Istvan Mody

List of Publications by Year
in descending order

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125	18,292	15466	17546
papers	citations	65 h-index	121 g-index

125	125	125	15675
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Inhibitory Interneuron Deficit Links Altered Network Activity and Cognitive Dysfunction in Alzheimer Model. Cell, 2012, 149, 708-721.	13.5	934
2	Reducing excessive GABA-mediated tonic inhibition promotes functional recovery after stroke. Nature, 2010, 468, 305-309.	13.7	722
3	Neuroactive steroids reduce neuronal excitability by selectively enhancing tonic inhibition mediated by Â subunit-containing GABAA receptors. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 14439-14444.	3.3	714
4	Extrasynaptic GABAA Receptors: Their Function in the CNS and Implications for Disease. Neuron, 2012, 73, 23-34.	3.8	568
5	Ovarian cycleâ€“linked changes in GABAA receptors mediating tonic inhibition alter seizure susceptibility and anxiety. Nature Neuroscience, 2005, 8, 797-804.	7.1	563
6	Diversity of inhibitory neurotransmission through GABAA receptors. Trends in Neurosciences, 2004, 27, 569-575.	4.2	490
7	Astrocyte Kir4.1 ion channel deficits contribute to neuronal dysfunction in Huntington's disease model mice. Nature Neuroscience, 2014, 17, 694-703.	7.1	486
8	Regulation of NMDA channel function by endogenous Ca2+-dependent phosphatase. Nature, 1994, 369, 235-239.	13.7	472
9	Highâ€frequency oscillations: What is normal and what is not?. Epilepsia, 2009, 50, 598-604.	2.6	447
10	Increased number of synaptic GABAA receptors underlies potentiation at hippocampal inhibitory synapses. Nature, 1998, 395, 172-177.	13.7	437
11	Selective Modulation of Tonic and Phasic Inhibitions in Dentate Gyrus Granule Cells. Journal of Neurophysiology, 2002, 87, 2624-2628.	0.9	436
12	NMDA receptors of dentate gyrus granule cells participate in synaptic transmission following kindling. Nature, 1987, 326, 701-704.	13.7	402
13	Local Generation of Fast Ripples in Epileptic Brain. Journal of Neuroscience, 2002, 22, 2012-2021.	1.7	400
14	High-frequency Oscillations after Status Epilepticus: Epileptogenesis and Seizure Genesis. Epilepsia, 2004, 45, 1017-1023.	2.6	394
15	Neurofibromin Regulation of ERK Signaling Modulates GABA Release and Learning. Cell, 2008, 135, 549-560.	13.5	384
16	Perisynaptic Localization of Î´ Subunit-Containing GABA_AReceptors and Their Activation by GABA Spillover in the Mouse Dentate Gyrus. Journal of Neuroscience, 2003, 23, 10650-10661.	1.7	364
17	GABAAR Plasticity during Pregnancy: Relevance to Postpartum Depression. Neuron, 2008, 59, 207-213.	3.8	345
18	Which GABA_AReceptor Subunits Are Necessary for Tonic Inhibition in the Hippocampus?. Journal of Neuroscience, 2008, 28, 1421-1426.	1.7	325

