoke Excitotoxicity at Distinct Cellular Locations in Rat Cortical Neurons <i>In Vitro</i> . <i>Journal of Neuroscience</i> , 2000, 20, 8831-8837.	1.7	75
30	Intracellular Zinc Release, 12-Lipoxygenase Activation and MAPK Dependent Neuronal and Oligodendroglial Death. <i>Molecular Medicine</i> , 2007, 13, 350-355.	1.9	75
31	Synaptic Zn ²⁺ Inhibits Neurotransmitter Release by Promoting Endocannabinoid Synthesis. <i>Journal of Neuroscience</i> , 2013, 33, 9259-9272.	1.7	73
32	Novel Neuroprotective K ⁺ Channel Inhibitor Identified by High-Throughput Screening in Yeast. <i>Molecular Pharmacology</i> , 2004, 65, 214-219.	1.0	69
33	Regulation of apoptotic potassium currents by coordinated zinc-dependent signalling. <i>Journal of Physiology</i> , 2009, 587, 4393-4404.	1.3	68
34	The Function and Regulation of Zinc in the Brain. <i>Neuroscience</i> , 2021, 457, 235-258.	1.1	67
35	The putative essential nutrient pyrroloquinoline quinone is neuroprotective in a rodent model of hypoxic/ischemic brain injury. <i>Neuroscience</i> , 1994, 62, 399-406.	1.1	66
36	Convergent Ca ²⁺ and Zn ²⁺ signaling regulates apoptotic Kv2.1 K ⁺ currents. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 13988-13993.	3.3	66

#	ARTICLE	IF	CITATIONS
37	Homeostatic regulation of KCC2 activity by the zinc receptor mZnR/GPR39 during seizures. <i>Neurobiology of Disease</i> , 2015, 81, 4-13.	2.1	66
38	ERK signaling leads to mitochondrial dysfunction in extracellular zinc-induced neurotoxicity. <i>Journal of Neurochemistry</i> , 2010, 114, 452-461.	2.1	65
39	Assessment of Cell Viability in Primary Neuronal Cultures. <i>Current Protocols in Neuroscience</i> , 2008, 44, Unit 7.18.	2.6	63
40	Intracellular zinc inhibits KCC2 transporter activity. <i>Nature Neuroscience</i> , 2009, 12, 725-727.	7.1	59
41	The selective p38 inhibitor SB-239063 protects primary neurons from mild to moderate excitotoxic injury. <i>European Journal of Pharmacology</i> , 2002, 447, 37-42.	1.7	57
42	Redox Regulation of Intracellular Zinc: Molecular Signaling in the Life and Death of Neurons. <i>Antioxidants and Redox Signaling</i> , 2011, 15, 2249-2263.	2.5	56
43	Oxidized glutathione modulates and depolarization-induced increases in intracellular Ca ²⁺ in cultured rat forebrain neurons. <i>Neuroscience Letters</i> , 1991, 133, 11-14.	1.0	54
44	Novel Role for the NMDA Receptor Redox Modulatory Site in the Pathophysiology of Seizures. <i>Journal of Neuroscience</i> , 2000, 20, 2409-2417.	1.7	54
45	Microglia induce neurotoxicity via intraneuronal Zn ²⁺ release and a K ⁺ current surge. <i>Glia</i> , 2008, 56, 89-96.	2.5	54
46	Protein kinase C regulation of neuronal zinc signaling mediates survival during preconditioning. <i>Journal of Neurochemistry</i> , 2009, 110, 106-117.	2.1	53
47	Synthesis and Evaluation of Potent KCNQ2/3-Specific Channel Activators. <i>Molecular Pharmacology</i> , 2016, 89, 667-677.	1.0	51
48	2,4,5-trihydroxyphenylalanine in solution forms a non-N-methyl-D-aspartate glutamatergic agonist and neurotoxin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1991, 88, 4865-4869.	3.3	50
49	The neuroprotective agent ebselen modifies NMDA receptor function via the redox modulatory site. <i>Journal of Neurochemistry</i> , 2001, 78, 1307-1314.	2.1	50
50	Nitrosative stress and potassium channel-mediated neuronal apoptosis: is zinc the link?. <i>Pflügers Archiv European Journal of Physiology</i> , 2004, 448, 296-303.	1.3	50
51	SNARE-dependent upregulation of potassium chloride co-transporter 2 activity after metabotropic zinc receptor activation in rat cortical neurons in vitro. <i>Neuroscience</i> , 2012, 210, 38-46.	1.1	50
52	Effects of nicotinic agonists on the NMDA receptor. <i>Brain Research</i> , 1991, 551, 355-357.	1.1	49
