Gustav Akk

List of Publications by Citations

63 papers	1,582 citations	23 h-index	38 g-index
89 ext. papers	1,759 ext. citations	5 avg, IF	5.31 L-index

#	Paper	IF	Citations
63	Neurosteroid access to the GABAA receptor. *Journal of Neuroscience*, **2005**, 25, 11605-13	6.6	134
62	Mechanisms of neurosteroid interactions with GABA(A) receptors **2007**, 116, 35-57		119
61	Pregnenolone sulfate block of GABA(A) receptors: mechanism and involvement of a residue in the M2 region of the alpha subunit. *Journal of Physiology*, **2001**, 532, 673-84	3.9	104
60	Mutations of the GABA-A receptor alpha1 subunit M1 domain reveal unexpected complexity for modulation by neuroactive steroids. *Molecular Pharmacology*, **2008**, 74, 614-27	4.3	71
59	Neuroactive steroids have multiple actions to potentiate GABAA receptors. *Journal of Physiology*, **2004**, 558, 59-74	3.9	67
58	Photoaffinity labeling with a neuroactive steroid analogue. 6-azi-pregnanolone labels voltage-dependent anion channel-1 in rat brain. *Journal of Biological Chemistry*, **2003**, 278, 13196-206	5.4	63
57	Activation of GABA(A) receptors containing the alpha4 subunit by GABA and pentobarbital. *Journal of Physiology*, **2004**, 556, 387-99	3.9	55
56	Activation and block of recombinant GABA(A) receptors by pentobarbitone: a single-channel study. *British Journal of Pharmacology*, **2000**, 130, 249-58	8.6	46
55	Characteristics of concatemeric GABA(A) receptors containing □/□subunits expressed in Xenopus oocytes. *British Journal of Pharmacology*, **2012**, 165, 2228-43	8.6	42
54	Galantamine activates muscle-type nicotinic acetylcholine receptors without binding to the acetylcholine-binding site. *Journal of Neuroscience*, **2005**, 25, 1992-2001	6.6	39
53	Multiple functional neurosteroid binding sites on GABAA receptors. *PLoS Biology*, **2019**, 17, e3000157	9.7	38
52	The influence of the membrane on neurosteroid actions at GABA(A) receptors. *Psychoneuroendocrinology*, **2009**, 34 Suppl 1, S59-66	5	38
51	Natural and enantiomeric etiocholanolone interact with distinct sites on the rat alpha1beta2gamma2L GABAA receptor. *Molecular Pharmacology*, **2007**, 71, 1582-90	4.3	36
50	Contributions of the non-alpha subunit residues (loop D) to agonist binding and channel gating in the muscle nicotinic acetylcholine receptor. *Journal of Physiology*, **2002**, 544, 695-705	3.9	36
49	□aminobutyric acid type A □, □, and □subunits assemble to produce more than one functionally distinct receptor type. *Molecular Pharmacology*, **2014**, 86, 647-56	4.3	33
48	Propofol Is an Allosteric Agonist with Multiple Binding Sites on Concatemeric Ternary GABA Receptors. *Molecular Pharmacology*, **2018**, 93, 178-189	4.3	29
47	Multiple Non-Equivalent Interfaces Mediate Direct Activation of GABAA Receptors by Propofol. *Current Neuropharmacology*, **2016**, 14, 772-80	7.6	29

