

# 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	Calcium-sensitive potassium channelopathy in human epilepsy and paroxysmal movement disorder. <i>Nature Genetics</i> , 2005, 37, 733-738.	21.4	513
2	Identification of a KCNE2 Gain-of-Function Mutation in Patients with Familial Atrial Fibrillation. <i>American Journal of Human Genetics</i> , 2004, 75, 899-905.	6.2	375
3	FMRP Regulates Neurotransmitter Release and Synaptic Information Transmission by Modulating Action Potential Duration via BK Channels. <i>Neuron</i> , 2013, 77, 696-711.	8.1	307
4	Ultrasound-induced cell membrane porosity. <i>Ultrasound in Medicine and Biology</i> , 2004, 30, 519-526.	1.5	306
5	Ultrasound modulates ion channel currents. <i>Scientific Reports</i> , 2016, 6, 24170.	3.3	241
6	Allosteric Voltage Gating of Potassium Channels I. <i>Journal of General Physiology</i> , 1999, 114, 277-304.	1.9	239
7	BK channel activation: structural and functional insights. <i>Trends in Neurosciences</i> , 2010, 33, 415-423.	8.6	225
8	Mechanism of magnesium activation of calcium-activated potassium channels. <i>Nature</i> , 2002, 418, 876-880.	27.8	204
9	Kv7.1 ion channels require a lipid to couple voltage sensing to pore opening. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 13180-13185.	7.1	170
10	Allosteric Linkage between Voltage and Ca <sup>2+</sup> -Dependent Activation of BK-Type mslo1 K <sup>+</sup> Channels. <i>Biochemistry</i> , 2000, 39, 15612-15619.	2.5	125
11	A multiscale model linking ion-channel molecular dynamics and electrostatics to the cardiac action potential. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 11102-11106.	7.1	124
12	Intracellular Mg <sup>2+</sup> Enhances the Function of Bk-Type Ca <sup>2+</sup> -Activated K <sup>+</sup> Channels. <i>Journal of General Physiology</i> , 2001, 118, 589-606.	1.9	114
13	An Epilepsy/Dyskinesia-Associated Mutation Enhances BK Channel Activation by Potentiating Ca <sup>2+</sup> Sensing. <i>Neuron</i> , 2010, 66, 871-883.	8.1	110
14	PIP2 regulation of KCNQ channels: biophysical and molecular mechanisms for lipid modulation of voltage-dependent gating. <i>Frontiers in Physiology</i> , 2014, 5, 195.	2.8	104
15	KCNE1 enhances phosphatidylinositol 4,5-bisphosphate (PIP <sub>2</sub> ) sensitivity of I <sub>Ks</sub> to modulate channel activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 9095-9100.	7.1	103
16	BK channels: multiple sensors, one activation gate. <i>Frontiers in Physiology</i> , 2015, 6, 29.	2.8	101
17	Assembly of a Ca <sup>2+</sup> -dependent BK channel signaling complex by binding to Î²2 adrenergic receptor. <i>EMBO Journal</i> , 2004, 23, 2196-2205.	7.8	99
18	Effects of extracellular calcium on cell membrane resealing in sonoporation. <i>Journal of Controlled Release</i> , 2008, 126, 34-43.	9.9	96

