Steven M Sine

List of Publications by Year
in descending order

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105 papers	7,860 citations	41323 49 h-index	51562 86 g-index
106 all docs	106 docs citations	106 times ranked	3606 citing authors

#	Article	IF	Citations
1	NACHO and 14-3-3 promote expression of distinct subunit stoichiometries of the Î±4Î²2 acetylcholine receptor. Cellular and Molecular Life Sciences, 2021, 78, 1565-1575.	2.4	14
2	Unmasking coupling between channel gating and ion permeation in the muscle nicotinic receptor. ELife, 2021, 10, .	2.8	5
3	Structure and gating mechanism of the Î±7 nicotinic acetylcholine receptor. Cell, 2021, 184, 2121-2134.e13.	13.5	137
4	Stoichiometryâ€selective modulation of Î±4Î²2 nicotinic acetylcholine receptors by divalent cations. British Journal of Pharmacology, 2021, , .	2.7	5
5	A novel fast-channel myasthenia caused by mutation in Î² subunit of AChR reveals subunit-specific contribution of the intracellular M1-M2 linker to channel gating. Experimental Neurology, 2020, 331, 113375.	2.0	5
6	Mechanism of calcium potentiation of the Î±7 nicotinic acetylcholine receptor. Journal of General Physiology, 2020, 152, .	0.9	12
7	Slowâ€channel myasthenia due to novel mutation in M2 domain of AChR delta subunit. Annals of Clinical and Translational Neurology, 2019, 6, 2066-2078.	1.7	7
8	Structural basis for Î±-bungarotoxin insensitivity of neuronal nicotinic acetylcholine receptors. Neuropharmacology, 2019, 160, 107660.	2.0	9
9	Potentiation of a neuronal nicotinic receptor via pseudo-agonist site. Cellular and Molecular Life Sciences, 2019, 76, 1151-1167.	2.4	19
10	Full and partial agonists evoke distinct structural changes in opening the muscle acetylcholine receptor channel. Journal of General Physiology, 2018, 150, 713-729.	0.9	8
11	Nicotinic acetylcholine receptors at the singleâ€channel level. British Journal of Pharmacology, 2018, 175, 1789-1804.	2.7	38
12	Alcohol reduces muscle fatigue through atomistic interactions with nicotinic receptors. Communications Biology, 2018, 1, 159.	2.0	4
13	Mutations causing congenital myasthenia reveal principal coupling pathway in the acetylcholine receptor Îµ-subunit. JCI Insight, 2018, 3, .	2.3	8
14	Î±4Î²2 Nicotinic Acetylcholine Receptors. Journal of Biological Chemistry, 2017, 292, 2729-2740.	1.6	48
15	Improved resolution of single channel dwell times reveals mechanisms of binding, priming, and gating in muscle AChR. Journal of General Physiology, 2016, 148, 43-63.	0.9	45
16	Investigation of Congenital Myasthenia Reveals Functional Asymmetry of Invariant Acetylcholine Receptor (AChR) Cys-loop Aspartates. Journal of Biological Chemistry, 2016, 291, 3291-3301.	1.6	10
17	Stoichiometry for Î±-bungarotoxin block of Î±7 acetylcholine receptors. Nature Communications, 2015, 6, 8057.	5.8	39
18	Congenital myasthenic syndromes: pathogenesis, diagnosis, and treatment. Lancet Neurology, The, 2015, 14, 420-434.	4.9	413

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19	Stoichiometry for activation of neuronal Î±7 nicotinic receptors. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20819-20824.	3.3	75
20	Nicotinic Receptor Transduction Zone: Invariant Arginine Couples toÂMultiple Electron-Rich Residues. Biophysical Journal, 2013, 104, 355-367.	0.2	25
21	Inter-residue coupling contributes to high-affinity subtype-selective binding of Î±-bungarotoxin to nicotinic receptors. Biochemical Journal, 2013, 454, 311-321.	1.7	16
