Miriam B Goodman

List of Publications by Year
in descending order

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100	7,263	61984	64796
papers	citations	43 h-index	79 g-index

118	118	118	6291
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dissecting a circuit for olfactory behaviour in Caenorhabditis elegans. Nature, 2007, 450, 63-70.	27.8	573
2	The MEC-4 DEG/ENaC channel of Caenorhabditis elegans touch receptor neurons transduces mechanical signals. Nature Neuroscience, 2005, 8, 43-50.	14.8	457
3	The major Î±-tubulin K40 acetyltransferase Î±TAT1 promotes rapid ciliogenesis and efficient mechanosensation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 21517-21522.	7.1	366
4	Active Currents Regulate Sensitivity and Dynamic Range in C. elegans Neurons. Neuron, 1998, 20, 763-772.	8.1	340
5	MEC-2 regulates C. elegans DEG/ENaC channels needed for mechanosensation. Nature, 2002, 415, 1039-1042.	27.8	294
6	The Parallel Worm Tracker: A Platform for Measuring Average Speed and Drug-Induced Paralysis in Nematodes. PLoS ONE, 2008, 3, e2208.	2.5	253
7	Ultrasound Elicits Behavioral Responses through Mechanical Effects on Neurons and Ion Channels in a Simple Nervous System. Journal of Neuroscience, 2018, 38, 3081-3091.	3.6	210
8	Bidirectional temperature-sensing by a single thermosensory neuron in C. elegans. Nature Neuroscience, 2008, 11, 908-915.	14.8	180
9	Running hot and cold: behavioral strategies, neural circuits, and the molecular machinery for thermotaxis in C. elegans and Drosophila. Genes and Development, 2010, 24, 2365-2382.	5.9	179
10	Mechanical control of the sense of touch by Î²-spectrin. Nature Cell Biology, 2014, 16, 224-233.	10.3	173
11	Artificial Dirt: Microfluidic Substrates for Nematode Neurobiology and Behavior. Journal of Neurophysiology, 2008, 99, 3136-3143.	1.8	162
12	The mechanosensory protein MEC-6 is a subunit of the C. elegans touch-cell degenerin channel. Nature, 2002, 420, 669-673.	27.8	150
13	Analysis of nematode mechanics by piezoresistive displacement clamp. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 17376-17381.	7.1	144
14	Posttranslational Acetylation of Î±-Tubulin Constrains Protofilament Number in Native Microtubules. Current Biology, 2012, 22, 1066-1074.	3.9	144
15	Transducing Touch inCaenorhabditis elegans. Annual Review of Physiology, 2003, 65, 429-452.	13.1	141
16	Mechanosensation. WormBook, 2006, , 1-14.	5.3	129
17	Feeling Force: Physical and Physiological Principles Enabling Sensory Mechanotransduction. Annual Review of Cell and Developmental Biology, 2015, 31, 347-371.	9.4	128
18	A kinetic description of the calcium-activated potassium channel and its application to electrical tuning of hair cells. Progress in Biophysics and Molecular Biology, 1995, 63, 131-158.	2.9	121

