Stephen J Tucker

List of Publications by Year
in descending order

113	8,399	50276	53230
papers	citations	46 h-index	85 g-index

129	129	129	6843
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Influence of effective polarization on ion and water interactions within a biomimetic nanopore. Biophysical Journal, 2022, 121, 2014-2026.	0.5	5
2	Transition between conformational states of the TREK-1 K2P channel promoted by interaction with PIP2. Biophysical Journal, 2022, 121, 2380-2388.	0.5	3
3	Molecular Simulations of Hydrophobic Gating of Pentameric Ligand Gated Ion Channels: Insights into Water and Ions. Journal of Physical Chemistry B, 2021, 125, 981-994.	2.6	27
4	The KCNJ11-E23K Gene Variant Hastens Diabetes Progression by Impairing Glucose-Induced Insulin Secretion. Diabetes, 2021, 70, 1145-1156.	0.6	11
5	Norfluoxetine inhibits TREK-2 K2P channels by multiple mechanisms including state-independent effects on the selectivity filter gate. Journal of General Physiology, 2021, 153, .	1.9	17
6	Kcnj16 (Kir5.1) Gene Ablation Causes Subfertility and Increases the Prevalence of Morphologically Abnormal Spermatozoa. International Journal of Molecular Sciences, 2021, 22, 5972.	4.1	5
7	KCNK18 Biallelic Variants Associated with Intellectual Disability and Neurodevelopmental Disorders Alter TRESK Channel Activity. International Journal of Molecular Sciences, 2021, 22, 6064.	4.1	3
8	Ion channels as convergence points in the pathology of pulmonary arterial hypertension. Biochemical Society Transactions, 2021, 49, 1855-1865.	3.4	7
9	Effects of ionic strength on gating and permeation of TREK-2 K2P channels. PLoS ONE, 2021, 16, e0258275.	2.5	0
10	Water Nanoconfined in a Hydrophobic Pore: Molecular Dynamics Simulations of Transmembrane Protein 175 and the Influence of Water Models. ACS Nano, 2021, 15, 19098-19108.	14.6	14
11	Selectivity filter instability dominates the low intrinsic activity of the TWIK-1 K2P K+ channel. Journal of Biological Chemistry, 2020, 295, 610-618.	3.4	16
12	Electric Field Induced Wetting of a Hydrophobic Gate in a Model Nanopore Based on the 5-HT₃ Receptor Channel. ACS Nano, 2020, 14, 10480-10491.	14.6	30
13	Altered functional properties of a missense variant in the TRESK K+ channel (KCNK18) associated with migraine and intellectual disability. Pflugers Archiv European Journal of Physiology, 2020, 472, 923-930.	2.8	9
14	Structure and assembly of calcium homeostasis modulator proteins. Nature Structural and Molecular Biology, 2020, 27, 150-159.	8.2	55
15	A lower X-gate in TASK channels traps inhibitors within the vestibule. Nature, 2020, 582, 443-447.	27.8	53
16	Induced Polarization in Molecular Dynamics Simulations of the 5-HT₃ Receptor Channel. Journal of the American Chemical Society, 2020, 142, 9415-9427.	13.7	38
17	A heuristic derived from analysis of the ion channel structural proteome permits the rapid identification of hydrophobic gates. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13989-13995.	7.1	52
18	CHAP: A Versatile Tool for the Structural and Functional Annotation of Ion Channel Pores. Journal of Molecular Biology, 2019, 431, 3353-3365.	4.2	97