22	Complex between Î±-bungarotoxin and an Î±7 nicotinic receptor ligand-binding domain chimaera. Biochemical Journal, 2013, 454, 303-310.	1.7	73
23	Stoichiometry for drug potentiation of a pentameric ion channel. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 6595-6600.	3.3	26
24	Intramembrane Proton Binding Site Linked to Activation of Bacterial Pentameric Ion Channel. Journal of Biological Chemistry, 2012, 287, 6482-6489.	1.6	38
25	End-Plate Acetylcholine Receptor: Structure, Mechanism, Pharmacology, and Disease. Physiological Reviews, 2012, 92, 1189-1234.	13.1	108
26	Myasthenic syndrome AChRÎ± C-loop mutant disrupts initiation of channel gating. Journal of Clinical Investigation, 2012, 122, 2613-2621.	3.9	23
27	Ligand-binding domain of an Î±7-nicotinic receptor chimera and its complex with agonist. Nature Neuroscience, 2011, 14, 1253-1259.	7.1	183
28	Functional Relationships between Agonist Binding Sites and Coupling Regions of Homomeric Cys-Loop Receptors. Journal of Neuroscience, 2011, 31, 3662-3669.	1.7	30
29	What Have We Learned from the Congenital Myasthenic Syndromes. Journal of Molecular Neuroscience, 2010, 40, 143-153.	1.1	82
30	On the Origin of Ion Selectivity in the Cys-Loop Receptor Family. Journal of Molecular Neuroscience, 2010, 40, 70-76.	1.1	24
31	Number and Locations of Agonist Binding Sites Required to Activate Homomeric Cys-Loop Receptors. Journal of Neuroscience, 2009, 29, 6022-6032.	1.7	106
32	Binding to Gating Transduction in Nicotinic Receptors: Cys-Loop Energetically Couples to Pre-M1 and M2â€“M3 Regions. Journal of Neuroscience, 2009, 29, 3189-3199.	1.7	90
33	Detection and trapping of intermediate states priming nicotinic receptor channel opening. Nature, 2009, 459, 451-454.	13.7	195
34	Single-Channel Current Through Nicotinic Receptor Produced by Closure of Binding Site C-Loop. Biophysical Journal, 2009, 96, 3582-3590.	0.2	29
35	Molecular-Dynamics Simulations of ELICâ€”a Prokaryotic Homologue of the Nicotinic Acetylcholine Receptor. Biophysical Journal, 2009, 96, 4502-4513.	0.2	36
36	Recent Structural and Mechanistic Insights into Endplate Acetylcholine Receptors. Annals of the New York Academy of Sciences, 2008, 1132, 53-60.	1.8	1

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37	Nicotinic Receptor Interloop Proline Anchors Î²1-Î²2 and Cys loops in Coupling Agonist Binding to Channel Gating. Journal of General Physiology, 2008, 132, 265-278.	0.9	47
38	An Ion Selectivity Filter in the Extracellular Domain of Cys-loop Receptors Reveals Determinants for Ion Conductance. Journal of Biological Chemistry, 2008, 283, 36066-36070.	1.6	54
39	Morantel Allosterically Enhances Channel Gating of Neuronal Nicotinic Acetylcholine Î±3Î²2 Receptors. Molecular Pharmacology, 2008, 74, 466-475.	1.0	21
40	Control of Cation Permeation through the Nicotinic Receptor Channel. PLoS Computational Biology, 2008, 4, e41.	1.5	50
41	The Interface between Extracellular and Transmembrane Domains of Homomeric Cys-Loop Receptors Governs Open-Channel Lifetime and Rate of Desensitization. Journal of Neuroscience, 2008, 28, 7808-7819.	1.7	118
42	Congenital myastheniaâ€“related AChR Î´ subunit mutation interferes with intersubunit communication essential for channel gating. Journal of Clinical Investigation, 2008, 118, 1867-1876.	3.9	50