46	Activation and block of mouse muscle-type nicotinic receptors by tetraethylammonium. *Journal of Physiology*, **2003**, 551, 155-68	3.9	28
45	Aromatics at the murine nicotinic receptor agonist binding site: mutational analysis of the alphaY93 and alphaW149 residues. *Journal of Physiology*, **2001**, 535, 729-40	3.9	27
44	Low doses of ethanol and a neuroactive steroid positively interact to modulate rat GABA(A) receptor function. *Journal of Physiology*, **2003**, 546, 641-6	3.9	26
43	Mapping two neurosteroid-modulatory sites in the prototypic pentameric ligand-gated ion channel GLIC. *Journal of Biological Chemistry*, **2018**, 293, 3013-3027	5.4	23
42	Structural elements near the C-terminus are responsible for changes in nicotinic receptor gating kinetics following patch excision. *Journal of Physiology*, **2000**, 527 Pt 3, 405-17	3.9	23
41	Occupation of either site for the neurosteroid allopregnanolone potentiates the opening of the GABAA receptor induced from either transmitter binding site. *Molecular Pharmacology*, **2011**, 80, 79-86	4.3	22
40	Applying the Monod-Wyman-Changeux Allosteric Activation Model to Pseudo-Steady-State Responses from GABA Receptors. *Molecular Pharmacology*, **2019**, 95, 106-119	4.3	21
39	GABA Type A Receptor Activation in the Allosteric Coagonist Model Framework: Relationship between EC and Basal Activity. *Molecular Pharmacology*, **2018**, 93, 90-100	4.3	21
38	Mutational Analysis of the Putative High-Affinity Propofol Binding Site in Human β Homomeric GABAA Receptors. *Molecular Pharmacology*, **2015**, 88, 736-45	4.3	19
37	The Actions of Drug Combinations on the GABA Receptor Manifest as Curvilinear Isoboles of Additivity. *Molecular Pharmacology*, **2017**, 92, 556-563	4.3	19
36	Kinetic and structural determinants for GABA-A receptor potentiation by neuroactive steroids. *Current Neuropharmacology*, **2010**, 8, 18-25	7.6	18
35	Hydrogen bonding between the 17beta-substituent of a neurosteroid and the GABA(A) receptor is not obligatory for channel potentiation. *British Journal of Pharmacology*, **2009**, 158, 1322-9	8.6	18
34	Chemogenetic Isolation Reveals Synaptic Contribution of δGABA Receptors in Mouse Dentate Granule Neurons. *Journal of Neuroscience*, **2018**, 38, 8128-8145	6.6	17
33	Enhanced GABAergic actions resulting from the coapplication of the steroid 3β-hydroxy-5β-pregnane-11,20-dione (alfaxalone) with propofol or diazepam. *Scientific Reports*, **2018**, 8, 10341	4.9	17
32	Steady-State Activation and Modulation of the Concatemeric 122L GABA Receptor. *Molecular Pharmacology*, **2019**, 96, 320-329	4.3	16
31	Ethanol modulates the interaction of the endogenous neurosteroid allopregnanolone with the alpha1beta2gamma2L GABAA receptor. *Molecular Pharmacology*, **2007**, 71, 461-72	4.3	16
30	Analysis of GABA Receptor Activation by Combinations of Agonists Acting at the Same or Distinct Binding Sites. *Molecular Pharmacology*, **2019**, 95, 70-81	4.3	16
29	Synaptic-type 122L GABAA receptors produce large persistent currents in the presence of ambient GABA and anesthetic drugs. *Molecular Pharmacology*, **2015**, 87, 776-81	4.3	15