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19	A pharmacological master key mechanism that unlocks the selectivity filter gate in K ⁺ channels. Science, 2019, 363, 875-880.	12.6	91
20	A Newly Available Tool for Functional Annotation of Ion Channel Structures Based on Molecular Dynamics Simulations. Biophysical Journal, 2018, 114, 134a.	0.5	1
21	Water and hydrophobic gates in ion channels and nanopores. Faraday Discussions, 2018, 209, 231-247.	3.2	48
22	Rare NaV1.7 variants associated with painful diabetic peripheral neuropathy. Pain, 2018, 159, 469-480.	4.2	116
23	Bilayer-Mediated Structural Transitions Control Mechanosensitivity of the TREK-2 K2P Channel. Structure, 2017, 25, 708-718.e2.	3.3	64
24	A BEST example of channel structure annotation by molecular simulation. Channels, 2017, 11, 347-353.	2.8	26
25	Asymmetric mechanosensitivity in a eukaryotic ion channel. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8343-E8351.	7.1	45
26	Dynamic role of the tether helix in PIP2-dependent gating of a G proteinâ€“gated potassium channel. Journal of General Physiology, 2017, 149, 799-811.	1.9	35
27	The effects of stretch activation on ionic selectivity of the TREK-2 K2P K+ channel. Channels, 2017, 11, 482-486.	2.8	6
28	Functional Annotation of Ion Channel Structures by Molecular Simulation. Structure, 2016, 24, 2207-2216.	3.3	69
29	Solution-Based Single-Molecule FRET Studies of K + Channel Gating in a Lipid Bilayer. Biophysical Journal, 2016, 110, 2663-2670.	0.5	20
30	Polymodal activation of the TREK-2 K2P channel produces structurally distinct open states. Journal of General Physiology, 2016, 147, 497-505.	1.9	65
31	A Non-canonical Voltage-Sensing Mechanism Controls Gating in K2P K+ Channels. Cell, 2016, 164, 937-949.	28.9	169
32	Dominant-Negative Effect of a Missense Variant in the TASK-2 (KCNK5) K+ Channel Associated with Balkan Endemic Nephropathy. PLoS ONE, 2016, 11, e0156456.	2.5	12
33	The Concise Guide to PHARMACOLOGY 2015/16: Overview. British Journal of Pharmacology, 2015, 172, 5729-5743.	5.4	220
34	Modular Design of the Selectivity Filter Pore Loop in a Novel Family of Prokaryotic â€˜Inward Rectifierâ€™ (NirBac) channels. Scientific Reports, 2015, 5, 15305.	3.3	2
35	Crystal Structures of the Extracellular Domain from PepT1 and PepT2 Provide Novel Insights into Mammalian Peptide Transport. Structure, 2015, 23, 1889-1899.	3.3	40
36	Influence of lipids on the hydrophobic barrier within the pore of the TWIK-1 K2P channel. Channels, 2015, 9, 44-49.	2.8	21

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37	De novopoint mutations in patients diagnosed with ataxic cerebral palsy. Brain, 2015, 138, 1817-1832.	7.6	129
38	K2P channel gating mechanisms revealed by structures of TREK-2 and a complex with Prozac. Science, 2015, 347, 1256-1259.	12.6	255
39	Molecular simulation studies of hydrophobic gating in nanopores and ion channels. Biochemical Society Transactions, 2015, 43, 146-150.	3.4	22
40	Hydrophobic Gating in Ion Channels. Journal of Molecular Biology, 2015, 427, 121-130.	4.2	254
41	A hydrophobic barrier deep within the inner pore of the TWIK-1 K2P potassium channel. Nature Communications, 2014, 5, 4377.	12.8	107
42	Control of KirBac3.1 Potassium Channel Gating at the Interface between Cytoplasmic Domains. Journal of Biological Chemistry, 2014, 289, 143-151.	3.4	20
43	Insights into the structural nature of the transition state in the Kir channel gating pathway. Channels, 2014, 8, 551-555.	2.8	3
44	Influence of the N Terminus on the Biophysical Properties and Pharmacology of TREK1 Potassium Channels. Molecular Pharmacology, 2014, 85, 671-681.	2.3	52
45	State-Dependent Network Connectivity Determines Gating in a K+ Channel. Structure, 2014, 22, 1037-1046.	3.3	8
46	Novel phenotype associated with a mutation in the KCNA1(Kv1.1) gene. Frontiers in Physiology, 2014, 5, 525.	2.8	42
47	Simulation-Based Prediction of Phosphatidylinositol 4,5-Bisphosphate Binding to an Ion Channel. Biochemistry, 2013, 52, 279-281.	2.5	63
48	State-independent intracellular access of quaternary ammonium blockers to the pore of TREK-1. Channels, 2012, 6, 473-478.	2.8	37
49	Functional analysis of missense variants in the TRESK (KCNK18) K+ channel. Scientific Reports, 2012, 2, 237.	3.3	82
50	Structure of a KirBac potassium channel with an open bundle crossing indicates a mechanism of channel gating. Nature Structural and Molecular Biology, 2012, 19, 158-163.	8.2	92
51	Renal phenotype in mice lacking the Kir5.1 (Kcnj16) K ⁺ channel subunit contrasts with that observed in SeSAME/EAST syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10361-10366.	7.1	95
52	In Vitro Reconstitution of Eukaryotic Ion Channels Using Droplet Interface Bilayers. Journal of the American Chemical Society, 2011, 133, 9370-9375.	13.7	58
53	The pore structure and gating mechanism of K2P channels. EMBO Journal, 2011, 30, 3607-3619.	7.8	162
54	Respiratory responses to hypercapnia and hypoxia in mice with genetic ablation of Kir5.1 (Kcnj16). Experimental Physiology, 2011, 96, 451-459.	2.0	41

