Nathan Dascal

List of Publications by Year in Descending Order

132 papers	7,207 citations	44 h-index	82 g-index
174 ext. papers	7,609 ext. citations	6.6 avg, IF	5.53 L-index

#	Paper	IF	Citations
132	A selectivity filter mutation provides insights into gating regulation of a K channel.. *Communications Biology*, **2022**, 5, 345	6.7	1
131	A novel small molecule selective activator of homomeric GIRK4 channels.. *Journal of Biological Chemistry*, **2022**, 102009	5.4	2
130	Reconstitution of -adrenergic regulation of Ca1.2: Rad-dependent and Rad-independent protein kinase A mechanisms. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	9
129	Encephalopathy-causing mutations in G() alter regulation of neuronal GIRK channels. *IScience*, **2021**, 24, 103018	6.1	
128	A Collision Coupling Model Governs the Activation of Neuronal GIRK1/2 Channels by Muscarinic-2 Receptors. *Frontiers in Pharmacology*, **2020**, 11, 1216	5.6	2
127	Andersen-Tawil Syndrome Is Associated With Impaired PIP Regulation of the Potassium Channel Kir2.1. *Frontiers in Pharmacology*, **2020**, 11, 672	5.6	5
126	Antiepileptic Drug Ethosuximide May Regulate Absence Seizures Through Different Ion Channels. *Biophysical Journal*, **2020**, 118, 588a	2.9	3
125	Mutual action by G and G for optimal activation of GIRK channels in a channel subunit-specific manner. *Scientific Reports*, **2019**, 9, 508	4.9	6
124	Protein kinase A regulates C-terminally truncated Ca 1.2 in Xenopus oocytes: roles of N- and C-termini of the subunit. *Journal of Physiology*, **2017**, 595, 3181-3202	3.9	9
123	Lithium reduces the span of G protein-activated K (GIRK) channel inhibition in hippocampal neurons. *Bipolar Disorders*, **2017**, 19, 568-574	3.8	2
122	Protein kinase C enhances plasma membrane expression of cardiac L-type calcium channel, Ca1.2. *Channels*, **2017**, 11, 604-615	3	9
121	Collision coupling in the GABA receptor-G protein-GIRK signaling cascade. *FEBS Letters*, **2017**, 591, 2816-2825	3.8	8
120	Interactions between N and C termini of C subunit regulate inactivation of CaV1.2 L-type Ca(2+) channel. *Channels*, **2016**, 10, 55-68	3	11
119	The Roles of G and G in Gating and Regulation of GIRK Channels. *International Review of Neurobiology*, **2015**, 123, 27-85	4.4	38
118	A Quantitative Model of the GIRK1/2 Channel Reveals That Its Basal and Evoked Activities Are Controlled by Unequal Stoichiometry of G and G *PLoS Computational Biology*, **2015**, 11, e1004598	5	11
117	Molecular Aspects of Modulation of L-type Calcium Channels by Protein Kinase C. *Current Molecular Pharmacology*, **2015**, 8, 43-53	3.7	13
116	Dual regulation of G proteins and the G-protein-activated K+ channels by lithium. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 5018-23	11.5	27

115	Recruitment of G□□controls the basal activity of G-protein coupled inwardly rectifying potassium (GIRK) channels: crucial role of distal C terminus of GIRK1. *Journal of Physiology*, **2014**, 592, 5373-90	3.9	21
114	Conserved charged residues at the surface and interface of epithelial sodium channel subunits--roles in cell surface expression and the sodium self-inhibition response. *FEBS Journal*, **2014**, 281, 2097-111	5.7	17
113	Competitive and non-competitive regulation of calcium-dependent inactivation in CaV1.2 L-type Ca2+ channels by calmodulin and Ca2+-binding protein 1. *Journal of Biological Chemistry*, **2013**, 288, 12680-91	5.4	31
112	Molecular basis of the facilitation of the heterooligomeric GIRK1/GIRK4 complex by cAMP dependent protein kinase. *Biochimica Et Biophysica Acta - Biomembranes*, **2013**, 1828, 1214-21	3.8	6
