

# William A Catterall

## List of Publications by Citations

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157  
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26,791  
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77  
h-index

163  
g-index

167  
ext. papers

29,971  
ext. citations

13.9  
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7.64  
L-index

#	Paper	IF	Citations
157	Structure and regulation of voltage-gated Ca <sup>2+</sup> channels. <i>Annual Review of Cell and Developmental Biology</i> , <b>2000</b> , 16, 521-55	12.6	1924
156	From ionic currents to molecular mechanisms: the structure and function of voltage-gated sodium channels. <i>Neuron</i> , <b>2000</b> , 26, 13-25	13.9	1680
155	The crystal structure of a voltage-gated sodium channel. <i>Nature</i> , <b>2011</b> , 475, 353-8	50.4	1069
154	International Union of Pharmacology. XLVII. Nomenclature and structure-function relationships of voltage-gated sodium channels. <i>Pharmacological Reviews</i> , <b>2005</b> , 57, 397-409	22.5	1031
153	The IUPHAR/BPS Guide to PHARMACOLOGY in 2016: towards curated quantitative interactions between 1300 protein targets and 6000 ligands. <i>Nucleic Acids Research</i> , <b>2016</b> , 44, D1054-68	20.1	1014
152	International Union of Pharmacology. XLVIII. Nomenclature and structure-function relationships of voltage-gated calcium channels. <i>Pharmacological Reviews</i> , <b>2005</b> , 57, 411-25	22.5	970
151	Voltage-gated calcium channels. <i>Cold Spring Harbor Perspectives in Biology</i> , <b>2011</b> , 3, a003947	10.2	888
150	Modulation of Ca <sup>2+</sup> channels by G-protein beta gamma subunits. <i>Nature</i> , <b>1996</b> , 380, 258-62	50.4	755
149	Reduced sodium current in GABAergic interneurons in a mouse model of severe myoclonic epilepsy in infancy. <i>Nature Neuroscience</i> , <b>2006</b> , 9, 1142-9	25.5	746
148	Molecular mechanisms of neurotoxin action on voltage-gated sodium channels. <i>Biochimie</i> , <b>2000</b> , 82, 883-98	22.5	592
147	Voltage-gated ion channels and gating modifier toxins. <i>Toxicon</i> , <b>2007</b> , 49, 124-41	2.8	489
146	Calcium channel regulation and presynaptic plasticity. <i>Neuron</i> , <b>2008</b> , 59, 882-901	13.9	482
145	Clustering of L-type Ca <sup>2+</sup> channels at the base of major dendrites in hippocampal pyramidal neurons. <i>Nature</i> , <b>1990</b> , 347, 281-4	50.4	437
144	Voltage-gated sodium channels at 60: structure, function and pathophysiology. <i>Journal of Physiology</i> , <b>2012</b> , 590, 2577-89	3.9	434
143	Ca <sup>2+</sup> /calmodulin binds to and modulates P/Q-type calcium channels. <i>Nature</i> , <b>1999</b> , 399, 155-9	50.4	428
142	Autistic-like behaviour in Scn1a <sup>+/-</sup> mice and rescue by enhanced GABA-mediated neurotransmission. <i>Nature</i> , <b>2012</b> , 489, 385-90	50.4	424
141	Differential subcellular localization of the RI and RII Na <sup>+</sup> channel subtypes in central neurons. <i>Neuron</i> , <b>1989</b> , 3, 695-704	13.9	393

