

Istvan Mody

List of Publications by Year in descending order

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125
papers

18,292
citations

14653

66
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17104

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125
docs citations

125
times ranked

15675
citing authors

#	ARTICLE	IF	CITATIONS
1	Inhibitory Interneuron Deficit Links Altered Network Activity and Cognitive Dysfunction in Alzheimer Model. <i>Cell</i> , 2012, 149, 708-721.	28.9	934
2	Reducing excessive GABA-mediated tonic inhibition promotes functional recovery after stroke. <i>Nature</i> , 2010, 468, 305-309.	27.8	722
3	Neuroactive steroids reduce neuronal excitability by selectively enhancing tonic inhibition mediated by δ subunit-containing GABA _A receptors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 14439-14444.	7.1	714
4	Extrasynaptic GABA _A Receptors: Their Function in the CNS and Implications for Disease. <i>Neuron</i> , 2012, 73, 23-34.	8.1	568
5	Ovarian cycle-linked changes in GABA _A receptors mediating tonic inhibition alter seizure susceptibility and anxiety. <i>Nature Neuroscience</i> , 2005, 8, 797-804.	14.8	563
6	Diversity of inhibitory neurotransmission through GABA _A receptors. <i>Trends in Neurosciences</i> , 2004, 27, 569-575.	8.6	490
7	Astrocyte Kir4.1 ion channel deficits contribute to neuronal dysfunction in Huntington's disease model mice. <i>Nature Neuroscience</i> , 2014, 17, 694-703.	14.8	486
8	Regulation of NMDA channel function by endogenous Ca ²⁺ -dependent phosphatase. <i>Nature</i> , 1994, 369, 235-239.	27.8	472
9	High-frequency oscillations: What is normal and what is not?. <i>Epilepsia</i> , 2009, 50, 598-604.	5.1	447
10	Increased number of synaptic GABA _A receptors underlies potentiation at hippocampal inhibitory synapses. <i>Nature</i> , 1998, 395, 172-177.	27.8	437
11	Selective Modulation of Tonic and Phasic Inhibitions in Dentate Gyrus Granule Cells. <i>Journal of Neurophysiology</i> , 2002, 87, 2624-2628.	1.8	436
12	NMDA receptors of dentate gyrus granule cells participate in synaptic transmission following kindling. <i>Nature</i> , 1987, 326, 701-704.	27.8	402
13	Local Generation of Fast Ripples in Epileptic Brain. <i>Journal of Neuroscience</i> , 2002, 22, 2012-2021.	3.6	400
14	High-frequency Oscillations after Status Epilepticus: Epileptogenesis and Seizure Genesis. <i>Epilepsia</i> , 2004, 45, 1017-1023.	5.1	394
15	Neurofibromin Regulation of ERK Signaling Modulates GABA Release and Learning. <i>Cell</i> , 2008, 135, 549-560.	28.9	384
16	Perisynaptic Localization of δ Subunit-Containing GABA _A Receptors and Their Activation by GABA Spillover in the Mouse Dentate Gyrus. <i>Journal of Neuroscience</i> , 2003, 23, 10650-10661.	3.6	364
17	GABA _A R Plasticity during Pregnancy: Relevance to Postpartum Depression. <i>Neuron</i> , 2008, 59, 207-213.	8.1	345
18	Which GABA _A Receptor Subunits Are Necessary for Tonic Inhibition in the Hippocampus?. <i>Journal of Neuroscience</i> , 2008, 28, 1421-1426.	3.6	325

