Paul Blount

List of Publications by Year
in descending order

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67 papers	4,325 citations	126907 33 h-index	110387 64 g-index
67 all docs	67 docs citations	67 times ranked	2276 citing authors

#	Article	IF	Citations
1	A large-conductance mechanosensitive channel in E. coli encoded by mscL alone. Nature, 1994, 368, 265-268.	27.8	680
2	MECHANOSENSITIVE CHANNELS OFESCHERICHIA COLI:The MscL Gene, Protein, and Activities. Annual Review of Physiology, 1997, 59, 633-657.	13.1	289
3	Molecular basis of the two nonequivalent ligand binding sites of the muscle nicotinic acetylcholine receptor. Neuron, 1989, 3, 349-357.	8.1	283
4	The MscS and MscL Families of Mechanosensitive Channels Act as Microbial Emergency Release Valves. Journal of Bacteriology, 2012, 194, 4802-4809.	2.2	189
5	Hydrophilicity of a Single Residue within MscL Correlates with Increased Channel Mechanosensitivity. Biophysical Journal, 1999, 77, 1960-1972.	0.5	187
6	Assessment of Potential Stimuli for Mechano-Dependent Gating of MscL:â€‰ Effects of Pressure, Tension, and Lipid Headgroups. Biochemistry, 2005, 44, 12239-12244.	2.5	183
7	How do membrane proteins sense water stress?. Molecular Microbiology, 2002, 44, 889-902.	2.5	130
8	Functional and structural conservation in the mechanosensitive channel MscL implicates elements crucial for mechanosensation. Molecular Microbiology, 1998, 28, 583-592.	2.5	126
9	Pivotal role of the glycine-rich TM3 helix in gating the MscS mechanosensitive channel. Nature Structural and Molecular Biology, 2005, 12, 113-119.	8.2	125
10	Ionic regulation of MscK, a mechanosensitive channel from Escherichia coli. EMBO Journal, 2002, 21, 5323-5330.	7.8	123
11	[24] Mechanosensitive channels of bacteria. Methods in Enzymology, 1999, 294, 458-482.	1.0	118
12	Bacterial mechanosensitive channels: integrating physiology, structure and function. Trends in Microbiology, 1999, 7, 420-424.	7.7	114
13	Mutations in a Bacterial Mechanosensitive Channel Change the Cellular Response to Osmotic Stress. Journal of Biological Chemistry, 1997, 272, 32150-32157.	3.4	113
14	Correlating a Protein Structure with Function of a Bacterial Mechanosensitive Channel. Journal of Biological Chemistry, 2000, 275, 31121-31127.	3.4	92
15	Functional Design of Bacterial Mechanosensitive Channels. Journal of Biological Chemistry, 2002, 277, 27682-27688.	3.4	79
16	On the Structure of the N-Terminal Domain of the MscL Channel: Helical Bundle or Membrane Interface. Biophysical Journal, 2008, 95, 2283-2291.	0.5	72
17	Sensing and Responding to Membrane Tension: The Bacterial MscL Channel as a Model System. Biophysical Journal, 2012, 103, 169-174.	0.5	72
18	Cysteine Scanning of MscL Transmembrane Domains Reveals Residues Critical for Mechanosensitive Channel Gating. Biophysical Journal, 2004, 86, 2862-2870.	0.5	68

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19	Family ties of gated pores: evolution of the sensor module. FASEB Journal, 2002, 16, 1623-1629.	0.5	62
20	An in vivo assay identifies changes in residue accessibility on mechanosensitive channel gating. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10161-10165.	7.1	61
21	S. aureus MscL Is a Pentamer In Vivo but of Variable Stoichiometries In Vitro: Implications for Detergent-Solubilized Membrane Proteins. PLoS Biology, 2010, 8, e1000555.	5.6	60
22	Structure and molecular mechanism of an anion-selective mechanosensitive channel of small conductance. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18180-18185.	7.1	56
23	Streptomycin potency is dependent on MscL channel expression. Nature Communications, 2014, 5, 4891.	12.8	51
24	Defining the Physical Gate of a Mechanosensitive Channel, MscL, by Engineering Metal-Binding Sites. Biophysical Journal, 2004, 87, 3172-3180.	0.5	48
25	A new antibiotic with potent activity targets MscL. Journal of Antibiotics, 2015, 68, 453-462.	2.0	46
26	Channels in microbes: so many holes to fill. Molecular Microbiology, 2004, 53, 373-380.	2.5	44
27	Towards an understanding of the structural and functional properties of MscL, a mechanosensitive channel in bacteria. Biology of the Cell, 1996, 87, 1-8.	2.0	41
28	Life with Bacterial Mechanosensitive Channels, from Discovery to Physiology to Pharmacological Target. Microbiology and Molecular Biology Reviews, 2020, 84, .	6.6	41
29	Mechanosensitive Channel Gating Transitions Resolved by Functional Changes upon Pore Modification. Biophysical Journal, 2006, 91, 3684-3691.	0.5	39
30	Voltage-induced gating of the mechanosensitive MscL ion channel reconstituted in a tethered lipid bilayer membrane. Biosensors and Bioelectronics, 2008, 23, 919-923.	10.1	38
31	Three Routes To Modulate the Pore Size of the MscL Channel/Nanovalve. ACS Nano, 2012, 6, 1134-1141.	14.6	36
32	Phosphatidylinositol Is Crucial for the Mechanosensitivity of Mycobacterium tuberculosis MscL. Biochemistry, 2013, 52, 5415-5420.	2.5	36
33	Molecular Mechanisms of Mechanosensation. Neuron, 2003, 37, 731-734.	8.1	35
34	Lactococcus lactis Uses MscL as Its Principal Mechanosensitive Channel. Journal of Biological Chemistry, 2005, 280, 8784-8792.	3.4	35
35	Dihydrostreptomycin Directly Binds to, Modulates, and Passes through the MscL Channel Pore. PLoS Biology, 2016, 14, e1002473.	5.6	35
36	The oligomeric state of the truncated mechanosensitive channel of large conductance shows no variance in vivo. Protein Science, 2011, 20, 1638-1642.	7.6	33