28	Activation and modulation of recombinant glycine and GABA receptors by 4-halogenated analogues of propofol. *British Journal of Pharmacology*, **2016**, 173, 3110-3120	8.6	14
27	Steady-state activation and modulation of the synaptic-type 122L GABA receptor by combinations of physiological and clinical ligands. *Physiological Reports*, **2019**, 7, e14230	2.6	13
26	Pharmacology of structural changes at the GABA(A) receptor transmitter binding site. *British Journal of Pharmacology*, **2011**, 162, 840-50	8.6	12
25	Activation of heteroliganded mouse muscle nicotinic receptors. *Journal of Physiology*, **2005**, 564, 359-76	3.9	12
24	Structural studies of the actions of anesthetic drugs on the aminobutyric acid type A receptor. *Anesthesiology*, **2011**, 115, 1338-48	4.3	12
23	Site-specific effects of neurosteroids on GABA receptor activation and desensitization. *ELife*, **2020**, 9,	8.9	11
22	11-trifluoromethyl-phenyldiazirinyl neurosteroid analogues: potent general anesthetics and photolabeling reagents for GABAA receptors. *Psychopharmacology*, **2014**, 231, 3479-91	4.7	10
21	Activation and modulation of concatemeric GABA-A receptors expressed in human embryonic kidney cells. *Molecular Pharmacology*, **2009**, 75, 1400-11	4.3	10
20	The molecular determinants of neurosteroid binding in the GABA(A) receptor. *Journal of Steroid Biochemistry and Molecular Biology*, **2019**, 192, 105383	5.1	8
19	Modulation of the human 1 GABAA receptor by inhibitory steroids. *Psychopharmacology*, **2014**, 231, 3467-78	4.7	8
18	Steady-state activation of the high-affinity isoform of the GABA receptor. *Scientific Reports*, **2019**, 9, 15997	4.9	7
17	Comparison of Steroid Modulation of Spontaneous Inhibitory Postsynaptic Currents in Cultured Hippocampal Neurons and Steady-State Single-Channel Currents from Heterologously Expressed 122L GABA(A) Receptors. *Molecular Pharmacology*, **2016**, 89, 399-406	4.3	6
16	Mutations in the main cytoplasmic loop of the GABA(A) receptor 4 and subunits have opposite effects on surface expression. *Molecular Pharmacology*, **2014**, 86, 20-7	4.3	6
15	The E Loop of the Transmitter Binding Site Is a Key Determinant of the Modulatory Effects of Physostigmine on Neuronal Nicotinic 2 Receptors. *Molecular Pharmacology*, **2017**, 91, 100-109	4.3	4
14	High Constitutive Activity Accounts for the Combination of Enhanced Direct Activation and Reduced Potentiation in Mutated GABA Receptors. *Molecular Pharmacology*, **2018**, 93, 468-476	4.3	4
13	Enhancement of Muscimol Binding and Gating by Allosteric Modulators of the GABA Receptor: Relating Occupancy to State Functions. *Molecular Pharmacology*, **2020**, 98, 303-313	4.3	4
12	Enhancement of Muscimol Binding and Gating by Allosteric Modulators of the GABAAReceptor: Relating Occupancy to State Functions. *Molecular Pharmacology*, **2020**, 98, 303-313	4.3	3
11	Intrasubunit and Intersubunit Steroid Binding Sites Independently and Additively Mediate 122L GABA Receptor Potentiation by the Endogenous Neurosteroid Allopregnanolone. *Molecular Pharmacology*, **2021**, 100, 19-31	4.3	3

List of Publications

10	Application of the Co-Agonist Concerted Transition Model to Analysis of GABAA Receptor Properties. *Current Neuropharmacology*, **2019**, 17, 843-851	7.6	2
9	Mild chronic perturbation of inhibition severely alters hippocampal function. *Scientific Reports*, **2019**, 9, 16431	4.9	2
8	Energetic contributions to channel gating of residues in the muscle nicotinic receptor 1 subunit. *PLoS ONE*, **2013**, 8, e78539	3.7	2
7	Assessing Potentiation of the (4)3(2)2 Nicotinic Acetylcholine Receptor by the Allosteric Agonist CMPI. *Journal of Biological Chemistry*, **2021**, 101455	5.4	2
6	The sulfated steroids pregnenolone sulfate and dehydroepiandrosterone sulfate inhibit the 132L GABA receptor by stabilizing a novel non-conducting state. *Molecular Pharmacology*, **2021**,	4.3	2
5	Introduced Amino Terminal Epitopes Can Reduce Surface Expression of Neuronal Nicotinic Receptors. *PLoS ONE*, **2016**, 11, e0151071	3.7	1
4	Site-specific effects of neurosteroids on GABAA receptor activation and desensitization		1
3	Reduced Activation of the Synaptic-Type GABA Receptor Following Prolonged Exposure to Low Concentrations of Agonists: Relationship between Tonic Activity and Desensitization. *Molecular Pharmacology*, **2020**, 98, 762-769	4.3	1
2	Analysis of Modulation of the 1 GABA Receptor by Combinations of Inhibitory and Potentiating Neurosteroids Reveals Shared and Distinct Binding Sites. *Molecular Pharmacology*, **2020**, 98, 280-291	4.3	1
1	(+)-Catharanthine potentiates the GABA receptor by binding to a transmembrane site at the (+)/() interface near the TM2-TM3 loop.. *Biochemical Pharmacology*, **2022**, 114993	6	