Sarah C R Lummis

List of Publications by Year
in descending order

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83	3,966	147801	123424
papers	citations	31 h-index	61 g-index

86	86	86	3276
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cisâ€“trans isomerization at a proline opens the pore of a neurotransmitter-gated ion channel. Nature, 2005, 438, 248-252.	27.8	421
2	The structural basis of function in Cys-loop receptors. Quarterly Reviews of Biophysics, 2010, 43, 449-499.	5.7	308
3	Actions of imidacloprid and a related nitromethylene on cholinergic receptors of an identified insect motor neurone. Pest Management Science, 1991, 33, 197-204.	0.4	263
4	The 5-HT3 receptor â€“ the relationship between structure and function. Neuropharmacology, 2009, 56, 273-284.	4.1	228
5	The 5-HT₃receptor as a therapeutic target. Expert Opinion on Therapeutic Targets, 2007, 11, 527-540.	3.4	217
6	The molecular basis of the structure and function of the 5-HT 3 receptor: a model ligand-gated ion channel (Review). Molecular Membrane Biology, 2002, 19, 11-26.	2.0	174
7	A Cation-Ï€ Binding Interaction with a Tyrosine in the Binding Site of the GABAC Receptor. Chemistry and Biology, 2005, 12, 993-997.	6.0	127
8	5-HT3 Receptors. Journal of Biological Chemistry, 2012, 287, 40239-40245.	3.4	123
9	Pentameric ligand-gated ion channel ELIC is activated by GABA and modulated by benzodiazepines. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E3028-34.	7.1	120
10	Unnatural Amino Acid Mutagenesis of the GABAA Receptor Binding Site Residues Reveals a Novel Cation-Â Interaction between GABA and Â2Tyr97. Journal of Neuroscience, 2007, 27, 886-892.	3.6	102
11	Prediction of 5-HT3 Receptor Agonist-Binding Residues Using Homology Modeling. Biophysical Journal, 2003, 84, 2338-2344.	0.5	97
12	Tyrosine Residues That Control Binding and Gating in the 5-Hydroxytryptamine3 Receptor Revealed by Unnatural Amino Acid Mutagenesis. Journal of Neuroscience, 2004, 24, 9097-9104.	3.6	90
13	Multisite Binding of a General Anesthetic to the Prokaryotic Pentameric Erwinia chrysanthemi Ligand-gated Ion Channel (ELIC). Journal of Biological Chemistry, 2013, 288, 8355-8364.	3.4	90
14	Molecular modeling of the GABAC receptor ligand-binding domain. Journal of Molecular Modeling, 2006, 12, 317-324.	1.8	76
15	Structural basis of ligand recognition in 5â€HT₃ receptors. EMBO Reports, 2013, 14, 49-56.	4.5	74
16	Locating an Antagonist in the 5-HT3 Receptor Binding Site Using Modeling and Radioligand Binding. Journal of Biological Chemistry, 2005, 280, 20476-20482.	3.4	69
17	A Cation-Ï€ Interaction in the Binding Site of the Glycine Receptor Is Mediated by a Phenylalanine Residue. Journal of Neuroscience, 2008, 28, 10937-10942.	3.6	67
18	The nicotinic Î±6 subunit gene determines variability in chronic pain sensitivity via cross-inhibition of P2X2/3 receptors. Science Translational Medicine, 2015, 7, 287ra72.	12.4	59