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37	Intragenic suppression of gain-of-function mutations in the Escherichia coli mechanosensitive channel, MscL. Molecular Microbiology, 2004, 53, 485-495.	2.5	32
38	The mechanosensitive channel of small conductance (MscS) functions as a Jack-In-The Box. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 159-166.	2.6	32
39	Improving the Design of a MscL-Based Triggered Nanovalve. Biosensors, 2013, 3, 171-184.	4.7	30
40	Disulfide Trapping the Mechanosensitive Channel MscL into a Gating-Transition State. Biophysical Journal, 2007, 92, 1224-1232.	0.5	29
41	Spectrin couples cell shape, cortical tension, and Hippo signaling in retinal epithelial morphogenesis. Journal of Cell Biology, 2020, 219, .	5.2	29
42	An openâ€pore structure of the mechanosensitive channel MscL derived by determining transmembrane domain interactions upon gating. FASEB Journal, 2009, 23, 2197-2204.	0.5	28
43	Scanning MscL Channels with Targeted Post-Translational Modifications for Functional Alterations. PLoS ONE, 2015, 10, e0137994.	2.5	24
44	Interaction of the Mechanosensitive Channel, MscS, with the Membrane Bilayer through Lipid Intercalation into Grooves and Pockets. Journal of Molecular Biology, 2019, 431, 3339-3352.	4.2	24
45	An in vivo screen reveals proteinâ€lipid interactions crucial for gating a mechanosensitive channel. FASEB Journal, 2011, 25, 694-702.	0.5	23
46	Effects of Low Intensity Focused Ultrasound on Liposomes Containing Channel proteins. Scientific Reports, 2018, 8, 17250.	3.3	23
47	Chimeras Reveal a Single Lipid-Interface Residue that Controls MscL Channel Kinetics as well as Mechanosensitivity. Cell Reports, 2013, 3, 520-527.	6.4	21
48	Novel compounds that specifically bind and modulate MscL: insights into channel gating mechanisms. FASEB Journal, 2019, 33, 3180-3189.	0.5	17
49	Engineering a pHâ€Sensitive Liposomal MRI Agent by Modification of a Bacterial Channel. Small, 2018, 14, e1704256.	10.0	16
50	An agonist of the MscL channel affects multiple bacterial species and increases membrane permeability and potency of common antibiotics. Molecular Microbiology, 2019, 112, 896-905.	2.5	16
51	Manipulating the permeation of charged compounds through the MscL nanovalve. FASEB Journal, 2011, 25, 428-434.	0.5	14
52	Novel MscL agonists that allow multiple antibiotics cytoplasmic access activate the channel through a common binding site. PLoS ONE, 2020, 15, e0228153.	2.5	14
53	The dynamics of protein-protein interactions between domains of MscL at the cytoplasmic-lipid interface. Channels, 2012, 6, 255-261.	2.8	13
54	Mutations in a Conserved Domain of E. coli MscS to the Most Conserved Superfamily Residue Leads to Kinetic Changes. PLoS ONE, 2015, 10, e0136756.	2.5	12

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55	Towards an understanding of the structural and functional properties of MscL, a mechanosensitive channel in bacteria. Biology of the Cell, 1996, 87, 1-8.	2.0	11
56	Cryo-EM Structure of Mechanosensitive Channel YnaI Using SMA2000: Challenges and Opportunities. Membranes, 2021, 11, 849.	3.0	10
57	Electrostatics at the membrane define MscL channel mechanosensitivity and kinetics. FASEB Journal, 2014, 28, 5234-5241.	0.5	9
58	A native cell membrane nanoparticles system allows for high-quality functional proteoliposome reconstitution. BBA Advances, 2021, 1, 100011.	1.6	9
59	Curcumin activation of a bacterial mechanosensitive channel underlies its membrane permeability and adjuvant properties. PLoS Pathogens, 2021, 17, e1010198.	4.7	9
60	MscL: The Bacterial Mechanosensitive Channel of Large Conductance. Current Topics in Membranes, 2007, 58, 201-233.	0.9	7
61	Dynamics of Protein-Protein Interactions at the MscL Periplasmic-Lipid Interface. Biophysical Journal, 2014, 106, 375-381.	0.5	7
62	The roles of the putative third cytoplasmic loop and cytoplasmic carboxyl tail of NK-1 and NK-2 receptors in agonist stimulated second messenger responses in stably transfected CHO cells. Regulatory Peptides, 1993, 46, 447-449.	1.9	6
63	Human mutations highlight an intersubunit cationâ€“Ï€ bond that stabilizes the closed but not open or inactivated states of TRPV channels. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 9410-9416.	7.1	6
64	Mechanosensitive Channels Gated by Membrane Tension. , 2008, , 71-101.		6
65	In Silico Screen Identifies a New Family of Agonists for the Bacterial Mechanosensitive Channel MscL. Antibiotics, 2022, 11, 433.	3.7	4
66	Mechanosensitive Channels and Sensing Osmotic Stimuli in Bacteria. Springer Series in Biophysics, 2008, , 25-45.	0.4	2
67	The Bacterial Mechanosensitive Channel MscS and Its Extended Family. , 0, , 247-258.		2