

Gary Yellen

List of Publications by Year in descending order

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82
papers

12,614
citations

41258

49
h-index

62479

80
g-index

118
all docs

118
docs citations

118
times ranked

9349
citing authors

#	ARTICLE	IF	CITATIONS
1	The inward rectification mechanism of the HERG cardiac potassium channel. <i>Nature</i> , 1996, 379, 833-836.	13.7	736
2	The voltage-gated potassium channels and their relatives. <i>Nature</i> , 2002, 419, 35-42.	13.7	630
3	Ionic permeation and blockade in Ca ²⁺ -activated K ⁺ channels of bovine chromaffin cells. <i>Journal of General Physiology</i> , 1984, 84, 157-186.	0.9	484
4	Gated Access to the Pore of a Voltage-Dependent K ⁺ Channel. <i>Neuron</i> , 1997, 19, 175-184.	3.8	475
5	Single Ca ²⁺ -activated nonselective cation channels in neuroblastoma. <i>Nature</i> , 1982, 296, 357-359.	13.7	450
6	The moving parts of voltage-gated ion channels. <i>Quarterly Reviews of Biophysics</i> , 1998, 31, 239-295.	2.4	434
7	Dynamic Rearrangement of the Outer Mouth of a K ⁺ Channel during Gating. <i>Neuron</i> , 1996, 16, 859-867.	3.8	433
8	Imaging Cytosolic NADH-NAD ⁺ Redox State with a Genetically Encoded Fluorescent Biosensor. <i>Cell Metabolism</i> , 2011, 14, 545-554.	7.2	431
9	Tetraethylammonium blockade distinguishes two inactivation mechanisms in voltage-activated K ⁺ channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1991, 88, 5092-5095.	3.3	423
10	A genetically encoded fluorescent reporter of ATP:ADP ratio. <i>Nature Methods</i> , 2009, 6, 161-166.	9.0	416
11	Imaging Intracellular pH in Live Cells with a Genetically Encoded Red Fluorescent Protein Sensor. <i>Journal of the American Chemical Society</i> , 2011, 133, 10034-10037.	6.6	375
12	Imaging energy status in live cells with a fluorescent biosensor of the intracellular ATP-to-ADP ratio. <i>Nature Communications</i> , 2013, 4, 2550.	5.8	364
13	Modulation of K ⁺ current by frequency and external [K ⁺]: A tale of two inactivation mechanisms. <i>Neuron</i> , 1995, 15, 951-960.	3.8	362
14	Blocker protection in the pore of a voltage-gated K ⁺ channel and its structural implications. <i>Nature</i> , 2000, 403, 321-325.	13.7	342
15	Neuronal Stimulation Triggers Neuronal Glycolysis and Not Lactate Uptake. <i>Cell Metabolism</i> , 2017, 26, 361-374.e4.	7.2	327
16	The inactivation gate of the Shaker K ⁺ channel behaves like an open-channel blocker. <i>Neuron</i> , 1991, 7, 743-753.	3.8	293
17	The ketogenic diet: metabolic influences on brain excitability and epilepsy. <i>Trends in Neurosciences</i> , 2013, 36, 32-40.	4.2	271
18	Ketogenic Diet Metabolites Reduce Firing in Central Neurons by Opening KATP Channels. <i>Journal of Neuroscience</i> , 2007, 27, 3618-3625.	1.7	261

