Gustav Akk

List of Publications by Year
in descending order

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66	1,840	236925	302126
papers	citations	25 h-index	39 g-index

89	89	89	1128
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Neurosteroid Access to the GABAA Receptor. Journal of Neuroscience, 2005, 25, 11605-11613.	3.6	144
2	Mechanisms of neurosteroid interactions with GABAA receptors. , 2007, 116, 35-57.		136
3	Pregnenolone sulfate block of GABA A receptors: mechanism and involvement of a residue in the M2 region of the Î± subunit. Journal of Physiology, 2001, 532, 673-684.	2.9	121
4	Mutations of the GABA-A Receptor Î±1 Subunit M1 Domain Reveal Unexpected Complexity for Modulation by Neuroactive Steroids. Molecular Pharmacology, 2008, 74, 614-627.	2.3	82
5	Neuroactive steroids have multiple actions to potentiate GABAAreceptors. Journal of Physiology, 2004, 558, 59-74.	2.9	76
6	Multiple functional neurosteroid binding sites on GABAA receptors. PLoS Biology, 2019, 17, e3000157.	5.6	76
7	Photoaffinity Labeling with a Neuroactive Steroid Analogue. Journal of Biological Chemistry, 2003, 278, 13196-13206.	3.4	70
8	Activation of GABAAreceptors containing the Î±4 subunit by GABA and pentobarbital. Journal of Physiology, 2004, 556, 387-399.	2.9	56
9	Activation and block of recombinant GABAA receptors by pentobarbitone: a single-channel study. British Journal of Pharmacology, 2000, 130, 249-258.	5.4	53
10	The influence of the membrane on neurosteroid actions at GABAA receptors. Psychoneuroendocrinology, 2009, 34, S59-S66.	2.7	44
11	Characteristics of concatemeric GABA_A receptors containing Î±4/Î´ subunits expressed in Xenopus oocytes. British Journal of Pharmacology, 2012, 165, 2228-2243.	5.4	43
12	Galantamine Activates Muscle-Type Nicotinic Acetylcholine Receptors without Binding to the Acetylcholine-Binding Site. Journal of Neuroscience, 2005, 25, 1992-2001.	3.6	42
13	Natural and Enantiomeric Etiocholanolone Interact with Distinct Sites on the Rat Î±1Î²2Î³2L GABAA Receptor. Molecular Pharmacology, 2007, 71, 1582-1590.	2.3	41
14	Propofol Is an Allosteric Agonist with Multiple Binding Sites on Concatemeric Ternary GABA_A Receptors. Molecular Pharmacology, 2018, 93, 178-189.	2.3	41
15	Contributions of the nonâ€Î± subunit residues (loop D) to agonist binding and channel gating in the muscle nicotinic acetylcholine receptor. Journal of Physiology, 2002, 544, 695-705.	2.9	38
16	Multiple Non-Equivalent Interfaces Mediate Direct Activation of GABAA Receptors by Propofol. Current Neuropharmacology, 2016, 14, 772-780.	2.9	37
17	Î³-Aminobutyric Acid Type A Î±4, Î²2, and Î´ Subunits Assemble to Produce More Than One Functionally Distinct Receptor Type. Molecular Pharmacology, 2014, 86, 647-656.	2.3	35
18	Applying the Monod-Wyman-Changeux Allosteric Activation Model to Pseudoâ€“Steady-State Responses from GABA_AReceptors. Molecular Pharmacology, 2019, 95, 106-119.	2.3	35