53	Amino terminal domain regulation of NMDA receptor function. <i>European Journal of Pharmacology</i> , 2004, 500, 101-111.	1.7	49
54	Heterogeneous clinical and functional features of GRIN2D-related developmental and epileptic encephalopathy. <i>Brain</i> , 2019, 142, 3009-3027.	3.7	49

#	ARTICLE	IF	CITATIONS
55	Allosteric modulation of the NMDA receptor by dihydrolipoic and lipoic acid in rat cortical neurons in vitro. <i>Neuron</i> , 1993, 11, 857-863.	3.8	45
56	Modulation of N-methyl-d-aspartate receptors by hydroxyl radicals in rat cortical neurons in vitro. <i>Neuroscience Letters</i> , 1995, 189, 57-59.	1.0	45
57	Synaptic zinc inhibition of NMDA receptors depends on the association of GluN2A with the zinc transporter ZnT1. <i>Science Advances</i> , 2020, 6, .	4.7	43
58	A vital role for voltage-dependent potassium channels in dopamine transporter-mediated 6-hydroxydopamine neurotoxicity. <i>Neuroscience</i> , 2006, 143, 1-6.	1.1	42
59	Effects of pyrroloquinoline quinone on glutamate-induced production of reactive oxygen species in neurons. <i>European Journal of Pharmacology</i> , 1997, 326, 67-74.	1.7	41
60	Dihydrokainate-sensitive neuronal glutamate transport is required for protection of rat cortical neurons in culture against synaptically released glutamate. <i>European Journal of Neuroscience</i> , 1998, 10, 2523-2531.	1.2	39
61	Zinc accumulation after target loss: an early event in retrograde degeneration of thalamic neurons. <i>European Journal of Neuroscience</i> , 2005, 21, 647-657.	1.2	37
62	Methylisothiazolinone, A Neurotoxic Biocide, Disrupts the Association of Src Family Tyrosine Kinases with Focal Adhesion Kinase in Developing Cortical Neurons. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2006, 317, 1320-1329.	1.3	37
63	A 3,4-dihydroxyphenylalanine oxidation product is a glutamatergic agonist in rat cortical neurons. <i>Neuroscience Letters</i> , 1990, 116, 168-171.	1.0	34
64	Enhancement of NMDA receptor-mediated currents by light in rat neurones in vitro. <i>Journal of Physiology</i> , 2000, 524, 365-374.	1.3	34
65	Intrinsic redox properties of N-methyl-d-aspartate receptor can determine the developmental expression of excitotoxicity in rat cortical neurons in vitro. <i>Brain Research</i> , 1997, 747, 297-303.	1.1	33
66	Targeting a Potassium Channel/Syntaxin Interaction Ameliorates Cell Death in Ischemic Stroke. <i>Journal of Neuroscience</i> , 2017, 37, 5648-5658.	1.7	33
67	The action of CGS-19755 on the redox enhancement of NMDA toxicity in rat cortical neurons in vitro. <i>Brain Research</i> , 1992, 585, 28-34.	1.1	30
68	Further evidence that pyrroloquinoline quinone interacts with the receptor redox site in rat cortical neurons in vitro. <i>Neuroscience Letters</i> , 1994, 168, 189-192.	1.0	30
69	Zn ²⁺ regulates Kv2.1 voltage-dependent gating and localization following ischemia. <i>European Journal of Neuroscience</i> , 2009, 30, 2250-2257.	1.2	29
70	Lack of interaction between nitric oxide and the redox modulatory site of the NMDA receptor. <i>British Journal of Pharmacology</i> , 1999, 126, 296-300.	2.7	26
71	Obligatory role of ASK1 in the apoptotic surge of K ⁺ currents. <i>Neuroscience Letters</i> , 2005, 387, 136-140.	1.0	26
72	Stable transfection of the NR1 subunit in Chinese hamster ovary cells fails to produce a functional receptor. <i>Neuroscience Letters</i> , 1994, 173, 189-192.	1.0	25

#	ARTICLE	IF	CITATIONS
73	Subunit-specific Interactions of Cyanide with the N-Methyl-d-aspartate Receptor. <i>Journal of Biological Chemistry</i> , 1998, 273, 21505-21511.	1.6	25
