

Jerzy W Mozrzymas

List of Publications by Year in descending order

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103
papers

2,454
citations

218381

26
h-index

264894

42
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104
all docs

104
docs citations

104
times ranked

2887
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of matrix metalloproteinase MMP-9 on dendritic spine morphology. <i>Journal of Cell Science</i> , 2011, 124, 3369-3380.	1.2	200
2	Modulation of GABA _A Receptors by Hydrogen Ions Reveals Synaptic GABA Transient and a Crucial Role of the Desensitization Process. <i>Journal of Neuroscience</i> , 2003, 23, 7981-7992.	1.7	105
3	Extracellular proteolysis in structural and functional plasticity of mossy fiber synapses in hippocampus. <i>Frontiers in Cellular Neuroscience</i> , 2015, 9, 427.	1.8	103
4	Chlorpromazine Inhibits Miniature GABAergic Currents by Reducing the Binding and by Increasing the Unbinding Rate of GABA _A Receptors. <i>Journal of Neuroscience</i> , 1999, 19, 2474-2488.	1.7	92
5	Binding Sites, Singly Bound States, and Conformation Coupling Shape GABA-Evoked Currents. <i>Journal of Neurophysiology</i> , 2003, 89, 871-883.	0.9	79
6	Protection with estradiol in developmental models of apoptotic neurodegeneration. <i>Annals of Neurology</i> , 2005, 58, 266-276.	2.8	71
7	The attenuating effect of memantine on staurosporine-, salsolinol- and doxorubicin-induced apoptosis in human neuroblastoma SH-SY5Y cells. <i>Neurochemistry International</i> , 2008, 52, 864-877.	1.9	66
8	Astrocyte-neuron crosstalk regulates the expression and subcellular localization of carbohydrate metabolism enzymes. <i>Glia</i> , 2015, 63, 328-340.	2.5	59
9	CD44: a novel synaptic cell adhesion molecule regulating structural and functional plasticity of dendritic spines. <i>Molecular Biology of the Cell</i> , 2016, 27, 4055-4066.	0.9	58
10	Dynamism of GABA _A receptor activation shapes the "personality" of inhibitory synapses. <i>Neuropharmacology</i> , 2004, 47, 945-960.	2.0	55
11	LEF1/ β -Catenin Complex Regulates Transcription of the Cav3.1 Calcium Channel Gene (<i>Cacna1g</i>) in Thalamic Neurons of the Adult Brain. <i>Journal of Neuroscience</i> , 2010, 30, 4957-4969.	1.7	55
12	Zinc Inhibits Miniature GABAergic Currents by Allosteric Modulation of GABA _A Receptor Gating. <i>Journal of Neuroscience</i> , 2000, 20, 8618-8627.	1.7	54
13	Maintenance of long-term potentiation in hippocampal mossy fiber CA3 pathway requires fine-tuned MMP α proteolytic activity. <i>Hippocampus</i> , 2013, 23, 529-543.	0.9	52
14	Desensitization and binding properties determine distinct $\hat{1}\hat{1}^2\hat{2}^3$ and $\hat{1}\hat{3}\hat{1}^2\hat{2}^3$ GABA _A receptor-channel kinetic behavior. <i>European Journal of Neuroscience</i> , 2007, 25, 2726-2740.	1.2	50
15	Polyacetylenes from Sardinian <i>Oenanthe fistulosa</i> : A Molecular Clue to <i>risus sardonicus</i> . <i>Journal of Natural Products</i> , 2009, 72, 962-965.	1.5	48
16	Impact of Synaptic Neurotransmitter Concentration Time Course on the Kinetics and Pharmacological Modulation of Inhibitory Synaptic Currents. <i>Frontiers in Cellular Neuroscience</i> , 2011, 5, 6.	1.8	44
17	GABA transient sets the susceptibility of mIPSCs to modulation by benzodiazepine receptor agonists in rat hippocampal neurons. <i>Journal of Physiology</i> , 2007, 585, 29-46.	1.3	41
18	Mechanisms of NMDA Receptor- and Voltage-Gated L-Type Calcium Channel-Dependent Hippocampal LTP Critically Rely on Proteolysis That Is Mediated by Distinct Metalloproteinases. <i>Journal of Neuroscience</i> , 2017, 37, 1240-1256.	1.7	39

