Jianmin Cui

List of Publications by Year in descending order

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78 papers	5,510 citations	101543 36 h-index	85541 71 g-index
88 all docs	88 docs citations	88 times ranked	5042 citing authors

#	Article	IF	Citations
1	Coupling between Ca2+ binding and the activation gate opening in BK channels probed by an allosteric activator. Biophysical Journal, 2022, 121, 295a.	0.5	0
2	Neuronal mechanism of a BK channelopathy in absence epilepsy and dyskinesia. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2200140119.	7.1	14
3	A benzodiazepine activator locks Kv7.1 channels open by electro-mechanical uncoupling. Communications Biology, 2022, 5, 301.	4.4	7
4	Modulating the voltage sensor of a cardiac potassium channel shows antiarrhythmic effects. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	6
5	Sonothermogenetics for noninvasive and cell-type specific deep brain neuromodulation. Brain Stimulation, 2021, 14, 790-800.	1.6	44
6	BK Channel Gating Mechanisms: Progresses Toward a Better Understanding of Variants Linked Neurological Diseases. Frontiers in Physiology, 2021, 12, 762175.	2.8	11
7	A PIP2 substitute mediates voltage sensor-pore coupling in KCNQ activation. Communications Biology, 2020, 3, 385.	4.4	22
8	Calmodulin acts as a state-dependent switch to control a cardiac potassium channel opening. Science Advances, 2020, 6, .	10.3	38
9	TMEM16A-inhibitor loaded pH-responsive nanoparticles: A novel dual-targeting antitumor therapy for lung adenocarcinoma. Biochemical Pharmacology, 2020, 178, 114062.	4.4	15
10	Coupling of Ca ²⁺ and voltage activation in BK channels through the Î±B helix/voltage sensor interface. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14512-14521.	7.1	19
11	A <scp>Gainâ€ofâ€Function</scp> Mutation in <scp>KCNMA1</scp> Causes Dystonia Spells Controlled With Stimulant Therapy. Movement Disorders, 2020, 35, 1868-1873.	3.9	21
12	Two-stage electroâ€“mechanical coupling of a KV channel in voltage-dependent activation. Nature Communications, 2020, 11, 676.	12.8	46
13	The action of a BK channel opener. Journal of General Physiology, 2020, 152, .	1.9	4
14	Structure and physiological function of the human KCNQ1 channel voltage sensor intermediate state. ELife, 2020, 9, .	6.0	36
15	Aromatic interactions with membrane modulate human BK channel activation. ELife, 2020, 9, .	6.0	2
16	Molecular game theory for a toxin-dominant food chain model. National Science Review, 2019, 6, 1191-1200.	9.5	6
17	ML277 specifically enhances the fully activated open state of KCNQ1 by modulating VSD-pore coupling. ELife, 2019, 8, .	6.0	28
18	Patch-Clamp and Perfusion Techniques to Study Ion Channels Expressed in Xenopus Oocytes. Cold Spring Harbor Protocols, 2018, 2018, pdb.prot099051.	0.3	5