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55	Genetic Inactivation of Kcnj16 Identifies Kir5.1 as an Important Determinant of Neuronal PCO2/pH Sensitivity. Journal of Biological Chemistry, 2011, 286, 192-198.	3.4	43
56	The pore structure and gating mechanism of K2P channels. EMBO Journal, 2011, 30, 4515-4515.	7.8	65
57	Conformational Changes During the Gating of a Potassium Channel Revealed by Structural Mass Spectrometry. Structure, 2010, 18, 839-846.	3.3	76
58	A dominant-negative mutation in the TRESK potassium channel is linked to familial migraine with aura. Nature Medicine, 2010, 16, 1157-1160.	30.7	312
59	Functional Complementation and Genetic Deletion Studies of KirBac Channels. Journal of Biological Chemistry, 2010, 285, 40754-40761.	3.4	22
60	Random mutagenesis screening indicates the absence of a separate H⁺-sensor in the pH-sensitive Kir channels. Channels, 2010, 4, 390-397.	2.8	16
61	Ion Mobility Mass Spectrometry of Two Tetrameric Membrane Protein Complexes Reveals Compact Structures and Differences in Stability and Packing. Journal of the American Chemical Society, 2010, 132, 15468-15470.	13.7	77
62	Contribution of the central hydrophobic residue in the PXP motif of voltage-dependent K⁺channels to S6 flexibility and gating properties. Channels, 2009, 3, 39-45.	2.8	22
63	Kir5.1 underlies long-lived subconductance levels in heteromeric Kir4.1/Kir5.1 channels from Xenopus tropicalis. Biochemical and Biophysical Research Communications, 2009, 388, 501-505.	2.1	3
64	Non-equivalent role of TM2 gating hinges in heteromeric Kir4.1/Kir5.1 potassium channels. European Biophysics Journal, 2008, 37, 165-171.	2.2	14
65	Peptide Backbone Mutagenesis of Putative Gating Hinges in a Potassium Ion Channel. ChemBioChem, 2008, 9, 1725-1728.	2.6	5
66	A novel KCNA1 mutation identified in an Italian family affected by episodic ataxia type 1. Neuroscience, 2008, 157, 577-587.	2.3	39
67	How Highly Charged Anionic Lipids Bind and Regulate Ion Channels. Journal of General Physiology, 2008, 131, 431-438.	1.9	51
68	Genetic selection of activatory mutations in KcsA. Channels, 2008, 2, 413-418.	2.8	14
69	Control of pH and PIP₂Gating in Heteromeric Kir4.1/Kir5.1 Channels by H-Bonding at the Helix-Bundle Crossing. Channels, 2007, 1, 327-330.	2.8	30
70	H Bonding at the Helix-Bundle Crossing Controls Gating in Kir Potassium Channels. Neuron, 2007, 55, 602-614.	8.1	63
71	Molecular Dynamics Simulations of Inwardly Rectifying (Kir) Potassium Channels:Â A Comparative Studyâ€. Biochemistry, 2007, 46, 3643-3652.	2.5	40
72	Cloning and functional characterization of a superfamily of microbial inwardly rectifying potassium channels. Physiological Genomics, 2006, 26, 1-7.	2.3	16

