

Derek Bowie

List of Publications by Year in descending order

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67
papers

2,834
citations

236833

25
h-index

182361

51
g-index

70
all docs

70
docs citations

70
times ranked

2744
citing authors

#	ARTICLE	IF	CITATIONS
1	Ionotropic glutamate receptors: structure, function and dysfunction. <i>Journal of Physiology</i> , 2022, 600, 175-179.	1.3	6
2	The many faces of the AMPA-type ionotropic glutamate receptor. <i>Neuropharmacology</i> , 2022, 208, 108975.	2.0	4
3	Spliced isoforms of the cardiac Nav1.5 channel modify channel activation by distinct structural mechanisms. <i>Journal of General Physiology</i> , 2022, 154, .	0.9	1
4	Closed-state inactivation of cardiac, skeletal, and neuronal sodium channels is isoform specific. <i>Journal of General Physiology</i> , 2022, 154, .	0.9	0
5	Intrinsic plasticity of cerebellar stellate cells is mediated by NMDA receptor regulation of voltage-gated Na ⁺ channels. <i>Journal of Physiology</i> , 2021, 599, 647-665.	1.3	5
6	Neurotransmitter-gated ion channels, still front and centre stage. <i>Journal of Physiology</i> , 2021, 599, 389-395.	1.3	2
7	Architecture and structural dynamics of the heteromeric GluK2/K5 kainate receptor. <i>ELife</i> , 2021, 10, .	2.8	20
8	Structure, Function, and Pharmacology of Glutamate Receptor Ion Channels. <i>Pharmacological Reviews</i> , 2021, 73, 1469-1658.	7.1	237
9	Modeling excitability in cerebellar stellate cells: Temporal changes in threshold, latency and frequency of firing. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2020, 82, 105014.	1.7	6
10	Switching in Cerebellar Stellate Cell Excitability in Response to a Pair of Inhibitory/Excitatory Presynaptic Inputs: A Dynamical System Perspective. <i>Neural Computation</i> , 2020, 32, 626-658.	1.3	4
11	Nitric Oxide Signaling Strengthens Inhibitory Synapses of Cerebellar Molecular Layer Interneurons through a GABARAP-Dependent Mechanism. <i>Journal of Neuroscience</i> , 2020, 40, 3348-3359.	1.7	5
12	Bursting in cerebellar stellate cells induced by pharmacological agents: Non-sequential spike adding. <i>PLoS Computational Biology</i> , 2020, 16, e1008463.	1.5	9
13	Nanoscale Mobility of the Apo State and TARP Stoichiometry Dictate the Gating Behavior of Alternatively Spliced AMPA Receptors. <i>Neuron</i> , 2019, 102, 976-992.e5.	3.8	25
14	Cerebellar Stellate Cell Excitability Is Coordinated by Shifts in the Gating Behavior of Voltage-Gated Na ⁺ and A-Type K ⁺ Channels. <i>ENeuro</i> , 2019, 6, ENEURO.0126-19.2019.	0.9	24
15	Stargazin and cornichon-3 relieve polyamine block of AMPA receptors by enhancing blocker permeation. <i>Journal of General Physiology</i> , 2018, 150, 67-82.	0.9	25
16	Polyamine-mediated channel block of ionotropic glutamate receptors and its regulation by auxiliary proteins. <i>Journal of Biological Chemistry</i> , 2018, 293, 18789-18802.	1.6	50
17	Shared and unique aspects of ligand- and voltage-gated ion channel gating. <i>Journal of Physiology</i> , 2018, 596, 1829-1832.	1.3	1
18	Design and Synthesis of a Series of <i>trans</i> -4-Substituted Prolines as Selective Antagonists for the Ionotropic Glutamate Receptors Including Functional and X-ray Crystallographic Studies of New Subtype Selective Kainic Acid Receptor Subtype 1 (GluK1) Antagonist (2 <i>S</i> ,4 <i>R</i>)-4-(2-Carboxyphenoxy)pyrrolidine-2-carboxylic Acid. <i>Journal of Medicinal Chemistry</i> , 2017, 60, 441-457.	2.9	6