111	Regulation of cardiac L-type Ca□+ channel CaV1.2 via the □-adrenergic-cAMP-protein kinase A pathway: old dogmas, advances, and new uncertainties. *Circulation Research*, **2013**, 113, 617-31	15.7	70
110	SK4 Ca2+ activated K+ channel is a critical player in cardiac pacemaker derived from human embryonic stem cells. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E1685-94	11.5	50
109	Early infantile epileptic encephalopathy associated with a high voltage gated calcium channelopathy. *Journal of Medical Genetics*, **2013**, 50, 118-23	5.8	50
108	Modulation of distinct isoforms of L-type calcium channels by G(q)-coupled receptors in Xenopus oocytes: antagonistic effects of G□□and protein kinase C. *Channels*, **2012**, 6, 426-37	3	10
107	Ahnak1 interaction is affected by phosphorylation of Ser-296 on Cav□□*Biochemical and Biophysical Research Communications*, **2012**, 421, 184-9	3.4	13
106	Ca(V)1.2 I-II linker structure and Timothy syndrome. *Channels*, **2012**, 6, 468-72	3	6
105	The role of a voltage-dependent Ca2+ channel intracellular linker: a structure-function analysis. *Journal of Neuroscience*, **2012**, 32, 7602-13	6.6	28
104	CaBP1 regulates voltage-dependent inactivation and activation of Ca(V)1.2 (L-type) calcium channels. *Journal of Biological Chemistry*, **2011**, 286, 13945-53	5.4	33
103	Two distinct aspects of coupling between G(□) protein and G protein-activated K+ channel (GIRK) revealed by fluorescently labeled G(□3) protein subunits. *Journal of Biological Chemistry*, **2011**, 286, 33223-35	5.4	32
102	Identification of the roles of conserved charged residues in the extracellular domain of an epithelial sodium channel (ENaC) subunit by alanine mutagenesis. *American Journal of Physiology - Renal Physiology*, **2011**, 300, F887-97	4.3	21
101	A novel mutation in the HCN4 gene causes symptomatic sinus bradycardia in Moroccan Jews. *Journal of Cardiovascular Electrophysiology*, **2010**, 21, 1365-72	2.7	50
100	Stargazin modulates neuronal voltage-dependent Ca(2+) channel Ca(v)2.2 by a Gbetagamma-dependent mechanism. *Journal of Biological Chemistry*, **2010**, 285, 20462-71	5.4	17
99	G alpha(i) and G betagamma jointly regulate the conformations of a G betagamma effector, the neuronal G protein-activated K+ channel (GIRK). *Journal of Biological Chemistry*, **2010**, 285, 6179-85	5.4	35
98	Further characterization of regulation of Ca(V)2.2 by stargazin. *Channels*, **2010**, 4, 351-4	3	2

97	Truncated beta epithelial sodium channel (ENaC) subunits responsible for multi-system pseudohypoaldosteronism support partial activity of ENaC. *Journal of Steroid Biochemistry and Molecular Biology*, **2010**, 119, 84-8	5.1	25
96	Anion-sensitive regions of L-type CaV1.2 calcium channels expressed in HEK293 cells. *PLoS ONE*, **2010**, 5, e8602	3.7	15
95	N terminus of type 5 adenylyl cyclase scaffolds Gs heterotrimer. *Molecular Pharmacology*, **2009**, 76, 1256-64	4.3	25
94	Characterization of the calmodulin-binding site in the N terminus of CaV1.2. *Channels*, **2009**, 3, 337-42	3	21
93	Amplitude histogram-based method of analysis of patch clamp recordings that involve extreme changes in channel activity levels. *Journal of Molecular Neuroscience*, **2009**, 37, 201-11	3.3	4
92	Divergent regulation of GIRK1 and GIRK2 subunits of the neuronal G protein gated K+ channel by GalphaiGDP and Gbetagamma. *Journal of Physiology*, **2009**, 587, 3473-91	3.9	39
91	Renin-aldosterone response, urinary Na/K ratio and growth in pseudohypoaldosteronism patients with mutations in epithelial sodium channel (ENaC) subunit genes. *Journal of Steroid Biochemistry and Molecular Biology*, **2008**, 111, 268-74	5.1	48