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73	Structural and functional analysis of the putative pH sensor in the Kir1.1 (ROMK) potassium channel. EMBO Reports, 2006, 7, 611-616.	4.5	57
74	Long Chain CoA Esters as Competitive Antagonists of Phosphatidylinositol 4,5-Bisphosphate Activation in Kir Channels. Journal of Biological Chemistry, 2005, 280, 30760-30767.	3.4	36
75	Functional characterisation of missense variations in the Kir4.1 potassium channel (KCNJ10) associated with seizure susceptibility. Molecular Brain Research, 2005, 139, 178-183.	2.3	29
76	Identification of a Heteromeric Interaction That Influences the Rectification, Gating, and pH Sensitivity of Kir4.1/Kir5.1 Potassium Channels. Journal of Biological Chemistry, 2003, 278, 43533-43540.	3.4	42
77	Identification of domains that control the heteromeric assembly of Kir5.1/Kir4.0 potassium channels. American Journal of Physiology - Cell Physiology, 2003, 284, C910-C917.	4.6	30
78	Intrinsic Sensitivity of Kir1.1 (ROMK) to Glibenclamide in the Absence of SUR2B. Journal of Biological Chemistry, 2002, 277, 21346-21351.	3.4	27
79	Cystic Fibrosis Transmembrane Conductance Regulator-dependent Up-regulation of Kir1.1 (ROMK) Renal K+ Channels by the Epithelial Sodium Channel. Journal of Biological Chemistry, 2002, 277, 25377-25384.	3.4	43
80	Multiple sites of interaction between the intracellular domains of an inwardly rectifying potassium channel, Kir6.2. FEBS Letters, 2001, 508, 85-89.	2.8	24
81	Differential pH sensitivity of Kir4.1 and Kir4.2 potassium channels and their modulation by heteropolymerisation with Kir5.1. Journal of Physiology, 2001, 532, 359-367.	2.9	112
82	Role of receptor protein tyrosine phosphatase Î± (RPTPÎ±) and tyrosine phosphorylation in the serotonergic inhibition of voltage-dependent potassium channels. Pflugers Archiv European Journal of Physiology, 2000, 441, 257-262.	2.8	26
83	pH Dependence of the Inwardly Rectifying Potassium Channel, Kir5.1, and Localization in Renal Tubular Epithelia. Journal of Biological Chemistry, 2000, 275, 16404-16407.	3.4	114
84	A Novel Method for Measurement of Submembrane ATP Concentration. Journal of Biological Chemistry, 2000, 275, 30046-30049.	3.4	257
85	Direct Photoaffinity Labeling of Kir6.2 by [Î³-32P]ATP-[Î³]4-Azidoanilide. Biochemical and Biophysical Research Communications, 2000, 272, 316-319.	2.1	36
86	Mapping of the Physical Interaction between the Intracellular Domains of an Inwardly Rectifying Potassium Channel, Kir6.2. Journal of Biological Chemistry, 1999, 274, 33393-33397.	3.4	47
87	Direct Photoaffinity Labeling of the Kir6.2 Subunit of the ATP-sensitive K+ Channel by 8-Azido-ATP. Journal of Biological Chemistry, 1999, 274, 3931-3933.	3.4	93
88	The role of lysine 185 in the Kir6.2 subunit of the ATPâ€sensitive channel in channel inhibition by ATP. Journal of Physiology, 1999, 520, 661-669.	2.9	42
89	Involvement of the N-terminus of Kir6.2 in the inhibition of the KATPchannel by ATP. Journal of Physiology, 1999, 514, 19-25.	2.9	54
90	Involvement of the N-terminus of Kir6.2 in coupling to the sulphonylurea receptor. Journal of Physiology, 1999, 518, 325-336.	2.9	92