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19	The internal quaternary ammonium receptor site of Shaker potassium channels. <i>Neuron</i> , 1993, 10, 533-541.	3.8	258
20	Tight Steric Closure at the Intracellular Activation Gate of a Voltage-Gated K ⁺ Channel. <i>Neuron</i> , 2001, 32, 649-656.	3.8	257
21	Fueling thought: Management of glycolysis and oxidative phosphorylation in neuronal metabolism. <i>Journal of Cell Biology</i> , 2018, 217, 2235-2246.	2.3	248
22	Quantitative determinants of aerobic glycolysis identify flux through the enzyme GAPDH as a limiting step. <i>ELife</i> , 2014, 3, .	2.8	222
23	On the Use of Thiol-modifying Agents to Determine Channel Topology. <i>Neuropharmacology</i> , 1996, 35, 797-804.	2.0	218
24	Use-Dependent Blockers and Exit Rate of the Last Ion from the Multi-Ion Pore of a K ⁺ Channel. <i>Science</i> , 1996, 271, 653-656.	6.0	217
25	Defective "pacemaker" current (I _h) in a zebrafish mutant with a slow heart rate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997, 94, 4554-4559.	3.3	215
26	Trapping of Organic Blockers by Closing of Voltage-dependent K ⁺ Channels. <i>Journal of General Physiology</i> , 1997, 109, 527-535.	0.9	206
27	Intracellular gate opening in Shaker K ⁺ channels defined by high-affinity metal bridges. <i>Nature</i> , 2004, 428, 864-868.	13.7	203
28	The Activation Gate of a Voltage-Gated K ⁺ Channel Can Be Trapped in the Open State by an Intersubunit Metal Bridge. <i>Neuron</i> , 1998, 21, 617-621.	3.8	194
29	Blocker State Dependence and Trapping in Hyperpolarization-Activated Cation Channels. <i>Journal of General Physiology</i> , 2001, 117, 91-102.	0.9	162
30	BAD-Dependent Regulation of Fuel Metabolism and KATP Channel Activity Confers Resistance to Epileptic Seizures. <i>Neuron</i> , 2012, 74, 719-730.	3.8	145
31	Relief of Na ⁺ block of Ca ²⁺ -activated K ⁺ channels by external cations.. <i>Journal of General Physiology</i> , 1984, 84, 187-199.	0.9	135
32	Single KATP Channel Opening in Response to Action Potential Firing in Mouse Dentate Granule Neurons. <i>Journal of Neuroscience</i> , 2011, 31, 8689-8696.	1.7	133
33	A novel K ⁺ channel with unique localizations in mammalian brain: Molecular cloning and characterization. <i>Neuron</i> , 1992, 8, 473-481.	3.8	122
34	Inactivation in HCN Channels Results from Reclosure of the Activation Gate. <i>Neuron</i> , 2004, 41, 737-744.	3.8	110
35	Hepatic NADH reductive stress underlies common variation in metabolic traits. <i>Nature</i> , 2020, 583, 122-126.	13.7	108
36	Fast and Slow Voltage Sensor Movements in HERG Potassium Channels. <i>Journal of General Physiology</i> , 2002, 119, 275-293.	0.9	107

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37	N-type inactivation and the S4-S5 region of the Shaker K ⁺ channel. Journal of General Physiology, 1996, 108, 195-206.	0.9	99
38	Voltage-Controlled Gating at the Intracellular Entrance to a Hyperpolarization-Activated Cation Channel. Journal of General Physiology, 2002, 119, 83-91.	0.9	98
39	Neurons rely on glucose rather than astrocytic lactate during stimulation. Journal of Neuroscience Research, 2019, 97, 883-889.	1.3	90
40	Ketone bodies, glycolysis, and K ⁺ ATP channels in the mechanism of the ketogenic diet. Epilepsia, 2008, 49, 80-82.	2.6	89
41	Ion effects on gating of the Ca(2+)-activated K ⁺ channel correlate with occupancy of the pore. Biophysical Journal, 1992, 61, 639-648.	0.2	88
42	Cytosolic NADH-NAD ⁺ Redox Visualized in Brain Slices by Two-Photon Fluorescence Lifetime Biosensor Imaging. Antioxidants and Redox Signaling, 2016, 25, 553-563.	2.5	77
43	A PKA activity sensor for quantitative analysis of endogenous GPCR signaling via 2-photon FRET-FLIM imaging. Frontiers in Pharmacology, 2014, 5, 56.	1.6	76
44	Quantitative two-photon imaging of fluorescent biosensors. Current Opinion in Chemical Biology, 2015, 27, 24-30.	2.8	69
45	Quantitative <i>in vivo</i> imaging of neuronal glucose concentrations with a genetically encoded fluorescence lifetime sensor. Journal of Neuroscience Research, 2019, 97, 946-960.	1.3	67
46	The leak channel NALCN controls tonic firing and glycolytic sensitivity of substantia nigra pars reticulata neurons. ELife, 2016, 5, .	2.8	63
47	Two functionally distinct subsites for the binding of internal blockers to the pore of voltage-activated K ⁺ channels. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 13357-13361.	3.3	57
48	Status of the Intracellular Gate in the Activated-not-open State of Shaker K ⁺ Channels. Journal of General Physiology, 2005, 126, 419-428.	0.9	57
49	Reversal of HCN Channel Voltage Dependence via Bridging of the S4-S5 Linker and Post-S6. Journal of General Physiology, 2006, 128, 273-282.	0.9	56
50	Akt regulation of glycolysis mediates bioenergetic stability in epithelial cells. ELife, 2017, 6, .	2.8	55
51	Optogenetic reporters. Progress in Brain Research, 2012, 196, 235-263.	0.9	54
52	The distinct roles of calcium in rapid control of neuronal glycolysis and the tricarboxylic acid cycle. ELife, 2021, 10, .	2.8	51
53	Metabolism Regulates the Spontaneous Firing of Substantia Nigra Pars Reticulata Neurons via K ⁺ ATP and Nonselective Cation Channels. Journal of Neuroscience, 2014, 34, 16336-16347.	1.7	49
54	Movements near the Gate of a Hyperpolarization-activated Cation Channel. Journal of General Physiology, 2003, 122, 501-510.	0.9	47