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19	The splicing regulator Rbfox1 (A2BP1) controls neuronal excitation in the mammalian brain. Nature Genetics, 2011, 43, 706-711.	9.4	297
20	Activation of GABAA Receptors: Views from Outside the Synaptic Cleft. Neuron, 2007, 56, 763-770.	3.8	295
21	Altered Expression of the Â Subunit of the GABAA Receptor in a Mouse Model of Temporal Lobe Epilepsy. Journal of Neuroscience, 2004, 24, 8629-8639.	1.7	286
22	Receptors with Different Affinities Mediate Phasic and Tonic GABA_AConductances in Hippocampal Neurons. Journal of Neuroscience, 2002, 22, RC223-RC223.	1.7	281
23	Low Ethanol Concentrations Selectively Augment the Tonic Inhibition Mediated by Â Subunit-Containing GABAA Receptors in Hippocampal Neurons. Journal of Neuroscience, 2004, 24, 8379-8382.	1.7	236
24	A new naturally occurring GABAA receptor subunit partnership with high sensitivity to ethanol. Nature Neuroscience, 2007, 10, 40-48.	7.1	232
25	The main source of ambient GABA responsible for tonic inhibition in the mouse hippocampus. Journal of Physiology, 2007, 582, 1163-1178.	1.3	231
26	Connectomics and epilepsy. Current Opinion in Neurology, 2013, 26, 186-194.	1.8	227
27	Distinguishing between GABA(A) receptors responsible for tonic and phasic conductances. , 2001, 26, 907-913.		222
28	Pathological Cell-Cell Interactions Elicited by a Neuropathogenic Form of Mutant Huntingtin Contribute to Cortical Pathogenesis in HD Mice. Neuron, 2005, 46, 433-444.	3.8	222
29	GABA Transporter-1 (GAT1)-Deficient Mice: Differential Tonic Activation of GABAA Versus GABAB Receptors in the Hippocampus. Journal of Neurophysiology, 2003, 90, 2690-2701.	0.9	218
30	GABA Transporter Deficiency Causes Tremor, Ataxia, Nervousness, and Increased GABA-Induced Tonic Conductance in Cerebellum. Journal of Neuroscience, 2005, 25, 3234-3245.	1.7	212
31	Neurosteroid Synthesis-Mediated Regulation of GABAA Receptors: Relevance to the Ovarian Cycle and Stress. Journal of Neuroscience, 2007, 27, 2155-2162.	1.7	210
32	Disruption of GABA_A Receptors on GABAergic Interneurons Leads to Increased Oscillatory Power in the Olfactory Bulb Network. Journal of Neurophysiology, 2001, 86, 2823-2833.	0.9	207
33	Perpetual inhibitory activity in mammalian brain slices generated by spontaneous GABA release. Brain Research, 1991, 545, 142-150.	1.1	204
34	Altered Localization of GABA_AReceptor Subunits on Dentate Granule Cell Dendrites Influences Tonic and Phasic Inhibition in a Mouse Model of Epilepsy. Journal of Neuroscience, 2007, 27, 7520-7531.	1.7	196
35	Seizures and enhanced cortical GABAergic inhibition in two mouse models of human autosomal dominant nocturnal frontal lobe epilepsy. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19152-19157.	3.3	195
36	Control of hippocampal gamma oscillation frequency by tonic inhibition and excitation of interneurons. Nature Neuroscience, 2010, 13, 205-212.	7.1	191

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37	Hippocampal Network Hyperactivity After Selective Reduction of Tonic Inhibition in GABAA Receptor Î±5 Subunitâ€“Deficient Mice. Journal of Neurophysiology, 2006, 95, 2796-2807.	0.9	190
38	Binding Kinetics of Calbindin-D28k Determined by Flash Photolysis of Caged Ca2+. Biophysical Journal, 2000, 79, 3009-3018.	0.2	176
39	The process of epileptogenesis: a pathophysiological approach. Current Opinion in Neurology, 2001, 14, 187-192.	1.8	175
40	Modulation of Synaptic GABA_AReceptor Function by PKA and PKC in Adult Hippocampal Neurons. Journal of Neuroscience, 1999, 19, 674-683.	1.7	171
41	A hybrid approach to measuring electrical activity in genetically specified neurons. Nature Neuroscience, 2005, 8, 1619-1626.	7.1	169
42	Calmodulin as a direct detector of Ca2+ signals. Nature Neuroscience, 2011, 14, 301-304.	7.1	165
43	Deletion of Astroglial Dicer Causes Non-Cell-Autonomous Neuronal Dysfunction and Degeneration. Journal of Neuroscience, 2011, 31, 8306-8319.	1.7	154
44	Halothane enhances tonic neuronal inhibition of elevating intracellular calcium. Brain Research, 1991, 538, 319-323.	1.1	148
45	Dantrolene-Na (Dantrium) blocks induction of long-term potentiation in hippocampal slices. Neuroscience Letters, 1989, 98, 172-178.	1.0	137
46	Surviving Granule Cells of the Sclerotic Human Hippocampus Have Reduced Ca²⁺Influx Because of a Loss of Calbindin-D_{28k}in Temporal Lobe Epilepsy. Journal of Neuroscience, 2000, 20, 1831-1836.	1.7	137
47	Number, Density, and Surface/Cytoplasmic Distribution of GABA Transporters at Presynaptic Structures of Knock-In Mice Carrying GABA Transporter Subtype 1â€“Green Fluorescent Protein Fusions. Journal of Neuroscience, 2002, 22, 10251-10266.	1.7	133
48	Cell type- and synapse-specific variability in synaptic GABAAreceptor occupancy. European Journal of Neuroscience, 2000, 12, 810-818.	1.2	130
49	Aspects of the homeostaic plasticity of GABAAreceptor-mediated inhibition. Journal of Physiology, 2005, 562, 37-46.	1.3	123
50	Synaptic Communication among Hippocampal Interneurons: Properties of Spontaneous IPSCs in Morphologically Identified Cells. Journal of Neuroscience, 1997, 17, 8427-8442.	1.7	119
51	Excitability Changes Related to GABA_AReceptor Plasticity during Pregnancy. Journal of Neuroscience, 2009, 29, 9592-9601.	1.7	114
52	Identification of neural oscillations and epileptiform changes in human brain organoids. Nature Neuroscience, 2021, 24, 1488-1500.	7.1	112
53	Establishing a physiological environment for visualized in vitro brain slice recordings by increasing oxygen supply and modifying aCSF content. Journal of Neuroscience Methods, 2009, 183, 107-113.	1.3	107
54	Glutamatergic synapses onto hippocampal interneurons: precision timing without lasting plasticity. Trends in Neurosciences, 1999, 22, 228-235.	4.2	100