140	Identification of a syntaxin-binding site on N-type calcium channels. <i>Neuron</i> , <b>1994</b> , 13, 1303-13	13.9	391
139	Crystal structure of a voltage-gated sodium channel in two potentially inactivated states. <i>Nature</i> , <b>2012</b> , 486, 135-9	50.4	377
138	Ion channel voltage sensors: structure, function, and pathophysiology. <i>Neuron</i> , <b>2010</b> , 67, 915-28	13.9	371
137	Molecular determinants of high affinity binding of alpha-scorpion toxin and sea anemone toxin in the S3-S4 extracellular loop in domain IV of the Na <sup>+</sup> channel alpha subunit. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 15950-62	5.4	349
136	Calcium-dependent interaction of N-type calcium channels with the synaptic core complex. <i>Nature</i> , <b>1996</b> , 379, 451-4	50.4	323
135	Molecular determinants of drug binding and action on L-type calcium channels. <i>Annual Review of Pharmacology and Toxicology</i> , <b>1997</b> , 37, 361-96	17.9	314
134	Neuromodulation of Na <sup>+</sup> channels: an unexpected form of cellular plasticity. <i>Nature Reviews Neuroscience</i> , <b>2001</b> , 2, 397-407	13.5	312
133	Voltage sensor-trapping: enhanced activation of sodium channels by beta-scorpion toxin bound to the S3-S4 loop in domain II. <i>Neuron</i> , <b>1998</b> , 21, 919-31	13.9	309
132	Nav1.1 channels and epilepsy. <i>Journal of Physiology</i> , <b>2010</b> , 588, 1849-59	3.9	267
131	Voltage-dependent potentiation of L-type Ca <sup>2+</sup> channels due to phosphorylation by cAMP-dependent protein kinase. <i>Nature</i> , <b>1993</b> , 364, 240-3	50.4	252
130	Specific phosphorylation of a site in the full-length form of the alpha 1 subunit of the cardiac L-type calcium channel by adenosine 3'5'-cyclic monophosphate-dependent protein kinase. <i>Biochemistry</i> , <b>1996</b> , 35, 10392-402	3.2	251
129	Gating pore current in an inherited ion channelopathy. <i>Nature</i> , <b>2007</b> , 446, 76-8	50.4	233
128	Structural basis for Ca <sup>2+</sup> selectivity of a voltage-gated calcium channel. <i>Nature</i> , <b>2014</b> , 505, 56-61	50.4	231
127	Interactions of presynaptic Ca <sup>2+</sup> channels and snare proteins in neurotransmitter release. <i>Annals of the New York Academy of Sciences</i> , <b>1999</b> , 868, 144-59	6.5	225
126	The Concise Guide to PHARMACOLOGY 2015/16: Overview. <i>British Journal of Pharmacology</i> , <b>2015</b> , 172, 5729-43	8.6	207
125	Calcium Channels, Synaptic Plasticity, and Neuropsychiatric Disease. <i>Neuron</i> , <b>2018</b> , 98, 466-481	13.9	200
124	THE CONCISE GUIDE TO PHARMACOLOGY 2019/20: Ion channels. <i>British Journal of Pharmacology</i> , <b>2019</b> , 176 Suppl 1, S142-S228	8.6	200
123	Specific deletion of Nav1.1 sodium channels in inhibitory interneurons causes seizures and premature death in a mouse model of Dravet syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 14646-51	11.5	195