43	An Intersubunit Trigger of Channel Gating in the Muscle Nicotinic Receptor. Journal of Neuroscience, 2007, 27, 4110-4119.	1.7	36
44	Nanosecond-Timescale Conformational Dynamics of the Human Î±7 Nicotinic Acetylcholine Receptor. Biophysical Journal, 2007, 93, 2622-2634.	0.2	70
45	Recent advances in Cys-loop receptor structure and function. Nature, 2006, 440, 448-455.	13.7	480
46	Slow-channel mutation in acetylcholine receptor Î±M4 domain and its efficient knockdown. Annals of Neurology, 2006, 60, 128-136.	2.8	44
47	Targeted Molecular Dynamics Study of C-Loop Closure and Channel Gating in Nicotinic Receptors. PLoS Computational Biology, 2006, 2, e134.	1.5	113
48	Solution NMR of Acetylcholine Binding Protein Reveals Agonist-Mediated Conformational Change of the C-Loop. Molecular Pharmacology, 2006, 70, 1230-1235.	1.0	36
49	Principal pathway coupling agonist binding to channel gating in nicotinic receptors. Nature, 2005, 438, 243-247.	13.7	263
50	Structural Basis for Epibatidine Selectivity at Desensitized Nicotinic Receptors. Molecular Pharmacology, 2005, 67, 123-131.	1.0	5
51	Initial Coupling of Binding to Gating Mediated by Conserved Residues in the Muscle Nicotinic Receptor. Journal of General Physiology, 2005, 126, 23-39.	0.9	102
52	Single-Channel Kinetic Analysis of Chimeric Î±7â€“5HT3A Receptors. Molecular Pharmacology, 2005, 68, 1475-1483.	1.0	37
53	Agonist-mediated Conformational Changes in Acetylcholine-binding Protein Revealed by Simulation and Intrinsic Tryptophan Fluorescence. Journal of Biological Chemistry, 2005, 280, 8443-8451.	1.6	119
54	Current understanding of congenital myasthenic syndromes. Current Opinion in Pharmacology, 2005, 5, 308-321.	1.7	147

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55	Ligand-Induced Conformational Change in the Î±7 Nicotinic Receptor Ligand Binding Domain. Biophysical Journal, 2005, 88, 2564-2576.	0.2	67
56	Toward Atomic-Scale Understanding of Ligand Recognition in the Muscle Nicotinic Receptor. Current Medicinal Chemistry, 2004, 11, 559-567.	1.2	18
57	Invariant Aspartic Acid in Muscle Nicotinic Receptor Contributes Selectively to the Kinetics of Agonist Binding. Journal of General Physiology, 2004, 124, 555-567.	0.9	39
58	Coupling of agonist binding to channel gating in an ACh-binding protein linked to an ion channel. Nature, 2004, 430, 896-900.	13.7	255
59	Molecular insights into acetylcholine receptor structure and function revealed by mutations causing congenital myasthenic syndromes. Advances in Molecular and Cell Biology, 2004, 32, 95-119.	0.1	0
60	Congenital myasthenic syndromes. , 2004, , 213-226.		2
61	Congenital myasthenic syndromes: A diverse array of molecular targets. Journal of Neurocytology, 2003, 32, 1017-1037.	1.6	20
62	Mechanistic Diversity Underlying Fast Channel Congenital Myasthenic Syndromes. Annals of the New York Academy of Sciences, 2003, 998, 128-137.	1.8	13
63	Congenital Myasthenic Syndromes: Multiple Molecular Targets at the Neuromuscular Junction. Annals of the New York Academy of Sciences, 2003, 998, 138-160.	1.8	49
64	Congenital myasthenic syndromes: Progress over the past decade. Muscle and Nerve, 2003, 27, 4-25.	1.0	130
65	Sleuthing molecular targets for neurological diseases at the neuromuscular junction. Nature Reviews Neuroscience, 2003, 4, 339-352.	4.9	212
66	Curariform Antagonists Bind in Different Orientations to Acetylcholine-binding Protein. Journal of Biological Chemistry, 2003, 278, 23020-23026.	1.6	44