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55	Astrocyte Intermediaries of Septal Cholinergic Modulation in the Hippocampus. Neuron, 2016, 90, 853-865.	3.8	100
56	Synapse-Specific Contribution of the Variation of Transmitter Concentration to the Decay of Inhibitory Postsynaptic Currents. Biophysical Journal, 2001, 80, 1251-1261.	0.2	93
57	GABAAR Modulator for Postpartum Depression. Cell, 2019, 176, 1.	13.5	91
58	Resolving the Fast Kinetics of Cooperative Binding: Ca2+ Buffering by Calretinin. PLoS Biology, 2007, 5, e311.	2.6	88
59	Activation of NMDA Receptors in Rat Dentate Gyrus Granule Cells by Spontaneous and Evoked Transmitter Release. Journal of Neurophysiology, 2003, 90, 786-797.	0.9	84
60	Selective Reduction of Cholecystokinin-Positive Basket Cell Innervation in a Model of Temporal Lobe Epilepsy. Journal of Neuroscience, 2010, 30, 8993-9006.	1.7	83
61	Finding a better drug for epilepsy: Antiepileptogenesis targets. Epilepsia, 2012, 53, 1868-1876.	2.6	82
62	Protein Kinase CÎ´ Regulates Ethanol Intoxication and Enhancement of GABA-Stimulated Tonic Current. Journal of Neuroscience, 2008, 28, 11890-11899.	1.7	77
63	Kindling-induced epilepsy alters calcium currents in granule cells of rat hippocampal slices. Brain Research, 1990, 531, 88-94.	1.1	76
64	Differential activation of glutamate receptors by spontaneously released transmitter in slices of neocortex. Neuroscience Letters, 1990, 114, 265-271.	1.0	75
65	Casein kinaseâ€“II regulates NMDA channel function in hippocampal neurons. Nature Neuroscience, 1999, 2, 125-132.	7.1	74
66	A method for isolating and patch-clamping single mammalian taste receptor cells. Brain Research, 1989, 503, 326-329.	1.1	67
67	Changes in Hippocampal Neuronal Activity During and After Unilateral Selective Hippocampal IschemiaIn Vivo. Journal of Neuroscience, 2011, 31, 851-860.	1.7	66
68	N17 Modifies Mutant Huntingtin Nuclear Pathogenesis and Severity of Disease in HD BAC Transgenic Mice. Neuron, 2015, 85, 726-741.	3.8	66
69	Ion Channels in Epilepsy. International Review of Neurobiology, 1998, 42, 199-226.	0.9	62
70	The Molecular Basis of Kindling. Brain Pathology, 1993, 3, 395-403.	2.1	61
71	A new meaning for â€œGin & Tonicâ€: tonic inhibition as the target for ethanol action in the brain. Alcohol, 2007, 41, 145-153.	0.8	59
72	The multifaceted role of inhibition in epilepsy: seizure-genesis through excessive GABAergic inhibition in autosomal dominant nocturnal frontal lobe epilepsy. Current Opinion in Neurology, 2008, 21, 155-160.	1.8	58