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19	A single ring of charged amino acids at one end of the pore can control ion selectivity in the 5-HT3 receptor. British Journal of Pharmacology, 2003, 140, 359-365.	5.4	54
20	Mutagenesis and Molecular Modeling Reveal the Importance of the 5-HT3 Receptor F-loop. Journal of Biological Chemistry, 2006, 281, 16576-16582.	3.4	52
21	The Role of Tyrosine Residues in the Extracellular Domain of the 5-Hydroxytryptamine3 Receptor. Journal of Biological Chemistry, 2004, 279, 23294-23301.	3.4	47
22	A Hydrogen Bond in Loop A Is Critical for the Binding and Function of the 5-HT₃ Receptor. Biochemistry, 2008, 47, 6370-6377.	2.5	46
23	A Cation-Ï€ Interaction at a Phenylalanine Residue in the Glycine Receptor Binding Site Is Conserved for Different Agonists. Molecular Pharmacology, 2011, 79, 742-748.	2.3	43
24	GABA Binding to an Insect GABA Receptor: A Molecular Dynamics and Mutagenesis Study. Biophysical Journal, 2012, 103, 2071-2081.	0.5	43
25	Locating the Carboxylate Group of GABA in the Homomeric rho GABAA Receptor Ligand-binding Pocket. Journal of Biological Chemistry, 2006, 281, 24455-24461.	3.4	39
26	Mutation of the GABAA receptor M1 transmembrane proline increases GABA affinity and reduces barbiturate enhancement. Neuropharmacology, 2002, 42, 502-521.	4.1	37
27	Molecular Properties of 5-Hydroxytryptamine3 Receptor-Type Binding Sites Purified from NG1O8-15 Cells. Journal of Neurochemistry, 1992, 59, 1692-1701.	3.9	35
28	Transducing Agonist Binding to Channel Gating Involves Different Interactions in 5-HT3 and GABAC Receptors. Journal of Biological Chemistry, 2007, 282, 25623-25630.	3.4	35
29	Design, Synthesis, and Structureâ€“Activity Relationships of Highly Potent 5-HT₃ Receptor Ligands. Journal of Medicinal Chemistry, 2012, 55, 8603-8614.	6.4	35
30	Two Amino Acid Residues Contribute to a Cation-Â Binding Interaction in the Binding Site of an Insect GABA Receptor. Journal of Neuroscience, 2011, 31, 12371-12376.	3.6	34
31	Ginkgolide B and bilobalide block the pore of the 5-HT3 receptor at a location that overlaps the picrotoxin binding site. Neuropharmacology, 2011, 60, 488-495.	4.1	32
32	FlexStation examination of 5-HT3 receptor function using Ca2+- and membrane potential-sensitive dyes: Advantages and potential problems. Journal of Neuroscience Methods, 2005, 149, 172-177.	2.5	31
33	Molecular Characterization of Agonists That Bind to an Insect GABA Receptor. Biochemistry, 2010, 49, 2897-2902.	2.5	31
34	Defining the roles of Asn-128, Glu-129 and Phe-130 in loop A of the 5-HT3receptor. Molecular Membrane Biology, 2006, 23, 442-451.	2.0	29
35	The pharmacological profile of ELIC, a prokaryotic GABA-gated receptor. Neuropharmacology, 2012, 63, 761-767.	4.1	28
36	Snake venom phospholipase A2s exhibit strong virucidal activity against SARS-CoV-2 and inhibit the viral spike glycoprotein interaction with ACE2. Cellular and Molecular Life Sciences, 2021, 78, 7777-7794.	5.4	28

