

Lucas Pozzo-Miller

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89 papers	7,114 citations	42 h-index	84 g-index
93 ext. papers	7,751 ext. citations	5.7 avg, IF	5.91 L-index

#	Paper	IF	Citations
89	Regulation of synaptic responses to high-frequency stimulation and LTP by neurotrophins in the hippocampus. <i>Nature</i> , 1996 , 381, 706-9	50.4	957
88	From acquisition to consolidation: on the role of brain-derived neurotrophic factor signaling in hippocampal-dependent learning. <i>Learning and Memory</i> , 2002 , 9, 224-37	2.8	521
87	Impairments in high-frequency transmission, synaptic vesicle docking, and synaptic protein distribution in the hippocampus of BDNF knockout mice. <i>Journal of Neuroscience</i> , 1999 , 19, 4972-83	6.6	406
86	BDNF enhances quantal neurotransmitter release and increases the number of docked vesicles at the active zones of hippocampal excitatory synapses. <i>Journal of Neuroscience</i> , 2001 , 21, 4249-58	6.6	382
85	ERK1/2 activation is necessary for BDNF to increase dendritic spine density in hippocampal CA1 pyramidal neurons. <i>Learning and Memory</i> , 2004 , 11, 172-8	2.8	283
84	Presynaptic modulation of synaptic transmission and plasticity by brain-derived neurotrophic factor in the developing hippocampus. <i>Journal of Neuroscience</i> , 1998 , 18, 6830-9	6.6	252
83	Miniature synaptic transmission and BDNF modulate dendritic spine growth and form in rat CA1 neurones. <i>Journal of Physiology</i> , 2003 , 553, 497-509	3.9	210
82	Dendritic spine pathologies in hippocampal pyramidal neurons from Rett syndrome brain and after expression of Rett-associated MECP2 mutations. <i>Neurobiology of Disease</i> , 2009 , 35, 219-33	7.5	188
81	TRPC3 channels are necessary for brain-derived neurotrophic factor to activate a nonselective cationic current and to induce dendritic spine formation. <i>Journal of Neuroscience</i> , 2007 , 27, 5179-89	6.6	162
80	Modulation of presynaptic plasticity and learning by the H-ras/extracellular signal-regulated kinase/synapsin I signaling pathway. <i>Journal of Neuroscience</i> , 2005 , 25, 9721-34	6.6	158
79	Preclinical research in Rett syndrome: setting the foundation for translational success. <i>DMM Disease Models and Mechanisms</i> , 2012 , 5, 733-45	4.1	154
78	Estradiol increases spine density and NMDA-dependent Ca ²⁺ transients in spines of CA1 pyramidal neurons from hippocampal slices. <i>Journal of Neurophysiology</i> , 1999 , 81, 1404-11	3.2	153
77	Protein synthesis-dependent and -independent regulation of hippocampal synapses by brain-derived neurotrophic factor. <i>Journal of Biological Chemistry</i> , 2001 , 276, 37585-93	5.4	144
76	Glutamate-induced transient modification of the postsynaptic density. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001 , 98, 10428-32	11.5	141
75	Micromolar Ca ²⁺ transients in dendritic spines of hippocampal pyramidal neurons in brain slice. <i>Neuron</i> , 1995 , 14, 1223-31	13.9	130
74	Perineuronal Nets Suppress Plasticity of Excitatory Synapses on CA2 Pyramidal Neurons. <i>Journal of Neuroscience</i> , 2016 , 36, 6312-20	6.6	117
73	BDNF deregulation in Rett syndrome. <i>Neuropharmacology</i> , 2014 , 76 Pt C, 737-46	5.5	116