74	Chapter 5 Why is the role of nitric oxide in NMDA receptor function and dysfunction so controversial?. <i>Progress in Brain Research</i> , 1998, 118, 53-71.	0.9	25
75	Iron-Mediated Oxidation of 3,4-Dihydroxyphenylalanine to an Excitotoxin. <i>Journal of Neurochemistry</i> , 1995, 64, 1742-1748.	2.1	24
76	Blockade of nicotinic responses in rat retinal ganglion cells by neuronal bungarotoxin. <i>Brain Research</i> , 1990, 517, 209-214.	1.1	21
77	Glutathione prevents 2,4,5-trihydroxyphenylalanine excitotoxicity by maintaining it in a reduced, non-active form. <i>Neuroscience Letters</i> , 1992, 144, 233-236.	1.0	21
78	Nonenzymatic Conversion of 3,4-Dihydroxyphenylalanine to 2,4,5-Trihydroxyphenylalanine and 2,4,5-Trihydroxyphenylalanine Quinone in Physiological Solutions. <i>Journal of Neurochemistry</i> , 1993, 61, 911-920.	2.1	21
79	Targeted disruption of Kv2.1-VAPA association provides neuroprotection against ischemic stroke in mice by declustering Kv2.1 channels. <i>Science Advances</i> , 2020, 6, .	4.7	21
80	Regulation of neuronal pH by the metabotropic Zn ²⁺ -sensing Gq-coupled receptor, mZnR/GPR39. <i>Journal of Neurochemistry</i> , 2015, 135, 897-907.	2.1	20
81	Comparison of the Potency of Competitive NMDA Antagonists Against the Neurotoxicity of Glutamate and NMDA. <i>Journal of Neurochemistry</i> , 2002, 63, 879-885.	2.1	19
82	Metals and neurodegeneration. <i>Neurobiology of Disease</i> , 2015, 81, 1-3.	2.1	19
83	The Multifaceted Roles of Zinc in Neuronal Mitochondrial Dysfunction. <i>Biomedicines</i> , 2021, 9, 489.	1.4	19
84	Reversible modulation of GABA _A receptor-mediated currents by light is dependent on the redox state of the receptor. <i>European Journal of Neuroscience</i> , 2003, 17, 2077-2083.	1.2	18
85	A molecular technique for detecting the liberation of intracellular zinc in cultured neurons. <i>Journal of Neuroscience Methods</i> , 2004, 137, 175-180.	1.3	18
86	Inhibitory effects of chalcone glycosides isolated from <i>Brassica rapa</i> L. "hidabeni"™ and their synthetic derivatives on LPS-induced NO production in microglia. <i>Bioorganic and Medicinal Chemistry</i> , 2011, 19, 5559-5568.	1.4	18
87	Syntaxin-binding domain of Kv2.1 is essential for the expression of apoptotic K ⁺ currents. <i>Journal of Physiology</i> , 2014, 592, 3511-3521.	1.3	17
88	Evolutionary rate covariation identifies SLC30A9 (ZnT9) as a mitochondrial zinc transporter. <i>Biochemical Journal</i> , 2021, 478, 3205-3220.	1.7	17
89	Regulation of Neuronal Proapoptotic Potassium Currents by the Hepatitis C Virus Nonstructural Protein 5A. <i>Journal of Neuroscience</i> , 2012, 32, 8865-8870.	1.7	16
90	Zn ²⁺ -induced Ca ²⁺ release via ryanodine receptors triggers calcineurin-dependent redistribution of cortical neuronal Kv2.1 K ⁺ channels. <i>Journal of Physiology</i> , 2016, 594, 2647-2659.	1.3	16

#	ARTICLE	IF	CITATIONS
91	Complex role of zinc in methamphetamine toxicity in vitro. <i>Neuroscience</i> , 2010, 171, 31-39.	1.1	15
92	Regulation of Pro-Apoptotic Phosphorylation of Kv2.1 K ⁺ Channels. <i>PLoS ONE</i> , 2015, 10, e0129498.	1.1	15
93	Axonal transport of α -bungarotoxin binding sites in rat sciatic nerve. <i>Brain Research</i> , 1985, 340, 269-276.	1.1	14
94	Elevation of intracellular cAMP evokes activity-dependent release of adenosine in cultured rat forebrain neurons. <i>European Journal of Neuroscience</i> , 2004, 19, 2669-2681.	1.2	14
95	Cyclin E1 Regulates Kv2.1 Channel Phosphorylation and Localization in Neuronal Ischemia. <i>Journal of Neuroscience</i> , 2014, 34, 4326-4331.	1.7	14
96	Disruption of K V 2.1 somato-dendritic clusters prevents the apoptogenic increase of potassium currents. <i>Neuroscience</i> , 2017, 354, 158-167.	1.1	14