90	Molecular mechanisms that control initiation and termination of physiological depolarization-evoked transmitter release. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 4435-40	11.5	18
89	An inactivation gate in the selectivity filter of KCNQ1 potassium channels. *Biophysical Journal*, **2007**, 93, 4159-72	2.9	25
88	Galphai3 primes the G protein-activated K+ channels for activation by coexpressed Gbetagamma in intact Xenopus oocytes. *Journal of Physiology*, **2007**, 581, 17-32	3.9	38
87	Point mutation in the HCN4 cardiac ion channel pore affecting synthesis, trafficking, and functional expression is associated with familial asymptomatic sinus bradycardia. *Circulation*, **2007**, 116, 463-70	16.7	136
86	Regulation of maximal open probability is a separable function of Ca(v)beta subunit in L-type Ca2+ channel, dependent on NH2 terminus of alpha1C (Ca(v)1.2alpha). *Journal of General Physiology*, **2006**, 128, 15-36	3.4	38
85	Coupling of GABAB receptor GABAB2 subunit to G proteins: evidence from Xenopus oocyte and baby hamster kidney cell expression system. *American Journal of Physiology - Cell Physiology*, **2006**, 290, C200-7	5.4	16
84	Movement of R gating charge is coupled to ligand binding in a G-protein-coupled receptor. *Nature*, **2006**, 444, 106-9	50.4	129
83	Kinetic modeling of Na(+)-induced, Gbetagamma-dependent activation of G protein-gated K(+) channels. *Journal of Molecular Neuroscience*, **2005**, 25, 7-19	3.3	13
82	Gbetagamma-dependent and Gbetagamma-independent basal activity of G protein-activated K+ channels. *Journal of Biological Chemistry*, **2005**, 280, 16685-94	5.4	45
81	Galphai1 and Galphai3 differentially interact with, and regulate, the G protein-activated K+ channel. *Journal of Biological Chemistry*, **2004**, 279, 17260-8	5.4	57
80	Modulation of cardiac Ca2+ channel by Gq-activating neurotransmitters reconstituted in Xenopus oocytes. *Journal of Biological Chemistry*, **2004**, 279, 12503-10	5.4	16

79	A retinal-specific regulator of G-protein signaling interacts with Galpha(o) and accelerates an expressed metabotropic glutamate receptor 6 cascade. *Journal of Neuroscience*, **2004**, 24, 5684-93	6.6	50
78	Intracellular Na+ inhibits voltage-dependent N-type Ca2+ channels by a G protein betagamma subunit-dependent mechanism. *Journal of Physiology*, **2004**, 556, 121-34	3.9	24
77	G protein-activated K+ channels: a reporter for rapid activation of G proteins by lysophosphatidic acid in Xenopus oocytes. *FEBS Letters*, **2004**, 564, 157-60	3.8	3
76	Na+ promotes the dissociation between Galpha GDP and Gbeta gamma, activating G protein-gated K+ channels. *Journal of Biological Chemistry*, **2003**, 278, 3840-5	5.4	40
75	The M2 muscarinic G-protein-coupled receptor is voltage-sensitive. *Journal of Biological Chemistry*, **2003**, 278, 22482-91	5.4	101
74	Mapping the Gbetagamma-binding sites in GIRK1 and GIRK2 subunits of the G protein-activated K+ channel. *Journal of Biological Chemistry*, **2003**, 278, 29174-83	5.4	57
73	A novel long N-terminal isoform of human L-type Ca2+ channel is up-regulated by protein kinase C. *Journal of Biological Chemistry*, **2002**, 277, 3419-23	5.4	36
72	G(alpha)(i) controls the gating of the G protein-activated K(+) channel, GIRK. *Neuron*, **2002**, 33, 87-99	13.9	141
71	Voltage clamp recordings from Xenopus oocytes. *Current Protocols in Neuroscience*, **2001**, Chapter 6, Unit 6.12	2.7	13
70	Ion-channel regulation by G proteins. *Trends in Endocrinology and Metabolism*, **2001**, 12, 391-8	8.8	138
69	Expression levels of RGS7 and RGS4 proteins determine the mode of regulation of the G protein-activated K(+) channel and control regulation of RGS7 by G beta 5. *FEBS Letters*, **2001**, 492, 20-8	3.8	20
