Trevor G Smart

List of Publications by Year
in descending order

98 papers	10,436 citations	41258 49 h-index	35952 97 g-index
106 all docs	106 docs citations	106 times ranked	8589 citing authors

#	Article	IF	Citations
1	Endogenous neurosteroids regulate GABAA receptors through two discrete transmembrane sites. Nature, 2006, 444, 486-489.	13.7	650
2	HEK293 cell line: A vehicle for the expression of recombinant proteins. Journal of Pharmacological and Toxicological Methods, 2005, 51, 187-200.	0.3	528
3	Cloning and functional expression of a brain G-protein-coupled ATP receptor. FEBS Letters, 1993, 324, 219-225.	1.3	496
4	Constructing inhibitory synapses. Nature Reviews Neuroscience, 2001, 2, 240-250.	4.9	422
5	Modulation of inhibitory and excitatory amino acid receptor ion channels by zinc. Progress in Neurobiology, 1994, 42, 393-441.	2.8	416
6	A physiological role for endogenous zinc in rat hippocampal synaptic neurotransmission. Nature, 1991, 349, 521-524.	13.7	367
7	Assembly and Cell Surface Expression of Heteromeric and Homomeric Î3-Aminobutyric Acid Type A Receptors. Journal of Biological Chemistry, 1996, 271, 89-96.	1.6	293
8	Regulation of GABAA receptor function by protein kinase C phosphorylation. Neuron, 1994, 12, 1081-1095.	3.8	290
9	Constitutive Endocytosis of GABA_AReceptors by an Association with the Adaptin AP2 Complex Modulates Inhibitory Synaptic Currents in Hippocampal Neurons. Journal of Neuroscience, 2000, 20, 7972-7977.	1.7	281
10	Binding, activation and modulation of Cys-loop receptors. Trends in Pharmacological Sciences, 2010, 31, 161-174.	4.0	276
11	Brain-Derived Neurotrophic Factor Modulates Fast Synaptic Inhibition by Regulating GABAA Receptor Phosphorylation, Activity, and Cell-Surface Stability. Journal of Neuroscience, 2004, 24, 522-530.	1.7	249
12	Retrograde activation of presynaptic NMDA receptors enhances GABA release at cerebellar interneuronâ€“Purkinje cell synapses. Nature Neuroscience, 2004, 7, 525-533.	7.1	240
13	Mutations in the gene encoding GlyT2 (SLC6A5) define a presynaptic component of human startle disease. Nature Genetics, 2006, 38, 801-806.	9.4	232
14	Zinc-mediated inhibition of GABAA receptors: discrete binding sites underlie subtype specificity. Nature Neuroscience, 2003, 6, 362-369.	7.1	226
15	GABAA receptor cell surface number and subunit stability are regulated by the ubiquitin-like protein Plic-1. Nature Neuroscience, 2001, 4, 908-916.	7.1	217
16	Adjacent phosphorylation sites on GABAA receptor Î2 subunits determine regulation by cAMP-dependent protein kinase. Nature Neuroscience, 1998, 1, 23-28.	7.1	211
17	Neurosteroid binding sites on GABAA receptors. , 2007, 116, 7-19.		209
18	Modulation of GABAA receptors by tyrosine phosphorylation. Nature, 1995, 377, 344-348.	13.7	208