97	ZnT1 is a neuronal Zn ²⁺ /Ca ²⁺ exchanger. <i>Cell Calcium</i> , 2022, 101, 102505.	1.1	12
98	Glutamate transporter expression and function in a striatal neuronal model of Huntington's disease. <i>Neurochemistry International</i> , 2013, 62, 973-981.	1.9	11
99	The Redox Biology of Excitotoxic Processes: The NMDA Receptor, TOPA Quinone, and the Oxidative Liberation of Intracellular Zinc. <i>Frontiers in Neuroscience</i> , 2020, 14, 778.	1.4	10
100	Lessons from Recent Advances in Ischemic Stroke Management and Targeting Kv2.1 for Neuroprotection. <i>International Journal of Molecular Sciences</i> , 2020, 21, 6107.	1.8	10
101	Studies on the effects of several pentamidine analogues on the NMDA receptor. <i>European Journal of Pharmacology</i> , 1993, 244, 175-179.	2.7	9
102	Targeted single-neuron infection with rabies virus for transneuronal multisynaptic tracing. <i>Journal of Neuroscience Methods</i> , 2012, 209, 367-370.	1.3	9
103	Two pharmacological classes of quisqualate-induced electrical responses in rat retinal ganglion cells in vitro. <i>European Journal of Pharmacology</i> , 1989, 174, 9-22.	1.7	8
104	A role for the redox site in the modulation of the NMDA receptor by light. <i>Journal of Physiology</i> , 2002, 545, 435-440.	1.3	8
105	Defining the Kv2.1 syntaxin molecular interaction identifies a first-in-class small molecule neuroprotectant. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 15696-15705.	3.3	8
106	SNAP23 regulates KCC2 membrane insertion and activity following mZnR/GPR39 activation in hippocampal neurons. <i>iScience</i> , 2022, 25, 103751.	1.9	7
107	The ZIP3 Zinc Transporter Is Localized to Mossy Fiber Terminals and Is Required for Kainate-Induced Degeneration of CA3 Neurons. <i>Journal of Neuroscience</i> , 2022, 42, 2824-2834.	1.7	7
108	NMDA potentiation by visible light in the presence of a fluorescent neurosteroid analogue. <i>Journal of Physiology</i> , 2009, 587, 2937-2947.	1.3	6

#	ARTICLE	IF	CITATIONS
109	Molecular Neuroprotection Induced by Zinc-Dependent Expression of Hepatitis Câ€”Derived Protein NS5A Targeting Kv2.1 Potassium Channels. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2018, 367, 348-355.	1.3	6
110	Selective retrograde axonal transport of free glycine in identified neurons of <i>Aplysia</i> . <i>Cellular and Molecular Neurobiology</i> , 1984, 4, 231-247.	1.7	5
111	Protein kinases and light: unlikely partners in a receptor localization puzzle. <i>Physiology and Behavior</i> , 2002, 77, 533-536.	1.0	5
112	Modulation of NMDA Excitotoxicity by Redox Reagents. <i>Annals of the New York Academy of Sciences</i> , 1992, 648, 125-131.	1.8	4
113	Critical role of Casein kinase 2 in hepatitis C NS5A-mediated inhibition of Kv2.1 K + channel function. <i>Neuroscience Letters</i> , 2015, 609, 48-52.	1.0	4
114	Oxidative Stress and Neuronal Zinc Signaling. , 2014, , 55-87.		3
115	Imprecision in Precision Medicine: Differential Response of a Disease-Linked GluN2A Mutant to NMDA Channel Blockers. <i>Frontiers in Pharmacology</i> , 2021, 12, 773455.	1.6	3
116	A Zincâ€”Potassium Continuum in Neuronal Apoptosis. <i>Contemporary Clinical Neuroscience</i> , 2009, , 97-115.	0.3	1
117	Zinc Signaling in the Life and Death of Neurons. , 2019, , 165-185.		1
118	Dihydrokainate-sensitive neuronal glutamate transport is required for protection of rat cortical neurons in culture against synaptically released glutamate. , 1998, 10, 2523.		1
119	Seashells by the zinc shore: a meeting report of the International Society for Zinc Biology, Asilomar, CA 2014. <i>Metallomics</i> , 2015, 7, 1299-1304.	1.0	0
120	Elucidating the Quality Control Pathway of KCC2, a Critical Synchronizer of Neuronal Development. <i>FASEB Journal</i> , 2022, 36, .	0.2	0