Denis B Tikhonov

List of Publications by Citations

92 papers	1,962 citations	28 h-index	41 g-index
98 ext. papers	2,202 ext. citations	3.6 avg, IF	5.09 L-index

#	Paper	IF	Citations
92	Modeling P-loops domain of sodium channel: homology with potassium channels and interaction with ligands. *Biophysical Journal*, **2005**, 88, 184-97	2.9	112
91	Potassium, sodium, calcium and glutamate-gated channels: pore architecture and ligand action. *Journal of Neurochemistry*, **2004**, 88, 782-99	6	93
90	Architecture and pore block of eukaryotic voltage-gated sodium channels in view of NavAb bacterial sodium channel structure. *Molecular Pharmacology*, **2012**, 82, 97-104	4.3	88
89	Structural model for dihydropyridine binding to L-type calcium channels. *Journal of Biological Chemistry*, **2009**, 284, 19006-17	5.4	66
88	Determinants of trapping block of N-methyl-d-aspartate receptor channels. *Journal of Neurochemistry*, **2003**, 87, 56-65	6	66
87	Mechanism of sodium channel block by local anesthetics, antiarrhythmics, and anticonvulsants. *Journal of General Physiology*, **2017**, 149, 465-481	3.4	55
86	Access and binding of local anesthetics in the closed sodium channel. *Molecular Pharmacology*, **2008**, 74, 1033-45	4.3	54
85	Sodium channels: ionic model of slow inactivation and state-dependent drug binding. *Biophysical Journal*, **2007**, 93, 1557-70	2.9	51
84	Sodium channel activators: model of binding inside the pore and a possible mechanism of action. *FEBS Letters*, **2005**, 579, 4207-12	3.8	51
83	How batrachotoxin modifies the sodium channel permeation pathway: computer modeling and site-directed mutagenesis. *Molecular Pharmacology*, **2006**, 69, 788-95	4.3	49
82	Modeling of the pore domain of the GLUR1 channel: homology with K+ channel and binding of channel blockers. *Biophysical Journal*, **2002**, 82, 1884-93	2.9	48
81	Design of antagonists for NMDA and AMPA receptors. *Neuropharmacology*, **2005**, 49, 144-55	5.5	46
80	Molecular modeling of benzothiazepine binding in the L-type calcium channel. *Journal of Biological Chemistry*, **2008**, 283, 17594-604	5.4	45
79	Characterization of acid-sensitive ion channels in freshly isolated rat brain neurons. *Neuroscience*, **2002**, 110, 723-30	3.9	45
78	Uncompetitive antagonism of AMPA receptors: Mechanistic insights from studies of polyamine toxin derivatives. *Journal of Medicinal Chemistry*, **2006**, 49, 5414-23	8.3	41
77	Solid-phase synthesis and biological evaluation of a combinatorial library of philanthotoxin analogues. *Journal of Medicinal Chemistry*, **2000**, 43, 4526-33	8.3	41
76	Influence of external magnesium ions on the NMDA receptor channel block by different types of organic cations. *Neuropharmacology*, **2012**, 62, 2078-85	5.5	40

