Catherine E Morris

List of Publications by Year
in descending order

75 papers	4,878 citations	186209 28 h-index	102432 66 g-index
78 all docs	78 docs citations	78 times ranked	3347 citing authors

#	Article	IF	Citations
1	Voltage oscillations in the barnacle giant muscle fiber. Biophysical Journal, 1981, 35, 193-213.	0.2	1,806
2	Mechanosensitive ion channels. Journal of Membrane Biology, 1990, 113, 93-107.	1.0	587
3	Membrane Tension in Swelling and Shrinking Molluscan Neurons. Journal of Neuroscience, 1998, 18, 6681-6692.	1.7	225
4	Successive openings of the same acetylcholine receptor channel are correlated in open time. Biophysical Journal, 1983, 42, 109-114.	0.2	172
5	Nav Channel Mechanosensitivity: Activation and Inactivation Accelerate Reversibly with Stretch. Biophysical Journal, 2007, 93, 822-833.	0.2	150
6	Stretch-Activation and Stretch-Inactivation of Shaker-IR, a Voltage-Gated K+ Channel. Biophysical Journal, 2001, 80, 2678-2693.	0.2	110
7	Stretch Activation of a K+ Channel in Molluscan Heart Cells. Journal of Experimental Biology, 1987, 127, 191-209.	0.8	110
8	Mechanosensitivity of N-Type Calcium Channel Currents. Biophysical Journal, 2002, 83, 2560-2574.	0.2	108
9	A putative nicotine pump at the metabolic blood-brain barrier of the tobacco hornworm. Journal of Neurobiology, 1994, 25, 23-34.	3.7	91
10	Membrane trauma and Na⁺leak from Nav1.6 channels. American Journal of Physiology - Cell Physiology, 2009, 297, C823-C834.	2.1	80
11	Membrane Stretch Affects Gating Modes of a Skeletal Muscle Sodium Channel. Biophysical Journal, 1999, 77, 758-774.	0.2	76
12	Voltage-Gated Channel Mechanosensitivity: Fact or Friction?. Frontiers in Physiology, 2011, 2, 25.	1.3	75
13	Coupled left-shift of Nav channels: modeling the Na+-loading and dysfunctional excitability of damaged axons. Journal of Computational Neuroscience, 2012, 33, 301-319.	0.6	64
14	Activation of mechanosensitive currents in traumatized membrane. American Journal of Physiology - Cell Physiology, 1999, 276, C318-C327.	2.1	63
15	Responses of neurons to extreme osmomechanical stress. Journal of Membrane Biology, 1995, 145, 21-31.	1.0	58
16	Membrane Tension Accelerates Rate-limiting Voltage-dependent Activation and Slow Inactivation Steps in a Shaker Channel. Journal of General Physiology, 2004, 123, 135-154.	0.9	56
17	Membrane Stretch Slows the Concerted Step prior to Opening in a Kv Channel. Journal of General Physiology, 2006, 127, 687-701.	0.9	56
18	Dual Stretch Responses of mHCN2 Pacemaker Channels: Accelerated Activation, Accelerated Deactivation. Biophysical Journal, 2007, 92, 1559-1572.	0.2	54