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19	Functional Validation of Heteromeric Kainate Receptor Models. <i>Biophysical Journal</i> , 2017, 113, 2173-2177.	0.2	16
20	Full-length cellular β -secretase has a trimeric subunit stoichiometry, and its sulfur-rich transmembrane interaction site modulates cytosolic copper compartmentalization. <i>Journal of Biological Chemistry</i> , 2017, 292, 13258-13270.	1.6	21
21	Kainate receptor pore-forming and auxiliary subunits regulate channel block by a novel mechanism. <i>Journal of Physiology</i> , 2016, 594, 1821-1840.	1.3	24
22	Distinct Structural Pathways Coordinate the Activation of AMPA Receptor-Auxiliary Subunit Complexes. <i>Neuron</i> , 2016, 89, 1264-1276.	3.8	61
23	Mechanism of AMPA Receptor Gating Re-Shaped by Auxiliary Proteins. <i>Biophysical Journal</i> , 2016, 110, 201a.	0.2	1
24	A Step-by-Step Guide to Single-Subunit Counting of Membrane-Bound Proteins in Mammalian Cells. <i>NeuroMethods</i> , 2016, , 15-30.	0.2	3
25	Coupling cellular metabolism to neuronal signalling. <i>Journal of Physiology</i> , 2015, 593, 3413-3415.	1.3	2
26	Ionotropic glutamate receptors: alive and kicking. <i>Journal of Physiology</i> , 2015, 593, 25-27.	1.3	0
27	β -6-Containing GABAA Receptors Are the Principal Mediators of Inhibitory Synapse Strengthening by Insulin in Cerebellar Granule Cells. <i>Journal of Neuroscience</i> , 2015, 35, 9676-9688.	1.7	25
28	Discovery of novel small-molecule antagonists for GluK2. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2015, 25, 2416-2420.	1.0	1
29	Binding Mode of an α -Amino Acid-Linked Quinoxaline-2,3-dione Analogue at Glutamate Receptor Subtype GluK1. <i>ACS Chemical Neuroscience</i> , 2015, 6, 845-854.	1.7	21
30	Can Activation and Desensitization Properties of iGluRs Be Predicted and Understood by Studying the LBD Dimer Dynamics?. <i>Biophysical Journal</i> , 2015, 108, 287a-288a.	0.2	0
31	Soluble Tumor Necrosis Factor Alpha Promotes Retinal Ganglion Cell Death in Glaucoma via Calcium-Permeable AMPA Receptor Activation. <i>Journal of Neuroscience</i> , 2015, 35, 12088-12102.	1.7	111
32	Retour aux sources: defining the structural basis of glutamate receptor activation. <i>Journal of Physiology</i> , 2015, 593, 97-110.	1.3	13
33	Mitochondrial reactive oxygen species regulate the strength of inhibitory GABA-mediated synaptic transmission. <i>Nature Communications</i> , 2014, 5, 3168.	5.8	62
34	Ionotropic glutamate receptors made crystal clear. <i>Trends in Neurosciences</i> , 2014, 37, 687-688.	4.2	1
35	Hydrogen Peroxide Increases GABAA Receptor-Mediated Tonic Current in Hippocampal Neurons. <i>Journal of Neuroscience</i> , 2014, 34, 10624-10634.	1.7	25
36	Functional Consequences of Cysteine Mutations at the Kainate Receptor Dimer Interface. <i>Biophysical Journal</i> , 2014, 106, 150a.	0.2	0

