Pablo E Castillo

List of Publications by Year
in descending order

100 papers	14,232 citations	34105 52 h-index	37204 96 g-index
126 all docs	126 docs citations	126 times ranked	13331 citing authors

#	Article	IF	Citations
1	Mice Lacking Î±-Synuclein Display Functional Deficits in the Nigrostriatal Dopamine System. Neuron, 2000, 25, 239-252.	8.1	1,573
2	Endocannabinoid Signaling and Synaptic Function. Neuron, 2012, 76, 70-81.	8.1	824
3	ENDOCANNABINOID-MEDIATED SYNAPTIC PLASTICITY IN THE CNS. Annual Review of Neuroscience, 2006, 29, 37-76.	10.7	691
4	Heterosynaptic LTD of Hippocampal GABAergic Synapses. Neuron, 2003, 38, 461-472.	8.1	581
5	RIM1Î± forms a protein scaffold for regulating neurotransmitter release at the active zone. Nature, 2002, 415, 321-326.	27.8	552
6	Kainate receptors mediate a slow postsynaptic current in hippocampal CA3 neurons. Nature, 1997, 388, 182-186.	27.8	504
7	Altered synaptic physiology and reduced susceptibility to kainate-induced seizures in GluR6-deficient mice. Nature, 1998, 392, 601-605.	27.8	450
8	Endocannabinoid Signaling and Long-Term Synaptic Plasticity. Annual Review of Physiology, 2009, 71, 283-306.	13.1	400
9	Double-knockout mice for Â- and Â-synucleins: Effect on synaptic functions. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14966-14971.	7.1	392
10	RIM1Î± is required for presynaptic long-term potentiation. Nature, 2002, 415, 327-330.	27.8	377
11	Rab3A is essential for mossy fibre long-term potentiation in the hippocampus. Nature, 1997, 388, 590-593.	27.8	336
12	The role of Ca2+ channels in hippocampal mossy fiber synaptic transmission and long-term potentiation. Neuron, 1994, 12, 261-269.	8.1	317
13	Age-Dependent Impairment of Cognitive and Synaptic Function in the htau Mouse Model of Tau Pathology. Journal of Neuroscience, 2009, 29, 10741-10749.	3.6	306
14	TRPV1 activation by endogenous anandamide triggers postsynaptic long-term depression in dentate gyrus. Nature Neuroscience, 2010, 13, 1511-1518.	14.8	291
15	Protein kinase A regulates calcium permeability of NMDA receptors. Nature Neuroscience, 2006, 9, 501-510.	14.8	275
16	Endocannabinoid-Mediated Metaplasticity in the Hippocampus. Neuron, 2004, 43, 871-881.	8.1	274
17	Synaptic plasticity of NMDA receptors: mechanisms and functional implications. Current Opinion in Neurobiology, 2012, 22, 496-508.	4.2	270
18	Î±Î²Î³-Synuclein triple knockout mice reveal age-dependent neuronal dysfunction. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19573-19578.	7.1	261