75	Structural model for phenylalkylamine binding to L-type calcium channels. *Journal of Biological Chemistry*, **2009**, 284, 28332-28342	5.4	39
74	Different arrangement of hydrophobic and nucleophilic components of channel binding sites in N-methyl-D-aspartate and AMPA receptors of rat brain is revealed by channel blockade. *Neuroscience Letters*, **2000**, 291, 101-4	3.3	39
73	Origin and molecular evolution of ionotropic glutamate receptors. *Neuroscience and Behavioral Physiology*, **2009**, 39, 763-73	0.3	38
72	Atomic determinants of state-dependent block of sodium channels by charged local anesthetics and benzocaine. *FEBS Letters*, **2006**, 580, 6027-32	3.8	37
71	Voltage-dependent block of native AMPA receptor channels by dicationic compounds. *British Journal of Pharmacology*, **2000**, 129, 265-74	8.6	37
70	Kinked-helices model of the nicotinic acetylcholine receptor ion channel and its complexes with blockers: simulation by the Monte Carlo minimization method. *Biophysical Journal*, **1998**, 74, 242-55	2.9	36
69	Inhibition of the NMDA and AMPA receptor channels by antidepressants and antipsychotics. *Brain Research*, **2017**, 1660, 58-66	3.7	34
68	Ion channels of glutamate receptors: structural modeling. *Molecular Membrane Biology*, **2007**, 24, 135-47	3.4	32
67	Possible roles of exceptionally conserved residues around the selectivity filters of sodium and calcium channels. *Journal of Biological Chemistry*, **2011**, 286, 2998-3006	5.4	30
66	Contrasting actions of philanthotoxin-343 and philanthotoxin-(12) on human muscle nicotinic acetylcholine receptors. *Molecular Pharmacology*, **2003**, 64, 954-64	4.3	29
65	Folding similarity of the outer pore region in prokaryotic and eukaryotic sodium channels revealed by docking of conotoxins GIIIA, PIIIA, and KIIIA in a NavAb-based model of Nav1.4. *Journal of General Physiology*, **2014**, 144, 231-44	3.4	28
64	In silico activation of KcsA K+ channel by lateral forces applied to the C-termini of inner helices. *Biophysical Journal*, **2004**, 87, 1526-36	2.9	27
63	Voltage dependence of open channel blockade: onset and offset rates. *Journal of Membrane Biology*, **1998**, 161, 1-8	2.3	26
62	Selective blockade of Ca2+ permeable AMPA receptors in CA1 area of rat hippocampus. *Neuroscience*, **2007**, 144, 88-99	3.9	26
61	Intersegment hydrogen bonds as possible structural determinants of the N/Q/R site in glutamate receptors. *Biophysical Journal*, **1999**, 77, 1914-26	2.9	25
60	Monoamine NMDA receptor channel blockers inhibit and potentiate native and recombinant proton-gated ion channels. *Neuropharmacology*, **2015**, 89, 1-10	5.5	24
59	Optical control of L-type Ca channels using a diltiazem photoswitch. *Nature Chemical Biology*, **2018**, 14, 764-767	11.7	23
58	Irreversible block of cardiac mutant Na+ channels by batrachotoxin. *Channels*, **2007**, 1, 179-88	3	22

57	TRPV1 activation power can switch an action mode for its polypeptide ligands. *PLoS ONE*, **2017**, 12, e0177977	3.7	22
56	Effect of flumazenil on GABAA receptors in isolated rat hippocampal neurons. *Neurochemical Research*, **2002**, 27, 1605-12	4.6	21
55	Organic blockers escape from trapping in the AMPA receptor channels by leaking into the cytoplasm. *Neuropharmacology*, **2008**, 54, 653-64	5.5	20
54	Serine-401 as a batrachotoxin- and local anesthetic-sensing residue in the human cardiac Na+ channel. *Pflugers Archiv European Journal of Physiology*, **2007**, 454, 277-87	4.6	20
53	Modeling noncompetitive antagonism of a nicotinic acetylcholine receptor. *Biophysical Journal*, **2004**, 87, 159-70	2.9	20
52	Histamine selectively potentiates acid-sensing ion channel 1a. *Neuroscience Letters*, **2016**, 632, 136-40	3.3	19
51	Blockade of NMDA receptor channels by 9-aminoacridine and its derivatives. *Neuroscience Letters*, **2009**, 451, 29-33	3.3	19
50	Ligand action on sodium, potassium, and calcium channels: role of permeant ions. *Trends in Pharmacological Sciences*, **2013**, 34, 154-61	13.2	17
49	Predicting Structural Details of the Sodium Channel Pore Basing on Animal Toxin Studies. *Frontiers in Pharmacology*, **2018**, 9, 880	5.6	16
48	State-dependent inter-repeat contacts of exceptionally conserved asparagines in the inner helices of sodium and calcium channels. *Pflugers Archiv European Journal of Physiology*, **2015**, 467, 253-66	4.6	15
47	Argiotoxin in the closed AMPA receptor channel: experimental and modeling study. *Biochemistry*, **2011**, 50, 8213-20	3.2	14
46	Structural modeling of calcium binding in the selectivity filter of the L-type calcium channel. *European Biophysics Journal*, **2010**, 39, 839-53	1.9	14
45	Computational Structural Pharmacology and Toxicology of Voltage-Gated Sodium Channels. *Current Topics in Membranes*, **2016**, 78, 117-44	2.2	11
44	Ligands of histamine receptors modulate acid-sensing ion channels. *Biochemical and Biophysical Research Communications*, **2017**, 490, 1314-1318	3.4	11
43	Ca2+-dependent desensitization of AMPA receptors. *NeuroReport*, **2000**, 11, 2937-41	1.7	11
42	Batrachotoxin acts as a stent to hold open homotetrameric prokaryotic voltage-gated sodium channels. *Journal of General Physiology*, **2019**, 151, 186-199	3.4	11
41	Determinants of action of hydrophobic amines on ASIC1a and ASIC2a. *European Journal of Pharmacology*, **2016**, 788, 75-83	5.3	10
40	Homology modeling of Kv1.5 channel block by cationic and electroneutral ligands. *Biochimica Et Biophysica Acta - Biomembranes*, **2014**, 1838, 978-87	3.8	9