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73	Requirement of NMDA receptor/channels for intracellular high-energy phosphates and the extent of intraneuronal calcium buffering in cultured mouse hippocampal neurons. Neuroscience Letters, 1988, 93, 73-78.	1.0	54
74	L-type Ca2+ channel-mediated short-term plasticity of GABAergic synapses. Nature Neuroscience, 2001, 4, 975-976.	7.1	52
75	A TinyOS-Enabled MICA2-Based Wireless Neural Interface. IEEE Transactions on Biomedical Engineering, 2006, 53, 1416-1424.	2.5	49
76	Diminished KCC2 confounds synapse specificity of LTP during senescence. Nature Neuroscience, 2016, 19, 1197-1200.	7.1	47
77	Silent GABAASynapses during Flurazepam Withdrawal Are Region-Specific in the Hippocampal Formation. Journal of Neuroscience, 1997, 17, 3467-3475.	1.7	46
78	The dynamics of synchronized neurotransmitter release determined from compound spontaneous IPSCs in rat dentate granule neuronesin vitro. Journal of Physiology, 1998, 510, 477-497.	1.3	45
79	Substance P Enhances NMDA Channel Function in Hippocampal Dentate Gyrus Granule Cells. Journal of Neurophysiology, 1998, 80, 113-119.	0.9	44
80	InÂvitro gamma oscillations following partial and complete ablation of Î´ subunit-containing GABAA receptors from parvalbumin interneurons. Neuropharmacology, 2015, 88, 91-98.	2.0	43
81	Whole-cell voltage-clamp recordings in granule cells acutely isolated from hippocampal slices of adult or aged rats. Neuroscience Letters, 1989, 96, 70-75.	1.0	42
82	Hippocampal zinc infusion delays the development of afterdischarges and seizures in a kindling model of epilepsy. Epilepsia, 2009, 50, 870-879.	2.6	42
83	Altered gamma oscillations during pregnancy through loss of Î´ subunit-containing GABAA receptors on parvalbumin interneurons. Frontiers in Neural Circuits, 2013, 7, 144.	1.4	41
84	Interneuronal GABAA receptors inside and outside of synapses. Current Opinion in Neurobiology, 2014, 26, 57-63.	2.0	41
85	Bi-Fi: An Embedded Sensor/System Architecture for Remote Biological Monitoring. IEEE Transactions on Information Technology in Biomedicine, 2007, 11, 611-618.	3.6	40
86	Extrasynaptic GABAA receptors in the crosshairs of hormones and ethanol. Neurochemistry International, 2008, 52, 60-64.	1.9	40
87	Glutamatergic input from specific sources influences the nucleus accumbens-ventral pallidum information flow. Brain Structure and Function, 2012, 217, 37-48.	1.2	38
88	Kindling Induces Transient NMDA Receptorâ€“Mediated Facilitation of High-Frequency Input in the Rat Dentate Gyrus. Journal of Neurophysiology, 2001, 85, 2195-2202.	0.9	35
89	Differences between the scaling of miniature IPSCs and EPSCs recorded in the dendrites of CA1 mouse pyramidal neurons. Journal of Physiology, 2006, 576, 191-196.	1.3	34
90	Ovarian cycle-linked plasticity of ÃŽÂ´-GABAA receptor subunits in hippocampal interneurons affects ÃŽÂ³ oscillations in vivo. Frontiers in Cellular Neuroscience, 2014, 8, 222.	1.8	34