122	Reduced sodium current in Purkinje neurons from Nav1.1 mutant mice: implications for ataxia in severe myoclonic epilepsy in infancy. <i>Journal of Neuroscience</i> , <b>2007</b> , 27, 11065-74	6.6	194
121	Inherited neuronal ion channelopathies: new windows on complex neurological diseases. <i>Journal of Neuroscience</i> , <b>2008</b> , 28, 11768-77	6.6	191
120	Sudden unexpected death in a mouse model of Dravet syndrome. <i>Journal of Clinical Investigation</i> , <b>2013</b> , 123, 1798-808	15.9	182
119	Cannabidiol attenuates seizures and social deficits in a mouse model of Dravet syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 11229-11234	11.5	180
118	Ca <sup>2+</sup> /calmodulin-dependent facilitation and inactivation of P/Q-type Ca <sup>2+</sup> channels. <i>Journal of Neuroscience</i> , <b>2000</b> , 20, 6830-8	6.6	177
117	Structural basis for gating charge movement in the voltage sensor of a sodium channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, E93-102	11.5	176
116	Differential modulation of Ca(v)2.1 channels by calmodulin and Ca <sup>2+</sup> -binding protein 1. <i>Nature Neuroscience</i> , <b>2002</b> , 5, 210-7	25.5	167
115	The Concise Guide to PHARMACOLOGY 2015/16: Voltage-gated ion channels. <i>British Journal of Pharmacology</i> , <b>2015</b> , 172, 5904-41	8.6	164
114	A sodium channel signaling complex: modulation by associated receptor protein tyrosine phosphatase beta. <i>Nature Neuroscience</i> , <b>2000</b> , 3, 437-44	25.5	162
113	Enhancement of inhibitory neurotransmission by GABA <sub>A</sub> receptors having $\alpha$ 3-subunits ameliorates behavioral deficits in a mouse model of autism. <i>Neuron</i> , <b>2014</b> , 81, 1282-1289	13.9	159
112	Temperature- and age-dependent seizures in a mouse model of severe myoclonic epilepsy in infancy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 3994-9	11.5	159
111	The voltage-gated sodium channel Scn8a is a genetic modifier of severe myoclonic epilepsy of infancy. <i>Human Molecular Genetics</i> , <b>2007</b> , 16, 2892-9	5.6	157
110	International Union of Basic and Clinical Pharmacology. XC. multisite pharmacology: recommendations for the nomenclature of receptor allosterism and allosteric ligands. <i>Pharmacological Reviews</i> , <b>2014</b> , 66, 918-47	22.5	156
109	Sodium channel beta1 and beta3 subunits associate with neurofascin through their extracellular immunoglobulin-like domain. <i>Journal of Cell Biology</i> , <b>2001</b> , 154, 427-34	7.3	151
108	A critical role for the S4-S5 intracellular loop in domain IV of the sodium channel alpha-subunit in fast inactivation. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 1121-9	5.4	144
107	Impaired excitability of somatostatin- and parvalbumin-expressing cortical interneurons in a mouse model of Dravet syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, E3139-48	11.5	142
106	An emerging consensus on voltage-dependent gating from computational modeling and molecular dynamics simulations. <i>Journal of General Physiology</i> , <b>2012</b> , 140, 587-94	3.4	141
105	Structure and function of voltage-gated sodium channels at atomic resolution. <i>Experimental Physiology</i> , <b>2014</b> , 99, 35-51	2.4	140

104	Molecular determinants of Ca(2+)/calmodulin-dependent regulation of Ca(v)2.1 channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 16059-64	11.5	140
103	A critical role for transmembrane segment IVS6 of the sodium channel alpha subunit in fast inactivation. <i>Journal of Biological Chemistry</i> , <b>1995</b> , 270, 12025-34	5.4	140
102	Reciprocal regulation of P/Q-type Ca <sup>2+</sup> channels by SNAP-25, syntaxin and synaptotagmin. <i>Nature Neuroscience</i> , <b>1999</b> , 2, 939-41	25.5	138
101	Regulation of presynaptic Ca(V)2.1 channels by Ca <sup>2+</sup> sensor proteins mediates short-term synaptic plasticity. <i>Neuron</i> , <b>2008</b> , 57, 210-6	13.9	130
100	Progress in Understanding and Treating SCN2A-Mediated Disorders. <i>Trends in Neurosciences</i> , <b>2018</b> , 41, 442-456	13.3	128
99	Structural Basis for Pharmacology of Voltage-Gated Sodium and Calcium Channels. <i>Molecular Pharmacology</i> , <b>2015</b> , 88, 141-50	4.3	121
98	Structural basis for inhibition of a voltage-gated Ca channel by Ca antagonist drugs. <i>Nature</i> , <b>2016</b> , 537, 117-121	50.4	121
97	Sodium channels, inherited epilepsy, and antiepileptic drugs. <i>Annual Review of Pharmacology and Toxicology</i> , <b>2014</b> , 54, 317-38	17.9	120
96	Sequential formation of ion pairs during activation of a sodium channel voltage sensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 22498-503	11.5	117
95	Solution structure of the sodium channel inactivation gate. <i>Biochemistry</i> , <b>1999</b> , 38, 855-61	3.2	116
94	Structure and function of the voltage sensor of sodium channels probed by a beta-scorpion toxin. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 21332-21344	5.4	115
93	International Union of Pharmacology. XXXIX. Compendium of voltage-gated ion channels: sodium channels. <i>Pharmacological Reviews</i> , <b>2003</b> , 55, 575-8	22.5	112
92	Ion permeation through a voltage-sensitive gating pore in brain sodium channels having voltage sensor mutations. <i>Neuron</i> , <b>2005</b> , 47, 183-9	13.9	111
91	Mapping the receptor site for alpha-scorpion toxins on a Na <sup>+</sup> channel voltage sensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 15426-31	11.5	110
90	Disulfide locking a sodium channel voltage sensor reveals ion pair formation during activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 15142-7	11.5	103
89	Requirement for the synaptic protein interaction site for reconstitution of synaptic transmission by P/Q-type calcium channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 2819-24	11.5	103
88	Na <sup>+</sup> channel subunits and Ig domains. <i>Nature</i> , <b>1996</b> , 383, 307-8	50.4	99
87	Structure of the Cardiac Sodium Channel. <i>Cell</i> , <b>2020</b> , 180, 122-134.e10	56.2	99