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19	Zn2+ Ions: Modulators of Excitatory and Inhibitory Synaptic Activity. Neuroscientist, 2004, 10, 432-442.	2.6	207
20	Conserved site for neurosteroid modulation of GABAA receptors. Neuropharmacology, 2009, 56, 149-154.	2.0	204
21	Cell Surface Stability of Î³-Aminobutyric Acid Type A Receptors. Journal of Biological Chemistry, 1999, 274, 36565-36572.	1.6	167
22	Phospho-Dependent Functional Modulation of GABAB Receptors by the Metabolic Sensor AMP-Dependent Protein Kinase. Neuron, 2007, 53, 233-247.	3.8	167
23	GABAA Receptor Phosphorylation and Functional Modulation in Cortical Neurons by a Protein Kinase C-dependent Pathway. Journal of Biological Chemistry, 2000, 275, 38856-38862.	1.6	162
24	Dynamic mobility of functional GABAA receptors at inhibitory synapses. Nature Neuroscience, 2005, 8, 889-897.	7.1	161
25	Extrasynaptic Î±Î² subunit GABAAreceptors on rat hippocampal pyramidal neurons. Journal of Physiology, 2006, 577, 841-856.	1.3	153
26	Crystal structures of a GABAA-receptor chimera reveal new endogenous neurosteroid-binding sites. Nature Structural and Molecular Biology, 2017, 24, 977-985.	3.6	152
27	The major central endocannabinoid directly acts at GABA _A receptors. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18150-18155.	3.3	149
28	GABA Potency at GABAA Receptors Found in Synaptic and Extrasynaptic Zones. Frontiers in Cellular Neuroscience, 2011, 6, 1.	1.8	134
29	Distinct activities of GABA agonists at synapticâ€•and extrasynapticâ€‐type GABA_A receptors. Journal of Physiology, 2010, 588, 1251-1268.	1.3	133
30	The desensitization gate of inhibitory Cys-loop receptors. Nature Communications, 2015, 6, 6829.	5.8	117
31	Cyclic AMPâ€“dependent protein kinase phosphorylation facilitates GABAB receptorâ€“effector coupling. Nature Neuroscience, 2002, 5, 415-424.	7.1	115
32	Pharmacological and Physiological Characterization of Murine Homomeric Î²3 GABAAReceptors. European Journal of Neuroscience, 1997, 9, 2225-2235.	1.2	114
33	Identification of Amino Acid Residues within GABA_AReceptor Î² Subunits that Mediate Both Homomeric and Heteromeric Receptor Expression. Journal of Neuroscience, 1999, 19, 6360-6371.	1.7	107
34	Prolonged activation of NMDA receptors promotes dephosphorylation and alters postendocytic sorting of GABA _B receptors. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13918-13923.	3.3	107
35	Radixin regulates synaptic GABAA receptor density and is essential for reversal learning and short-term memory. Nature Communications, 2015, 6, 6872.	5.8	106
36	Benzodiazepines Modulate GABA_AReceptors by Regulating the Preactivation Step after GABA Binding. Journal of Neuroscience, 2012, 32, 5707-5715.	1.7	99

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37	Identification of an inhibitory Zn2+binding site on the human glycine receptor Î±1 subunit. Journal of Physiology, 1999, 520, 53-64.	1.3	89
38	Synaptic Neurotransmitter-Gated Receptors. Cold Spring Harbor Perspectives in Biology, 2012, 4, a009662-a009662.	2.3	83
39	Modulation of long-term potentiation in rat hippocampal pyramidal neurons by zinc. Pflugers Archiv European Journal of Physiology, 1994, 427, 481-486.	1.3	77
40	Modulation of neuronal and recombinant GABAAreceptors by redox reagents. Journal of Physiology, 1999, 517, 35-50.	1.3	74
41	Subcellular Localization and Endocytosis of Homomeric Î³2 Subunit Splice Variants of Î³-Aminobutyric Acid Type A Receptors. Molecular and Cellular Neurosciences, 1999, 13, 259-271.	1.0	74
42	Molecular Basis for Zinc Potentiation at Strychnine-sensitive Glycine Receptors. Journal of Biological Chemistry, 2005, 280, 37877-37884.	1.6	74
43	Identification of a Zn2+binding site on the marine gABAAreceptor complex: Dependence on the Second transmembrane domain of Î² subunits. Journal of Physiology, 1997, 505, 633-640.	1.3	72
44	Identification of Residues within GABAAReceptor Î± Subunits That Mediate Specific Assembly with Receptor Î² Subunits. Journal of Neuroscience, 2000, 20, 1297-1306.	1.7	67
45	Wnt Signaling Mediates LTP-Dependent Spine Plasticity and AMPAR Localization through Frizzled-7 Receptors. Cell Reports, 2018, 23, 1060-1071.	2.9	64
46	Interaction of H+and Zn2+on recombinant and native rat neuronal GABAAreceptors. Journal of Physiology, 1998, 507, 639-652.	1.3	63
47	Intracellular Chloride Ions Regulate the Time Course of GABA-Mediated Inhibitory Synaptic Transmission. Journal of Neuroscience, 2009, 29, 10416-10423.	1.7	63
48	Activation of single heteromeric GABAAreceptor ion channels by full and partial agonists. Journal of Physiology, 2004, 557, 389-413.	1.3	58
49	Disease-associated missense mutations in GluN2B subunit alter NMDA receptor ligand binding and ion channel properties. Nature Communications, 2018, 9, 957.	5.8	58
50	Methods for recording and measuring tonic GABAA receptor-mediated inhibition. Frontiers in Neural Circuits, 2013, 7, 193.	1.4	56
51	Brief Report: Isogenic Induced Pluripotent Stem Cell Lines From an Adult With Mosaic Down Syndrome Model Accelerated Neuronal Ageing and Neurodegeneration. Stem Cells, 2015, 33, 2077-2084.	1.4	56
52	Molecular determinants of glycine receptor Î±Î² subunit sensitivities to Zn2+-mediated inhibition. Journal of Physiology, 2005, 566, 657-670.	1.3	49
53	Mutations in the Gabrb1 gene promote alcohol consumption through increased tonic inhibition. Nature Communications, 2013, 4, 2816.	5.8	44
54	Identification of the Sites for CaMK-II-dependent Phosphorylation of GABAA Receptors. Journal of Biological Chemistry, 2007, 282, 17855-17865.	1.6	43