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19	Activation of Slo1 BK channels by Mg <sup>2+</sup> coordinated between the voltage sensor and RCK1 domains. <i>Nature Structural and Molecular Biology</i> , 2008, 15, 1152-1159.	8.2	90
20	State-dependent electrostatic interactions of S4 arginines with E1 in S2 during Kv7.1 activation. <i>Journal of General Physiology</i> , 2010, 135, 595-606.	1.9	85
21	Domain-domain interactions determine the gating, permeation, pharmacology, and subunit modulation of the IKs ion channel. <i>ELife</i> , 2014, 3, e03606.	6.0	81
22	Study of sonoporation dynamics affected by ultrasound duty cycle. <i>Ultrasound in Medicine and Biology</i> , 2005, 31, 849-856.	1.5	78
23	Ion sensing in the RCK1 domain of BK channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 18700-18705.	7.1	78
24	Hydrophobic gating in BK channels. <i>Nature Communications</i> , 2018, 9, 3408.	12.8	70
25	Mg <sup>2+</sup> mediates interaction between the voltage sensor and cytosolic domain to activate BK channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18270-18275.	7.1	69
26	Voltage-Dependent Gating: Novel Insights from KCNQ1 Channels. <i>Biophysical Journal</i> , 2016, 110, 14-25.	0.5	66
27	Inactivation of KCNQ1 potassium channels reveals dynamic coupling between voltage sensing and pore opening. <i>Nature Communications</i> , 2017, 8, 1730.	12.8	65
28	A clinical and mechanistic study of topical borneol-induced analgesia. <i>EMBO Molecular Medicine</i> , 2017, 9, 802-815.	6.9	63
29	Dynamics of Sonoporation Correlated with Acoustic Cavitation Activities. <i>Biophysical Journal</i> , 2008, 94, L51-L53.	0.5	61
30	Participation of the S4 voltage sensor in the Mg <sup>2+</sup> -dependent activation of large conductance (BK) K <sup>+</sup> channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 10488-10493.	7.1	55
31	PIP2-dependent coupling is prominent in Kv7.1 due to weakened interactions between S4-S5 and S6. <i>Scientific Reports</i> , 2015, 5, 7474.	3.3	53
32	Î² subunit-specific modulations of BK channel function by a mutation associated with epilepsy and dyskinesia. <i>Journal of Physiology</i> , 2009, 587, 1481-1498.	2.9	52
33	KCNE1 Remodels the Voltage Sensor of Kv7.1 to Modulate Channel Function. <i>Biophysical Journal</i> , 2010, 99, 3599-3608.	0.5	50
34	Regulation of Voltage-Activated K <sup>+</sup> Channel Gating by Transmembrane Î² Subunits. <i>Frontiers in Pharmacology</i> , 2012, 3, 63.	3.5	50
35	Ion Channel Associated Diseases: Overview of Molecular Mechanisms. <i>Chemical Reviews</i> , 2012, 112, 6319-6333.	47.7	47
36	Centipedes subdue giant prey by blocking KCNQ channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 1646-1651.	7.1	47

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37	Two-stage electro-mechanical coupling of a KV channel in voltage-dependent activation. Nature Communications, 2020, 11, 676.	12.8	46
38	Sonothermogenetics for noninvasive and cell-type specific deep brain neuromodulation. Brain Stimulation, 2021, 14, 790-800.	1.6	44
39	Intracellular ATP binding is required to activate the slowly activating K <sup>+</sup> channel I <sub>Ks</sub> . Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18922-18927.	7.1	39
40	Calmodulin acts as a state-dependent switch to control a cardiac potassium channel opening. Science Advances, 2020, 6, .	10.3	38
41	Structure and physiological function of the human KCNQ1 channel voltage sensor intermediate state. ELife, 2020, 9, .	6.0	36
42	The NH2 Terminus of RCK1 Domain Regulates Ca <sup>2+</sup> -dependent BKCa Channel Gating. Journal of General Physiology, 2005, 126, 227-241.	1.9	34
43	Î <sup>2</sup> - but not Î <sup>1</sup> -adrenoceptor activation modulates intracellular oxygen availability. Journal of Physiology, 2010, 588, 2987-2998.	2.9	32
44	Direct Measurement of Cardiac Na <sup>+</sup> Channel Conformations Reveals Molecular Pathologies of Inherited Mutations. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 1228-1239.	4.8	32
45	LRP6 acts as a scaffold protein in cardiac gap junction assembly. Nature Communications, 2016, 7, 11775.	12.8	30
46	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
47	ML277 specifically enhances the fully activated open state of KCNQ1 by modulating VSD-pore coupling. ELife, 2019, 8, .	6.0	28
48	Subunit-Specific Effect of the Voltage Sensor Domain on Ca <sup>2+</sup> Sensitivity of BK Channels. Biophysical Journal, 2008, 94, 4678-4687.	0.5	26
49	Modulation of BK Channel Gating by the Î <sup>2</sup> Subunit Involves Both Membrane-Spanning and Cytoplasmic Domains of Slo1. Journal of Neuroscience, 2010, 30, 16170-16179.	3.6	26
50	BK-type calcium-activated potassium channels: coupling of metal ions and voltage sensing. Journal of Physiology, 2010, 588, 4651-4658.	2.9	25
51	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
52	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
53	Interaction between residues in the Mg <sup>2+</sup> -binding site regulates BK channel activation. Journal of General Physiology, 2013, 141, 217-228.	1.9	22
54	A PIP2 substitute mediates voltage sensor-pore coupling in KCNQ activation. Communications Biology, 2020, 3, 385.	4.4	22