#	Article	IF	Citations
19	FMRFamide and membrane stretch as activators of the Aplysia S-channel. Biophysical Journal, 1994, 66, 46-58.	0.2	53
20	Membrane Stretch Accelerates Activation and Slow Inactivation in Shaker Channels with S3â€“S4 Linker Deletions. Biophysical Journal, 2002, 82, 2982-2994.	0.2	53
21	Spontaneous Excitation Patterns Computed for Axons with Injury-like Impairments of Sodium Channels and Na/K Pumps. PLoS Computational Biology, 2012, 8, e1002664.	1.5	47
22	Lipid Stress at Play: Mechanosensitivity of Voltage-Gated Channels. Current Topics in Membranes, 2007, 59, 297-338.	0.5	42
23	Uptake and metabolism of nicotine by the CNS of a nicotine-resistant insect, the tobacco hornworm (Manduca sexta). Journal of Insect Physiology, 1983, 29, 807-817.	0.9	40
24	Stretch activation of the Aplysia S-channel. Journal of Membrane Biology, 1992, 127, 205-14.	1.0	38
25	Modulation of KvAP Unitary Conductance and Gating by 1-Alkanols and Other Surface Active Agents. Biophysical Journal, 2010, 98, 762-772.	0.2	37
26	Discrete and reversible vacuole-like dilations induced by osmomechanical perturbation of neurons. Journal of Membrane Biology, 1995, 145, 33-47.	1.0	35
27	Electrophysiological effects of cholinergic agents on the CNS of a nicotine-resistant insect, the tobacco hornworm (Manduca sexta). The Journal of Experimental Zoology, 1984, 229, 361-374.	1.4	33
28	Are stretch-sensitive channels in molluscan cells and elsewhere physiological mechanotransducers?. Experientia, 1992, 48, 852-858.	1.2	31
29	How did cells get their size?. The Anatomical Record, 2002, 268, 239-251.	2.3	30
30	Impaired stretch modulation in potentially lethal cardiac sodium channel mutants. Channels, 2010, 4, 12-21.	1.5	30
31	Neuronal Plasma Membrane Dynamics Evoked by Osmomechanical Perturbations. Journal of Membrane Biology, 1998, 166, 223-235.	1.0	27
32	Left-Shifted Nav Channels in Injured Bilayer: Primary Targets for Neuroprotective Nav Antagonists?. Frontiers in Pharmacology, 2012, 3, 19.	1.6	26
33	The Hv1 proton channel responds to mechanical stimuli. Journal of General Physiology, 2016, 148, 405-418.	0.9	25
34	Studying the Mechanosensitivity of Voltage-Gated Channels Using Oocyte Patches. Methods in Molecular Biology, 2006, 322, 315-329.	0.4	25
35	F-actin at Newly Invaginated Membrane in Neurons: Implications for Surface Area Regulation. Journal of Membrane Biology, 1999, 171, 151-169.	1.0	24
36	Pharmacology of stretchâ€activated K channels in Lymnaea neurones. British Journal of Pharmacology, 1995, 114, 180-186.	2.7	23

#	Article	IF	Citations
37	Mechanosensitive Closed-Closed Transitions in Large Membrane Proteins: Osmoprotection and Tension Damping. Biophysical Journal, 2009, 97, 2761-2770.	0.2	19
38	Force Spectroscopy Measurements Show That Cortical Neurons Exposed to Excitotoxic Agonists Stiffen before Showing Evidence of Bleb Damage. PLoS ONE, 2013, 8, e73499.	1.1	19
39	Mechanosensitive Gating of Kv Channels. PLoS ONE, 2015, 10, e0118335.	1.1	18
40	Channels activated by stretch in neurons of a helix snail. Canadian Journal of Physiology and Pharmacology, 1992, 70, 207-213.	0.7	16
41	Perturbed voltage-gated channel activity in perturbed bilayers: Implications for ectopic arrhythmias arising from damaged membrane. Progress in Biophysics and Molecular Biology, 2012, 110, 245-256.	1.4	16
42	Multiple conductance states of the acetylcholine receptor channel complex. Canadian Journal of Physiology and Pharmacology, 1986, 64, 347-355.	0.7	12
43	Sensorin-A immunocytochemistry reveals putative mechanosensory neurons inLymnaea CNS. Invertebrate Neuroscience, 1995, 1, 207-213.	1.8	12
44	Stimulation-induced ectopicity and propagation windows in model damaged axons. Journal of Computational Neuroscience, 2014, 37, 523-531.	0.6	12
45	Osmotically-induced volume changes in isolated cells of a pond snail. Comparative Biochemistry and Physiology A, Comparative Physiology, 1989, 92, 479-483.	0.7	11
46	Embryogenesis in the Presence of Blockers of Mechanosensitive Ion Channels. (embryogenesis/mechanosensitive ion channels/channel blockers/Xenopus/ascidians). Development Growth and Differentiation, 1991, 33, 437-442.	0.6	11
47	The spectrin skeleton of newly-invaginated plasma membrane. Journal of Muscle Research and Cell Motility, 2000, 21, 67-77.	0.9	11
48	Molecular cloning and functional expression of Xenopus laevis oocyte ATP-activated P2X4 channels1The nucleotide sequence data reported in this paper have been deposited in the GenBank database under accession Nos. AF308148 (xP2X4a), AF308149 (xP2X4b), AF308150 (xP2X4c), AF308151 (xP2X4d), AF308152 (xP2X4e) and AF308153 (xP2X4f).1. Biochimica Et Biophysica Acta - Biomembranes, 2001, 1512, 111-124.	1.4	11
49	Efflux of nicotine and its CNS metabolites from the nerve cord of the tobacco hornworm. Manduca sexta. Journal of Insect Physiology, 1983, 29, 953-959.	0.9	10
50	Nav Channels in Damaged Membranes. Current Topics in Membranes, 2016, 78, 561-597.	0.5	10
51	Accumulation of daunomycin and fluorescent dyes by drug-transporting Malpighian tubule cells of the tobacco hornworn, Manduca sexta. Tissue and Cell, 1999, 31, 185-194.	1.0	9
52	Traditional AMPA receptor antagonists partially block Nav1.6-mediated persistent current. Neuropharmacology, 2008, 55, 1165-1171.	2.0	9
53	Why are So Many Ion Channels Mechanosensitive?. , 2012, , 493-505.		9
54	Membrane order parameters for interdigitated lipid bilayers measured via polarized total-internal-reflection fluorescence microscopy. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2861-2869.	1.4	9