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19	An Arf-like Small G Protein, ARL-8, Promotes the Axonal Transport of Presynaptic Cargoes by Suppressing Vesicle Aggregation. Neuron, 2010, 66, 710-723.	8.1	117
20	DEG/ENaC but Not TRP Channels Are the Major Mechanoelectrical Transduction Channels in a C.Âelegans Nociceptor. Neuron, 2011, 71, 845-857.	8.1	115
21	Heat Avoidance Is Regulated by Transient Receptor Potential (TRP) Channels and a Neuropeptide Signaling Pathway inCaenorhabditis elegans. Genetics, 2011, 188, 91-103.	2.9	109
22	Bidirectional thermotaxis in Caenorhabditis elegans is mediated by distinct sensorimotor strategies driven by the AFD thermosensory neurons. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2776-2781.	7.1	98
23	Phospholipids that Contain Polyunsaturated Fatty Acids Enhance Neuronal Cell Mechanics and Touch Sensation. Cell Reports, 2014, 6, 70-80.	6.4	98
24	Nanoscale Organization of the MEC-4 DEG/ENaC Sensory Mechanotransduction Channel inCaenorhabditis elegansTouch Receptor Neurons. Journal of Neuroscience, 2007, 27, 14089-14098.	3.6	94
25	Genetic defects in Î²-spectrin and tau sensitize C. elegans axons to movement-induced damage via torque-tension coupling. ELife, 2017, 6, .	6.0	93
26	How We Feel: Ion Channel Partnerships that Detect Mechanical Inputs and Give Rise to Touch and Pain Perception. Neuron, 2012, 74, 609-619.	8.1	87
27	How Caenorhabditis elegans Senses Mechanical Stress, Temperature, and Other Physical Stimuli. Genetics, 2019, 212, 25-51.	2.9	86
28	PTRN-1, a microtubule minus end-binding CAMSAP homolog, promotes microtubule function in Caenorhabditis elegans neurons. ELife, 2014, 3, e01498.	6.0	78
29	The DEG/ENaC Protein MEC-10 Regulates the Transduction Channel Complex inCaenorhabditis elegansTouch Receptor Neurons. Journal of Neuroscience, 2011, 31, 12695-12704.	3.6	75
30	The quest for action potentials in C. elegans neurons hits a plateau. Nature Neuroscience, 2009, 12, 377-378.	14.8	73
31	Calcium Currents and Fura-2 Signals in Fluorescence-Activated Cell Sorted Lactotrophs and Somatotrophs of Rat Anterior Pituitary. Endocrinology, 1988, 123, 611-621.	2.8	72
32	Pressure polishing: a method for re-shaping patch pipettes during fire polishing. Journal of Neuroscience Methods, 2000, 100, 13-15.	2.5	72
33	Upconverting Nanoparticles as Optical Sensors of Nano- to Micro-Newton Forces. Nano Letters, 2017, 17, 4172-4177.	9.1	71
34	Thermotaxis is a Robust Mechanism for Thermoregulation in Caenorhabditis elegans Nematodes. Journal of Neuroscience, 2008, 28, 12546-12557.	3.6	67
35	MEC-2 and MEC-6 in the Caenorhabditis elegans Sensory Mechanotransduction Complex: Auxiliary Subunits that Enable Channel Activity. Journal of General Physiology, 2008, 131, 605-616.	1.9	64
36	Insight into DEG/ENaC Channel Gating from Genetics and Structure. Physiology, 2012, 27, 282-290.	3.1	63

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37	SU-8 force sensing pillar arrays for biological measurements. Lab on A Chip, 2009, 9, 1449.	6.0	62
38	Parallel Processing of Two Mechanosensory Modalities by a Single Neuron in C.Âelegans. Developmental Cell, 2019, 51, 617-631.e3.	7.0	62
39	CaMKI-Dependent Regulation of Sensory Gene Expression Mediates Experience-Dependent Plasticity in the Operating Range of a Thermosensory Neuron. Neuron, 2014, 84, 919-926.	8.1	59
40	Expansion microscopy of C. elegans. ELife, 2020, 9, .	6.0	59
41	Tissue mechanics govern the rapidly adapting and symmetrical response to touch. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6955-63.	7.1	57
42	Pneumatic stimulation of C. elegans mechanoreceptor neurons in a microfluidic trap. Lab on A Chip, 2017, 17, 1116-1127.	6.0	55
43	Bright, Mechanosensitive Upconversion with Cubic-Phase Heteroepitaxial Coreâ€“Shell Nanoparticles. Nano Letters, 2018, 18, 4454-4459.	9.1	55
44	Caenorhabditis elegans Body Mechanics Are Regulated by Body Wall Muscle Tone. Biophysical Journal, 2011, 100, 1977-1985.	0.5	53
45	FBN-1, a fibrillin-related protein, is required for resistance of the epidermis to mechanical deformation during C. elegans embryogenesis. ELife, 2015, 4, .	6.0	52
46	Assaying mechanosensation. WormBook, 2014, , 1-13.	5.3	51
47	The Dystrophin Complex Controls BK Channel Localization and Muscle Activity in Caenorhabditis elegans. PLoS Genetics, 2009, 5, e1000780.	3.5	50
48	GCY-8, PDE-2, and NCS-1 are critical elements of the cGMP-dependent thermotransduction cascade in the AFD neurons responsible for C. elegans thermotaxis. Journal of General Physiology, 2013, 142, 437-449.	1.9	50
49	The tubulin repertoire ofCaenorhabditis eleganssensory neurons and its contextâ€‘dependent role in process outgrowth. Molecular Biology of the Cell, 2016, 27, 3717-3728.	2.1	47
50	Variations in the ensemble of potassium currents underlying resonance in turtle hair cells.. Journal of Physiology, 1996, 497, 395-412.	2.9	44
51	MEMS-based force-clamp analysis of the role of body stiffness inC. eleganstouch sensation. Integrative Biology (United Kingdom), 2013, 5, 853-864.	1.3	44
52	The Balance between Cytoplasmic and Nuclear CaM Kinase-1 Signaling Controls the Operating Range of Noxious Heat Avoidance. Neuron, 2014, 84, 983-996.	8.1	44
53	The extraordinary AFD thermosensor of C. elegans. Pflugers Archiv European Journal of Physiology, 2018, 470, 839-849.	2.8	44
54	Electrophysiological Methods for Caenorhabditis elegans Neurobiology. Methods in Cell Biology, 2012, 107, 409-436.	1.1	40