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19	Endocannabinoid-Mediated Long-Term Plasticity Requires cAMP/PKA Signaling and RIM1Î±. Neuron, 2007, 54, 801-812.	8.1	238
20	Synucleins Regulate the Kinetics of Synaptic Vesicle Endocytosis. Journal of Neuroscience, 2014, 34, 9364-9376.	3.6	237
21	Blockade of calcium-permeable AMPA receptors protects hippocampal neurons against global ischemia-induced death. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12230-12235.	7.1	220
22	A single in-vivo exposure to Î”9THC blocks endocannabinoid-mediated synaptic plasticity. Nature Neuroscience, 2004, 7, 585-586.	14.8	196
23	Long-term plasticity at inhibitory synapses. Current Opinion in Neurobiology, 2011, 21, 328-338.	4.2	191
24	Synaptic functions of endocannabinoid signaling in health and disease. Neuropharmacology, 2017, 124, 13-24.	4.1	180
25	Assessing the role of Ih channels in synaptic transmission and mossy fiber LTP. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9538-9543.	7.1	177
26	REST-dependent epigenetic remodeling promotes the developmental switch in synaptic NMDA receptors. Nature Neuroscience, 2012, 15, 1382-1390.	14.8	176
27	Piccolo and bassoon maintain synaptic vesicle clustering without directly participating in vesicle exocytosis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6504-6509.	7.1	168
28	De novo synaptogenesis induced by GABA in the developing mouse cortex. Science, 2016, 353, 1037-1040.	12.6	164
29	Presynaptic Protein Synthesis Is Required for Long-Term Plasticity of GABA Release. Neuron, 2016, 92, 479-492.	8.1	162
30	Multiple and Opposing Roles of Cholinergic Transmission in the Main Olfactory Bulb. Journal of Neuroscience, 1999, 19, 9180-9191.	3.6	144
31	Oxytocin improves behavioral and electrophysiological deficits in a novel Shank3-deficient rat. ELife, 2017, 6, .	6.0	136
32	Long-Term Potentiation Selectively Expressed by NMDA Receptors at Hippocampal Mossy Fiber Synapses. Neuron, 2008, 57, 108-120.	8.1	134
33	The CB1 cannabinoid receptor mediates glutamatergic synaptic suppression in the hippocampus. Neuroscience, 2006, 139, 795-802.	2.3	129
34	Dopaminergic Modulation of Endocannabinoid-Mediated Plasticity at GABAergic Synapses in the Prefrontal Cortex. Journal of Neuroscience, 2010, 30, 7236-7248.	3.6	129
35	Presynaptic LTP and LTD of Excitatory and Inhibitory Synapses. Cold Spring Harbor Perspectives in Biology, 2012, 4, a005728-a005728.	5.5	129
36	Redundant functions of RIM1Î± and RIM2Î± in Ca2+-triggered neurotransmitter release. EMBO Journal, 2006, 25, 5852-5863.	7.8	120

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37	Long-Term Plasticity of Neurotransmitter Release: Emerging Mechanisms and Contributions to Brain Function and Disease. Annual Review of Neuroscience, 2018, 41, 299-322.	10.7	120
38	Distinct functions of kainate receptors in the brain are determined by the auxiliary subunit Neto1. Nature Neuroscience, 2011, 14, 866-873.	14.8	111
39	Interneuron activity controls endocannabinoid-mediated presynaptic plasticity through calcineurin. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10250-10255.	7.1	102
40	CaMKII Phosphorylation of TARPÎ³-8 Is a Mediator of LTP and Learning and Memory. Neuron, 2016, 92, 75-83.	8.1	101
41	Unconventional NMDA Receptor Signaling. Journal of Neuroscience, 2017, 37, 10800-10807.	3.6	99
42	Pharmacology of metabotropic glutamate receptors at the mossy fiber synapses of the guinea pig hippocampus. Neuropharmacology, 1995, 34, 965-971.	4.1	98
43	ELKS2Î±/CAST Deletion Selectively Increases Neurotransmitter Release at Inhibitory Synapses. Neuron, 2009, 64, 227-239.	8.1	96
44	The extent and strength of electrical coupling between inferior olivary neurons is heterogeneous. Journal of Neurophysiology, 2011, 105, 1089-1101.	1.8	86
45	RIM1Î± and RIM1Î² Are Synthesized from Distinct Promoters of the<i>RIM1</i>Gene to Mediate Differential But Overlapping Synaptic Functions. Journal of Neuroscience, 2008, 28, 13435-13447.	3.6	84
46	APP and APLP2 interact with the synaptic release machinery and facilitate transmitter release at hippocampal synapses. ELife, 2015, 4, e09743.	6.0	73
47	LTP at Hilar Mossy Cell-Dentate Granule Cell Synapses Modulates Dentate Gyrus Output by Increasing Excitation/Inhibition Balance. Neuron, 2017, 95, 928-943.e3.	8.1	71
48	RIM1Î± phosphorylation at serine-413 by protein kinase A is not required for presynaptic long-term plasticity or learning. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 14680-14685.	7.1	69
49	Role of Glutamate Autoreceptors at Hippocampal Mossy Fiber Synapses. Neuron, 2008, 60, 1082-1094.	8.1	68
50	Npas4 Is a Critical Regulator of Learning-Induced Plasticity at Mossy Fiber-CA3 Synapses during Contextual Memory Formation. Neuron, 2018, 97, 1137-1152.e5.	8.1	68
51	Rab3B protein is required for long-term depression of hippocampal inhibitory synapses and for normal reversal learning. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14300-14305.	7.1	62
52	Selective Dysregulation of Hippocampal Inhibition in the Mouse Lacking Autism Candidate Gene<i>CNTNAP2</i>. Journal of Neuroscience, 2015, 35, 14681-14687.	3.6	61
53	The control of jaw-opener motoneurons during active sleep. Brain Research, 1994, 653, 31-38.	2.2	58
54	Neto1 and Neto2: auxiliary subunits that determine key properties of native kainate receptors. Journal of Physiology, 2012, 590, 2217-2223.	2.9	57