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19	The splicing regulator Rbfox1 (A2BP1) controls neuronal excitation in the mammalian brain. <i>Nature Genetics</i> , 2011, 43, 706-711.	21.4	297
20	Activation of GABA _A Receptors: Views from Outside the Synaptic Cleft. <i>Neuron</i> , 2007, 56, 763-770.	8.1	295
21	Altered Expression of the α Subunit of the GABA _A Receptor in a Mouse Model of Temporal Lobe Epilepsy. <i>Journal of Neuroscience</i> , 2004, 24, 8629-8639.	3.6	286
22	Receptors with Different Affinities Mediate Phasic and Tonic GABA _A Conductances in Hippocampal Neurons. <i>Journal of Neuroscience</i> , 2002, 22, RC223-RC223.	3.6	281
23	Low Ethanol Concentrations Selectively Augment the Tonic Inhibition Mediated by α Subunit-Containing GABA _A Receptors in Hippocampal Neurons. <i>Journal of Neuroscience</i> , 2004, 24, 8379-8382.	3.6	236
24	A new naturally occurring GABA _A receptor subunit partnership with high sensitivity to ethanol. <i>Nature Neuroscience</i> , 2007, 10, 40-48.	14.8	232
25	The main source of ambient GABA responsible for tonic inhibition in the mouse hippocampus. <i>Journal of Physiology</i> , 2007, 582, 1163-1178.	2.9	231
26	Connectomics and epilepsy. <i>Current Opinion in Neurology</i> , 2013, 26, 186-194.	3.6	227
27	Distinguishing between GABA(A) receptors responsible for tonic and phasic conductances. <i>Neurochemical Research</i> , 2001, 26, 907-913.	3.3	222
28	Pathological Cell-Cell Interactions Elicited by a Neuropathogenic Form of Mutant Huntingtin Contribute to Cortical Pathogenesis in HD Mice. <i>Neuron</i> , 2005, 46, 433-444.	8.1	222
29	GABA Transporter-1 (GAT1)-Deficient Mice: Differential Tonic Activation of GABA _A Versus GABA _B Receptors in the Hippocampus. <i>Journal of Neurophysiology</i> , 2003, 90, 2690-2701.	1.8	218
30	GABA Transporter Deficiency Causes Tremor, Ataxia, Nervousness, and Increased GABA-Induced Tonic Conductance in Cerebellum. <i>Journal of Neuroscience</i> , 2005, 25, 3234-3245.	3.6	212
31	Neurosteroid Synthesis-Mediated Regulation of GABA _A Receptors: Relevance to the Ovarian Cycle and Stress. <i>Journal of Neuroscience</i> , 2007, 27, 2155-2162.	3.6	210
32	Disruption of GABA _A Receptors on GABAergic Interneurons Leads to Increased Oscillatory Power in the Olfactory Bulb Network. <i>Journal of Neurophysiology</i> , 2001, 86, 2823-2833.	1.8	207
33	Perpetual inhibitory activity in mammalian brain slices generated by spontaneous GABA release. <i>Brain Research</i> , 1991, 545, 142-150.	2.2	204
34	Altered Localization of GABA _A Receptor Subunits on Dentate Granule Cell Dendrites Influences Tonic and Phasic Inhibition in a Mouse Model of Epilepsy. <i>Journal of Neuroscience</i> , 2007, 27, 7520-7531.	3.6	196
35	Seizures and enhanced cortical GABAergic inhibition in two mouse models of human autosomal dominant nocturnal frontal lobe epilepsy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 19152-19157.	7.1	195
36	Control of hippocampal gamma oscillation frequency by tonic inhibition and excitation of interneurons. <i>Nature Neuroscience</i> , 2010, 13, 205-212.	14.8	191