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55	Interneuron- and GABAA receptor-specific inhibitory synaptic plasticity in cerebellar Purkinje cells. Nature Communications, 2015, 6, 7364.	5.8	42
56	A half century of Î³-aminobutyric acid. Brain and Neuroscience Advances, 2019, 3, 239821281985824.	1.8	42
57	Single-channel recording of ligand-gated ion channels. Nature Protocols, 2007, 2, 2826-2841.	5.5	41
58	Identification of a Î² Subunit TM2 Residue Mediating Proton Modulation of GABA Type A Receptors. Journal of Neuroscience, 2002, 22, 5328-5333.	1.7	40
59	Differential agonist sensitivity of glycine receptor Î± 2 subunit splice variants. British Journal of Pharmacology, 2004, 143, 19-26.	2.7	35
60	Sushi domains confer distinct trafficking profiles on GABA _B receptors. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12171-12176.	3.3	35
61	Protein kinase <scp>C</scp> regulates tonic <scp>GABA_A</scp> receptorâ€mediated inhibition in the hippocampus and thalamus. European Journal of Neuroscience, 2013, 38, 3408-3423.	1.2	34
62	GABAAR isoform and subunit structural motifs determine synaptic and extrasynaptic receptor localisation. Neuropharmacology, 2020, 169, 107540.	2.0	34
63	Mapping a molecular link between allosteric inhibition and activation of the glycine receptor. Nature Structural and Molecular Biology, 2008, 15, 1084-1093.	3.6	33
64	Snake neurotoxin Î±-bungarotoxin is an antagonist at native GABAA receptors. Neuropharmacology, 2015, 93, 28-40.	2.0	33
65	Proton sensitivity of rat cerebellar granule cell GABA A receptors: dependence on neuronal development. Journal of Physiology, 2001, 530, 219-233.	1.3	32
66	Proton modulation of recombinant GABAAreceptors: influence of GABA concentration and the Î² subunit TM2-TM3 domain. Journal of Physiology, 2005, 567, 365-377.	1.3	32
67	Epilepsy and intellectual disability linked protein Shrm4 interaction with GABABRs shapes inhibitory neurotransmission. Nature Communications, 2017, 8, 14536.	5.8	31
68	Mechanisms of inhibition and activation of extrasynaptic Î±Î² GABAA receptors. Nature, 2022, 602, 529-533.	13.7	31
69	Inhibitory Neurosteroids and the GABAA Receptor. Advances in Pharmacology, 2015, 72, 165-187.	1.2	28
70	Modulation of neurosteroid potentiation by protein kinases at synaptic- and extrasynaptic-type GABAA receptors. Neuropharmacology, 2015, 88, 63-73.	2.0	27
71	Thiocyanate ions selectively antagonize AMPAâ€evoked responses in <i>Xenopus laevis</i> oocytes microinjected with rat brain mRNA. British Journal of Pharmacology, 1993, 109, 779-787.	2.7	24
72	Photo-antagonism of the GABAA receptor. Nature Communications, 2014, 5, 4454.	5.8	22

