

# Gary Yellen

## List of Publications by Citations

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78  
papers

10,544  
citations

46  
h-index

102  
g-index

118  
ext. papers

11,695  
ext. citations

12.1  
avg, IF

6.63  
L-index

#	Paper	IF	Citations
78	The inward rectification mechanism of the HERG cardiac potassium channel. <i>Nature</i> , <b>1996</b> , 379, 833-6	50.4	660
77	The voltage-gated potassium channels and their relatives. <i>Nature</i> , <b>2002</b> , 419, 35-42	50.4	538
76	Ionic permeation and blockade in Ca <sup>2+</sup> -activated K <sup>+</sup> channels of bovine chromaffin cells. <i>Journal of General Physiology</i> , <b>1984</b> , 84, 157-86	3.4	452
75	Gated access to the pore of a voltage-dependent K <sup>+</sup> channel. <i>Neuron</i> , <b>1997</b> , 19, 175-84	13.9	435
74	Single Ca <sup>2+</sup> -activated nonselective cation channels in neuroblastoma. <i>Nature</i> , <b>1982</b> , 296, 357-9	50.4	431
73	Dynamic rearrangement of the outer mouth of a K <sup>+</sup> channel during gating. <i>Neuron</i> , <b>1996</b> , 16, 859-67	13.9	405
72	The moving parts of voltage-gated ion channels. <i>Quarterly Reviews of Biophysics</i> , <b>1998</b> , 31, 239-95	7	389
71	Tetraethylammonium blockade distinguishes two inactivation mechanisms in voltage-activated K <sup>+</sup> channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1991</b> , 88, 5092-5	11.5	384
70	Imaging cytosolic NADH-NAD(+) redox state with a genetically encoded fluorescent biosensor. <i>Cell Metabolism</i> , <b>2011</b> , 14, 545-54	24.6	351
69	A genetically encoded fluorescent reporter of ATP:ADP ratio. <i>Nature Methods</i> , <b>2009</b> , 6, 161-6	21.6	341
68	Modulation of K <sup>+</sup> current by frequency and external [K <sup>+</sup> ]: a tale of two inactivation mechanisms. <i>Neuron</i> , <b>1995</b> , 15, 951-60	13.9	329
67	Blocker protection in the pore of a voltage-gated K <sup>+</sup> channel and its structural implications. <i>Nature</i> , <b>2000</b> , 403, 321-5	50.4	320
66	Imaging intracellular pH in live cells with a genetically encoded red fluorescent protein sensor. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 10034-7	16.4	312
65	The inactivation gate of the Shaker K <sup>+</sup> channel behaves like an open-channel blocker. <i>Neuron</i> , <b>1991</b> , 7, 743-53	13.9	273
64	Imaging energy status in live cells with a fluorescent biosensor of the intracellular ATP-to-ADP ratio. <i>Nature Communications</i> , <b>2013</b> , 4, 2550	17.4	239
63	The internal quaternary ammonium receptor site of Shaker potassium channels. <i>Neuron</i> , <b>1993</b> , 10, 533-41	13.9	239
62	Tight steric closure at the intracellular activation gate of a voltage-gated K(+) channel. <i>Neuron</i> , <b>2001</b> , 32, 649-56	13.9	226