- 86 Calcium channels and short-term synaptic plasticity. *Journal of Biological Chemistry*, **2013**, 288, 10742-9 5.4 96
- 85 Signaling complexes of voltage-gated sodium and calcium channels. *Neuroscience Letters*, **2010**, 486, 107-16 3.3 96
- 84 Catalysis of Na<sup>+</sup> permeation in the bacterial sodium channel Na(V)Ab. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 11331-6 11.5 94
- 83 The chemical basis for electrical signaling. *Nature Chemical Biology*, **2017**, 13, 455-463 11.7 93
- 82 Structures of closed and open states of a voltage-gated sodium channel. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E3051-E3060 11.5 93
- 81 A BAC transgenic mouse model reveals neuron subtype-specific effects of a Generalized Epilepsy with Febrile Seizures Plus (GEFS+) mutation. *Neurobiology of Disease*, **2009**, 35, 91-102 7.5 80
- 80 Depolarization-activated gating pore current conducted by mutant sodium channels in potassium-sensitive normokalemic periodic paralysis. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 19980-5 11.5 77
- 79 Resting-State Structure and Gating Mechanism of a Voltage-Gated Sodium Channel. *Cell*, **2019**, 178, 993-1003.e12 11.5 75
- 78 Molecular properties of sodium and calcium channels. *Journal of Bioenergetics and Biomembranes*, **1996**, 28, 219-30 3.7 75
- 77 Dissecting the phenotypes of Dravet syndrome by gene deletion. *Brain*, **2015**, 138, 2219-33 11.2 73
- 76 Na(V)1.1 channels are critical for intercellular communication in the suprachiasmatic nucleus and for normal circadian rhythms. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E368-77 11.5 73
- 75 Molecular determinants for modulation of persistent sodium current by G-protein betagamma subunits. *Journal of Neuroscience*, **2005**, 25, 3341-9 6.6 73
- 74 Forty Years of Sodium Channels: Structure, Function, Pharmacology, and Epilepsy. *Neurochemical Research*, **2017**, 42, 2495-2504 4.6 72
- 73 Molecular analysis of the putative inactivation particle in the inactivation gate of brain type IIA Na<sup>+</sup> channels. *Journal of General Physiology*, **1997**, 109, 589-605 3.4 69
- 72 Structure-function map of the receptor site for scorpion toxins in domain II of voltage-gated sodium channels. *Journal of Biological Chemistry*, **2011**, 286, 33641-51 5.4 66
- 71 Subtype-selective reconstitution of synaptic transmission in sympathetic ganglion neurons by expression of exogenous calcium channels. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 2813-8 11.5 65
- 70 Molecular mechanisms of gating and drug block of sodium channels. *Novartis Foundation Symposium*, **2002**, 241, 206-18; discussion 218-32 65
- 69 Gating charge interactions with the S1 segment during activation of a Na<sup>+</sup> channel voltage sensor. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 18825-30 11.5 63