67	Asymmetric Structural Motions of the Homomeric Î±7 Nicotinic Receptor Ligand Binding Domain Revealed by Molecular Dynamics Simulation. Biophysical Journal, 2003, 85, 3007-3018.	0.2	76
68	Curariform Antagonists Bind in Different Orientations to the Nicotinic Receptor Ligand Binding Domain. Journal of Biological Chemistry, 2003, 278, 32284-32291.	1.6	23
69	Mutation causing severe myasthenia reveals functional asymmetry of AChR signature cystine loops in agonist binding and gating. Journal of Clinical Investigation, 2003, 111, 497-505.	3.9	68
70	Naturally Occurring Mutations at the Acetylcholine Receptor Binding Site Independently Alter ACh Binding and Channel Gating. Journal of General Physiology, 2002, 120, 483-496.	0.9	59
71	Mechanism of Tacrine Block at Adult Human Muscle Nicotinic Acetylcholine Receptors. Journal of General Physiology, 2002, 120, 369-393.	0.9	27
72	Lysine Scanning Mutagenesis Delineates Structural Model of the Nicotinic Receptor Ligand Binding Domain. Journal of Biological Chemistry, 2002, 277, 29210-29223.	1.6	71

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73	Identification of Residues at the Î± and Îµ Subunit Interfaces Mediating Species Selectivity of Waglerin-1 for Nicotinic Acetylcholine Receptors. Journal of Biological Chemistry, 2002, 277, 5433-5440.	1.6	42
74	Residues in the Îµ Subunit of the Nicotinic Acetylcholine Receptor Interact To Confer Selectivity of Waglerin-1 for the Î±â^'Îµ Subunit Interface Siteâ€. Biochemistry, 2002, 41, 7895-7906.	1.2	40
75	Subunit-Selective Contribution to Channel Gating of the M4 Domain of the Nicotinic Receptor. Biophysical Journal, 2002, 82, 1920-1929.	0.2	47
76	Novel Modulation of Neuronal Nicotinic Acetylcholine Receptors by Association with the Endogenous Prototoxin lynx1. Neuron, 2002, 33, 893-903.	3.8	197
77	The nicotinic receptor ligand binding domain. Journal of Neurobiology, 2002, 53, 431-446.	3.7	161
78	The Spectrum of Congenital Myasthenic Syndromes. Molecular Neurobiology, 2002, 26, 347-367.	1.9	21
79	Hydrophobic Pairwise Interactions Stabilize Î±-Conotoxin MI in the Muscle Acetylcholine Receptor Binding Site. Journal of Biological Chemistry, 2000, 275, 12692-12700.	1.6	49
80	Pairwise Electrostatic Interactions between Î±-Neurotoxins and Î³, Î´, and Îµ Subunits of the Nicotinic Acetylcholine Receptor. Journal of Biological Chemistry, 2000, 275, 5478-5484.	1.6	45
81	Nicotinic Receptor Fourth Transmembrane Domain. Journal of General Physiology, 2000, 115, 663-672.	0.9	86
82	Fundamental Gating Mechanism of Nicotinic Receptor Channel Revealed by Mutation Causing a Congenital Myasthenic Syndrome. Journal of General Physiology, 2000, 116, 449-462.	0.9	77
83	Orientation of Î±-Neurotoxin at the Subunit Interfaces of the Nicotinic Acetylcholine Receptorâ€. Biochemistry, 2000, 39, 15388-15398.	1.2	35
84	Subunit Interface Selectivity of the Î±-Neurotoxins for the Nicotinic Acetylcholine Receptor. Journal of Biological Chemistry, 1999, 274, 9581-9586.	1.6	39
85	Acetylcholine and Epibatidine Binding to Muscle Acetylcholine Receptors Distinguish between Concerted and Uncoupled Models. Journal of Biological Chemistry, 1999, 274, 19623-19629.	1.6	35
86	Pairwise Interactions between Neuronal Î±7Acetylcholine Receptors and Î±-Conotoxin ImI. Journal of Biological Chemistry, 1999, 274, 19517-19524.	1.6	63