61	On the use of thiol-modifying agents to determine channel topology. <i>Neuropharmacology</i> , <b>1996</b> , 35, 797-804	5.9	213
60	Ketogenic diet metabolites reduce firing in central neurons by opening K(ATP) channels. <i>Journal of Neuroscience</i> , <b>2007</b> , 27, 3618-25	6.6	205
59	Neuronal Stimulation Triggers Neuronal Glycolysis and Not Lactate Uptake. <i>Cell Metabolism</i> , <b>2017</b> , 26, 361-374.e4	24.6	203
58	Use-dependent blockers and exit rate of the last ion from the multi-ion pore of a K <sup>+</sup> channel. <i>Science</i> , <b>1996</b> , 271, 653-6	33.3	200
57	The ketogenic diet: metabolic influences on brain excitability and epilepsy. <i>Trends in Neurosciences</i> , <b>2013</b> , 36, 32-40	13.3	198
56	Intracellular gate opening in Shaker K <sup>+</sup> channels defined by high-affinity metal bridges. <i>Nature</i> , <b>2004</b> , 428, 864-8	50.4	185
55	Trapping of organic blockers by closing of voltage-dependent K <sup>+</sup> channels: evidence for a trap door mechanism of activation gating. <i>Journal of General Physiology</i> , <b>1997</b> , 109, 527-35	3.4	180
54	Defective "pacemaker" current (I <sub>h</sub> ) in a zebrafish mutant with a slow heart rate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1997</b> , 94, 4554-9	11.5	178
53	The activation gate of a voltage-gated K <sup>+</sup> channel can be trapped in the open state by an intersubunit metal bridge. <i>Neuron</i> , <b>1998</b> , 21, 617-21	13.9	177
52	Blocker state dependence and trapping in hyperpolarization-activated cation channels: evidence for an intracellular activation gate. <i>Journal of General Physiology</i> , <b>2001</b> , 117, 91-101	3.4	152
51	Quantitative determinants of aerobic glycolysis identify flux through the enzyme GAPDH as a limiting step. <i>ELife</i> , <b>2014</b> , 3,	8.9	142
50	Fueling thought: Management of glycolysis and oxidative phosphorylation in neuronal metabolism. <i>Journal of Cell Biology</i> , <b>2018</b> , 217, 2235-2246	7.3	129
49	Relief of Na <sup>+</sup> block of Ca <sup>2+</sup> -activated K <sup>+</sup> channels by external cations. <i>Journal of General Physiology</i> , <b>1984</b> , 84, 187-99	3.4	129
48	BAD-dependent regulation of fuel metabolism and K(ATP) channel activity confers resistance to epileptic seizures. <i>Neuron</i> , <b>2012</b> , 74, 719-30	13.9	118
47	A novel K <sup>+</sup> channel with unique localizations in mammalian brain: molecular cloning and characterization. <i>Neuron</i> , <b>1992</b> , 8, 473-81	13.9	109
46	Inactivation in HCN channels results from reclosure of the activation gate: desensitization to voltage. <i>Neuron</i> , <b>2004</b> , 41, 737-44	13.9	101
45	Single K ATP channel opening in response to action potential firing in mouse dentate granule neurons. <i>Journal of Neuroscience</i> , <b>2011</b> , 31, 8689-96	6.6	100
44	Fast and slow voltage sensor movements in HERG potassium channels. <i>Journal of General Physiology</i> , <b>2002</b> , 119, 275-93	3.4	97

43	N-type inactivation and the S4-S5 region of the Shaker K <sup>+</sup> channel. <i>Journal of General Physiology</i> , <b>1996</b> , 108, 195-206	3.4	96
42	Voltage-controlled gating at the intracellular entrance to a hyperpolarization-activated cation channel. <i>Journal of General Physiology</i> , <b>2002</b> , 119, 83-91	3.4	91
41	Ion effects on gating of the Ca(2+)-activated K <sup>+</sup> channel correlate with occupancy of the pore. <i>Biophysical Journal</i> , <b>1992</b> , 61, 639-48	2.9	88
40	Ketone bodies, glycolysis, and KATP channels in the mechanism of the ketogenic diet. <i>Epilepsia</i> , <b>2008</b> , 49 Suppl 8, 80-2	6.4	63
39	A PKA activity sensor for quantitative analysis of endogenous GPCR signaling via 2-photon FRET-FLIM imaging. <i>Frontiers in Pharmacology</i> , <b>2014</b> , 5, 56	5.6	56
38	Status of the intracellular gate in the activated-not-open state of shaker K <sup>+</sup> channels. <i>Journal of General Physiology</i> , <b>2005</b> , 126, 419-28	3.4	53
37	Quantitative two-photon imaging of fluorescent biosensors. <i>Current Opinion in Chemical Biology</i> , <b>2015</b> , 27, 24-30	9.7	51
36	Reversal of HCN channel voltage dependence via bridging of the S4-S5 linker and Post-S6. <i>Journal of General Physiology</i> , <b>2006</b> , 128, 273-82	3.4	51
35	Cytosolic NADH-NAD(+) Redox Visualized in Brain Slices by Two-Photon Fluorescence Lifetime Biosensor Imaging. <i>Antioxidants and Redox Signaling</i> , <b>2016</b> , 25, 553-63	8.4	50
34	Optogenetic reporters: Fluorescent protein-based genetically encoded indicators of signaling and metabolism in the brain. <i>Progress in Brain Research</i> , <b>2012</b> , 196, 235-63	2.9	50
33	Two functionally distinct subsites for the binding of internal blockers to the pore of voltage-activated K <sup>+</sup> channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1996</b> , 93, 13357-61	11.5	48
32	Distinct populations of HCN pacemaker channels produce voltage-dependent and voltage-independent currents. <i>Journal of General Physiology</i> , <b>2006</b> , 127, 183-90	3.4	46
31	Hepatic NADH reductive stress underlies common variation in metabolic traits. <i>Nature</i> , <b>2020</b> , 583, 122-126	6.4	44
30	Movements near the gate of a hyperpolarization-activated cation channel. <i>Journal of General Physiology</i> , <b>2003</b> , 122, 501-10	3.4	41
29	Neurons rely on glucose rather than astrocytic lactate during stimulation. <i>Journal of Neuroscience Research</i> , <b>2019</b> , 97, 883-889	4.4	41
28	Quantitative in vivo imaging of neuronal glucose concentrations with a genetically encoded fluorescence lifetime sensor. <i>Journal of Neuroscience Research</i> , <b>2019</b> , 97, 946-960	4.4	39
27	Metabolism regulates the spontaneous firing of substantia nigra pars reticulata neurons via KATP and nonselective cation channels. <i>Journal of Neuroscience</i> , <b>2014</b> , 34, 16336-47	6.6	38
26	Akt regulation of glycolysis mediates bioenergetic stability in epithelial cells. <i>ELife</i> , <b>2017</b> , 6,	8.9	36