68	Slow modal gating of single G protein-activated K+ channels expressed in Xenopus oocytes. *Journal of Physiology*, **2000**, 524 Pt 3, 737-55	3.9	30
67	Imaging plasma membrane proteins in large membrane patches of Xenopus oocytes. *Pflugers Archiv European Journal of Physiology*, **2000**, 440, 627-33	4.6	15
66	Modulation of L-type Ca2+ channels by gbeta gamma and calmodulin via interactions with N and C termini of alpha 1C. *Journal of Biological Chemistry*, **2000**, 275, 39846-54	5.4	110
65	Coupling of the muscarinic m2 receptor to G protein-activated K(+) channels via Galpha(z) and a receptor-Galpha(z) fusion protein. Fusion between the receptor and Galpha(z) eliminates catalytic (collision) coupling. *Journal of Biological Chemistry*, **2000**, 275, 4166-70	5.4	46
64	Heterologous facilitation of G protein-activated K(+) channels by beta-adrenergic stimulation via cAMP-dependent protein kinase. *Journal of General Physiology*, **2000**, 115, 547-58	3.4	54
63	Expression cloning of KCRF, a potassium channel regulatory factor. *Biochemical and Biophysical Research Communications*, **2000**, 274, 852-8	3.4	2
62	The N terminus of the cardiac L-type Ca(2+) channel alpha(1C) subunit. The initial segment is ubiquitous and crucial for protein kinase C modulation, but is not directly phosphorylated. *Journal of Biological Chemistry*, **1999**, 274, 31145-9	5.4	43

61	Modal behavior of the Kv1.1 channel conferred by the Kv1.1 subunit and its regulation by dephosphorylation of Kv1.1. *Pflugers Archiv European Journal of Physiology*, **1999**, 439, 18-26	4.6	11
60	Regulation of cardiac L-type Ca2+ channel by coexpression of G(alpha s) in Xenopus oocytes. *FEBS Letters*, **1999**, 444, 78-84	3.8	13
59	Agonist-independent inactivation and agonist-induced desensitization of the G protein-activated K+ channel (GIRK) in Xenopus oocytes. *Pflugers Archiv European Journal of Physiology*, **1998**, 436, 56-68	4.6	21
58	Crucial role of N terminus in function of cardiac L-type Ca2+ channel and its modulation by protein kinase C. *Journal of Biological Chemistry*, **1998**, 273, 17901-9	5.4	93
57	Positive and negative coupling of the metabotropic glutamate receptors to a G protein-activated K+ channel, GIRK, in Xenopus oocytes. *Journal of General Physiology*, **1997**, 109, 477-90	3.4	137
56	cAMP-dependent regulation of cardiac L-type Ca2+ channels requires membrane targeting of PKA and phosphorylation of channel subunits. *Neuron*, **1997**, 19, 185-96	13.9	447
55	A C-terminal peptide of the GIRK1 subunit directly blocks the G protein-activated K+ channel (GIRK) expressed in Xenopus oocytes. *Journal of Physiology*, **1997**, 505 (Pt 1), 13-22	3.9	21
54	Signalling via the G protein-activated K+ channels. *Cellular Signalling*, **1997**, 9, 551-73	4.9	266
53	A potential site of functional modulation by protein kinase A in the cardiac Ca2+ channel alpha 1C subunit. *FEBS Letters*, **1996**, 384, 189-92	3.8	70
52	Serotonin and protein kinase C modulation of a rat brain inwardly rectifying K+ channel expressed in xenopus oocytes. *Pflugers Archiv European Journal of Physiology*, **1996**, 431, 335-40	4.6	16
51	Inhibition of an inwardly rectifying K+ channel by G-protein alpha-subunits. *Nature*, **1996**, 380, 624-7	50.4	107
50	Inhibition of function in Xenopus oocytes of the inwardly rectifying G-protein-activated atrial K channel (GIRK1) by overexpression of a membrane-attached form of the C-terminal tail. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 6758-62	11.5	35