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73	Â-Aminobutyric Acid Type B (GABAB) Receptor Internalization Is Regulated by the R2 Subunit. Journal of Biological Chemistry, 2011, 286, 24324-24335.	1.6	21
74	Î³-Aminobutyric Acid Type B (GABAB) Receptor Internalization Is Regulated by the R2 Subunit. Journal of Biological Chemistry, 2011, 286, 24324-24335.	1.6	20
75	Azogabazine; a photochromic antagonist of the GABA_Areceptor. Organic and Biomolecular Chemistry, 2016, 14, 6676-6678.	1.5	19
76	Barbiturates Bind in the GLIC Ion Channel Pore and Cause Inhibition by Stabilizing a Closed State. Journal of Biological Chemistry, 2017, 292, 1550-1558.	1.6	19
77	Synthesis and evaluation of highly potent GABAA receptor antagonists based on gabazine (SR-95531). Bioorganic and Medicinal Chemistry Letters, 2011, 21, 4252-4254.	1.0	18
78	Phospho-dependent Accumulation of GABABRs at Presynaptic Terminals after NMDAR Activation. Cell Reports, 2016, 16, 1962-1973.	2.9	18
79	Probing GABAA receptors with inhibitory neurosteroids. Neuropharmacology, 2018, 136, 23-36.	2.0	18
80	Tracking Cell Surface Mobility of GPCRs Using Î±-Bungarotoxin-Linked Fluorophores. Methods in Enzymology, 2013, 521, 109-129.	0.4	16
81	Tyrosine Phosphorylation of GABAA Receptor Â2-Subunit Regulates Tonic and Phasic Inhibition in the Thalamus. Journal of Neuroscience, 2013, 33, 12718-12727.	1.7	15
82	Cell surface expression of homomeric GABAA receptors depends on single residues in subunit transmembrane domains. Journal of Biological Chemistry, 2018, 293, 13427-13439.	1.6	15
83	Giant GABAB-mediated Synaptic Potentials Induced by Zinc in the Rat Hippocampus: Paradoxical Effects of Zinc on the GABABReceptor. European Journal of Neuroscience, 1993, 5, 430-436.	1.2	14
84	Physiological role for GABAA receptor desensitization in the induction of long-term potentiation at inhibitory synapses. Nature Communications, 2021, 12, 2112.	5.8	14
85	Murine startle mutant <i>Nmf11</i> affects the structural stability of the glycine receptor and increases deactivation. Journal of Physiology, 2016, 594, 3589-3607.	1.3	10
86	Effects of <i>Gabra2</i> Point Mutations on Alcohol Intake: Increased Bingeâ€Like and Blunted Chronic Drinking by Mice. Alcoholism: Clinical and Experimental Research, 2016, 40, 2445-2455.	1.4	10
87	Differential Coassembly of Î±1-GABA_ARs Associated with Epileptic Encephalopathy. Journal of Neuroscience, 2020, 40, 5518-5530.	1.7	10
88	Context-Dependent Modulation of GABA_AR-Mediated Tonic Currents. Journal of Neuroscience, 2016, 36, 607-621.	1.7	9
89	Structural determinants and regulation of spontaneous activity in GABAA receptors. Nature Communications, 2021, 12, 5457.	5.8	8
90	Pharmacological characterisation of murine Î±4Î²1Î´ GABAA receptors expressed in Xenopus oocytes. BMC Neuroscience, 2015, 16, 8.	0.8	6

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91	Developing New 4-PIOL and 4-PHP Analogues for Photoinactivation of Î³-Aminobutyric Acid Type A Receptors. ACS Chemical Neuroscience, 2019, 10, 4669-4684.	1.7	6
92	AKAP79 enables calcineurin to directly suppress protein kinase A activity. ELife, 2021, 10, .	2.8	6
93	Speciesâ€dependent functional properties of nonâ€NMDA receptors expressed in <i>Xenopus laevis</i> oocytes injected with mammalian and avian brain mRNA. British Journal of Pharmacology, 1994, 111, 803-810.	2.7	4
94	Phosphorylation of neuroligin-2 by PKA regulates its cell surface abundance and synaptic stabilization. Science Signaling, 2022, 15, .	1.6	4
95	Optopharmacology reveals a differential contribution of native GABAA receptors to dendritic and somatic inhibition using azogabazine. Neuropharmacology, 2020, 176, 108135.	2.0	3
96	Presynaptic NMDA Receptors. Frontiers in Neuroscience, 2008, , 313-328.	0.0	3
97	Use of Electrophysiological Methods in the Study of Recombinant and Native Neuronal Ligandâ€Gated Ion Channels. Current Protocols in Pharmacology, 2012, 59, Unit 11.4.	4.0	2
98	Neuronal Inhibition under the Spotlight. Neuron, 2015, 88, 845-847.	3.8	1