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55	Input-specific plasticity at excitatory synapses mediated by endocannabinoids in the dentate gyrus. Neuropharmacology, 2008, 54, 68-78.	4.1	55
56	Bidirectional NMDA receptor plasticity controls CA3 output and heterosynaptic metaplasticity. Nature Neuroscience, 2013, 16, 1049-1059.	14.8	55
57	RNA-binding protein Sam68 controls synapse number and local Î²-actin mRNA metabolism in dendrites. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3125-3130.	7.1	55
58	Compartment-Specific Modulation of GABAergic Synaptic Transmission by TRPV1 Channels in the Dentate Gyrus. Journal of Neuroscience, 2014, 34, 16621-16629.	3.6	50
59	Closing the gap: long-term presynaptic plasticity in brain function and disease. Current Opinion in Neurobiology, 2017, 45, 106-112.	4.2	46
60	Evidence against a role for metabotropic glutamate receptors in mossy fiber LTP: the use of mutant mice and pharmacological antagonists. Neuropharmacology, 1995, 34, 1567-1572.	4.1	43
61	Characterizing the Site and Mode of Action of Dynorphin at Hippocampal Mossy Fiber Synapses in the Guinea Pig. Journal of Neuroscience, 1996, 16, 5942-5950.	3.6	41
62	CA1 Pyramidal Cell Theta-Burst Firing Triggers Endocannabinoid-Mediated Long-Term Depression at Both Somatic and Dendritic Inhibitory Synapses. Journal of Neuroscience, 2013, 33, 13743-13757.	3.6	41
63	Endogenous cannabinoid signaling at inhibitory interneurons. Current Opinion in Neurobiology, 2014, 26, 42-50.	4.2	41
64	Actinin-4 Governs Dendritic Spine Dynamics and Promotes Their Remodeling by Metabotropic Glutamate Receptors. Journal of Biological Chemistry, 2015, 290, 15909-15920.	3.4	41
65	Coordination between Translation and Degradation Regulates Inducibility of mGluR-LTD. Cell Reports, 2015, 10, 1459-1466.	6.4	39
66	Synaptotagmin-12 Phosphorylation by cAMP-Dependent Protein Kinase Is Essential for Hippocampal Mossy Fiber LTP. Journal of Neuroscience, 2013, 33, 9769-9780.	3.6	36
67	ANKS1B Gene Product AIDA-1 Controls Hippocampal Synaptic Transmission by Regulating GluN2B Subunit Localization. Journal of Neuroscience, 2015, 35, 8986-8996.	3.6	36
68	Altered synaptic connectivity and brain function in mice lacking microglial adapter protein Iba1. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	35
69	Targeted deletion of AKAP7 in dentate granule cells impairs spatial discrimination. ELife, 2016, 5, .	6.0	33
70	A Combined Optogenetic-Knockdown Strategy Reveals a Major Role of Tomosyn in Mossy Fiber Synaptic Plasticity. Cell Reports, 2015, 12, 396-404.	6.4	32
71	Presynaptic FMRP and local protein synthesis support structural and functional plasticity of glutamatergic axon terminals. Neuron, 2022, 110, 2588-2606.e6.	8.1	29
72	Modulation of NMDA Receptors by G-protein-coupled receptors: Role in Synaptic Transmission, Plasticity and Beyond. Neuroscience, 2021, 456, 27-42.	2.3	27