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55	[13] Tight-seal whole-cell patch clamping of caenorhabditis elegans neurons. Methods in Enzymology, 1998, 293, 201-217.	1.0	39
56	Gain-of-Function Mutations in the MEC-4 DEG/ENaC Sensory Mechanotransduction Channel Alter Gating and Drug Blockade. Journal of General Physiology, 2007, 129, 161-173.	1.9	37
57	Alternatively spliced domains interact to regulate BK potassium channel gating. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20784-20789.	7.1	37
58	Positive feedback by a potassium-selective inward rectifier enhances tuning in vertebrate hair cells. Biophysical Journal, 1996, 71, 430-442.	0.5	35
59	Intragenic alternative splicing coordination is essential for Caenorhabditis elegans slo-1 gene function. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20790-20795.	7.1	34
60	Mechanical systems biology of C. elegans touch sensation. BioEssays, 2015, 37, 335-344.	2.5	34
61	Optically Robust and Biocompatible Mechanosensitive Upconverting Nanoparticles. ACS Central Science, 2019, 5, 1211-1222.	11.3	30
62	Molecules and Mechanisms of Mechanotransduction. Journal of Neuroscience, 2004, 24, 9220-9222.	3.6	25
63	The C. elegansEMAP-like protein, ELP-1 is required for touch sensation and associates with microtubules and adhesion complexes. BMC Developmental Biology, 2008, 8, 110.	2.1	25
64	Thermotaxis navigation behavior. WormBook, 2014, , 1-10.	5.3	25
65	Piezoresistive cantilever force-clamp system. Review of Scientific Instruments, 2011, 82, 043703.	1.3	23
66	Inositol trisphosphate mediates cloned muscarinic receptor-activated conductances in transfected mouse fibroblast A9 L cells.. Journal of Physiology, 1990, 421, 499-519.	2.9	21
67	First report of action potentials in a C. elegans neuron is premature. Nature Neuroscience, 2009, 12, 365-366.	14.8	19
68	Making Patch-pipettes and Sharp Electrodes with a Programmable Puller. Journal of Visualized Experiments, 2008, , .	0.3	18
69	Loss of CaMKI Function Disrupts Salt Aversive Learning in C. elegans. Journal of Neuroscience, 2018, 38, 6114-6129.	3.6	18
70	Sensation is painless. Trends in Neurosciences, 2003, 26, 643-645.	8.6	17
71	Identification of 526 Conserved Metazoan Genetic Innovations Exposes a New Role for Cofactor E-like in Neuronal Microtubule Homeostasis. PLoS Genetics, 2013, 9, e1003804.	3.5	16
72	Somatosensory neurons integrate the geometry of skin deformation and mechanotransduction channels to shape touch sensing. ELife, 2019, 8, .	6.0	14