72	Experimental models of Rett syndrome based on Mecp2 dysfunction. <i>Experimental Biology and Medicine</i> , 2011 , 236, 3-19	3.7	104
71	Bdnf overexpression in hippocampal neurons prevents dendritic atrophy caused by Rett-associated MECP2 mutations. <i>Neurobiology of Disease</i> , 2009 , 34, 199-211	7.5	101
70	Dendritic spine dysgenesis in autism related disorders. <i>Neuroscience Letters</i> , 2015 , 601, 30-40	3.3	97
69	BDNF increases release probability and the size of a rapidly recycling vesicle pool within rat hippocampal excitatory synapses. <i>Journal of Physiology</i> , 2006 , 574, 787-803	3.9	97
68	The role of neurotrophins in neurotransmitter release. <i>Neuroscientist</i> , 2002 , 8, 524-31	7.6	97
67	Ca2+ release from intracellular stores induced by afferent stimulation of CA3 pyramidal neurons in hippocampal slices. <i>Journal of Neurophysiology</i> , 1996 , 76, 554-62	3.2	94
66	Network hyperexcitability in hippocampal slices from Mecp2 mutant mice revealed by voltage-sensitive dye imaging. <i>Journal of Neurophysiology</i> , 2011 , 105, 1768-84	3.2	90
65	Excitation/inhibition imbalance and impaired synaptic inhibition in hippocampal area CA3 of Mecp2 knockout mice. <i>Hippocampus</i> , 2015 , 25, 159-68	3.5	88
64	Dietary flavonoid quercetin stimulates vasorelaxation in aortic vessels. <i>Free Radical Biology and Medicine</i> , 2010 , 49, 339-47	7.8	84
63	Spontaneous pyramidal cell death in organotypic slice cultures from rat hippocampus is prevented by glutamate receptor antagonists. <i>Neuroscience</i> , 1994 , 63, 471-87	3.9	83
62	Modulation of dendritic spine development and plasticity by BDNF and vesicular trafficking: fundamental roles in neurodevelopmental disorders associated with mental retardation and autism. <i>Journal of Neurodevelopmental Disorders</i> , 2009 , 1, 185-96	4.6	74
61	Activity-dependent calcium sequestration in dendrites of hippocampal neurons in brain slices. <i>Journal of Neuroscience</i> , 1997 , 17, 8729-38	6.6	70
60	Correlated calcium uptake and release by mitochondria and endoplasmic reticulum of CA3 hippocampal dendrites after afferent synaptic stimulation. <i>Journal of Neuroscience</i> , 2002 , 22, 10653-61	6.6	66
59	Activity-dependent BDNF release and TRPC signaling is impaired in hippocampal neurons of Mecp2 mutant mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 17087-92	11.5	65
58	HDAC activity is required for BDNF to increase quantal neurotransmitter release and dendritic spine density in CA1 pyramidal neurons. <i>Hippocampus</i> , 2012 , 22, 1493-500	3.5	56
57	Hyperforin modulates dendritic spine morphology in hippocampal pyramidal neurons by activating Ca(2+) -permeable TRPC6 channels. <i>Hippocampus</i> , 2013 , 23, 40-52	3.5	54
56	The actions of BDNF on dendritic spine density and morphology in organotypic slice cultures depend on the presence of serum in culture media. <i>Journal of Neuroscience Methods</i> , 2008 , 169, 182-90	3	54
55	BDNF induces calcium elevations associated with IBDNF, a nonselective cationic current mediated by TRPC channels. <i>Journal of Neurophysiology</i> , 2007 , 98, 2476-82	3.2	53