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19	Overexpression of STIM1 in neurons in mouse brain improves contextual learning and impairs long-term depression. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2017, 1864, 1071-1087.	1.9	38
20	Late phase of long-term potentiation in the mossy fiber CA3 hippocampal pathway is critically dependent on metalloproteinases activity. <i>Hippocampus</i> , 2010, 20, 917-921.	0.9	37
21	Y64 Residue at GABA _A Receptor Binding Site Is Involved in Gating by Influencing the Receptor Flipping Transitions. <i>Journal of Neuroscience</i> , 2014, 34, 3193-3209.	1.7	34
22	Membrane stretch activates a potassium channel in pig articular chondrocytes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1997, 1329, 205-210.	1.4	33
23	Declusterization of GABAA Receptors Affects the Kinetic Properties of GABAergic Currents in Cultured Hippocampal Neurons. <i>Journal of Biological Chemistry</i> , 2003, 278, 16271-16279.	1.6	33
24	Neuron-astrocyte interaction enhance GABAergic synaptic transmission in a manner dependent on key metabolic enzymes. <i>Frontiers in Cellular Neuroscience</i> , 2015, 9, 120.	1.8	31
25	Matrix metalloprotease activity shapes the magnitude of EPSPs and spike plasticity within the hippocampal CA3 network. <i>Hippocampus</i> , 2014, 24, 135-153.	0.9	29
26	Synaptic Potentiation at Basal and Apical Dendrites of Hippocampal Pyramidal Neurons Involves Activation of a Distinct Set of Extracellular and Intracellular Molecular Cues. <i>Cerebral Cortex</i> , 2019, 29, 283-304.	1.6	27
27	Matrix metalloproteinase-9 reversibly affects the time course of NMDA-induced currents in cultured rat hippocampal neurons. <i>Hippocampus</i> , 2010, 20, 1105-1108.	0.9	26
28	High Affinity Carnitine Transporters from OCTN Family in Neural Cells. <i>Neurochemical Research</i> , 2010, 35, 743-748.	1.6	26
29	Long term potentiation affects intracellular metalloproteinases activity in the mossy fiber CA3 pathway. <i>Molecular and Cellular Neurosciences</i> , 2012, 50, 147-159.	1.0	26
30	Developmental Changes of GABA Synaptic Transient in Cerebellar Granule Cells. <i>Molecular Pharmacology</i> , 2005, 67, 1221-1228.	1.0	25
31	Involvement of cellular metabolism in age-related LTP modifications in rat hippocampal slices. <i>Oncotarget</i> , 2015, 6, 14065-14081.	0.8	25
32	Interaction between cyclodextrin and neuronal membrane results in modulation of GABAA receptor conformational transitions. <i>British Journal of Pharmacology</i> , 2006, 148, 413-422.	2.7	24
33	New insights on the role of gephyrin in regulating both phasic and tonic GABAergic inhibition in rat hippocampal neurons in culture. <i>Neuroscience</i> , 2009, 164, 552-562.	1.1	24
34	The effect of glycogen phosphorylase on basal glutaminergic transmission. <i>Biochemical and Biophysical Research Communications</i> , 2011, 404, 652-655.	1.0	24
35	17 β -estradiol affects GABAergic transmission in developing hippocampus. <i>Brain Research</i> , 2008, 1241, 7-17.	1.1	23
36	Monoterpene α -thujone exerts a differential inhibitory action on GABAA receptors implicated in phasic and tonic GABAergic inhibition. <i>European Journal of Pharmacology</i> , 2013, 702, 38-43.	1.7	23