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37	Hippocampal Network Hyperactivity After Selective Reduction of Tonic Inhibition in GABA _A Receptor $\alpha 5$ Subunit-Deficient Mice. <i>Journal of Neurophysiology</i> , 2006, 95, 2796-2807.	1.8	190
38	Binding Kinetics of Calbindin-D28k Determined by Flash Photolysis of Caged Ca ²⁺ . <i>Biophysical Journal</i> , 2000, 79, 3009-3018.	0.5	176
39	The process of epileptogenesis: a pathophysiological approach. <i>Current Opinion in Neurology</i> , 2001, 14, 187-192.	3.6	175
40	Modulation of Synaptic GABA _A Receptor Function by PKA and PKC in Adult Hippocampal Neurons. <i>Journal of Neuroscience</i> , 1999, 19, 674-683.	3.6	171
41	A hybrid approach to measuring electrical activity in genetically specified neurons. <i>Nature Neuroscience</i> , 2005, 8, 1619-1626.	14.8	169
42	Calmodulin as a direct detector of Ca ²⁺ signals. <i>Nature Neuroscience</i> , 2011, 14, 301-304.	14.8	165
43	Deletion of Astroglial Dicer Causes Non-Cell-Autonomous Neuronal Dysfunction and Degeneration. <i>Journal of Neuroscience</i> , 2011, 31, 8306-8319.	3.6	154
44	Halothane enhances tonic neuronal inhibition of elevating intracellular calcium. <i>Brain Research</i> , 1991, 538, 319-323.	2.2	148
45	Dantrolene-Na (Dantrium) blocks induction of long-term potentiation in hippocampal slices. <i>Neuroscience Letters</i> , 1989, 98, 172-178.	2.1	137
46	Surviving Granule Cells of the Sclerotic Human Hippocampus Have Reduced Ca ²⁺ Influx Because of a Loss of Calbindin-D _{28k} in Temporal Lobe Epilepsy. <i>Journal of Neuroscience</i> , 2000, 20, 1831-1836.	3.6	137
47	Number, Density, and Surface/Cytoplasmic Distribution of GABA Transporters at Presynaptic Structures of Knock-In Mice Carrying GABA Transporter Subtype $\alpha 1$ Green Fluorescent Protein Fusions. <i>Journal of Neuroscience</i> , 2002, 22, 10251-10266.	3.6	133
48	Cell type- and synapse-specific variability in synaptic GABA _A receptor occupancy. <i>European Journal of Neuroscience</i> , 2000, 12, 810-818.	2.6	130
49	Aspects of the homeostatic plasticity of GABA _A receptor-mediated inhibition. <i>Journal of Physiology</i> , 2005, 562, 37-46.	2.9	123
50	Synaptic Communication among Hippocampal Interneurons: Properties of Spontaneous IPSCs in Morphologically Identified Cells. <i>Journal of Neuroscience</i> , 1997, 17, 8427-8442.	3.6	119
51	Excitability Changes Related to GABA _A Receptor Plasticity during Pregnancy. <i>Journal of Neuroscience</i> , 2009, 29, 9592-9601.	3.6	114
52	Identification of neural oscillations and epileptiform changes in human brain organoids. <i>Nature Neuroscience</i> , 2021, 24, 1488-1500.	14.8	112
53	Establishing a physiological environment for visualized in vitro brain slice recordings by increasing oxygen supply and modifying aCSF content. <i>Journal of Neuroscience Methods</i> , 2009, 183, 107-113.	2.5	107
54	Glutamatergic synapses onto hippocampal interneurons: precision timing without lasting plasticity. <i>Trends in Neurosciences</i> , 1999, 22, 228-235.	8.6	100

