Israel Sekler

List of Publications by Year
in descending order

92 papers	5,839 citations	76326 40 h-index	79698 73 g-index
98 all docs	98 docs citations	98 times ranked	6433 citing authors

#	Article	IF	Citations
1	NCLX is an essential component of mitochondrial Na ⁺ /Ca ²⁺ exchange. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 436-441.	7.1	683
2	Zinc in the physiology and pathology of the CNS. Nature Reviews Neuroscience, 2009, 10, 780-791.	10.2	647
3	Role of GPR40 in fatty acid action on the Î² cell line INS-1E. Biochemical and Biophysical Research Communications, 2005, 335, 97-104.	2.1	201
4	Synaptically Released Zinc Triggers Metabotropic Signaling via a Zinc-Sensing Receptor in the Hippocampus. Journal of Neuroscience, 2009, 29, 2890-2901.	3.6	199
5	Mechanism and Regulation of Cellular Zinc Transport. Molecular Medicine, 2007, 13, 337-343.	4.4	176
6	Identification of the Zn2+ Binding Site and Mode of Operation of a Mammalian Zn2+ Transporter. Journal of Biological Chemistry, 2009, 284, 17677-17686.	3.4	161
7	The Mitochondrial Ca2+ Uniporter MCU Is Essential for Glucose-Induced ATP Increases in Pancreatic Î²-Cells. PLoS ONE, 2012, 7, e39722.	2.5	146
8	PKA Phosphorylation of NCLX Reverses Mitochondrial Calcium Overload and Depolarization, Promoting Survival of PINK1-Deficient Dopaminergic Neurons. Cell Reports, 2015, 13, 376-386.	6.4	136
9	NCLX: The mitochondrial sodium calcium exchanger. Journal of Molecular and Cellular Cardiology, 2013, 59, 205-213.	1.9	132
10	Upregulation of KCC2 Activity by Zinc-Mediated Neurotransmission via the mZnR/GPR39 Receptor. Journal of Neuroscience, 2011, 31, 12916-12926.	3.6	125
11	Lithium-Calcium Exchange Is Mediated by a Distinct Potassium-independent Sodium-Calcium Exchanger. Journal of Biological Chemistry, 2004, 279, 25234-25240.	3.4	119
12	Histidine pairing at the metal transport site of mammalian ZnT transporters controls Zn ²⁺ over Cd ²⁺ selectivity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7202-7207.	7.1	117
13	ZnT-1 expression in astroglial cells protects against zinc toxicity and slows the accumulation of intracellular zinc. Glia, 2004, 48, 145-155.	4.9	107
14	NCLX Protein, but Not LETM1, Mediates Mitochondrial Ca2+ Extrusion, Thereby Limiting Ca2+-induced NAD(P)H Production and Modulating Matrix Redox State. Journal of Biological Chemistry, 2014, 289, 20377-20385.	3.4	102
15	Mitochondrial Calcium Dysregulation Contributes to Dendrite Degeneration Mediated by PD/LBD-Associated LRRK2 Mutants. Journal of Neuroscience, 2017, 37, 11151-11165.	3.6	100
16	Zinc Released from Injured Cells Is Acting via the Zn2+-sensing Receptor, ZnR, to Trigger Signaling Leading to Epithelial Repair. Journal of Biological Chemistry, 2010, 285, 26097-26106.	3.4	94
17	Distribution of the zinc transporter ZnT-1 in comparison with chelatable zinc in the mouse brain. Journal of Comparative Neurology, 2002, 447, 201-209.	1.6	90
18	Mitochondrial Exchanger NCLX Plays a Major Role in the Intracellular Ca²⁺Signaling, Gliotransmission, and Proliferation of Astrocytes. Journal of Neuroscience, 2013, 33, 7206-7219.	3.6	90