#	Article	IF	Citations
55	Stretch-Sensitive Ion Channels. , 1995, , 483-489.		8
56	Neural structures in the receptive field of pleural ganglion mechanosensory neurons of Aplysia californica. Cell and Tissue Research, 1993, 273, 487-497.	1.5	7
57	Calculating the Consequences of Left-Shifted Nav Channel Activity in Sick Excitable Cells. Handbook of Experimental Pharmacology, 2017, 246, 401-422.	0.9	7
58	Cytotoxic Swelling of Sick Excitable Cells â€“ Impaired Ion Homeostasis and Membrane Tension Homeostasis in Muscle and Neuron. Current Topics in Membranes, 2018, 81, 457-496.	0.5	7
59	Pacemaker, potassium, calcium, sodium: stretch modulation of the voltage-gated channels. , 2011, , 42-49.		7
60	Efflux patterns for organic molecules from the CNS of the tobacco hornworm. Manduca sexta. Journal of Insect Physiology, 1983, 29, 961-966.	0.9	6
61	Central nervous system features of a nicotine-resistant insect, the tobacco hornworm Manduca sexta. Tissue and Cell, 1984, 16, 601-612.	1.0	6
62	Coiled mechanoreceptors inAplysia revealed by sensorin immunofluorescence and confocal microscopy. Invertebrate Neuroscience, 1996, 2, 129-134.	1.8	6
63	Mechanosensitive Ion Channels in Eukaryotic Cells. , 2001, , 745-760.		5
64	Activation by curare of acetylcholine receptor channels in a murine skeletal muscle cell line. Canadian Journal of Physiology and Pharmacology, 1989, 67, 152-158.	0.7	4
65	The Membrane Skeleton: Mechanoprotector and Mediator of Mechanosensitive Surface Area. Cellular and Molecular Biology Letters, 2001, 6, 222-223.	2.7	4
66	Action potential initiation in damaged axon initial segment. BMC Neuroscience, 2014, 15, .	0.8	3
67	Does a stretch-inactivated cation channel integrate osmotic and peptidergic signals?. Nature Neuroscience, 2000, 3, 847-847.	7.1	2
68	Mechanosensitive Membrane Traffic and an Optimal Strategy for Volume and Surface Area Regulation in CNS Neurons. American Zoologist, 2001, 41, 721-727.	0.7	2
69	A model for studying the energetics of sustained high frequency firing. PLoS ONE, 2018, 13, e0196508.	1.1	2
70	Effects of Applied Stretch on Native and Recombinant Cardiac Na+ Currents. , 2010, , 169-184.		1
71	Chapter 14 Mechano-sensitive ion channels. Principles of Medical Biology, 1997, 7, 341-354.	0.1	0
72	Trauma-Induced Nav Leak and Dysexcitability in Axonal Membranes: Simulating the Consequences of Mechanically-Induced Left-Shift of Transient Nav1.6 Current. Biophysical Journal, 2011, 100, 424a.	0.2	0

#	Article	IF	Citations
73	Stimulation-induced ectopicity and propagation windows in model damaged axons. BMC Neuroscience, 2014, 15, .	0.8	0
74	The Donnan-dominated resting state of skeletal muscle fibers contributes to resilience and longevity in dystrophic fibers. Journal of General Physiology, 2022, 154, .	0.9	0
75	Stretch-Sensitive Ion Channels. , 1995, , 483-489.		0