68	Differential proteolysis of the full-length form of the L-type calcium channel alpha 1 subunit by calpain. <i>Journal of Neurochemistry</i> , <b>1994</b> , 63, 1558-64	6	63
67	Ion permeation and block of the gating pore in the voltage sensor of NaV1.4 channels with hypokalemic periodic paralysis mutations. <i>Journal of General Physiology</i> , <b>2010</b> , 136, 225-36	3.4	59
66	Phosphorylation of Ser1928 mediates the enhanced activity of the L-type Ca <sup>2+</sup> channel Cav1.2 by the $\beta$ -adrenergic receptor in neurons. <i>Science Signaling</i> , <b>2017</b> , 10,	8.8	57
65	Computational design of transmembrane pores. <i>Nature</i> , <b>2020</b> , 585, 129-134	50.4	56
64	Sleep impairment and reduced interneuron excitability in a mouse model of Dravet Syndrome. <i>Neurobiology of Disease</i> , <b>2015</b> , 77, 141-54	7.5	55
63	Genetic background modulates impaired excitability of inhibitory neurons in a mouse model of Dravet syndrome. <i>Neurobiology of Disease</i> , <b>2015</b> , 73, 106-17	7.5	55
62	Mapping the interaction site for a $\beta$ -scorpion toxin in the pore module of domain III of voltage-gated Na <sup>(+)</sup> channels. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 30719-28	5.4	55
61	The Hodgkin-Huxley heritage: from channels to circuits. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 14064-73	6.6	55
60	Dravet Syndrome: A Sodium Channel Interneuronopathy. <i>Current Opinion in Physiology</i> , <b>2018</b> , 2, 42-50	2.6	54
59	Molecular analysis of potential hinge residues in the inactivation gate of brain type IIA Na <sup>+</sup> channels. <i>Journal of General Physiology</i> , <b>1997</b> , 109, 607-17	3.4	50
58	Basal and $\beta$ -adrenergic regulation of the cardiac calcium channel CaV1.2 requires phosphorylation of serine 1700. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 16598-603	11.5	49
57	Deciphering voltage-gated Na <sup>(+)</sup> and Ca <sup>(2+)</sup> channels by studying prokaryotic ancestors. <i>Trends in Biochemical Sciences</i> , <b>2015</b> , 40, 526-34	10.3	48
56	Distribution and function of sodium channel subtypes in human atrial myocardium. <i>Journal of Molecular and Cellular Cardiology</i> , <b>2013</b> , 61, 133-141	5.8	45
55	Correlations in timing of sodium channel expression, epilepsy, and sudden death in Dravet syndrome. <i>Channels</i> , <b>2013</b> , 7, 468-72	3	41
54	Protective effect of the ketogenic diet in Scn1a mutant mice. <i>Epilepsia</i> , <b>2011</b> , 52, 2050-6	6.4	41
53	Phosphorylation of Cav1.2 on S1928 uncouples the L-type Ca <sup>2+</sup> channel from the $\beta$ adrenergic receptor. <i>EMBO Journal</i> , <b>2016</b> , 35, 1330-45	13	40
52	Fenestrations control resting-state block of a voltage-gated sodium channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 13111-13116	11.5	40
51	Synergistic GABA-enhancing therapy against seizures in a mouse model of Dravet syndrome. <i>Journal of Pharmacology and Experimental Therapeutics</i> , <b>2013</b> , 345, 215-24	4.7	35