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19	Centipedes subdue giant prey by blocking KCNQ channels. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1646-1651.	7.1	47
20	Hydrophobic gating in BK channels. Nature Communications, 2018, 9, 3408.	12.8	70
21	Thiazolidine reacts with thioreactive biomolecules. Free Radical Biology and Medicine, 2017, 104, 272-279.	2.9	1
22	Deletion of cytosolic gating ring decreases gate and voltage sensor coupling in BK channels. Journal of General Physiology, 2017, 149, 373-387.	1.9	24
23	A clinical and mechanistic study of topical borneolâ€induced analgesia. EMBO Molecular Medicine, 2017, 9, 802-815.	6.9	63
24	Threading the biophysics of mammalian Slo1 channels onto structures of an invertebrate Slo1 channel. Journal of General Physiology, 2017, 149, 985-1007.	1.9	30
25	Inactivation of KCNQ1 potassium channels reveals dynamic coupling between voltage sensing and pore opening. Nature Communications, 2017, 8, 1730.	12.8	65
26	Pro-arrhythmogenic Effects of the V141M KCNQ1 Mutation in Short QT Syndrome and Its Potential Therapeutic Targets: Insights from Modeling. Journal of Medical and Biological Engineering, 2017, 37, 780-789.	1.8	23
27	Ultrasound modulates ion channel currents. Scientific Reports, 2016, 6, 24170.	3.3	241
28	<scp>TRPA</scp> 1 and <scp>TRPV</scp> 1 contribute to iodine antisepticsâ€associated pain and allergy. EMBO Reports, 2016, 17, 1422-1430.	4.5	10
29	LRP6 acts as a scaffold protein in cardiac gap junction assembly. Nature Communications, 2016, 7, 11775.	12.8	30
30	Voltage-Dependent Gating: Novel Insights from KCNQ1 Channels. Biophysical Journal, 2016, 110, 14-25.	0.5	66
31	PIP2-dependent coupling is prominent in Kv7.1 due to weakened interactions between S4-S5 and S6. Scientific Reports, 2015, 5, 7474.	3.3	53
32	BK channels: multiple sensors, one activation gate. Frontiers in Physiology, 2015, 6, 29.	2.8	101
33	Direct Measurement of Cardiac Na ⁺ Channel Conformations Reveals Molecular Pathologies of Inherited Mutations. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 1228-1239.	4.8	32
34	PIP2 regulation of KCNQ channels: biophysical and molecular mechanisms for lipid modulation of voltage-dependent gating. Frontiers in Physiology, 2014, 5, 195.	2.8	104
35	Conopeptide Vt3.1 Preferentially Inhibits BK Potassium Channels Containing Î²4 Subunits via Electrostatic Interactions. Journal of Biological Chemistry, 2014, 289, 4735-4742.	3.4	15
36	A Charged Residue in S4 Regulates Coupling among the Activation Gate, Voltage, and Ca²⁺Sensors in BK Channels. Journal of Neuroscience, 2014, 34, 12280-12288.	3.6	20

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37	Domainâ€“domain interactions determine the gating, permeation, pharmacology, and subunit modulation of the IKs ion channel. ELife, 2014, 3, e03606.	6.0	81
38	Kv7.1 ion channels require a lipid to couple voltage sensing to pore opening. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13180-13185.	7.1	170
39	Modulation of KCNQ1 alternative splicing regulates cardiac IKs and action potential repolarization. Heart Rhythm, 2013, 10, 1220-1228.	0.7	13
40	Interaction between residues in the Mg2+-binding site regulates BK channel activation. Journal of General Physiology, 2013, 141, 217-228.	1.9	22
41	FMRP Regulates Neurotransmitter Release and Synaptic Information Transmission by Modulating Action Potential Duration via BK Channels. Neuron, 2013, 77, 696-711.	8.1	307
42	Intracellular ATP binding is required to activate the slowly activating K ⁺ channel I _{Ks}. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18922-18927.	7.1	39
43	The Interface between Membrane-Spanning and Cytosolic Domains in Ca2+-Dependent K+ Channels Is Involved in Â Subunit Modulation of Gating. Journal of Neuroscience, 2013, 33, 11253-11261.	3.6	15
44	Ion Channel Associated Diseases: Overview of Molecular Mechanisms. Chemical Reviews, 2012, 112, 6319-6333.	47.7	47
45	Regulation of Voltage-Activated K+ Channel Gating by Transmembrane Î² Subunits. Frontiers in Pharmacology, 2012, 3, 63.	3.5	50
46	Prolyl hydroxylase 2: a novel regulator of Î²2-adrenoceptor internalization. Journal of Cellular and Molecular Medicine, 2011, 15, 2712-2722.	3.6	9
47	KCNE1 enhances phosphatidylinositol 4,5-bisphosphate (PIP ₂) sensitivity of I _{Ks} to modulate channel activity. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9095-9100.	7.1	103
48	Î²₂- but not Î²₁-adrenoceptor activation modulates intracellular oxygen availability. Journal of Physiology, 2010, 588, 2987-2998.	2.9	32
49	BK-type calcium-activated potassium channels: coupling of metal ions and voltage sensing. Journal of Physiology, 2010, 588, 4651-4658.	2.9	25
50	Reduction of CaV channel activities by Ca2+â€“CaM: inactivation or deactivation?. Journal of General Physiology, 2010, 135, 297-301.	1.9	2
51	Ion sensing in the RCK1 domain of BK channels. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18700-18705.	7.1	78
52	Modulation of BK Channel Gating by the Î²2 Subunit Involves Both Membrane-Spanning and Cytoplasmic Domains of Slo1. Journal of Neuroscience, 2010, 30, 16170-16179.	3.6	26
53	State-dependent electrostatic interactions of S4 arginines with E1 in S2 during Kv7.1 activation. Journal of General Physiology, 2010, 135, 595-606.	1.9	85
54	KCNE1 Remodels the Voltage Sensor of Kv7.1 to Modulate Channel Function. Biophysical Journal, 2010, 99, 3599-3608.	0.5	50