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37	Defining the structural relationship between kainate-receptor deactivation and desensitization. <i>Nature Structural and Molecular Biology</i> , 2013, 20, 1054-1061.	3.6	34
38	Crosslinking the ligand-binding domain dimer interface locks kainate receptors out of the main open state. <i>Journal of Physiology</i> , 2013, 591, 3873-3885.	1.3	20
39	Automating Single Subunit Counting of Membrane Proteins in Mammalian Cells. <i>Journal of Biological Chemistry</i> , 2012, 287, 35912-35921.	1.6	85
40	An Automated Method to Study Oligomerization of Single Membrane-Bound Proteins using Fluorescence Imaging. <i>Biophysical Journal</i> , 2012, 102, 114a-115a.	0.2	0
41	Redefining the classification of AMPA-selective ionotropic glutamate receptors. <i>Journal of Physiology</i> , 2012, 590, 49-61.	1.3	55
42	Ligand-gated ion channels: from genes to behaviour. <i>Journal of Physiology</i> , 2012, 590, 9-11.	1.3	2
43	Thinking of Co ²⁺ -staining explant tissue or cultured cells? How to make it reliable and specific. <i>European Journal of Neuroscience</i> , 2012, 35, 1201-1207.	1.2	4
44	Novel γ 1 and γ 2 GABA _A receptor subunit mutations in families with idiopathic generalized epilepsy. <i>European Journal of Neuroscience</i> , 2011, 34, 237-249.	1.2	98
45	Transmembrane AMPA receptor regulatory protein regulation of competitive antagonism: a problem of interpretation. <i>Journal of Physiology</i> , 2011, 589, 5383-5390.	1.3	23
46	Cations But Not Anions Regulate the Responsiveness of Kainate Receptors. <i>Journal of Neuroscience</i> , 2011, 31, 2136-2144.	1.7	13
47	Ion-independent gating of kainate receptors. <i>Journal of Physiology</i> , 2010, 588, 67-81.	1.3	30
48	TARP Modulation of AMPA Receptor Pharmacology: Polyamine Block and Competitive Antagonism. <i>Biophysical Journal</i> , 2010, 98, 523a-524a.	0.2	0
49	Functional Characterization and In Silico Docking of Full and Partial GluK2 Kainate Receptor Agonists. <i>Molecular Pharmacology</i> , 2009, 75, 1096-1107.	1.0	19
50	Excitotoxic Death of Retinal Neurons <i>In Vivo</i> Occurs via a Non-Cell-Autonomous Mechanism. <i>Journal of Neuroscience</i> , 2009, 29, 5536-5545.	1.7	167
51	Identification of a novel di-leucine motif mediating K ⁺ /Cl ⁻ cotransporter KCC2 constitutive endocytosis. <i>Cellular Signalling</i> , 2008, 20, 1769-1779.	1.7	38
52	Ionotropic Glutamate Receptors & CNS Disorders. <i>CNS and Neurological Disorders - Drug Targets</i> , 2008, 7, 129-143.	0.8	177
53	Na ⁺ /Cl ⁻ Dipole Couples Agonist Binding to Kainate Receptor Activation. <i>Journal of Neuroscience</i> , 2007, 27, 6800-6809.	1.7	31
54	Light triggers expression of philanthotoxin-insensitive Ca ²⁺ -permeable AMPA receptors in the developing rat retina. <i>Journal of Physiology</i> , 2007, 582, 95-111.	1.3	37

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55	Concanavalin-A reports agonist-induced conformational changes in the intact GluR6 kainate receptor. <i>Journal of Physiology</i> , 2006, 572, 201-213.	1.3	25
56	External Ions Are Coactivators of Kainate Receptors. <i>Journal of Neuroscience</i> , 2006, 26, 5750-5755.	1.7	43
57	Allosteric Regulation and Spatial Distribution of Kainate Receptors Bound to Ancillary Proteins. <i>Journal of Physiology</i> , 2003, 547, 373-385.	1.3	56
58	External anions and cations distinguish between AMPA and kainate receptor gating mechanisms. <i>Journal of Physiology</i> , 2002, 539, 725-733.	1.3	67
59	Functional Stoichiometry of Glutamate Receptor Desensitization. <i>Journal of Neuroscience</i> , 2002, 22, 3392-3403.	1.7	76
60	External anions and cations distinguish between AMPA and kainate receptor gating mechanisms. , 2002, 539, 725.		2
61	Activity-Dependent Modulation of Glutamate Receptors by Polyamines. <i>Journal of Neuroscience</i> , 1998, 18, 8175-8185.	1.7	105
62	Permeation and block of rat glur6 glutamate receptor channels by internal and external polyamines. <i>Journal of Physiology</i> , 1997, 502, 575-589.	1.3	94
63	Inward rectification of both AMPA and kainate subtype glutamate receptors generated by polyamine-mediated ion channel block. <i>Neuron</i> , 1995, 15, 453-462.	3.8	526
64	Structural determinants of allosteric regulation in alternatively spliced AMPA receptors. <i>Neuron</i> , 1995, 14, 833-843.	3.8	154
65	Speciesâ€dependent functional properties of nonâ€NMDA receptors expressed in <i>Xenopus laevis</i> oocytes injected with mammalian and avian brain mRNA. <i>British Journal of Pharmacology</i> , 1994, 111, 803-810.	2.7	4
66	Thiocyanate ions selectively antagonize AMPAâ€evoked responses in <i>Xenopus laevis</i> oocytes microinjected with rat brain mRNA. <i>British Journal of Pharmacology</i> , 1993, 109, 779-787.	2.7	24
67	Interplay between expressed non-NMDA receptors and endogenous calcium-activated chloride currents in <i>Xenopus laevis</i> oocytes. <i>Neuroscience Letters</i> , 1993, 151, 4-8.	1.0	4