50	Structural basis for gating pore current in periodic paralysis. <i>Nature</i> , <b>2018</b> , 557, 590-594	50.4	33
49	Regulation of sodium and calcium channels by signaling complexes. <i>Journal of Receptor and Signal Transduction Research</i> , <b>2006</b> , 26, 577-98	2.6	29
48	Calcium sensor regulation of the CaV2.1 Ca <sup>2+</sup> channel contributes to short-term synaptic plasticity in hippocampal neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 1062-7	11.5	27
47	Molecular properties of calcium channels in skeletal muscle and neurons. <i>Annals of the New York Academy of Sciences</i> , <b>1993</b> , 681, 342-55	6.5	27
46	Hippocampal deletion of Na <sub>v</sub> 1.1 channels in mice causes thermal seizures and cognitive deficit characteristic of Dravet Syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 16571-16576	11.5	25
45	Loss of βadrenergic-stimulated phosphorylation of CaV1.2 channels on Ser1700 leads to heart failure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E7976-E7985	11.5	24
44	Calcium sensor regulation of the CaV2.1 Ca <sup>2+</sup> channel contributes to long-term potentiation and spatial learning. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 13209-13214	11.5	24
43	K(ATP) channel gain-of-function leads to increased myocardial L-type Ca <sup>2+</sup> current and contractility in Cantu syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 6773-8	11.5	22
42	Tracking S4 movement by gating pore currents in the bacterial sodium channel NaChBac. <i>Journal of General Physiology</i> , <b>2014</b> , 144, 147-57	3.4	21
41	Structure and modulation of voltage-gated ion channels. <i>Annals of the New York Academy of Sciences</i> , <b>1991</b> , 625, 174-80	6.5	21
40	THE CONCISE GUIDE TO PHARMACOLOGY 2021/22: Ion channels. <i>British Journal of Pharmacology</i> , <b>2021</b> , 178 Suppl 1, S157-S245	8.6	21
39	Selective dephosphorylation of the subunits of skeletal muscle calcium channels by purified phosphoprotein phosphatases. <i>Journal of Neurochemistry</i> , <b>1993</b> , 61, 1333-9	6	20
38	Structural Basis for Diltiazem Block of a Voltage-Gated Ca Channel. <i>Molecular Pharmacology</i> , <b>2019</b> , 96, 485-492	4.3	19
37	Down regulation of sodium channels in nerve terminals of spontaneously epileptic mice. <i>Cellular and Molecular Neurobiology</i> , <b>1986</b> , 6, 213-20	4.6	19
36	Structural basis for voltage-sensor trapping of the cardiac sodium channel by a deathstalker scorpion toxin. <i>Nature Communications</i> , <b>2021</b> , 12, 128	17.4	18
35	Structural Basis for High-Affinity Trapping of the Na <sub>v</sub> 1.7 Channel in Its Resting State by Tarantula Toxin. <i>Molecular Cell</i> , <b>2021</b> , 81, 38-48.e4	17.6	17
34	Interaction of polypeptide neurotoxins with a receptor site associated with voltage-sensitive sodium channels. <i>Journal of Supramolecular Structure</i> , <b>1980</b> , 14, 295-303		15
33	Painful channels. <i>Neuron</i> , <b>2006</b> , 52, 743-4	13.9	14

32	Detection of Marine Toxins Using Reconstituted Sodium Channels. <i>Journal of AOAC INTERNATIONAL</i> , <b>1995</b> , 78, 570-573	1.7	14
31	Molecular determinants of CaV2.1 channel regulation by calcium-binding protein-1. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 41917-41923	5.4	13
30	Molecular dissection of multiphase inactivation of the bacterial sodium channel NaAb. <i>Journal of General Physiology</i> , <b>2019</b> , 151, 174-185	3.4	13
29	The AKAP Cypher/Zasp contributes to $\beta$ -adrenergic/PKA stimulation of cardiac Ca <sub>v</sub> 1.2 calcium channels. <i>Journal of General Physiology</i> , <b>2018</b> , 150, 883-889	3.4	13
28	Control of Excitation/Inhibition Balance in a Hippocampal Circuit by Calcium Sensor Protein Regulation of Presynaptic Calcium Channels. <i>Journal of Neuroscience</i> , <b>2018</b> , 38, 4430-4440	6.6	12
27	Phosphorylation sites in the Hook domain of CaV $\beta$ subunits differentially modulate CaV1.2 channel function. <i>Journal of Molecular and Cellular Cardiology</i> , <b>2015</b> , 87, 248-56	5.8	11
26	Voltage-Gated Na <sup>+</sup> Channels <b>2012</b> , 41-54		11
25	Open-state structure and pore gating mechanism of the cardiac sodium channel. <i>Cell</i> , <b>2021</b> , 184, 5151-5162.e11	5.6	11
24	Molecular determinants of modulation of CaV2.1 channels by visinin-like protein 2. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 504-513	5.4	10
23	Molecular properties of dihydropyridine-sensitive calcium channels. <i>Annals of the New York Academy of Sciences</i> , <b>1988</b> , 522, 162-75	6.5	10
22	The Role of Ca <sub>v</sub> 2.1 Channel Facilitation in Synaptic Facilitation. <i>Cell Reports</i> , <b>2019</b> , 26, 2289-2297.e3	10.6	10
21	Structural and Functional Analysis of Sodium Channels Viewed from an Evolutionary Perspective. <i>Handbook of Experimental Pharmacology</i> , <b>2018</b> , 246, 53-72	3.2	9
20	IgGs from patients with amyotrophic lateral sclerosis and diabetes target Ca <sub>v</sub> 1 subunits impairing islet cell function and survival. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> ,	11.5	9
19	Altered short-term synaptic plasticity and reduced muscle strength in mice with impaired regulation of presynaptic CaV2.1 Ca <sup>2+</sup> channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 1068-73	11.5	8
18	Impairment of Sharp-Wave Ripples in a Murine Model of Dravet Syndrome. <i>Journal of Neuroscience</i> , <b>2019</b> , 39, 9251-9260	6.6	8
17	Sodium channelopathies of skeletal muscle and brain. <i>Physiological Reviews</i> , <b>2021</b> , 101, 1633-1689	47.9	8
16	Ion channels in plasma membrane signal transduction. <i>Journal of Bioenergetics and Biomembranes</i> , <b>1996</b> , 28, 217-8	3.7	6
15	The conformational cycle of a prototypical voltage-gated sodium channel. <i>Nature Chemical Biology</i> , <b>2020</b> , 16, 1314-1320	11.7	6