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55	Astrocyte Intermediaries of Septal Cholinergic Modulation in the Hippocampus. <i>Neuron</i> , 2016, 90, 853-865.	8.1	100
56	Synapse-Specific Contribution of the Variation of Transmitter Concentration to the Decay of Inhibitory Postsynaptic Currents. <i>Biophysical Journal</i> , 2001, 80, 1251-1261.	0.5	93
57	GABAAR Modulator for Postpartum Depression. <i>Cell</i> , 2019, 176, 1.	28.9	91
58	Resolving the Fast Kinetics of Cooperative Binding: Ca ²⁺ Buffering by Calretinin. <i>PLoS Biology</i> , 2007, 5, e311.	5.6	88
59	Activation of NMDA Receptors in Rat Dentate Gyrus Granule Cells by Spontaneous and Evoked Transmitter Release. <i>Journal of Neurophysiology</i> , 2003, 90, 786-797.	1.8	84
60	Selective Reduction of Cholecystokinin-Positive Basket Cell Innervation in a Model of Temporal Lobe Epilepsy. <i>Journal of Neuroscience</i> , 2010, 30, 8993-9006.	3.6	83
61	Finding a better drug for epilepsy: Antiepileptogenesis targets. <i>Epilepsia</i> , 2012, 53, 1868-1876.	5.1	82
62	Protein Kinase C δ Regulates Ethanol Intoxication and Enhancement of GABA-Stimulated Tonic Current. <i>Journal of Neuroscience</i> , 2008, 28, 11890-11899.	3.6	77
63	Kindling-induced epilepsy alters calcium currents in granule cells of rat hippocampal slices. <i>Brain Research</i> , 1990, 531, 88-94.	2.2	76
64	Differential activation of glutamate receptors by spontaneously released transmitter in slices of neocortex. <i>Neuroscience Letters</i> , 1990, 114, 265-271.	2.1	75
65	Casein kinase δ II regulates NMDA channel function in hippocampal neurons. <i>Nature Neuroscience</i> , 1999, 2, 125-132.	14.8	74
66	A method for isolating and patch-clamping single mammalian taste receptor cells. <i>Brain Research</i> , 1989, 503, 326-329.	2.2	67
67	Changes in Hippocampal Neuronal Activity During and After Unilateral Selective Hippocampal Ischemia <i>In Vivo</i> . <i>Journal of Neuroscience</i> , 2011, 31, 851-860.	3.6	66
68	N17 Modifies Mutant Huntingtin Nuclear Pathogenesis and Severity of Disease in HD BAC Transgenic Mice. <i>Neuron</i> , 2015, 85, 726-741.	8.1	66
69	Ion Channels in Epilepsy. <i>International Review of Neurobiology</i> , 1998, 42, 199-226.	2.0	62
70	The Molecular Basis of Kindling. <i>Brain Pathology</i> , 1993, 3, 395-403.	4.1	61
71	A new meaning for α -Gin & Tonic δ tonic inhibition as the target for ethanol action in the brain. <i>Alcohol</i> , 2007, 41, 145-153.	1.7	59
72	The multifaceted role of inhibition in epilepsy: seizure-genesis through excessive GABAergic inhibition in autosomal dominant nocturnal frontal lobe epilepsy. <i>Current Opinion in Neurology</i> , 2008, 21, 155-160.	3.6	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. <i>Neuroscience Letters</i> , 1988, 93, 73-78.	2.1	54
74	L-type Ca ²⁺ channel-mediated short-term plasticity of GABAergic synapses. <i>Nature Neuroscience</i> , 2001, 4, 975-976.	14.8	52
75	A TinyOS-Enabled MICA2-Based Wireless Neural Interface. <i>IEEE Transactions on Biomedical Engineering</i> , 2006, 53, 1416-1424.	4.2	49
76	Diminished KCC2 confounds synapse specificity of LTP during senescence. <i>Nature Neuroscience</i> , 2016, 19, 1197-1200.	14.8	47
77	Silent GABA Synapses during Flurazepam Withdrawal Are Region-Specific in the Hippocampal Formation. <i>Journal of Neuroscience</i> , 1997, 17, 3467-3475.	3.6	46
78	The dynamics of synchronized neurotransmitter release determined from compound spontaneous IPSCs in rat dentate granule neurons in vitro. <i>Journal of Physiology</i> , 1998, 510, 477-497.	2.9	45
79	Substance P Enhances NMDA Channel Function in Hippocampal Dentate Gyrus Granule Cells. <i>Journal of Neurophysiology</i> , 1998, 80, 113-119.	1.8	44
80	In vitro gamma oscillations following partial and complete ablation of γ subunit-containing GABA _A receptors from parvalbumin interneurons. <i>Neuropharmacology</i> , 2015, 88, 91-98.	4.1	43
81	Whole-cell voltage-clamp recordings in granule cells acutely isolated from hippocampal slices of adult or aged rats. <i>Neuroscience Letters</i> , 1989, 96, 70-75.	2.1	42
82	Hippocampal zinc infusion delays the development of afterdischarges and seizures in a kindling model of epilepsy. <i>Epilepsia</i> , 2009, 50, 870-879.	5.1	42
83	Altered gamma oscillations during pregnancy through loss of γ subunit-containing GABA _A receptors on parvalbumin interneurons. <i>Frontiers in Neural Circuits</i> , 2013, 7, 144.	2.8	41
84	Interneuronal GABA _A receptors inside and outside of synapses. <i>Current Opinion in Neurobiology</i> , 2014, 26, 57-63.	4.2	41
85	Bi-Fi: An Embedded Sensor/System Architecture for Remote Biological Monitoring. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2007, 11, 611-618.	3.2	40
86	Extrasynaptic GABA _A receptors in the crosshairs of hormones and ethanol. <i>Neurochemistry International</i> , 2008, 52, 60-64.	3.8	40
87	Glutamatergic input from specific sources influences the nucleus accumbens-ventral pallidum information flow. <i>Brain Structure and Function</i> , 2012, 217, 37-48.	2.3	38
88	Kindling Induces Transient NMDA Receptor-Mediated Facilitation of High-Frequency Input in the Rat Dentate Gyrus. <i>Journal of Neurophysiology</i> , 2001, 85, 2195-2202.	1.8	35
89	Differences between the scaling of miniature IPSCs and EPSCs recorded in the dendrites of CA1 mouse pyramidal neurons. <i>Journal of Physiology</i> , 2006, 576, 191-196.	2.9	34
90	Ovarian cycle-linked plasticity of γ -GABA _A receptor subunits in hippocampal interneurons affects γ oscillations in vivo. <i>Frontiers in Cellular Neuroscience</i> , 2014, 8, 222.	3.7	34