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55	An Epilepsy/Dyskinesia-Associated Mutation Enhances BK Channel Activation by Potentiating Ca2+ Sensing. Neuron, 2010, 66, 871-883.	8.1	110
56	BK channel activation: structural and functional insights. Trends in Neurosciences, 2010, 33, 415-423.	8.6	225
57	A multiscale model linking ion-channel molecular dynamics and electrostatics to the cardiac action potential. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 11102-11106.	7.1	124
58	Î² subunitâ€specific modulations of BK channel function by a mutation associated with epilepsy and dyskinesia. Journal of Physiology, 2009, 587, 1481-1498.	2.9	52
59	Activation of Slo1 BK channels by Mg2+ coordinated between the voltage sensor and RCK1 domains. Nature Structural and Molecular Biology, 2008, 15, 1152-1159.	8.2	90
60	Effects of extracellular calcium on cell membrane resealing in sonoporation. Journal of Controlled Release, 2008, 126, 34-43.	9.9	96
61	Subunit-Specific Effect of the Voltage Sensor Domain on Ca2+ Sensitivity of BK Channels. Biophysical Journal, 2008, 94, 4678-4687.	0.5	26
62	Dynamics of Sonoporation Correlated with Acoustic Cavitation Activities. Biophysical Journal, 2008, 94, L51-L53.	0.5	61
63	The size of sonoporation pores on the cell membrane. , 2008, , .		0
64	Mg ²⁺ mediates interaction between the voltage sensor and cytosolic domain to activate BK channels. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18270-18275.	7.1	69
65	Tuning Magnesium Sensitivity of BK Channels by Mutations. Biophysical Journal, 2006, 91, 2892-2900.	0.5	20
66	Effects of Extracellular Calcium on Cell Membrane Resealing during Sonoporation. AIP Conference Proceedings, 2006, , .	0.4	0
67	Effects of Multiple Metal Binding Sites on Calcium and Magnesium-dependent Activation of BK Channels. Journal of General Physiology, 2006, 127, 35-50.	1.9	20
68	Study of sonoporation dynamics affected by ultrasound duty cycle. Ultrasound in Medicine and Biology, 2005, 31, 849-856.	1.5	78
69	Calcium-sensitive potassium channelopathy in human epilepsy and paroxysmal movement disorder. Nature Genetics, 2005, 37, 733-738.	21.4	513
70	The NH2 Terminus of RCK1 Domain Regulates Ca2+-dependent BKCa Channel Gating. Journal of General Physiology, 2005, 126, 227-241.	1.9	34
71	Assembly of a Ca2+-dependent BK channel signaling complex by binding to Î²2 adrenergic receptor. EMBO Journal, 2004, 23, 2196-2205.	7.8	99
72	Ultrasound-induced cell membrane porosity. Ultrasound in Medicine and Biology, 2004, 30, 519-526.	1.5	306

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73	Identification of a KCNE2 Gain-of-Function Mutation in Patients with Familial Atrial Fibrillation. American Journal of Human Genetics, 2004, 75, 899-905.	6.2	375
74	Participation of the S4 voltage sensor in the Mg2+-dependent activation of large conductance (BK) K+ channels. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 10488-10493.	7.1	55
75	Mechanism of magnesium activation of calcium-activated potassium channels. Nature, 2002, 418, 876-880.	27.8	204
76	Intracellular Mg2+ Enhances the Function of Bk-Type Ca2+-Activated K+ Channels. Journal of General Physiology, 2001, 118, 589-606.	1.9	114
77	Allosteric Linkage between Voltage and Ca2+-Dependent Activation of BK-Type mslo1 K+Channelsâ€. Biochemistry, 2000, 39, 15612-15619.	2.5	125
78	Allosteric Voltage Gating of Potassium Channels I. Journal of General Physiology, 1999, 114, 277-304.	1.9	239