14	Molecular Determinants of Brevetoxin Binding to Voltage-Gated Sodium Channels. <i>Toxins</i> , <b>2019</b> , 11,	4.9	5
13	Finding Channels. <i>Journal of Biological Chemistry</i> , <b>2015</b> , 290, 28357-28373	5.4	5
12	Helical motion of an S4 voltage sensor revealed by gating pore currents. <i>Channels</i> , <b>2010</b> , 4, 75-7	3	5
11	A more efficient conditional mouse model of Dravet syndrome: Implications for epigenetic selection and sex-dependent behaviors. <i>Journal of Neuroscience Methods</i> , <b>2019</b> , 325, 108315	3	4
10	Na <sup>+</sup> channel mutations and epilepsy. <i>Epilepsia</i> , <b>2010</b> , 51, 59-59	6.4	3
9	Voltage-gated sodium channels (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database. <i>IUPHAR/BPS Guide To Pharmacology CITE</i> , <b>2019</b> , 2019,	1.7	2
8	Voltage-gated calcium channels (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database. <i>IUPHAR/BPS Guide To Pharmacology CITE</i> , <b>2019</b> , 2019,	1.7	2
7	Distribution of high-voltage-activated calcium channels in cultured $\gamma$ -aminobutyric acidergic neurons from mouse cerebral cortex <b>2002</b> , 67, 48		2
6	Retrospective. Edwin G. Krebs (1918-2009). <i>Science</i> , <b>2010</b> , 327, 537	33.3	1
5	Voltage-gated Na <sup>+</sup> channels and epilepsy. <i>Epilepsia</i> , <b>2010</b> , 51, 9-9	6.4	1
4	Autism-associated mutations in K7 channels induce gating pore current. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	1
3	Sharp-Wave Ripple Frequency and Interictal Epileptic Discharges Increase in Tandem During Thermal Induction of Seizures in a Mouse Model of Genetic Epilepsy. <i>Frontiers in Cellular Neuroscience</i> , <b>2021</b> , 15, 751762	6.1	0
2	Expression and purification of the cardiac sodium channel Na <sub>v</sub> 1.5 for cryo-EM structure determination. <i>Methods in Enzymology</i> , <b>2021</b> , 653, 89-101	1.7	0
1	Interaction of Presynaptic Calcium channels with SNARE Proteins in Neurotransmitter Release. <i>Biochemical Society Transactions</i> , <b>1999</b> , 27, A71-A71	5.1	