25	Live-cell imaging of cytosolic NADH-NAD <sup>+</sup> redox state using a genetically encoded fluorescent biosensor. <i>Methods in Molecular Biology</i> , <b>2014</b> , 1071, 83-95	1.4	36
24	Cooperative gating between single HCN pacemaker channels. <i>Journal of General Physiology</i> , <b>2006</b> , 128, 561-7	3.4	35
23	The leak channel NALCN controls tonic firing and glycolytic sensitivity of substantia nigra pars reticulata neurons. <i>ELife</i> , <b>2016</b> , 5,	8.9	33
22	Structural changes during HCN channel gating defined by high affinity metal bridges. <i>Journal of General Physiology</i> , <b>2012</b> , 140, 279-91	3.4	31
21	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> , <b>2015</b> , 308, C264-76	5.4	30
20	Charge movement in gating-locked HCN channels reveals weak coupling of voltage sensors and gate. <i>Journal of General Physiology</i> , <b>2012</b> , 140, 469-79	3.4	25
19	The bacterial K <sup>+</sup> channel structure and its implications for neuronal channels. <i>Current Opinion in Neurobiology</i> , <b>1999</b> , 9, 267-73	7.6	25
18	BAD and K channels regulate neuron excitability and epileptiform activity. <i>ELife</i> , <b>2018</b> , 7,	8.9	20
17	Single channel seeks permeant ion for brief but intimate relationship. <i>Journal of General Physiology</i> , <b>1997</b> , 110, 83-5	3.4	19
16	Imaging changes in the cytosolic ATP-to-ADP ratio. <i>Methods in Enzymology</i> , <b>2014</b> , 547, 355-71	1.7	18
15	Channels from genes: The oocyte as an expression system. <i>Trends in Neurosciences</i> , <b>1984</b> , 7, 457-458	13.3	17
14	Analysis of Nonstationary Channel Kinetics <b>1983</b> , 287-299		13
13	Alternative mechanism for pathogenesis of an inherited epilepsy by a nicotinic AChR mutation. <i>Nature Genetics</i> , <b>1996</b> , 13, 396-7	36.3	12
12	Expression of Torpedo nicotinic acetylcholine receptor subunits in yeast is enhanced by use of yeast signal sequences. <i>Gene</i> , <b>1990</b> , 86, 145-52	3.8	12
11	The distinct roles of calcium in rapid control of neuronal glycolysis and the tricarboxylic acid cycle. <i>ELife</i> , <b>2021</b> , 10,	8.9	12
10	BAD knockout provides metabolic seizure resistance in a genetic model of epilepsy with sudden unexplained death in epilepsy. <i>Epilepsia</i> , <b>2018</b> , 59, e1-e4	6.4	9
9	Live cell imaging of cytosolic NADH/NAD ratio in hepatocytes and liver slices. <i>American Journal of Physiology - Renal Physiology</i> , <b>2018</b> , 314, G97-G108	5.1	8
8	Variants in KCNJ11 and BAD do not predict response to ketogenic dietary therapies for epilepsy. <i>Epilepsy Research</i> , <b>2015</b> , 118, 22-8	3	6

7	Fluorescent Biosensors for Neuronal Metabolism and the Challenges of Quantitation. <i>Current Opinion in Neurobiology</i> , <b>2020</b> , 63, 111-121	7.6	5
6	Premonitions of ion channel gating. <i>Nature Structural Biology</i> , <b>1998</b> , 5, 421		5
5	The immune system uses ion channels, too. <i>Trends in Neurosciences</i> , <b>1984</b> , 7, 179-181	13.3	4
4	Delivery of AAV for Expression of Fluorescent Biosensors in Juvenile Mouse Hippocampus.. <i>Bio-protocol</i> , <b>2021</b> , 11, e4259	0.9	1
3	The distinct roles of calcium in rapid control of neuronal glycolysis and the tricarboxylic acid cycle		1
2	Metabolism-based therapies for epilepsy: new directions for future cures. <i>Annals of Clinical and Translational Neurology</i> , <b>2021</b> , 8, 1730-1737	5.3	0
1	Neurophotonic tools for microscopic measurements and manipulation: status report.. <i>Neurophotonics</i> , <b>2022</b> , 9, 013001	3.9	0