54	Dendritic spine dysgenesis in Rett syndrome. <i>Frontiers in Neuroanatomy</i> , 2014 , 8, 97	3.6	52
53	G protein-coupled receptors mediate a fast excitatory postsynaptic current in CA3 pyramidal neurons in hippocampal slices. <i>Journal of Neuroscience</i> , 1995 , 15, 8320-30	6.6	51
52	Excitatory synapses are stronger in the hippocampus of Rett syndrome mice due to altered synaptic trafficking of AMPA-type glutamate receptors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E1575-84	11.5	50
51	Activity-dependent release of endogenous BDNF from mossy fibers evokes a TRPC3 current and Ca ²⁺ elevations in CA3 pyramidal neurons. <i>Journal of Neurophysiology</i> , 2010 , 103, 2846-56	3.2	50
50	Ventral hippocampal projections to the medial prefrontal cortex regulate social memory. <i>ELife</i> , 2019 , 8,	8.9	50
49	Kainate modulates presynaptic GABA release from two vesicle pools. <i>Journal of Neuroscience</i> , 2008 , 28, 725-31	6.6	47
48	Stereological analysis of the hypothalamic ventromedial nucleus. II. Hormone-induced changes in the synaptogenic pattern. <i>Developmental Brain Research</i> , 1991 , 61, 189-96		45
47	A selective histone deacetylase-6 inhibitor improves BDNF trafficking in hippocampal neurons from Mecp2 knockout mice: implications for Rett syndrome. <i>Frontiers in Cellular Neuroscience</i> , 2014 , 8, 68	6.1	42
46	Transient receptor potential channels as novel effectors of brain-derived neurotrophic factor signaling: potential implications for Rett syndrome 2007 , 113, 394-409		42
45	Optical imaging of cytosolic calcium, electrophysiology, and ultrastructure in pyramidal neurons of organotypic slice cultures from rat hippocampus. <i>NeuroImage</i> , 1993 , 1, 109-20	7.9	40
44	Intracellular Ca ²⁺ stores and Ca ²⁺ influx are both required for BDNF to rapidly increase quantal vesicular transmitter release. <i>Neural Plasticity</i> , 2012 , 2012, 203536	3.3	39
43	Insulinotropic treatments exacerbate metabolic syndrome in mice lacking MeCP2 function. <i>Human Molecular Genetics</i> , 2013 , 22, 2626-33	5.6	37
42	Kinase activity is not required for alphaCaMKII-dependent presynaptic plasticity at CA3-CA1 synapses. <i>Nature Neuroscience</i> , 2007 , 10, 1125-7	25.5	36
41	A small-molecule TrkB ligand restores hippocampal synaptic plasticity and object location memory in Rett syndrome mice. <i>DMM Disease Models and Mechanisms</i> , 2017 , 10, 837-845	4.1	35
40	Divergent roles of p75NTR and Trk receptors in BDNF's effects on dendritic spine density and morphology. <i>Neural Plasticity</i> , 2012 , 2012, 578057	3.3	35
39	Hippocampal CA1 pyramidal neurons of Mecp2 mutant mice show a dendritic spine phenotype only in the presymptomatic stage. <i>Neural Plasticity</i> , 2012 , 2012, 976164	3.3	34
38	MeCP2 regulates the synaptic expression of a Dysbindin-BLOC-1 network component in mouse brain and human induced pluripotent stem cell-derived neurons. <i>PLoS ONE</i> , 2013 , 8, e65069	3.7	34
37	Rett Syndrome: Reaching for Clinical Trials. <i>Neurotherapeutics</i> , 2015 , 12, 631-40	6.4	29

36	The neuronal Arf GAP centaurin alpha1 modulates dendritic differentiation. <i>Journal of Cell Science</i> , 2007 , 120, 2683-93	5.3	28
35	Calcium/calmodulin-dependent protein kinase II clusters in adult rat hippocampal slices. <i>Neuroscience</i> , 2002 , 115, 435-40	3.9	28
34	Recent Progress in Rett Syndrome and MeCP2 Dysfunction: Assessment of Potential Treatment Options. <i>Future Neurology</i> , 2013 , 8,	1.5	26
33	Calcium signaling in dendritic spines of hippocampal neurons. <i>Journal of Neurobiology</i> , 1994 , 25, 234-42		26
32	Postnatal development of the hypothalamic ventromedial nucleus: neurons and synapses. <i>Cellular and Molecular Neurobiology</i> , 1992 , 12, 121-9	4.6	24
31	Loss of Causes Atypical Synaptic and Molecular Plasticity of Parvalbumin-Expressing Interneurons Reflecting Rett Syndrome-Like Sensorimotor Defects. <i>ENeuro</i> , 2018 , 5,	3.9	23
30	Targeted pharmacological treatment of autism spectrum disorders: fragile X and Rett syndromes. <i>Frontiers in Cellular Neuroscience</i> , 2015 , 9, 55	6.1	22
29	Beyond Widespread Deletions to Model Rett Syndrome: Conditional Spatio-Temporal Knockout, Single-Point Mutations and Transgenic Rescue Mice. <i>Autism-open Access</i> , 2012 , 2012, 5	0	22
28	BDNF enhances dendritic Ca ²⁺ signals evoked by coincident EPSPs and back-propagating action potentials in CA1 pyramidal neurons. <i>Brain Research</i> , 2006 , 1104, 45-54	3.7	21
27	Calexcitin interaction with neuronal ryanodine receptors. <i>Biochemical Journal</i> , 1999 , 341 (Pt 2), 423-33	3.8	21
26	The effect of Rho-associated kinase inhibition on the ocular penetration of timolol maleate 2013 , 54, 1118-26		20
25	GABA vesicles at synapses: are there 2 distinct pools?. <i>Neuroscientist</i> , 2009 , 15, 218-24	7.6	20
24	Dysfunction of the corticostriatal pathway in autism spectrum disorders. <i>Journal of Neuroscience Research</i> , 2020 , 98, 2130-2147	4.4	20
23	Evaluation of current pharmacological treatment options in the management of Rett syndrome: from the present to future therapeutic alternatives. <i>Current Clinical Pharmacology</i> , 2013 , 8, 358-69	2.5	19
22	Correlated measurements of free and total intracellular calcium concentration in central nervous system neurons. <i>Microscopy Research and Technique</i> , 1999 , 46, 370-9	2.8	18
21	EEA1 restores homeostatic synaptic plasticity in hippocampal neurons from Rett syndrome mice. <i>Journal of Physiology</i> , 2017 , 595, 5699-5712	3.9	16
20	Modulation of neuronal calcium signaling by neurotrophic factors. <i>International Journal of Developmental Neuroscience</i> , 2002 , 20, 199-207	2.7	16
19	Long-term potentiation-induced synaptic changes in hippocampal dentate gyrus of rats with an inborn low or high learning capacity. <i>Brain Research</i> , 1990 , 537, 293-7	3.7	16