#	Article	IF	Citations
19	The Zinc Sensing Receptor, a Link Between Zinc and Cell Signaling. Molecular Medicine, 2007, 13, 331-336.	4.4	83
20	Mitochondria control storeâ€operated Ca ²⁺ entry through Na ⁺ and redox signals. EMBO Journal, 2017, 36, 797-815.	7.8	82
21	Crosslink between calcium and sodium signalling. Experimental Physiology, 2018, 103, 157-169.	2.0	70
22	The mitochondrial Na+/Ca2+ exchanger. Cell Calcium, 2012, 52, 9-15.	2.4	69
23	A role for ZnT-1 in regulating cellular cation influx. Biochemical and Biophysical Research Communications, 2004, 323, 1145-1150.	2.1	66
24	Silencing of ZnT-1 expression enhances heavy metal influx and toxicity. Journal of Molecular Medicine, 2006, 84, 753-763.	3.9	66
25	Homeostatic regulation of KCC2 activity by the zinc receptor mZnR/GPR39 during seizures. Neurobiology of Disease, 2015, 81, 4-13.	4.4	66
26	A Sodium Zinc Exchange Mechanism Is Mediating Extrusion of Zinc in Mammalian Cells. Journal of Biological Chemistry, 2004, 279, 4278-4284.	3.4	64
27	The Mitochondrial Na+/Ca2+ Exchanger Upregulates Glucose Dependent Ca2+ Signalling Linked to Insulin Secretion. PLoS ONE, 2012, 7, e46649.	2.5	64
28	Tissue Nonspecific Alkaline Phosphatase Is Activated via a Two-step Mechanism by Zinc Transport Complexes in the Early Secretory Pathway. Journal of Biological Chemistry, 2011, 286, 16363-16373.	3.4	60
29	Intracellular zinc inhibits KCC2 transporter activity. Nature Neuroscience, 2009, 12, 725-727.	14.8	59
30	Coupling of mitochondria to store-operated Ca2+-signaling sustains constitutive activation of protein kinase B/Akt and augments survival of malignant melanoma cells. Cell Calcium, 2010, 47, 525-537.	2.4	59
31	Molecular Identity and Functional Properties of the Mitochondrial Na+/Ca2+ Exchanger. Journal of Biological Chemistry, 2012, 287, 31650-31657.	3.4	56
32	Allosteric Regulation of NCLX by Mitochondrial Membrane Potential Links the Metabolic State and Ca2+ Signaling in Mitochondria. Cell Reports, 2018, 25, 3465-3475.e4.	6.4	56
33	Optogenetic control of mitochondrial metabolism and Ca ²⁺ signaling by mitochondria-targeted opsins. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5167-E5176.	7.1	52
34	LRRK2 deficiency induced mitochondrial Ca2+ efflux inhibition can be rescued by Na+/Ca2+/Li+ exchanger upregulation. Cell Death and Disease, 2019, 10, 265.	6.3	50
35	Extracellular zinc and zinc-citrate, acting through a putative zinc-sensing receptor, regulate growth and survival of prostate cancer cells. Carcinogenesis, 2008, 29, 1692-1700.	2.8	49
36	Pancreatic Î²â€cell Na⁺channels control global Ca²⁺signaling and oxidative metabolism by inducing Na⁺and Ca²⁺responses that are propagated into mitochondria. FASEB Journal, 2014, 28, 3301-3312.	0.5	49

#	Article	IF	Citations
37	Clioquinol effects on tissue chelatable zinc in mice. Journal of Molecular Medicine, 2003, 81, 637-644.	3.9	48
38	A Conserved Glutamate Is Responsible for Ion Selectivity and pH Dependence of the Mammalian Anion Exchangers AE1 and AE2. Journal of Biological Chemistry, 1995, 270, 28751-28758.	3.4	47
39	Zinc Sensing Receptor Signaling, Mediated by GPR39, Reduces Butyrate-Induced Cell Death in HT29 Colonocytes via Upregulation of Clusterin. PLoS ONE, 2012, 7, e35482.	2.5	44
40	Fluorescence-Based Zinc Ion Sensor for Zinc Ion Release from Pancreatic Cells. Analytical Chemistry, 2006, 78, 5799-5804.	6.5	42
41	Inhibitory Mechanism of Store-operated Ca2+ Channels by Zinc. Journal of Biological Chemistry, 2004, 279, 11106-11111.	3.4	41
42	Functional properties and mode of regulation of the mitochondrial Na+/Ca2+ exchanger, NCLX. Seminars in Cell and Developmental Biology, 2019, 94, 59-65.	5.0	40
43	Dichotomous role of the human mitochondrial Na+/Ca2+/Li+ exchanger NCLX in colorectal cancer growth and metastasis. ELife, 2020, 9, .	6.0	39
44	Zinc-regulating Proteins, ZnT-1, and Metallothionein I/II Are Present in Different Cell Populations in the Mouse Testis. Journal of Histochemistry and Cytochemistry, 2005, 53, 905-912.	2.5	38
45	The zinc sensing receptor, ZnR/GPR39, triggers metabotropic calcium signalling in colonocytes and regulates occludin recovery in experimental colitis. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150420.	4.0	36
46	High Level Expression, Partial Purification, and Functional Reconstitution of the Human AE1 Anion Exchanger in Saccharomycescerevisiae. Journal of Biological Chemistry, 1995, 270, 21028-21034.	3.4	35
47	Postnatal regulation of ZnT-1 expression in the mouse brain. Developmental Brain Research, 2002, 137, 149-157.	1.7	35
48	Targeting lipid rafts inhibits protein kinase B by disrupting calcium homeostasis and attenuates malignant properties of melanoma cells. Carcinogenesis, 2008, 29, 1546-1554.	2.8	35
49	Zinc ions are endogenous modulators of neurotransmitterâ€stimulated capacitative Ca²⁺ entry in both cultured and <i>in situ</i> mouse astrocytes. European Journal of Neuroscience, 2005, 21, 1626-1634.	2.6	34
50	Extreme Population Differences in the Human Zinc Transporter ZIP4 (SLC39A4) Are Explained by Positive Selection in Sub-Saharan Africa. PLoS Genetics, 2014, 10, e1004128.	3.5	34
51	Privileged crosstalk between TRPV1 channels and mitochondrial calcium shuttling machinery controls nociception. Biochimica Et Biophysica Acta - Molecular Cell Research, 2016, 1863, 2868-2880.	4.1	33
52	The ZnR/GPR39 Interacts With the CaSR to Enhance Signaling in Prostate and Salivary Epithelia. Journal of Cellular Physiology, 2014, 229, 868-877.	4.1	32
53	NCLX prevents cell death during adrenergic activation of the brown adipose tissue. Nature Communications, 2020, 11, 3347.	12.8	31
54	Sulfate Transport Mediated by the Mammalian Anion Exchangers in Reconstituted Proteoliposomes. Journal of Biological Chemistry, 1995, 270, 11251-11256.	3.4	30