49	Voltage clamping of Xenopus laevis oocytes utilizing agarose-cushion electrodes. *Pflugers Archiv European Journal of Physiology*, **1994**, 426, 453-8	4.6	124
48	Distribution and localization of a G protein-coupled inwardly rectifying K+ channel in the rat. *FEBS Letters*, **1994**, 348, 139-44	3.8	71
47	Phosphorylation by protein kinase A of RCK1 K+ channels expressed in Xenopus oocytes. *Biochemistry*, **1994**, 33, 8786-92	3.2	65
46	Expression of an atrial G-protein-activated potassium channel in Xenopus oocytes. *Proceedings of the National Academy of Sciences of the United States of America*, **1993**, 90, 6596-600	11.5	76
45	Atrial G protein-activated K+ channel: expression cloning and molecular properties. *Proceedings of the National Academy of Sciences of the United States of America*, **1993**, 90, 10235-9	11.5	334
44	Primary structure and functional expression of a cyclic nucleotide-gated channel from rabbit aorta. *FEBS Letters*, **1993**, 329, 134-8	3.8	143

43	Expression of Exogenous Ion Channels and Neurotransmitter Receptors in RNA-Injected Xenopus Oocytes **1992**, 205-226		30
42	Regulation of intracellular calcium activity in Xenopus oocytes. *Methods in Enzymology*, **1992**, 207, 381-90	1.7	8
41	Intracellular perfusion of Xenopus oocytes. *Methods in Enzymology*, **1992**, 207, 345-52	1.7	3
40	Evidence for the existence of RNA of Ca(2+)-channel alpha 2/delta subunit in Xenopus oocytes. *Biochimica Et Biophysica Acta - Molecular Cell Research*, **1992**, 1137, 39-44	4.9	20
39	Level of expression controls modes of gating of a K+ channel. *FEBS Letters*, **1992**, 302, 21-5	3.8	20
38	Modulation of cardiac Ca2+ channels in Xenopus oocytes by protein kinase C. *FEBS Letters*, **1992**, 306, 113-8	3.8	59
37	Heterologous expression of calcium channels. *Journal of Membrane Biology*, **1992**, 126, 97-108	2.3	25
36	Tissue-specific expression of high-voltage-activated dihydropyridine-sensitive L-type calcium channels. *FEBS Journal*, **1991**, 200, 81-8		79
35	Recording of voltage and Ca(2+)-dependent currents in Xenopus oocytes using an intracellular perfusion method. *Journal of Neuroscience Methods*, **1991**, 39, 29-38	3	8
34	The roles of the subunits in the function of the calcium channel. *Science*, **1991**, 253, 1553-7	33.3	506
33	Modulation of a Shaker potassium A-channel by protein kinase C activation. *FEBS Letters*, **1991**, 279, 256-60	3.8	28
32	Molecular mechanism of protein kinase C modulation of sodium channel alpha-subunits expressed in Xenopus oocytes. *FEBS Letters*, **1991**, 291, 341-4	3.8	24
31	Activation of protein kinase C alters voltage dependence of a Na+ channel. *Neuron*, **1991**, 6, 165-75	13.9	103
30	Inactivation of calcium-activated chloride conductance in Xenopus oocytes: roles of calcium and protein kinase C. *Pflugers Archiv European Journal of Physiology*, **1990**, 416, 1-6	4.6	38
29	Analysis and functional characteristics of dihydropyridine-sensitive and -insensitive calcium channel proteins. *Biochemical Pharmacology*, **1990**, 40, 1171-8	6	16
28	Interaction between injected Ca2+ and intracellular Ca2+ stores in Xenopus oocytes. *FEBS Letters*, **1990**, 267, 22-4	3.8	5
27	Modulation of vertebrate brain Na+ and K+ channels by subtypes of protein kinase C. *FEBS Letters*, **1990**, 267, 25-8	3.8	43
26	Short- and long-term desensitization of serotonergic response in Xenopus oocytes injected with brain RNA: roles for inositol 1,4,5-trisphosphate and protein kinase C. *Pflugers Archiv European Journal of Physiology*, **1990**, 416, 7-16	4.6	25

25	Protein kinase C modulates neurotransmitter responses in Xenopus oocytes injected with rat brain RNA. *Molecular Brain Research*, **1989**, 5, 193-202		55