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37	The Prokaryote Ligand-Gated Ion Channel ELIC Captured in a Pore Blocker-Bound Conformation by the Alzheimerâ€™s Disease Drug Memantine. Structure, 2014, 22, 1399-1407.	3.3	27
38	Agonists and antagonists induce different palonosetron dissociation rates in 5-HT3A and 5-HT3AB receptors. Neuropharmacology, 2013, 73, 241-246.	4.1	26
39	Disturbed Neuronal ER-Golgi Sorting of Unassembled Glycine Receptors Suggests Altered Subcellular Processing Is a Cause of Human Hyperekplexia. Journal of Neuroscience, 2015, 35, 422-437.	3.6	26
40	Detection of human and rodent 5-HT3B receptor subunits by anti-peptide polyclonal antibodies. BMC Neuroscience, 2006, 7, 27.	1.9	24
41	Palonosetronâ€“5-HT₃ Receptor Interactions As Shown by a Binding Protein Cocrystal Structure. ACS Chemical Neuroscience, 2016, 7, 1641-1646.	3.5	23
42	Locating GABA in GABA receptor binding sites. Biochemical Society Transactions, 2009, 37, 1343-1346.	3.4	22
43	Structural Requirements in the Transmembrane Domain of GLIC Revealed by Incorporation of Noncanonical Histidine Analogs. Chemistry and Biology, 2014, 21, 1700-1706.	6.0	22
44	An atypical residue in the pore of Varroa destructor GABA-activated RDL receptors affects picrotoxin block and thymol modulation. Insect Biochemistry and Molecular Biology, 2014, 55, 19-25.	2.7	21
45	Cys-Loop Receptor Channel Blockers Also Block GLIC. Biophysical Journal, 2011, 101, 2912-2918.	0.5	20
46	Multiple Tyrosine Residues Contribute to GABA Binding in the GABA_C Receptor Binding Pocket. ACS Chemical Neuroscience, 2012, 3, 186-192.	3.5	20
47	Varenicline Interactions at the 5-HT₃ Receptor Ligand Binding Site are Revealed by 5-HTBP. ACS Chemical Neuroscience, 2015, 6, 1151-1157.	3.5	20
48	A single amino acid determines the toxicity of Ginkgo biloba extracts. FASEB Journal, 2012, 26, 1884-1891.	0.5	19
49	?-Aminobutyric Acid Receptor Ionophore Complexes: Differential Effects of Deltamethrin, Dichlorodiphenyltrichloroethane, and Some Novel Insecticides in a Rat Brain Membrane Preparation. Journal of Neurochemistry, 1987, 48, 689-694.	3.9	18
50	Increased ?-Aminobutyric Acid Receptor Function in the Cerebral Cortex of Myoclonic Calves with an Hereditary Deficit in Glycine/Strychnine Receptors. Journal of Neurochemistry, 1990, 55, 421-426.	3.9	17
51	The roles of aromatic residues in the glycine receptor transmembrane domain. BMC Neuroscience, 2018, 19, 53.	1.9	17
52	5-Fluorotryptamine is a partial agonist at 5-HT3 receptors, and reveals that size and electronegativity at the 5 position of tryptamine are critical for efficient receptor function. European Journal of Pharmacology, 2008, 580, 291-297.	3.5	16
53	Regulation of a pentameric ligand-gated ion channel by a semiconserved cationic lipid-binding site. Journal of Biological Chemistry, 2021, 297, 100899.	3.4	15
54	Exploring a potential palonosetron allosteric binding site in the 5-HT3 receptor. Bioorganic and Medicinal Chemistry, 2013, 21, 7523-7528.	3.0	14