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55	Distinct Populations of HCN Pacemaker Channels Produce Voltage-dependent and Voltage-independent Currents. <i>Journal of General Physiology</i> , 2006, 127, 183-190.	0.9	47
56	Live-Cell Imaging of Cytosolic NADHâ€“NAD ⁺ Redox State Using a Genetically Encoded Fluorescent Biosensor. <i>Methods in Molecular Biology</i> , 2014, 1071, 83-95.	0.4	47
57	Cooperative Gating between Single HCN Pacemaker Channels. <i>Journal of General Physiology</i> , 2006, 128, 561-567.	0.9	41
58	A high-throughput multiparameter screen for accelerated development and optimization of soluble genetically encoded fluorescent biosensors. <i>Nature Communications</i> , 2022, 13, .	5.8	39
59	Structural changes during HCN channel gating defined by high affinity metal bridges. <i>Journal of General Physiology</i> , 2012, 140, 279-291.	0.9	36
60	The inward rectifier potassium channel Kir2.1 is expressed in mouse neutrophils from bone marrow and liver. <i>American Journal of Physiology - Cell Physiology</i> , 2015, 308, C264-C276.	2.1	36
61	BAD and KATP channels regulate neuron excitability and epileptiform activity. <i>ELife</i> , 2018, 7, .	2.8	35
62	Fluorescent Biosensors for Neuronal Metabolism and the Challenges of Quantitation. <i>Current Opinion in Neurobiology</i> , 2020, 63, 111-121.	2.0	32
63	Charge movement in gating-locked HCN channels reveals weak coupling of voltage sensors and gate. <i>Journal of General Physiology</i> , 2012, 140, 469-479.	0.9	30
64	The bacterial K ⁺ channel structure and its implications for neuronal channels. <i>Current Opinion in Neurobiology</i> , 1999, 9, 267-273.	2.0	25
65	Imaging Changes in the Cytosolic ATP-to-ADP Ratio. <i>Methods in Enzymology</i> , 2014, 547, 355-371.	0.4	23
66	Single Channel Seeks Permeant Ion for Brief but Intimate Relationship. <i>Journal of General Physiology</i> , 1997, 110, 83-85.	0.9	21
67	Live cell imaging of cytosolic NADH/NAD ⁺ ratio in hepatocytes and liver slices. <i>American Journal of Physiology - Renal Physiology</i> , 2018, 314, G97-G108.	1.6	20
68	Channels from genes: The oocyte as an expression system. <i>Trends in Neurosciences</i> , 1984, 7, 457-458.	4.2	17
69	Structure and selectivity. <i>Nature</i> , 1993, 366, 109-110.	13.7	17
70	Analysis of Nonstationary Channel Kinetics. , 1983, , 287-299.		17
71	Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. <i>Neurophotronics</i> , 2022, 9, 013001.	1.7	17
72	Keeping K ⁺ completely comfortable. <i>Nature Structural Biology</i> , 2001, 8, 1011-1013.	9.7	15

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73	Alternative mechanism for pathogenesis of an inherited epilepsy by a nicotinic AChR mutation. <i>Nature Genetics</i> , 1996, 13, 396-397.	9.4	14
74	<scp>BAD</scp> knockout provides metabolic seizure resistance in a genetic model of epilepsy with sudden unexplained death in epilepsy. <i>Epilepsia</i> , 2018, 59, e1-e4.	2.6	14
75	Expression of Torpedo nicotinic acetylcholine receptor subunits in yeast is enhanced by use of yeast signal sequences. <i>Gene</i> , 1990, 86, 145-152.	1.0	13
76	Dimers among friends: ion channel regulation by dimerization of tail domains. <i>Trends in Pharmacological Sciences</i> , 2001, 22, 439-441.	4.0	7
77	Premonitions of ion channel gating. <i>Nature Structural Biology</i> , 1998, 5, 421-421.	9.7	6
78	Variants in KCNJ11 and BAD do not predict response to ketogenic dietary therapies for epilepsy. <i>Epilepsy Research</i> , 2015, 118, 22-28.	0.8	6
79	Metabolism-based therapies for epilepsy: new directions for future cures. <i>Annals of Clinical and Translational Neurology</i> , 2021, 8, 1730-1737.	1.7	6
80	The immune system uses ion channels, too. <i>Trends in Neurosciences</i> , 1984, 7, 179-181.	4.2	5
81	Delivery of AAV for Expression of Fluorescent Biosensors in Juvenile Mouse Hippocampus. <i>Bio-protocol</i> , 2021, 11, e4259.	0.2	3
82	Native Currents in Hepatocytes with Characteristic Properties of Kir2 Channels. <i>Biophysical Journal</i> , 2013, 104, 129a.	0.2	0