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91	\hat{I}^3 -Hydroxybutyrate Reduces Mitogen-activated Protein Kinase Phosphorylation via GABAB Receptor Activation in Mouse Frontal Cortex and Hippocampus. <i>Journal of Biological Chemistry</i> , 2003, 278, 42006-42011.	3.4	33
92	Localization of the A kinase anchoring protein AKAP79 in the human hippocampus. <i>European Journal of Neuroscience</i> , 2000, 12, 1155-1164.	2.6	32
93	Mossy Cells in the Dorsal and Ventral Dentate Gyrus Differ in Their Patterns of Axonal Projections. <i>Journal of Neuroscience</i> , 2021, 41, 991-1004.	3.6	32
94	Decreased sensitivity to Group III mGluR agonists in the lateral perforant path following kindling. <i>Neuropharmacology</i> , 1999, 38, 927-933.	4.1	31
95	Kinetic Properties of DM-Nitrophen Binding to Calcium and Magnesium. <i>Biophysical Journal</i> , 2005, 88, 4421-4433.	0.5	31
96	Protective Effect of Ifenprodil Against Spreading Depression in the Mouse Entorhinal Cortex. <i>Journal of Neurophysiology</i> , 2004, 92, 2610-2614.	1.8	30
97	Rosiglitazone prevents the memory deficits induced by amyloid-beta oligomers via inhibition of inflammatory responses. <i>Neuroscience Letters</i> , 2014, 578, 7-11.	2.1	30
98	Spike Timing of Lacunosom-Moleculare Targeting Interneurons and CA3 Pyramidal Cells During High-Frequency Network Oscillations In Vitro. <i>Journal of Neurophysiology</i> , 2007, 98, 96-104.	1.8	29
99	Preferential enhancement of GluN2B-containing native NMDA receptors by the endogenous modulator 24S-hydroxycholesterol in hippocampal neurons. <i>Neuropharmacology</i> , 2019, 148, 11-20.	4.1	28
100	Integrity of perforant path fibers and the frequency of action potential independent excitatory and inhibitory synaptic events in dentate gyrus granule cells. <i>Synapse</i> , 1991, 9, 219-224.	1.2	23
101	Endogenous GABA Activates Small-Conductance K ⁺ Channels Underlying Slow IPSCs in Rat Hippocampal Neurons. <i>Journal of Neurophysiology</i> , 1997, 77, 2202-2208.	1.8	23
102	Evolution of temporal and spectral dynamics of pathologic high-frequency oscillations (pHFOs) during epileptogenesis. <i>Epilepsia</i> , 2015, 56, 1879-1889.	5.1	21
103	Silencing-Induced Metaplasticity in Hippocampal Cultured Neurons. <i>Journal of Neurophysiology</i> , 2008, 100, 690-697.	1.8	20
104	Kindling enhances kainate receptor-mediated depression of GABAergic inhibition in rat granule cells. <i>European Journal of Neuroscience</i> , 2002, 16, 861-867.	2.6	19
105	Down-regulation of norepinephrine sensitivity after induction of long-term neuronal plasticity (kindling) in the rat dentate gyrus. <i>Brain Research</i> , 1989, 476, 367-372.	2.2	18
106	Cell properties in the epileptic hippocampus. <i>Hippocampus</i> , 1994, 4, 275-280.	1.9	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 Alzheimer's Disease. <i>ENeuro</i> , 2018, 5, ENEURO.0059-18.2018.	1.9	18
108	Amyloid \hat{I}^2 induces interneuron-specific changes in the hippocampus of APPNL-F mice. <i>PLoS ONE</i> , 2020, 15, e0233700.	2.5	17