#	Article	IF	Citations
55	Zinc transporter 10 (ZnT10)-dependent extrusion of cellular Mn2+ is driven by an active Ca2+-coupled exchange. Journal of Biological Chemistry, 2019, 294, 5879-5889.	3.4	30
56	Zinc homeostasis and signaling in glia. Glia, 2012, 60, 843-850.	4.9	26
57	A crosstalk between Na+ channels, Na+/K+ pump and mitochondrial Na+ transporters controls glucose-dependent cytosolic and mitochondrial Na+ signals. Cell Calcium, 2015, 57, 69-75.	2.4	26
58	Amyloid Î² attenuates metabotropic zinc sensing receptor, <scp>mZnR</scp>/<scp>GPR</scp>39, dependent Ca²⁺, <scp>ERK</scp>1/2 and Clusterin signaling in neurons. Journal of Neurochemistry, 2016, 139, 221-233.	3.9	26
59	A Cluster of Cytoplasmic Histidine Residues Specifies pH Dependence of the AE2 Plasma Membrane Anion Exchanger. Cell, 1996, 86, 929-935.	28.9	25
60	Plasmalemmal and mitochondrial Na⁺â€Ca²⁺ exchange in neuroglia. Glia, 2016, 64, 1646-1654.	4.9	25
61	The Zn 2+ -sensing receptor, ZnR/GPR39, upregulates colonocytic Cl â^’ absorption, via basolateral KCC1, and reduces fluid loss. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2017, 1863, 947-960.	3.8	25
62	Characterization of a plasma membrane H+-ATPase from the extremely acidophilic algaDunaliella acidophila. Journal of Membrane Biology, 1991, 121, 51-57.	2.1	24
63	Cell death induced by zinc and cadmium is mediated by clusterin in cultured mouse seminiferous tubules. Journal of Cellular Physiology, 2009, 220, 222-229.	4.1	24
64	Elucidating the H+ Coupled Zn2+ Transport Mechanism of ZIP4; Implications in Acrodermatitis Enteropathica. International Journal of Molecular Sciences, 2020, 21, 734.	4.1	24
65	The PP-motif in luminal loop 2 of ZnT transporters plays a pivotal role in TNAP activation. Biochemical Journal, 2016, 473, 2611-2621.	3.7	23
66	Identification of residues that control Li + versus Na + dependent Ca 2+ exchange at the transport site of the mitochondrial NCLX. Biochimica Et Biophysica Acta - Molecular Cell Research, 2017, 1864, 997-1008.	4.1	23
67	Extracellular pH Regulates Zinc Signaling via an Asp Residue of the Zinc-sensing Receptor (ZnR/GPR39). Journal of Biological Chemistry, 2012, 287, 33339-33350.	3.4	22
68	Aberrant activity of mitochondrial NCLX is linked to impaired synaptic transmission and is associated with mental retardation. Communications Biology, 2021, 4, 666.	4.4	22
69	Histochemical and Histofluorescence Tracing of Chelatable Zinc in the Developing Mouse. Journal of Histochemistry and Cytochemistry, 2004, 52, 529-539.	2.5	21
70	Regulation of neuronal pH by the metabotropic Zn²⁺â€sensing Gqâ€coupled receptor, mZnR/GPR39. Journal of Neurochemistry, 2015, 135, 897-907.	3.9	20
71	Standing of giants shoulders the story of the mitochondrial Na+Ca2+ exchanger. Biochemical and Biophysical Research Communications, 2015, 460, 50-52.	2.1	18
72	Enhanced ZnR/GPR39 Activity in Breast Cancer, an Alternative Trigger of Signaling Leading to Cell Growth. Scientific Reports, 2018, 8, 8119.	3.3	18