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37	Sensory Learning Differentially Affects GABAergic Tonic Currents in Excitatory Neurons and Fast Spiking Interneurons in Layer 4 of Mouse Barrel Cortex. <i>Journal of Neurophysiology</i> , 2010, 104, 746-754.	0.9	22
38	Postsynaptic potentiation and desensitization at the vertebrate end-plate receptors. <i>Progress in Neurobiology</i> , 1992, 38, 19-33.	2.8	21
39	Changes in Intracellular Calcium Concentration Affect Desensitization of GABA _A Receptors in Acutely Dissociated P2â€‘P6 Rat Hippocampal Neurons. <i>Journal of Neurophysiology</i> , 1998, 79, 1321-1328.	0.9	21
40	Saturation and self-inhibition of rat hippocampal GABA _A receptors at high GABA concentrations. <i>European Journal of Neuroscience</i> , 2002, 16, 2253-2259.	1.2	21
41	Effect of extracellular pH on recombinant $\alpha 1\beta 2\gamma 2$ and $\alpha 1\beta 2$ GABA _A receptors. <i>Neuropharmacology</i> , 2006, 51, 305-314.	2.0	21
42	Zinc Modulation of Bicuculline-sensitive and -insensitive GABA Receptors in the Developing Rat Hippocampus. <i>European Journal of Neuroscience</i> , 1996, 8, 2168-2176.	1.2	20
43	Estradiol and GABAergic Transmission in the Hippocampus. <i>Vitamins and Hormones</i> , 2010, 82, 279-300.	0.7	20
44	Energy Metabolism, Replicative Ability, Intracellular Calcium Concentration, and Ionic Channels of Horse Articular Chondrocytes. <i>Experimental Cell Research</i> , 1994, 210, 130-136.	1.2	19
45	ATP activates junctional and extrajunctional acetylcholine receptor channels in isolated adult rat muscle fibres. <i>Neuroscience Letters</i> , 1992, 139, 217-220.	1.0	17
46	A large-conductance voltage-dependent potassium channel in cultured pig articular chondrocytes. <i>Pflügers Archiv European Journal of Physiology</i> , 1997, 433, 413-427.	1.3	17
47	Multifaceted Roles of Metzincins in CNS Physiology and Pathology: From Synaptic Plasticity and Cognition to Neurodegenerative Disorders. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 178.	1.8	17
48	Extracellular Metalloproteinases in the Plasticity of Excitatory and Inhibitory Synapses. <i>Cells</i> , 2021, 10, 2055.	1.8	17
49	Inhibition of the activity of T lymphocyte Kv1.3 channels by extracellular zinc. <i>Biochemical Pharmacology</i> , 2002, 64, 595-607.	2.0	16
50	GABAergic currents in RT and VB thalamic nuclei follow kinetic pattern of $\alpha 3\beta$ and $\alpha 1\beta$ subunit-containing GABA _A receptors. <i>European Journal of Neuroscience</i> , 2007, 26, 657-665.	1.2	16
51	Comparison of kinetic and pharmacological profiles of recombinant $\alpha 1\beta 2\gamma 2$ and $\alpha 1\beta 2\gamma 2$ GABA _A receptors â€‘ A clue to the role of intersubunit interactions. <i>European Journal of Pharmacology</i> , 2016, 784, 81-89.	1.7	16
52	Differential effects of chlorpromazine on ionotropic glutamate receptors in cultured rat hippocampal neurons. <i>Neuroscience Letters</i> , 2001, 305, 53-56.	1.0	15
53	Block and allosteric modulation of GABAergic currents by oenanthotoxin in rat cultured hippocampal neurons. <i>British Journal of Pharmacology</i> , 2010, 160, 1302-1315.	2.7	15
54	Diverse impact of acute and long-term extracellular proteolytic activity on plasticity of neuronal excitability. <i>Frontiers in Cellular Neuroscience</i> , 2015, 9, 313.	1.8	15