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91	Inward rectification in KATP channels: a pH switch in the pore. EMBO Journal, 1999, 18, 847-853.	7.8	77
92	NEM modification prevents high-affinity ATP binding to the first nucleotide binding fold of the sulphonylurea receptor, SUR1. FEBS Letters, 1999, 458, 292-294.	2.8	10
93	Molecular determinants of KATP channel inhibition by ATP. EMBO Journal, 1998, 17, 3290-3296.	7.8	208
94	A touching case of channel regulation: the ATP-sensitive K+ channel. Current Opinion in Neurobiology, 1998, 8, 316-320.	4.2	46
95	Non-equivalent cooperation between the two nucleotide-binding folds of P-glycoprotein. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1373, 131-136.	2.6	33
96	PIP2 and PIP as Determinants for ATP Inhibition of KATP Channels. , 1998, 282, 1141-1144.		481
97	Tissue specificity of sulfonylureas: studies on cloned cardiac and beta-cell K(ATP) channels. Diabetes, 1998, 47, 1412-1418.	0.6	248
98	Mechanism of ATP-sensitive K Channel Inhibition by Sulfhydryl Modification. Journal of General Physiology, 1998, 112, 325-332.	1.9	35
99	Molecular Analysis of ATP-sensitive K Channel Gating and Implications for Channel Inhibition by ATP. Journal of General Physiology, 1998, 112, 333-349.	1.9	168
100	MgATP activates the Â cell KATP channel by interaction with its SUR1 subunit. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 7185-7190.	7.1	162
101	A divergent CFTR homologue: highly regulated salt transport in the euryhaline teleostF. heteroclitus. American Journal of Physiology - Cell Physiology, 1998, 274, C715-C723.	4.6	141
102	Activation and inhibition of K-ATP currents by guanine nucleotides is mediated by different channel subunits. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 8872-8877.	7.1	60
103	The essential role of the Walker A motifs of SUR1 in K-ATP channel activation by Mg-ADP and diazoxide. EMBO Journal, 1997, 16, 1145-1152.	7.8	317
104	The Interaction of nucleotides with the tolbutamide block of cloned atp-sensitive k+channel currents expressed in xenopus oocytes: a reinterpretation. Journal of Physiology, 1997, 504, 35-45.	2.9	149
105	Truncation of Kir6.2 produces ATP-sensitive K+ channels in the absence of the sulphonylurea receptor. Nature, 1997, 387, 179-183.	27.8	723
106	Heteromeric channel formation and Ca2+-free media reduce the toxic effect of theweaverKir3.2 allele. FEBS Letters, 1996, 390, 253-257.	2.8	28
107	Muscarine-gated K+ channel: subunit stoichiometry and structural domains essential for G protein stimulation. American Journal of Physiology - Heart and Circulatory Physiology, 1996, 271, H379-H385.	3.2	20
108	Subunit positional effects revealed by novel heteromeric inwardly rectifying K+ channels.. EMBO Journal, 1996, 15, 2980-2987.	7.8	172

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109	Inward Rectifier Potassium Channels. Cloning, Expression and Structure-Function Studies.. International Heart Journal, 1996, 37, 651-660.	0.6	23
110	Inhibitory Interactions between Two Inward Rectifier K+ Channel Subunits Mediated by the Transmembrane Domains. Journal of Biological Chemistry, 1996, 271, 5866-5870.	3.4	48
111	Assignment of KATP-1, the Cardiac ATP-Sensitive Potassium Channel Gene (KCNJ5), to Human Chromosome 11q24. Genomics, 1995, 28, 127-128.	2.9	12
112	Characterization and variation of a human inwardly-rectifying K-channel gene (KCNJ6): a putative ATP-sensitive K-channel subunit. FEBS Letters, 1995, 367, 193-197.	2.8	42
113	Identification and developmental expression of the Xenopus laevis cystic fibrosis transmembrane conductance regulator gene. Human Molecular Genetics, 1992, 1, 77-82.	2.9	79