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73	Neuroligin1 Drives Synaptic and Behavioral Maturation through Intracellular Interactions. Journal of Neuroscience, 2013, 33, 9364-9384.	3.6	23
74	The Rac1 Inhibitor NSC23766 Suppresses CREB Signaling by Targeting NMDA Receptor Function. Journal of Neuroscience, 2014, 34, 14006-14012.	3.6	23
75	A medullary inhibitory region for trigeminal motoneurons in the cat. Brain Research, 1991, 549, 346-349.	2.2	20
76	Estradiol Attenuates Ischemia-Induced Death of Hippocampal Neurons and Enhances Synaptic Transmission in Aged, Long-Term Hormone-Deprived Female Rats. PLoS ONE, 2012, 7, e38018.	2.5	20
77	Presynaptic NMDA receptors facilitate short-term plasticity and BDNF release at hippocampal mossy fiber synapses. ELife, 2021, 10, .	6.0	20
78	Multiple cannabinoid signaling cascades powerfully suppress recurrent excitation in the hippocampus. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	19
79	CB1-receptor-mediated inhibitory LTD triggers presynaptic remodeling via protein synthesis and ubiquitination. ELife, 2020, 9, .	6.0	19
80	Strychnine blockade of the non-reciprocal inhibition of trigeminal motoneurons induced by stimulation of the parvocellular reticular formation. Brain Research, 1991, 567, 346-349.	2.2	18
81	Experimental analysis of the method of â€˜peelingâ€™ exponentials for measuring passive electrical properties of mammalian motoneurons. Brain Research, 1995, 675, 241-248.	2.2	17
82	The ins and outs of inhibitory synaptic plasticity: Neuron types, molecular mechanisms and functional roles. European Journal of Neuroscience, 2021, 54, 6882-6901.	2.6	16
83	The Ups and Downs of Translation-Dependent Plasticity. Neuron, 2008, 59, 1-3.	8.1	11
84	Presenilin-ryanodine receptor connection. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14825-14826.	7.1	10
85	Non-reciprocal postsynaptic inhibition of digastric motoneurons. Brain Research, 1990, 535, 339-342.	2.2	9
86	Neurotrophin and FGF Signaling Adapter Proteins, FRS2 and FRS3, Regulate Dentate Granule Cell Maturation and Excitatory Synaptogenesis. Neuroscience, 2018, 369, 192-201.	2.3	9
87	Sam68 Enables Metabotropic Glutamate Receptor-Dependent LTD in Distal Dendritic Regions of CA1 Hippocampal Neurons. Cell Reports, 2019, 29, 1789-1799.e6.	6.4	9
88	Activation of Extrasynaptic Kainate Receptors Drives Hilar Mossy Cell Activity. Journal of Neuroscience, 2022, 42, 2872-2884.	3.6	8
89	Donor-derived vasculature is required to support neocortical cell grafts after stroke. Stem Cell Research, 2022, 59, 102642.	0.7	7
90	28 The role of Ca2+ in transmitter release and long-term potentiation at hippocampal mossy fiber synapses. Advances in Second Messenger and Phosphoprotein Research, 1994, 29, 497-505.	4.5	6

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91	Excitatory and inhibitory receptors utilize distinct post- and trans-synaptic mechanisms in vivo. ELife, 2021, 10, .	6.0	5
92	CPEB3-dependent increase in GluA2 subunits impairs excitatory transmission onto inhibitory interneurons in a mouse model of fragile X. Cell Reports, 2022, 39, 110853.	6.4	5
93	Heterosynaptic LTD of Hippocampal GABAergic Synapses. Neuron, 2003, 38, 997.	8.1	3
94	Biochemical confinements without walls in aspiny neurons. Nature Neuroscience, 2006, 9, 719-720.	14.8	3
95	Endocannabinoid-Mediated Long-Term Plasticity Requires cAMP/PKA Signaling and RIM1Î±. Neuron, 2007, 55, 169.	8.1	2
96	Retrograde Suppression of Post-Tetanic Potentiation at the Mossy Fiber-CA3 Pyramidal Cell Synapse. ENeuro, 2021, 8, ENEURO.0450-20.2021.	1.9	2
97	Transsynaptic Dialogue Between Excitatory and Inhibitory Hippocampal Synapses via Endocannabinoids. , 2005, , 221-235.		0
98	The Battle over Inhibitory Synaptic Plasticity in Satiety Brain Circuits. Neuron, 2011, 71, 385-387.	8.1	0
99	Endocannabinoid Mediated Long-Term Depression at Inhibitory Synapses. , 2011, , 149-166.		0
100	Unique transsynaptic complexes enable long-term synaptic plasticity in a synapse-specific manner. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	0