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55	Matrix Metalloprotease 3 Activity Supports Hippocampal EPSP-to-Spike Plasticity Following Patterned Neuronal Activity via the Regulation of NMDAR Function and Calcium Flux. <i>Molecular Neurobiology</i> , 2017, 54, 804-816.	1.9	15
56	Spontaneous activity, singly bound states and the impact of alpha 1 Phe64 mutation on GABA A R gating in the novel kinetic model based on the single-channel recordings. <i>Neuropharmacology</i> , 2018, 131, 453-474.	2.0	15
57	The C loop at the orthosteric binding site is critically involved in GABAA receptor gating. <i>Neuropharmacology</i> , 2020, 166, 107903.	2.0	15
58	Propofol blocks voltage-gated potassium channels in human T lymphocytes. <i>Biochemical Pharmacology</i> , 1996, 52, 843-849.	2.0	14
59	Impact of matrix metalloproteinase-9 overexpression on synaptic excitatory transmission and its plasticity in rat CA3-CA1 hippocampal pathway. <i>Journal of Physiology and Pharmacology</i> , 2015, 66, 309-15.	1.1	14
60	Membrane voltage modulates the GABAA receptor gating in cultured rat hippocampal neurons. <i>Neuropharmacology</i> , 2006, 50, 143-153.	2.0	13
61	Distinct Modulation of Spontaneous and GABA-Evoked Gating by Flurazepam Shapes Cross-Talk Between Agonist-Free and Liganded GABAA Receptor Activity. <i>Frontiers in Cellular Neuroscience</i> , 2018, 12, 237.	1.8	13
62	Matrix metalloproteinase-3 in brain physiology and neurodegeneration. <i>Advances in Clinical and Experimental Medicine</i> , 2019, 28, 1717-1722.	0.6	13
63	Spike Timing-Dependent Plasticity in the Mouse Barrel Cortex Is Strongly Modulated by Sensory Learning and Depends on Activity of Matrix Metalloproteinase 9. <i>Molecular Neurobiology</i> , 2017, 54, 6723-6736.	1.9	12
64	Protons modulate gating of recombinant $\alpha 1\beta 2\gamma 2$ GABAA receptor by affecting desensitization and opening transitions. <i>Neuropharmacology</i> , 2019, 146, 300-315.	2.0	12
65	GABAA Receptor $\alpha 2E155$ Residue Located at the Agonist-Binding Site Is Involved in the Receptor Gating. <i>Frontiers in Cellular Neuroscience</i> , 2020, 14, 2.	1.8	12
66	Long-term plasticity of inhibitory synapses in the hippocampus and spatial learning depends on matrix metalloproteinase 3. <i>Cellular and Molecular Life Sciences</i> , 2021, 78, 2279-2298.	2.4	12
67	Potassium Channels of Pig Articular Chondrocytes Are Blocked by Propofol. <i>Biochemical and Biophysical Research Communications</i> , 1994, 202, 31-37.	1.0	11
68	Benzodiazepine receptor agonists affect both binding and gating of recombinant $\alpha 1\beta 2\gamma 2$ gamma-aminobutyric acid-A receptors. <i>NeuroReport</i> , 2007, 18, 781-785.	0.6	11
69	17 β -estradiol modulates GABAergic synaptic transmission and tonic currents during development in vitro. <i>Neuropharmacology</i> , 2007, 52, 1342-1353.	2.0	11
70	Mutations of $\alpha 1F45$ residue of GABAA receptor loop G reveal its involvement in agonist binding and channel opening/closing transitions. <i>Biochemical Pharmacology</i> , 2020, 177, 113917.	2.0	10
71	$\alpha 1$ Subunit Histidine 55 at the Interface between Extracellular and Transmembrane Domains Affects Preactivation and Desensitization of the GABA _A Receptor. <i>ACS Chemical Neuroscience</i> , 2021, 12, 562-572.	1.7	10
72	Facilitation of miniature GABAergic currents by chlorpromazine in cultured rat hippocampal cells. <i>NeuroReport</i> , 1999, 10, 2251-2254.	0.6	9

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73	Inhibitory effects of oenanthotoxin analogues on GABAergic currents in cultured rat hippocampal neurons depend on the polyacetylenes' polarity. <i>European Journal of Pharmacology</i> , 2012, 683, 35-42.	1.7	9
74	The Discrete Nature of Biological Membrane Conductance, Channel Interaction Through Electrolyte Layers and the Cable Equation. <i>Journal of Theoretical Biology</i> , 1993, 162, 371-380.	0.8	8
75	Recombinant $\alpha 1\alpha 2\alpha 3$ GABAA receptors expressed in HEK293 and in QT6 cells show different kinetics. <i>Neuroscience Letters</i> , 2003, 352, 195-198.	1.0	8
76	Flurazepam effect on GABAergic currents depends on extracellular pH. <i>British Journal of Pharmacology</i> , 2008, 154, 234-245.	2.7	8
77	Diverse impact of neuronal activity at $\alpha 1$ frequency on hippocampal long-term plasticity. <i>Journal of Neuroscience Research</i> , 2015, 93, 1330-1344.	1.3	7
78	Interaction between GABAA receptor $\alpha 1$ and $\alpha 2$ subunits at the N-terminal peripheral regions is crucial for receptor binding and gating. <i>Biochemical Pharmacology</i> , 2021, 183, 114338.	2.0	7
79	The effect of poneratoxin on neuromuscular transmission in the rat diaphragm. <i>Cellular and Molecular Biology Letters</i> , 2002, 7, 195-202.	2.7	7
80	Erythropoietin affects GABAergic transmission in hippocampal neurons in vitro. <i>Cellular and Molecular Biology Letters</i> , 2008, 13, 649-55.	2.7	6
81	Key Metabolic Enzymes Underlying Astrocytic Upregulation of GABAergic Plasticity. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 144.	1.8	6
82	An electrophysiological study of the effects of myasthenia gravis sera and complement on rat isolated muscle fibres. <i>Journal of Neuroimmunology</i> , 1993, 45, 155-162.	1.1	5
83	Mutations at the M2 and M3 Transmembrane Helices of the GABA _A Rs $\alpha 1$ and $\alpha 2$ Subunits Affect Primarily Late Gating Transitions Including Opening/Closing and Desensitization. <i>ACS Chemical Neuroscience</i> , 2021, 12, 2421-2436.	1.7	5
84	Induction of Inhibitory Synaptic Plasticity Enhances Tonic Current by Increasing the Content of $\alpha 5$ -Subunit Containing GABAA Receptors in Hippocampal Pyramidal Neurons. <i>Neuroscience</i> , 2021, 467, 39-46.	1.1	5
85	Forskolin reduces the activity of the rat muscle embryonic type acetylcholine receptor channel. <i>Brain Research</i> , 1995, 703, 100-104.	1.1	4
86	Membrane voltage differently affects mIPSCs and current responses recorded from somatic excised patches in rat hippocampal cultures. <i>Neuroscience Letters</i> , 2006, 393, 189-193.	1.0	4
87	The influence of protons and zinc ions on the steady-state inactivation of Kv1.3 potassium channels. <i>Cellular and Molecular Biology Letters</i> , 2007, 12, 220-30.	2.7	4
88	Sex-specificity of associative learning-induced changes in GABAergic tonic inhibition in layer 4 neurons of mouse barrel cortex. <i>Behavioural Brain Research</i> , 2011, 219, 373-377.	1.2	4
89	Glycine substitution of $\alpha 1$ F64 residue at the loop D of GABAA receptor impairs gating – Implications for importance of binding site-channel gate linker rigidity. <i>Biochemical Pharmacology</i> , 2021, 192, 114668.	2.0	4
90	Patch-Clamp Study on T-Lymphocyte Potassium Conductance in Patients with Chronic Renal Failure. <i>Nephron</i> , 1996, 72, 587-594.	0.9	3