#	Article	IF	Citations
73	The NCLX-type Na+/Ca2+ Exchanger NCX-9 Is Required for Patterning of Neural Circuits in Caenorhabditis elegans. Journal of Biological Chemistry, 2017, 292, 5364-5377.	3.4	17
74	ZnR/GPR39 upregulation of K+/Clâˆ'-cotransporter 3 in tamoxifen resistant breast cancer cells. Cell Calcium, 2019, 81, 12-20.	2.4	17
75	Klotho rewires cellular metabolism of breast cancer cells through alteration of calcium shuttling and mitochondrial activity. Oncogene, 2020, 39, 4636-4649.	5.9	15
76	Recent studies on NCLX in health and diseases. Cell Calcium, 2021, 94, 102345.	2.4	15
77	ASIC1a channels regulate mitochondrial ion signaling and energy homeostasis in neurons. Journal of Neurochemistry, 2020, 153, 203-215.	3.9	14
78	Frequency- and spike-timing-dependent mitochondrial Ca2+ signaling regulates the metabolic rate and synaptic efficacy in cortical neurons. ELife, 2022, 11, .	6.0	13
79	ZnT1 is a neuronal Zn2+/Ca2+ exchanger. Cell Calcium, 2022, 101, 102505.	2.4	12
80	Zinc homeostatic proteins in the CNS are regulated by crosstalk between extracellular and intracellular zinc. Journal of Cellular Physiology, 2010, 224, 567-574.	4.1	10
81	Sprinkling salt on mitochondria: The metabolic and pathophysiological roles of mitochondrial Na+ signaling mediated by NCLX. Cell Calcium, 2021, 97, 102416.	2.4	10
82	ASIC1a senses lactate uptake to regulate metabolism in neurons. Redox Biology, 2022, 51, 102253.	9.0	10
83	Disrupted expression of mitochondrial NCLX sensitizes neuroglial networks to excitotoxic stimuli and renders synaptic activity toxic. Journal of Biological Chemistry, 2022, 298, 101508.	3.4	9
84	Glutamate Regulates the Activity of Topoisomerase I in Mouse Cerebellum. Molecular Neurobiology, 2008, 38, 242-252.	4.0	7
85	Novel humanin analogs confer neuroprotection and myoprotection to neuronal and myoblast cell cultures exposed to ischemia-like and doxorubicin-induced cell death insults. Peptides, 2020, 134, 170399.	2.4	7
86	ZnR/GPR39 controls cell migration by orchestrating recruitment of KCC3 into protrusions, re-organization of actin and activation of MMP. Cell Calcium, 2021, 94, 102330.	2.4	7
87	SNAP23 regulates KCC2 membrane insertion and activity following mZnR/GPR39 activation in hippocampalneurons. IScience, 2022, 25, 103751.	4.1	7
88	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.	3.6	7
89	Function, regulation and physiological role of the mitochondrial Na + /Ca 2+ exchanger, NCLX. Current Opinion in Physiology, 2018, 3, 63-70.	1.8	2
90	Differential signaling patterns of stimulated bone marrow-derived dendritic cells under Î±1-antitrypsin-enriched conditions. Cellular Immunology, 2021, 361, 104281.	3.0	1

#	Article	IF	Citations
91	The mitochondrial Na+/Ca2+ exchangerâ€NCLX is an integrating hub for glucose dependent Na+ and Ca2+ signaling in pancreatic Î² cells. FASEB Journal, 2013, 27, 918.9.	0.5	1
92	Metallothioneins in Neurodegeneration. , 2003, , 307-322.		0