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109	Interneurons and the ghost of the sea. <i>Nature Neuroscience</i> , 1998, 1, 434-436.	14.8	15
110	Glutamate Receptor Activation in the Kindled Dentate Gyrus. <i>Epilepsia</i> , 2000, 41, S100-S103.	5.1	13
111	The GAD-given Right of Dentate Gyrus Granule Cells to Become GABAergic. <i>Epilepsy Currents</i> , 2002, 2, 143-145.	0.8	13
112	5-HT ₄ -Receptors Modulate Induction of Long-Term Depression but Not Potentiation at Hippocampal Output Synapses in Acute Rat Brain Slices. <i>PLoS ONE</i> , 2014, 9, e88085.	2.5	12
113	Intracellular Bicarbonate Regulates Action Potential Generation via KCNQ Channel Modulation. <i>Journal of Neuroscience</i> , 2014, 34, 4409-4417.	3.6	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. <i>Journal of Neuroscience Methods</i> , 2014, 221, 151-158.	2.5	6
116	WONOEP appraisal: Molecular and cellular imaging in epilepsy. <i>Epilepsia</i> , 2015, 56, 505-513.	5.1	6
117	A Tale of Timing and Transport. <i>Neuron</i> , 2003, 39, 729-730.	8.1	5
118	Defining the nature of human pluripotent stem cell-derived interneurons via single-cell analysis. <i>Stem Cell Reports</i> , 2021, 16, 2548-2564.	4.8	5
119	Activity-dependent changes in structure and function of hippocampal neurons. <i>Hippocampus</i> , 1993, 3, 99-111.	1.9	4
120	Another "Tonic" in the Realm of Epilepsy. <i>Epilepsy Currents</i> , 2004, 4, 248-249.	0.8	3
121	Plasticity of GABA _A receptors relevant toneurosteroid actions. <i>Epilepsia</i> , 2010, 51, 49-49.	5.1	3
122	GABAergic Signaling in Health and Disease. <i>Neuropharmacology</i> , 2015, 88, 1.	4.1	2
123	Introduction to the supplement. <i>Epilepsia</i> , 2010, 51, 1-1.	5.1	1
124	Calcium and Autosomal Dominant Nocturnal Frontal Lobe Epilepsy (ADNFLE). <i>Epilepsy Currents</i> , 2003, 3, 221-222.	0.8	0
125	"One Swallow Does Not Make a Summer" or Does It?. <i>Epilepsy Currents</i> , 2008, 8, 73-75.	0.8	0