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91	Î³-Hydroxybutyrate Reduces Mitogen-activated Protein Kinase Phosphorylation via GABAB Receptor Activation in Mouse Frontal Cortex and Hippocampus. Journal of Biological Chemistry, 2003, 278, 42006-42011.	1.6	33
92	Localization of the A kinase anchoring protein AKAP79 in the human hippocampus. European Journal of Neuroscience, 2000, 12, 1155-1164.	1.2	32
93	Mossy Cells in the Dorsal and Ventral Dentate Gyrus Differ in Their Patterns of Axonal Projections. Journal of Neuroscience, 2021, 41, 991-1004.	1.7	32
94	Decreased sensitivity to Group III mGluR agonists in the lateral perforant path following kindling. Neuropharmacology, 1999, 38, 927-933.	2.0	31
95	Kinetic Properties of DM-Nitrophen Binding to Calcium and Magnesium. Biophysical Journal, 2005, 88, 4421-4433.	0.2	31
96	Protective Effect of Ifenprodil Against Spreading Depression in the Mouse Entorhinal Cortex. Journal of Neurophysiology, 2004, 92, 2610-2614.	0.9	30
97	Rosiglitazone prevents the memory deficits induced by amyloid-beta oligomers via inhibition of inflammatory responses. Neuroscience Letters, 2014, 578, 7-11.	1.0	30
98	Spike Timing of Lacunosom-Moleculare Targeting Interneurons and CA3 Pyramidal Cells During High-Frequency Network Oscillations In Vitro. Journal of Neurophysiology, 2007, 98, 96-104.	0.9	29
99	Preferential enhancement of GluN2B-containing native NMDA receptors by the endogenous modulator 24S-hydroxycholesterol in hippocampal neurons. Neuropharmacology, 2019, 148, 11-20.	2.0	28
100	Integrity of perforant path fibers and the frequency of action potential independent excitatory and inhibitory synaptic events in dentate gyrus granule cells. Synapse, 1991, 9, 219-224.	0.6	23
101	Endogenous GABA Activates Small-Conductance K+ Channels Underlying Slow IPSCs in Rat Hippocampal Neurons. Journal of Neurophysiology, 1997, 77, 2202-2208.	0.9	23
102	Evolution of temporal and spectral dynamics of pathologic highâ€frequency oscillations (pHFOs) during epileptogenesis. Epilepsia, 2015, 56, 1879-1889.	2.6	21
103	Silencing-Induced Metaplasticity in Hippocampal Cultured Neurons. Journal of Neurophysiology, 2008, 100, 690-697.	0.9	20
104	Kindling enhances kainate receptor-mediated depression of GABAergic inhibition in rat granule cells. European Journal of Neuroscience, 2002, 16, 861-867.	1.2	19
105	Down-regulation of norepinephrine sensitivity after induction of long-term neuronal plasticity (kindling) in the rat dentate gyrus. Brain Research, 1989, 476, 367-372.	1.1	18
106	Cell properties in the epileptic hippocampus. Hippocampus, 1994, 4, 275-280.	0.9	18
107	Novel Quantitative Analyses of Spontaneous Synaptic Events in Cortical Pyramidal Cells Reveal Subtle Parvalbumin-Expressing Interneuron Dysfunction in a Knock-In Mouse Model of Alzheimerâ€™s Disease. ENeuro, 2018, 5, ENEURO.0059-18.2018.	0.9	18
108	Amyloid Î² induces interneuron-specific changes in the hippocampus of APPNL-F mice. PLoS ONE, 2020, 15, e0233700.	1.1	17

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109	Interneurons and the ghost of the sea. Nature Neuroscience, 1998, 1, 434-436.	7.1	15
110	Glutamate Receptor Activation in the Kindled Dentate Gyrus. Epilepsia, 2000, 41, S100-S103.	2.6	13
111	The GAD-given Right of Dentate Gyrus Granule Cells to Become GABAergic. Epilepsy Currents, 2002, 2, 143-145.	0.4	13
112	5-HT4-Receptors Modulate Induction of Long-Term Depression but Not Potentiation at Hippocampal Output Synapses in Acute Rat Brain Slices. PLoS ONE, 2014, 9, e88085.	1.1	12
113	Intracellular Bicarbonate Regulates Action Potential Generation via KCNQ Channel Modulation. Journal of Neuroscience, 2014, 34, 4409-4417.	1.7	10
114	Noradrenergic modulation of excitability in acute and chronic model epilepsies. , 1992, 8, 321-334.		7
115	Novel test of motor and other dysfunctions in mouse neurological disease models. Journal of Neuroscience Methods, 2014, 221, 151-158.	1.3	6
116	WONOEP appraisal: Molecular and cellular imaging in epilepsy. Epilepsia, 2015, 56, 505-513.	2.6	6
117	A Tale of Timing and Transport. Neuron, 2003, 39, 729-730.	3.8	5
118	Defining the nature of human pluripotent stem cell-derived interneurons via single-cell analysis. Stem Cell Reports, 2021, 16, 2548-2564.	2.3	5
119	Activityâ€dependent changes in structure and function of hippocampal neurons. Hippocampus, 1993, 3, 99-111.	0.9	4
120	Another â€œTonicâ€•in the Realm of Epilepsy. Epilepsy Currents, 2004, 4, 248-249.	0.4	3
121	Plasticity of GABAA receptors relevant toneurosteroid actions. Epilepsia, 2010, 51, 49-49.	2.6	3
122	GABAergic Signaling in Health and Disease. Neuropharmacology, 2015, 88, 1.	2.0	2
123	Introduction to the supplement. Epilepsia, 2010, 51, 1-1.	2.6	1
124	Calcium and Autosomal Dominant Nocturnal Frontal Lobe Epilepsy (ADNFLE). Epilepsy Currents, 2003, 3, 221-222.	0.4	0
125	â€œOne Swallow Does Not Make a Summerâ€•â€¦ or Does It?. Epilepsy Currents, 2008, 8, 73-75.	0.4	0