18	Multiple approaches to investigate the transport and activity-dependent release of BDNF and their application in neurogenetic disorders. <i>Neural Plasticity</i> , 2012 , 2012, 203734	3.3	13
17	Cdk5 Is Essential for Amphetamine to Increase Dendritic Spine Density in Hippocampal Pyramidal Neurons. <i>Frontiers in Cellular Neuroscience</i> , 2017 , 11, 372	6.1	10
16	Spontaneous and evoked glutamate signalling influences Fos-lacZ expression and pyramidal cell death in hippocampal slice cultures from transgenic rats. <i>Molecular Brain Research</i> , 1995 , 34, 197-208		10
15	The Endosome Localized Arf-GAP AGAP1 Modulates Dendritic Spine Morphology Downstream of the Neurodevelopmental Disorder Factor Dysbindin. <i>Frontiers in Cellular Neuroscience</i> , 2016 , 10, 218	6.1	8
14	The dynamics of excitatory synapse formation on dendritic spines. <i>Cellscience</i> , 2009 , 5, 19-25		7
13	The role of MeCP2 in learning and memory. <i>Learning and Memory</i> , 2019 , 26, 343-350	2.8	6
12	The val-66-met Polymorphism Affects Neuronal Morphology and Synaptic Transmission in Cultured Hippocampal Neurons from Rett Syndrome Mice. <i>Frontiers in Cellular Neuroscience</i> , 2017 , 11, 203	6.1	6
11	A novel DNA-binding feature of MeCP2 contributes to Rett syndrome. <i>Frontiers in Cellular Neuroscience</i> , 2013 , 7, 64	6.1	6
10	The first-order giant neurons of the giant fiber system in the squid: electrophysiological and ultrastructural observations. <i>Journal of Neurocytology</i> , 1998 , 27, 419-29		3
9	Differences in GluN2B-Containing NMDA Receptors Result in Distinct Long-Term Plasticity at Ipsilateral versus Contralateral Cortico-Striatal Synapses. <i>ENeuro</i> , 2019 , 6,	3.9	3
8	Dysfunction of the Methyl-CpG-Binding Protein MeCP2 in Rett Syndrome 2012 , 43-69		2
7	GABAergic synapse maturation: evidence of the instructive role of activity-dependent BDNF release. <i>Journal of Physiology</i> , 2008 , 586, 5041	3.9	1
6	On the Role of Neurotrophins in Dendritic Calcium Signaling 2005 , 185-200		1
5	Differences in GluN2B-containing NMDA receptors result in opposite long-term plasticity and dopaminergic modulation at ipsilateral vs. contralateral cortico-striatal synapses		1
4	Ventral hippocampal projections to the medial prefrontal cortex regulate social memory		1
3	Synaptically driven Ca ²⁺ release in hippocampal neurons. <i>Journal of Neurophysiology</i> , 2003 , 90, 3579; author reply 3579-80	3.2	
2	Identification of Socially-activated Neurons. <i>Bio-protocol</i> , 2020 , 10, e3744	0.9	
1	Defining and Diagnosing Rett Syndrome: Correlating Symptoms and Pathogenesis with Autism 2014 , 2581-2601		