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55	Insights into the binding of GABA to the insect RDL receptor from atomistic simulations: a comparison of models. Journal of Computer-Aided Molecular Design, 2014, 28, 35-48.	2.9	14
56	Aromatic Residues in the Fourth Transmembrane-Spanning Helix M4 Are Important for GABAÏ•Receptor Function. ACS Chemical Neuroscience, 2018, 9, 284-290.	3.5	14
57	Modeling and Mutational Analysis of the Binding Mode for the Multimodal Antidepressant Drug Vortioxetine to the Human 5-HT_{3A} Receptor. Molecular Pharmacology, 2018, 94, 1421-1434.	2.3	14
58	Curare alkaloids from Matis Dart Poison: Comparison with d-tubocurarine in interactions with nicotinic, 5-HT3 serotonin and GABAA receptors. PLoS ONE, 2019, 14, e0210182.	2.5	14
59	[N-Methyl-3H]Scopolamine binding sites in the central nervous system of the cockroachPeriplaneta americana. Archives of Insect Biochemistry and Physiology, 1986, 3, 339-347.	1.5	13
60	Characterization of Residues in the 5-HT₃ Receptor M4 Region That Contribute to Function. ACS Chemical Neuroscience, 2019, 10, 3167-3172.	3.5	13
61	Mixed antagonistic effects of the ginkgolides at recombinant human Ï1 GABAC receptors. Neuropharmacology, 2012, 63, 1127-1139.	4.1	12
62	Perturbation of Critical Prolines in Gloeobacter violaceus Ligand-gated Ion Channel (GLIC) Supports Conserved Gating Motions among Cys-loop Receptors. Journal of Biological Chemistry, 2016, 291, 6272-6280.	3.4	12
63	The M4 Helix Is Involved in Î±7 nACh Receptor Function. ACS Chemical Neuroscience, 2020, 11, 1406-1412.	3.5	11
64	Structureâ€“Activity Relationships of Quinoxalineâ€Based 5â€HT₃A and 5â€HT₃AB Receptorâ€Selective Ligands. ChemMedChem, 2013, 8, 946-955.	3.2	10
65	Proline Residues in the Transmembrane/Extracellular Domain Interface Loops Have Different Behaviors in 5-HT₃ and nACh Receptors. ACS Chemical Neuroscience, 2019, 10, 3327-3333.	3.5	10
66	Subtle Differences among 5-HT₃AC, 5-HT₃AD, and 5-HT₃AE Receptors Are Revealed by Partial Agonists. ACS Chemical Neuroscience, 2017, 8, 1085-1091.	3.5	9
67	Calcium modulation of 5-HT3 receptor binding and function. Neuropharmacology, 2009, 56, 285-291.	4.1	8
68	The binding characteristics and orientation of a novel radioligand with distinct properties at 5-HT3A and 5-HT3AB receptors. Neuropharmacology, 2014, 86, 378-388.	4.1	7
69	Crotonic Acid Blocks the Gloeobacter Ligand-Gated Ion Channel (GLIC) via the Extracellular Domain. Biochemistry, 2016, 55, 5947-5951.	2.5	7
70	Probing Proline Residues in the Prokaryotic Ligand-Gated Ion Channel, ELIC. Biochemistry, 2018, 57, 4036-4043.	2.5	7
71	M4, the Outermost Helix, is Extensively Involved in Opening of the Î±4Î²2 nACh Receptor. ACS Chemical Neuroscience, 2021, 12, 133-139.	3.5	7
72	5-HT₃ Receptor Brain-Type B-Subunits are Differentially Expressed in Heterologous Systems. ACS Chemical Neuroscience, 2015, 6, 1158-1164.	3.5	6

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73	Multiple regions in the extracellular domain of the glycine receptor determine receptor activity. Journal of Biological Chemistry, 2018, 293, 13889-13896.	3.4	6
74	Characterization of a 5-HT₃â€“ELIC Chimera Revealing the Sites of Action of Modulators. ACS Chemical Neuroscience, 2018, 9, 1409-1415.	3.5	5
75	Identification of Novel Functionally Important Aromatic Residue Interactions in the Extracellular Domain of the Glycine Receptor. Biochemistry, 2018, 57, 4029-4035.	2.5	5
76	A Single Mutation in the Outer Lipid-Facing Helix of a Pentameric Ligand-Gated Ion Channel Affects Channel Function Through a Radially-Propagating Mechanism. Frontiers in Molecular Biosciences, 2021, 8, 644720.	3.5	3
77	The Proton Responsiveness in the Extracellular Domain of GLIC Differs in the Presence of the ELIC Transmembrane Domain. Biochemistry, 2017, 56, 2134-2138.	2.5	2
78	Proline Residues Contribute to Efficient GABAp Receptor Function. ACS Chemical Neuroscience, 2020, 11, 4215-4222.	3.5	2
79	Mutations of the nACh Receptor M4 Helix Reveal Different Phenotypes in Different Expression Systems: Could Lipids be Responsible?. Frontiers in Physiology, 2022, 13, .	2.8	2
80	Many Proline Residues in the Extracellular Domain Contribute to Glycine Receptor Function. ACS Chemical Neuroscience, 2020, 11, 2658-2665.	3.5	1
81	Probing residues in the pore-forming (M2) domain of the Cys-loop receptor homologue GLIC reveals some unusual features. Molecular Membrane Biology, 2015, 32, 26-31.	2.0	0
82	The 5-HT3 Receptor. , 2016, , 1-4.		0
83	The 5-HT3 Receptor. , 2018, , 5373-5377.		0