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91	Chlorpromazine prolongs the deactivation of N-methyl-d-aspartate-induced currents in cultured rat hippocampal neurons. <i>Neuroscience Letters</i> , 2001, 315, 1-4.	1.0	3
92	The voltage dependence of GABAA receptor gating depends on extracellular pH. <i>NeuroReport</i> , 2005, 16, 1951-1954.	0.6	3
93	Editorial: Neuroplasticity and Extracellular Proteolysis. <i>Frontiers in Cellular Neuroscience</i> , 2016, 10, 59.	1.8	3
94	Changes of GABA(A)receptor activation kinetics in hippocampal neurons cultured for different periods of time. <i>Cellular and Molecular Biology Letters</i> , 2004, 9, 61-7.	2.7	3
95	Pharmacological studies reveal novel aspects of the versatility of GABA_A receptors. <i>Journal of Physiology</i> , 2010, 588, 1381-1382.	1.3	2
96	The γ 2 subunit E155 residue as a proton sensor at the binding site on GABA type A receptors. <i>European Journal of Pharmacology</i> , 2021, 906, 174293.	1.7	2
97	MMP-3 deficiency does not influence the length and number of CA1 dendrites of hippocampus of adult mice. <i>Acta Neurobiologiae Experimentalis</i> , 2018, 78, 281-286.	0.4	2
98	Electrophysiological description of mechanisms determining synaptic transmission and its modulation. <i>Acta Neurobiologiae Experimentalis</i> , 2008, 68, 256-63.	0.4	2
99	MMP-3 deficiency does not influence the length and number of CA1 dendrites of hippocampus of adult mice. <i>Acta Neurobiologiae Experimentalis</i> , 2018, 78, 281-286.	0.4	2
100	Resolving the ionotropic receptor kinetics and modulation in the time scale of synaptic transmission. <i>Cellular and Molecular Biology Letters</i> , 2003, 8, 231-41.	2.7	1
101	Recombinant γ 1 γ 2 γ 3 GABAA receptors expressed in HEK293 and in QT6 cells show different kinetics. <i>Neuroscience Letters</i> , 2003, 352, 195-195.	1.0	0
102	Loop G of the Gabaar Orthosteric Binding Site Is Involved Both in Binding and Gating Processes. <i>Biophysical Journal</i> , 2019, 116, 391a.	0.2	0
103	Influence of matrix metalloproteinase MMP-9 on dendritic spine morphology. <i>Development (Cambridge)</i> , 2011, 138, e2008-e2008.	1.2	0