24	Expression of mRNA encoding voltage-dependent Ca channels in Xenopus oocytes. Review and progress report. *Annals of the New York Academy of Sciences*, **1989**, 560, 174-82	6.5	9
23	Expression of voltage-dependent Ca channels from skeletal muscle in Xenopus oocytes. *Annals of the New York Academy of Sciences*, **1989**, 560, 183-4	6.5	3
22	Evidence for the existence of a cardiac specific isoform of the alpha 1 subunit of the voltage dependent calcium channel. *FEBS Letters*, **1989**, 250, 509-14	3.8	57
21	Modulation of the voltage-dependent sodium channel by agents affecting G-proteins: a study in Xenopus oocytes injected with brain RNA. *Brain Research*, **1989**, 496, 197-203	3.7	17
20	Specific block of calcium channel expression by a fragment of dihydropyridine receptor cDNA. *Science*, **1989**, 243, 666-9	33.3	40
19	Two calcium-activated chloride conductances in Xenopus laevis oocytes permeabilized with the ionophore A23187. *Journal of Physiology*, **1989**, 408, 511-34	3.9	107
18	Is a decrease in cyclic AMP a necessary and sufficient signal for maturation of amphibian oocytes?. *Developmental Biology*, **1988**, 127, 25-32	3.1	30
17	Further characterization of the slow muscarinic responses in Xenopus oocytes. *Pflugers Archiv European Journal of Physiology*, **1987**, 409, 512-20	4.6	16
16	Dissociation of acetylcholine- and cyclic GMP-induced currents in Xenopus oocytes. *Pflugers Archiv European Journal of Physiology*, **1987**, 409, 521-7	4.6	9
15	The use of Xenopus oocytes for the study of ion channels. *Critical Reviews in Biochemistry*, **1987**, 22, 317-87		525
14	ATP-evoked membrane responses in Xenopus oocytes. *Pflugers Archiv European Journal of Physiology*, **1986**, 406, 158-62	4.6	31
13	Expression and modulation of voltage-gated calcium channels after RNA injection in Xenopus oocytes. *Science*, **1986**, 231, 1147-50	33.3	159
12	Involvement of a GTP-binding protein in mediation of serotonin and acetylcholine responses in Xenopus oocytes injected with rat brain messenger RNA. *Molecular Brain Research*, **1986**, 387, 201-9		111
11	Acetylcholine and phorbol esters inhibit potassium currents evoked by adenosine and cAMP in Xenopus oocytes. *Proceedings of the National Academy of Sciences of the United States of America*, **1985**, 82, 6001-5	11.5	58
10	Inositol 1,4,5-trisphosphate mimics muscarinic response in Xenopus oocytes. *Nature*, **1985**, 313, 141-3	50.4	238
9	Cholinergic modulation of progesterone-induced maturation of Xenopus oocytes in vitro. *Gamete Research*, **1985**, 12, 171-181		5
8	Acetylcholine promotes progesterone-induced maturation of Xenopus oocytes. *The Journal of Experimental Zoology*, **1984**, 230, 131-5		41

7	Xenopus oocyte resting potential, muscarinic responses and the role of calcium and guanosine 3′,5′cyclic monophosphate. *Journal of Physiology*, **1984**, 352, 551-74	3.9	137
6	Cyclic GMP mimics the muscarinic response in Xenopus oocytes: identity of ionic mechanisms. *Proceedings of the National Academy of Sciences of the United States of America*, **1982**, 79, 3052-6	11.5	26
5	Adenosine-induced slow ionic currents in the Xenopus oocyte. *Nature*, **1982**, 298, 572-4	50.4	81
4	Divalent cations and transmitter release at low concentration of tetrodotoxin. *Biophysical Journal*, **1981**, 35, 573-86	2.9	5
3	Presynaptic effects of midgut extract from larvae of the Oriental hornet (Vespa orientalis). *Toxicon*, **1980**, 18, 339-42	2.8	
2	Types of muscarinic response in Xenopus oocytes. *Life Sciences*, **1980**, 27, 1423-8	6.8	63
1	G protein-coupled potassium channels implicated in mouse and cellular models of GNB1 Encephalopathy		2