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19	Site-specific effects of neurosteroids on GABAA receptor activation and desensitization. ELife, 2020, 9, .	6.0	32
20	Aromatics at the murine nicotinic receptor agonist binding site: mutational analysis of the Î±Y93 and Î±W149 residues. Journal of Physiology, 2001, 535, 729-740.	2.9	30
21	Low doses of ethanol and a neuroactive steroid positively interact to modulate rat GABA A receptor function. Journal of Physiology, 2003, 546, 641-646.	2.9	30
22	GABA Type A Receptor Activation in the Allosteric Coagonist Model Framework: Relationship between EC₅₀ and Basal Activity. Molecular Pharmacology, 2018, 93, 90-100.	2.3	29
23	Activation and block of mouse muscle-type nicotinic receptors by tetraethylammonium. Journal of Physiology, 2003, 551, 155-168.	2.9	29
24	The Actions of Drug Combinations on the GABA_AReceptor Manifest as Curvilinear Isoboles of Additivity. Molecular Pharmacology, 2017, 92, 556-563.	2.3	28
25	Mapping two neurosteroid-modulatory sites in the prototypic pentameric ligand-gated ion channel GLIC. Journal of Biological Chemistry, 2018, 293, 3013-3027.	3.4	28
26	Occupation of Either Site for the Neurosteroid Allopregnanolone Potentiates the Opening of the GABA_A Receptor Induced from Either Transmitter Binding Site. Molecular Pharmacology, 2011, 80, 79-86.	2.3	27
27	Enhanced GABAergic actions resulting from the coapplication of the steroid 3Î±-hydroxy-5Î±-pregnane-11,20-dione (alfaxalone) with propofol or diazepam. Scientific Reports, 2018, 8, 10341.	3.3	26
28	Analysis of GABA_A Receptor Activation by Combinations of Agonists Acting at the Same or Distinct Binding Sites. Molecular Pharmacology, 2019, 95, 70-81.	2.3	26
29	Structural elements near the Câ€terminus are responsible for changes in nicotinic receptor gating kinetics following patch excision. Journal of Physiology, 2000, 527, 405-417.	2.9	23
30	Kinetic and Structural Determinants for GABA-A Receptor Potentiation by Neuroactive Steroids. Current Neuropharmacology, 2010, 8, 18-25.	2.9	21
31	Chemogenetic Isolation Reveals Synaptic Contribution of Î´ GABA_AReceptors in Mouse Dentate Granule Neurons. Journal of Neuroscience, 2018, 38, 8128-8145.	3.6	21
32	Mutational Analysis of the Putative High-Affinity Propofol Binding Site in Human Î²3 Homomeric GABA_A Receptors. Molecular Pharmacology, 2015, 88, 736-745.	2.3	20
33	Steady-State Activation and Modulation of the Concatemeric Î±1Î²2Î³2L GABA_A Receptor. Molecular Pharmacology, 2019, 96, 320-329.	2.3	20
34	Hydrogen bonding between the 17Î²â€substituent of a neurosteroid and the GABA_A receptor is not obligatory for channel potentiation. British Journal of Pharmacology, 2009, 158, 1322-1329.	5.4	19
35	Activation and modulation of recombinant glycine and GABA_A receptors by 4â€halogenated analogues of propofol. British Journal of Pharmacology, 2016, 173, 3110-3120.	5.4	19
36	Steadyâ€state activation and modulation of the synapticâ€type Î± 1 Î² 2 Î³ 2L GABA _A receptor by combinations of physiological and clinical ligands. Physiological Reports, 2019, 7, e14230.	1.7	17