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55	A Gain-of-Function Mutation in <i>KCNMA1</i> Causes Dystonia Spells Controlled With Stimulant Therapy. <i>Movement Disorders</i> , 2020, 35, 1868-1873.	3.9	21
56	Tuning Magnesium Sensitivity of BK Channels by Mutations. <i>Biophysical Journal</i> , 2006, 91, 2892-2900.	0.5	20
57	Effects of Multiple Metal Binding Sites on Calcium and Magnesium-dependent Activation of BK Channels. <i>Journal of General Physiology</i> , 2006, 127, 35-50.	1.9	20
58	A Charged Residue in S4 Regulates Coupling among the Activation Gate, Voltage, and Ca <sup>2+</sup> Sensors in BK Channels. <i>Journal of Neuroscience</i> , 2014, 34, 12280-12288.	3.6	20
59	Coupling of Ca <sup>2+</sup> and voltage activation in BK channels through the $\hat{\pm}$ helix/voltage sensor interface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 14512-14521.	7.1	19
60	The Interface between Membrane-Spanning and Cytosolic Domains in Ca <sup>2+</sup> -Dependent K <sup>+</sup> Channels Is Involved in $\hat{A}$ Subunit Modulation of Gating. <i>Journal of Neuroscience</i> , 2013, 33, 11253-11261.	3.6	15
61	Conopeptide Vt3.1 Preferentially Inhibits BK Potassium Channels Containing $\hat{I}^{24}$ Subunits via Electrostatic Interactions. <i>Journal of Biological Chemistry</i> , 2014, 289, 4735-4742.	3.4	15
62	TMEM16A-inhibitor loaded pH-responsive nanoparticles: A novel dual-targeting antitumor therapy for lung adenocarcinoma. <i>Biochemical Pharmacology</i> , 2020, 178, 114062.	4.4	15
63	Neuronal mechanism of a BK channelopathy in absence epilepsy and dyskinesia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2200140119.	7.1	14
64	Modulation of KCNQ1 alternative splicing regulates cardiac IKs and action potential repolarization. <i>Heart Rhythm</i> , 2013, 10, 1220-1228.	0.7	13
65	BK Channel Gating Mechanisms: Progresses Toward a Better Understanding of Variants Linked Neurological Diseases. <i>Frontiers in Physiology</i> , 2021, 12, 762175.	2.8	11
66	<i>TRPA</i> 1 and <i>TRPV</i> 1 contribute to iodine antiseptics-associated pain and allergy. <i>EMBO Reports</i> , 2016, 17, 1422-1430.	4.5	10
67	Prolyl hydroxylase 2: a novel regulator of $\hat{I}^{22}$ -adrenoceptor internalization. <i>Journal of Cellular and Molecular Medicine</i> , 2011, 15, 2712-2722.	3.6	9
68	A benzodiazepine activator locks Kv7.1 channels open by electro-mechanical uncoupling. <i>Communications Biology</i> , 2022, 5, 301.	4.4	7
69	Molecular game theory for a toxin-dominant food chain model. <i>National Science Review</i> , 2019, 6, 1191-1200.	9.5	6
70	Modulating the voltage sensor of a cardiac potassium channel shows antiarrhythmic effects. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	6
71	Patch-Clamp and Perfusion Techniques to Study Ion Channels Expressed in <i>Xenopus</i> Oocytes. <i>Cold Spring Harbor Protocols</i> , 2018, 2018, pdb.prot099051.	0.3	5
72	The action of a BK channel opener. <i>Journal of General Physiology</i> , 2020, 152, .	1.9	4

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73	Reduction of CaV channel activities by Ca <sup>2+</sup> -CaM: inactivation or deactivation?. Journal of General Physiology, 2010, 135, 297-301.	1.9	2
74	Aromatic interactions with membrane modulate human BK channel activation. ELife, 2020, 9, .	6.0	2
75	Thiazolidine reacts with thioreactive biomolecules. Free Radical Biology and Medicine, 2017, 104, 272-279.	2.9	1
76	Effects of Extracellular Calcium on Cell Membrane Resealing during Sonoporation. AIP Conference Proceedings, 2006, , .	0.4	0
77	The size of sonoporation pores on the cell membrane. , 2008, , .		0
78	Coupling between Ca <sup>2+</sup> binding and the activation gate opening in BK channels probed by an allosteric activator. Biophysical Journal, 2022, 121, 295a.	0.5	0