87	Acetylcholine receptor M3 domain: stereochemical and volume contributions to channel gating. Nature Neuroscience, 1999, 2, 226-233.	7.1	119
88	Mutation causing congenital myasthenia reveals acetylcholine receptor Î²/Î´ subunit interaction essential for assembly. Journal of Clinical Investigation, 1999, 104, 1403-1410.	3.9	71
89	Congenital Myasthenic Syndromes: New Insights from Molecular Genetic and Patch-Clamp Studiesa. Annals of the New York Academy of Sciences, 1998, 841, 140-156.	1.8	17
90	Mode Switching Kinetics Produced by a Naturally Occurring Mutation in the Cytoplasmic Loop of the Human Acetylcholine Receptor Îµ Subunit. Neuron, 1998, 20, 575-588.	3.8	109

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91	Structural Elements in Î±-Conotoxin ImI Essential for Binding to Neuronal Î±7 Receptors. Journal of Biological Chemistry, 1998, 273, 11007-11011.	1.6	78
92	Identification of Residues in the Neuronal Î±7Acetylcholine Receptor That Confer Selectivity for Conotoxin ImI. Journal of Biological Chemistry, 1998, 273, 11001-11006.	1.6	59
93	REVIEW â– : Molecular Basis of Congenital Myasthenic Syndromes: Mutations in the Acetylcholine Receptor. Neuroscientist, 1998, 4, 185-194.	2.6	27
94	Residues at the Subunit Interfaces of the Nicotinic Acetylcholine Receptor That Contribute to Î±-Conotoxin M1 Binding. Molecular Pharmacology, 1998, 53, 787-794.	1.0	46
95	Identification of Equivalent Residues in the Î³, Î´, and Îµ Subunits of the Nicotinic Receptor That Contribute to Î±-Bungarotoxin Binding. Journal of Biological Chemistry, 1997, 272, 23521-23527.	1.6	52
96	Identification of Residues in the Adult Nicotinic Acetylcholine Receptor That Confer Selectivity for Curariform Antagonists. Journal of Biological Chemistry, 1997, 272, 30793-30798.	1.6	28
97	Congenital Myasthenic Syndromes due to Heteroallelic Nonsense/Missense Mutations in the Acetylcholine Receptor Â Subunit Gene: Identification and Functional Characterization of Six New Mutations. Human Molecular Genetics, 1997, 6, 753-766.	1.4	164
98	Mutation in the M1 Domain of the Acetylcholine Receptor Î± Subunit Decreases the Rate of Agonist Dissociation. Journal of General Physiology, 1997, 109, 757-766.	0.9	138
99	Slow-Channel Myasthenic Syndrome Caused By Enhanced Activation, Desensitization, and Agonist Binding Affinity Attributable to Mutation in the M2 Domain of the Acetylcholine Receptor Î± Subunit. Journal of Neuroscience, 1997, 17, 5651-5665.	1.7	147
100	Congenital Myasthenic Syndrome Caused by Decreased Agonist Binding Affinity Due to a Mutation in the Acetylcholine Receptor Îµ Subunit. Neuron, 1996, 17, 157-170.	3.8	240
101	End-plate acetylcholine receptor deficiency due to nonsense mutations in the ? subunit. Annals of Neurology, 1996, 40, 810-817.	2.8	159
102	Molecular Dissection of Subunit Interfaces in the Acetylcholine Receptor. Journal of Biological Chemistry, 1996, 271, 25770-25777.	1.6	74
103	Asymmetric Contribution of the Conserved Disulfide Loop to Subunit Oligomerization and Assembly of the Nicotinic Acetylcholine Receptor. Journal of Biological Chemistry, 1996, 271, 31479-31484.	1.6	27
104	Mutation of the acetylcholine receptor Î± subunit causes a slow-channel myasthenic syndrome by enhancing agonist binding affinity. Neuron, 1995, 15, 229-239.	3.8	273
105	Structural basis of the different gating kinetics of fetal and adult acetylcholine receptors. Neuron, 1994, 13, 1395-1402.	3.8	144