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73	Ionic Conductances and Hair Cell Tuning in the Turtle Cochlea. Annals of the New York Academy of Sciences, 1996, 781, 103-122.	3.8	13
74	The doublecortin-related gene zyg-8 is a microtubule organizer in Caenorhabditis elegans neurons. Journal of Cell Science, 2012, 125, 5417-27.	2.0	12
75	Using a Microfluidics Device for Mechanical Stimulation and High Resolution Imaging of C. elegans. Journal of Visualized Experiments, 2018, , .	0.3	12
76	Pressure-polishing Pipettes for Improved Patch-clamp Recording. Journal of Visualized Experiments, 2008, , .	0.3	11
77	Funders should evaluate projects, not people. Lancet, The, 2019, 393, 494-495.	13.7	11
78	Forces applied during classical touch assays for Caenorhabditis elegans. PLoS ONE, 2017, 12, e0178080.	2.5	10
79	Engineering Bright and Mechanosensitive Alkaline-Earth Rare-Earth Upconverting Nanoparticles. Journal of Physical Chemistry Letters, 2022, 13, 1547-1553.	4.6	10
80	Sensory Biology: It Takes Piezo2 toÂTango. Current Biology, 2014, 24, R566-R569.	3.9	9
81	Molecules empowering animals to sense and respond to temperature in changing environments. Current Opinion in Neurobiology, 2016, 41, 92-98.	4.2	9
82	Progressive recruitment of distal MEC-4 channels determines touch response strength in C. elegans. Journal of General Physiology, 2019, 151, 1213-1230.	1.9	9
83	Reciprocal interactions between transforming growth factor beta signaling and collagens: Insights from <scp>C</scp>aenorhabditis <scp>elegans</scp>. Developmental Dynamics, 2022, 251, 47-60.	1.8	9
84	Patch Clamp Recording of Ion Channels Expressed in Xenopus Oocytes. Journal of Visualized Experiments, 2008, , .	0.3	7
85	The tactile receptive fields of freely movingCaenorhabditis elegansnematodes. Integrative Biology (United Kingdom), 2018, 10, 450-463.	1.3	7
86	Touch-induced mechanical strain in somatosensory neurons is independent of extracellular matrix mutations inCaenorhabditis elegans. Molecular Biology of the Cell, 2020, 31, 1735-1743.	2.1	6
87	DEG/ENaC/ASIC channels vary in their sensitivity to anti-hypertensive and non-steroidal anti-inflammatory drugs. Journal of General Physiology, 2021, 153, .	1.9	5
88	Synaptic Communication upon Gentle Touch. Neuron, 2018, 100, 1272-1274.	8.1	4
89	Activation of the inositol trisphosphate second messenger system by cAMP in a mouse fibroblast cell line. Molecular and Cellular Biochemistry, 1991, 101, 43-9.	3.1	3
90	Keeping it regular with protons. Nature, 2008, 452, 35-36.	27.8	3

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91	EPPENDORF ESSAY WINNER: Deconstructing C. elegans Sensory Mechanotransduction. Science, 2004, 306, 427-428.	12.6	2
92	Neuropeptides strike back. Nature Neuroscience, 2010, 13, 528-529.	14.8	2
93	Immunofluorescence reveals neuron-specific promoter activity in non-neuronal cells. MicroPublication Biology, 2018, 2018, .	0.1	2
94	The bodies of are twice as stiff as wild type. MicroPublication Biology, 2018, 2018, .	0.1	2
95	Grabbing brain activity on the go. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1965-1967.	7.1	1
96	Alkaline-earth Rare-earth Upconverting Nanoparticles as Bio-compatible Mechanical Force Sensors. , 2020, , .		1
97	Miriam B. Goodman. Current Biology, 2013, 23, R333-R334.	3.9	0
98	Sensory Transduction in Caenorhabditis elegans. Springer Series in Biophysics, 2008, , 201-223.	0.4	0
99	MEC-2 and MEC-6 in theCaenorhabditis elegansSensory Mechanotransduction Complex: Auxiliary Subunits that Enable Channel Activity. Journal of Cell Biology, 2008, 181, i22-i22.	5.2	0
100	GCY-8, PDE-2, and NCS-1 are critical elements of the cGMP-dependent thermotransduction cascade in the AFD neurons responsible for C. elegans thermotaxis. Journal of Cell Biology, 2013, 203, 2031OIA114.	5.2	0