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37	Ethanol Modulates the Interaction of the Endogenous Neurosteroid Allopregnanolone with the Î±1Î²2Î³2L GABAA Receptor. Molecular Pharmacology, 2007, 71, 461-472.	2.3	16
38	Pharmacology of structural changes at the GABA_A receptor transmitter binding site. British Journal of Pharmacology, 2011, 162, 840-850.	5.4	15
39	Synaptic-Type Î±1Î²2Î³2L GABAA Receptors Produce Large Persistent Currents in the Presence of Ambient GABA and Anesthetic Drugs. Molecular Pharmacology, 2015, 87, 776-781.	2.3	15
40	The molecular determinants of neurosteroid binding in the GABA(A) receptor. Journal of Steroid Biochemistry and Molecular Biology, 2019, 192, 105383.	2.5	14
41	Activation of heteroliganded mouse muscle nicotinic receptors. Journal of Physiology, 2005, 564, 359-376.	2.9	13
42	Structural Studies of the Actions of Anesthetic Drugs on the Î³-Aminobutyric Acid Type A Receptor. Anesthesiology, 2011, 115, 1338-1348.	2.5	13
43	Activation and Modulation of Concatemeric GABA-A Receptors Expressed in Human Embryonic Kidney Cells. Molecular Pharmacology, 2009, 75, 1400-1411.	2.3	12
44	11-trifluoromethyl-phenyldiazirinyl neurosteroid analogues: potent general anesthetics and photolabeling reagents for GABAA receptors. Psychopharmacology, 2014, 231, 3479-3491.	3.1	12
45	Modulation of the human Ï1 GABAA receptor by inhibitory steroids. Psychopharmacology, 2014, 231, 3467-3478.	3.1	10
46	Mutations in the Main Cytoplasmic Loop of the GABAA Receptor Î±4 and Î´ Subunits Have Opposite Effects on Surface Expression. Molecular Pharmacology, 2014, 86, 20-27.	2.3	10
47	Steady-state activation of the high-affinity isoform of the Î±4Î²2Î´ GABAA receptor. Scientific Reports, 2019, 9, 15997.	3.3	10
48	Intrasubunit and intersubunit steroid binding sites independently and additively mediate Î±1Î²2Î³2L GABA_A receptor potentiation by the endogenous neurosteroid allopregnanolone. Molecular Pharmacology, 2021, 100, MOLPHARM-AR-2021-000268.	2.3	10
49	Application of the Co-Agonist Concerted Transition Model to Analysis of GABAA Receptor Properties. Current Neuropharmacology, 2019, 17, 843-851.	2.9	9
50	The Sulfated Steroids Pregnenolone Sulfate and Dehydroepiandrosterone Sulfate Inhibit the Î±1Î²3Î³2L GABA_A Receptor by Stabilizing a Novel Nonconducting State. Molecular Pharmacology, 2022, 101, 68-77.	2.3	9
51	Enhancement of muscimol binding and gating by allosteric modulators of the GABAA receptor: relating occupancy to state functions. Molecular Pharmacology, 2020, 98, MOLPHARM-AR-2020-000066.	2.3	8
52	Comparison of Steroid Modulation of Spontaneous Inhibitory Postsynaptic Currents in Cultured Hippocampal Neurons and Steady-State Single-Channel Currents from Heterologously Expressed Î±1Î²2Î³2L GABA_A Receptors. Molecular Pharmacology, 2016, 89, 399-406.	2.3	7
53	Enhancement of Muscimol Binding and Gating by Allosteric Modulators of the GABA_AReceptor: Relating Occupancy to State Functions. Molecular Pharmacology, 2020, 98, 303-313.	2.3	6
54	High Constitutive Activity Accounts for the Combination of Enhanced Direct Activation and Reduced Potentiation in Mutated GABAA Receptors. Molecular Pharmacology, 2018, 93, 468-476.	2.3	5

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55	The E Loop of the Transmitter Binding Site Is a Key Determinant of the Modulatory Effects of Physostigmine on Neuronal Nicotinic Î±4Î²2 Receptors. Molecular Pharmacology, 2017, 91, 100-109.	2.3	4
56	Mild chronic perturbation of inhibition severely alters hippocampal function. Scientific Reports, 2019, 9, 16431.	3.3	4
57	Perspective on the relationship between GABAA receptor activity and the apparent potency of an inhibitor. Current Neuropharmacology, 2021, 19, .	2.9	4
58	Assessing potentiation of the (Î±4)3(Î²2)2 nicotinic acetylcholine receptor by the allosteric agonist CMPI. Journal of Biological Chemistry, 2022, 298, 101455.	3.4	4
59	Energetic Contributions to Channel Gating of Residues in the Muscle Nicotinic Receptor Î²1 Subunit. PLoS ONE, 2013, 8, e78539.	2.5	3
60	Reduced Activation of the Synaptic-Type GABA_A Receptor Following Prolonged Exposure to Low Concentrations of Agonists: Relationship between Tonic Activity and Desensitization. Molecular Pharmacology, 2020, 98, 762-769.	2.3	2
61	Analysis of Modulation of the Ï‡ GABAA Receptor by Combinations of Inhibitory and Potentiating Neurosteroids Reveals Shared and Distinct Binding Sites. Molecular Pharmacology, 2020, 98, 280-291.	2.3	2
62	Neurosteroid Modulation of GABA_A Receptor Function by Independent Action at Multiple Specific Binding Sites. Current Neuropharmacology, 2022, 20, 886-890.	2.9	2
63	(+)-Catharanthine potentiates the GABAA receptor by binding to a transmembrane site at the Î²(+)/Î±(-) interface near the TM2-TM3 loop. Biochemical Pharmacology, 2022, 199, 114993.	4.4	2
64	Activation of the Rat Î±1Î²2Îµ GABAA Receptor by Orthosteric and Allosteric Agonists. Biomolecules, 2022, 12, 868.	4.0	2
65	Introduced Amino Terminal Epitopes Can Reduce Surface Expression of Neuronal Nicotinic Receptors. PLoS ONE, 2016, 11, e0151071.	2.5	1
66	Activation of the Î±1Î²2Î³2L GABAA Receptor by Physiological Agonists. Biomolecules, 2021, 11, 1864.	4.0	0