39	Characterization of ionotropic glutamate receptors in insect neuro-muscular junction. *Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology*, **2009**, 149, 275-80	3.2	9
38	Action of extracellular divalent cations on native alpha-amino-3-hydroxy-5-methylisoxazole-4-propionate (AMPA) receptors. *Journal of Neurochemistry*, **2005**, 95, 1704-12	6	9
37	Architecture of the neuronal nicotinic acetylcholine receptor ion channel at the binding site of bis-ammonium blockers. *Journal of Membrane Biology*, **1996**, 152, 77-87	2.3	9
36	Extremely Potent Block of Bacterial Voltage-Gated Sodium Channels by μ-Conotoxin PIIIA. *Marine Drugs*, **2019**, 17,	6	8
35	Properties of spontaneous and miniature excitatory postsynaptic currents in neurons of the rat prefrontal cortex. *Journal of Evolutionary Biochemistry and Physiology*, **2014**, 50, 506-514	0.5	8
34	Common binding site for externally and internally applied AMPA receptor channel blockers. *Journal of Molecular Neuroscience*, **2009**, 39, 169-74	3.3	8
33	Potentiation and Block of ASIC1a by Memantine. *Cellular and Molecular Neurobiology*, **2018**, 38, 869-881	4.6	6
32	Analysis of inter-residue contacts reveals folding stabilizers in P-loops of potassium, sodium, and TRPV channels. *European Biophysics Journal*, **2016**, 45, 321-9	1.9	6
31	Complex action of tyramine, tryptamine and histamine on native and recombinant ASICs. *Channels*, **2017**, 11, 648-659	3	6
30	Statistical models suggest presence of two distinct subpopulations of miniature EPSCs in fast-spiking interneurons of rat prefrontal cortex. *Neuroscience*, **2015**, 301, 508-19	3.9	5
29	The effects of conformational constraints in the polyamine moiety of philanthotoxins on AMPAR inhibition. *ChemMedChem*, **2014**, 9, 1725-31	3.7	5
28	Non-classical mechanism of α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor channel block by fluoxetine. *European Journal of Neuroscience*, **2015**, 41, 869-77	3.5	4
27	Conservation and variability of the pore-lining helices in P-loop channels. *Channels*, **2017**, 11, 660-672	3	4
26	Voltage-dependent and -independent block of α-amino-3-hydroxy-5-methylisoxazole-4-propionate receptor channels. *Journal of Neurochemistry*, **2010**, 115, 1621-32	6	4
25	Analysis of the excitatory and inhibitory components of postsynaptic currents recorded in pyramidal neurons and interneurons in the rat hippocampus. *Neuroscience and Behavioral Physiology*, **2005**, 35, 835-43	0.3	4
24	The pore domain in glutamate-gated ion channels: Structure, drug binding and similarity with potassium channels. *Biochimica Et Biophysica Acta - Biomembranes*, **2020**, 1862, 183401	3.8	4
23	Modulation of Proton-Gated Channels by Antidepressants. *ACS Chemical Neuroscience*, **2019**, 10, 1636-1648	3.7	4
22	Mutational analysis of state-dependent contacts in the pore module of eukaryotic sodium channels. *Archives of Biochemistry and Biophysics*, **2018**, 652, 59-70	4.1	4

21	Hydrophobic Amines and Their Guanidine Analogues Modulate Activation and Desensitization of ASIC3. *International Journal of Molecular Sciences*, **2019**, 20,	6.3	3
20	Tbo-IT1-New Inhibitor of Insect Calcium Channels Isolated from Spider Venom. *Scientific Reports*, **2015**, 5, 17232	4.9	3
19	Investigation of structure-activity relationships in organophosphates-cholinesterase interaction using docking analysis. *Chemico-Biological Interactions*, **2010**, 187, 153-6	5	3
18	Studies of the structure of glutamate receptor ion channels and the mechanisms of their blockade by organic cations. *Neuroscience and Behavioral Physiology*, **2003**, 33, 237-46	0.3	3
17	Multiple modes of action of hydrophobic amines and their guanidine analogues on ASIC1a. *European Journal of Pharmacology*, **2019**, 844, 183-194	5.3	3
16	Intersegment contacts determine geometry of the open and closed states in P-loop channels. *Journal of Biomolecular Structure and Dynamics*, **2020**, 38, 1012-1027	3.6	3
15	Molecular mechanisms of action determine inhibition of paroxysmal depolarizing shifts by NMDA receptor antagonists in rat cortical neurons. *Neuropharmacology*, **2021**, 184, 108443	5.5	3
14	Lidocaine and carbamazepine inhibit while phenytoin and lamotrigine paradoxically enhance the insect neuromuscular transmission. *Invertebrate Neuroscience*, **2019**, 19, 4	1.2	2
13	Phenylalkylamines in calcium channels: computational analysis of experimental structures. *Journal of Computer-Aided Molecular Design*, **2020**, 34, 1157-1169	4.2	2
12	Modeling interactions between blocking and permeant cations in the NavMs channel. *European Journal of Pharmacology*, **2016**, 780, 188-93	5.3	2
11	Ion channels of glutamate receptors of nerve-muscle junction of larva of the fly Calliphora vicina demonstrate a high structural homology with vertebrate AMPA-channels. *Journal of Evolutionary Biochemistry and Physiology*, **2008**, 44, 657-665	0.5	1
10	Mechanisms of the blockade of glutamate channel receptors: significance for structural and physiological investigations. *Neuroscience and Behavioral Physiology*, **2007**, 37, 277-84	0.3	1
9	Structural characteristics of ionotropic glutamate receptors as identified by channel blockade. *Neuroscience and Behavioral Physiology*, **2002**, 32, 173-82	0.3	1
8	3D Structures and Molecular Evolution of Ion Channels **2018**,		1
7	Optical Control of -Methyl-d-aspartate Receptors by Azobenzene Quaternary Ammonium Compounds. *ACS Chemical Neuroscience*, **2021**, 12, 3347-3357	5.7	1
6	Modulation of Slow Desensitization (Tachyphylaxis) of Acid-Sensing Ion Channel (ASIC)1a.. *Cellular and Molecular Neurobiology*, **2022**, 1	4.6	0
5	Ligand Docking to the Acidic Pocket of the Proton-Gated Ion Channel Asic1A. *Doklady Biochemistry and Biophysics*, **2019**, 485, 111-114	0.8	
4	The Diversity of Mechanisms of Blockade of Ion Channels as a Pathway to the Design of New Pharmacological Agents. *Neuroscience and Behavioral Physiology*, **2012**, 42, 111-119	0.3	

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3	Effects of the Ionic Composition of the External Medium on Blockade of the Ion Channels of AMPA Receptors. *Neuroscience and Behavioral Physiology*, **2011**, 41, 647-653	0.3
2	9-Aminoacridine blocks NMDA and AMPA receptors by different mechanisms. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2009**, 3, 275-280	0.7
1	Molecular evolution of ion channels: Amino acid sequences and 3D structures. *Journal of Evolutionary Biochemistry and Physiology*, **2016**, 52, 28-36	0.5