Tomoyuki Takahashi

List of Publications by Year
in descending order

99 papers	10,524 citations	38742 50 h-index	40979 93 g-index
104 all docs	104 docs citations	104 times ranked	6381 citing authors

#	Article	IF	Citations
1	Microtubule assembly by tau impairs endocytosis and neurotransmission via dynamin sequestration in Alzheimerâ€™s disease synapse model. ELife, 2022, 11, .	6.0	8
2	Presynaptic Black Box Opened by Pioneers at Biophysics Department in University College London. Neuroscience, 2020, 439, 10-21.	2.3	2
3	Microtubule and Actin Differentially Regulate Synaptic Vesicle Cycling to Maintain High-Frequency Neurotransmission. Journal of Neuroscience, 2020, 40, 131-142.	3.6	26
4	Frequency-Dependent Block of Excitatory Neurotransmission by Isoflurane via Dual Presynaptic Mechanisms. Journal of Neuroscience, 2020, 40, 4103-4115.	3.6	26
5	Hidden proteome of synaptic vesicles in the mammalian brain. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 33586-33596.	7.1	59
6	Vesicular GABA Uptake Can Be Rate Limiting for Recovery of IPSCs from Synaptic Depression. Cell Reports, 2018, 22, 3134-3141.	6.4	15
7	Culture of Mouse Giant Central Nervous System Synapses and Application for Imaging and Electrophysiological Analyses. Methods in Molecular Biology, 2018, 1727, 201-215.	0.9	0
8	Impact of vesicular glutamate leakage on synaptic transmission at the calyx of Held. Journal of Physiology, 2017, 595, 1263-1271.	2.9	14
9	Wild-Type Monomeric Î±-Synuclein Can Impair Vesicle Endocytosis and Synaptic Fidelity via Tubulin Polymerization at the Calyx of Held. Journal of Neuroscience, 2017, 37, 6043-6052.	3.6	51
10	Presynaptic morphology and vesicular composition determine vesicle dynamics in mouse central synapses. ELife, 2017, 6, .	6.0	20
11	Intravenous Administration of Endothelial Colony-Forming Cells Overexpressing Integrin Î²1 Augments Angiogenesis in Ischemic Legs. Stem Cells Translational Medicine, 2016, 5, 218-226.	3.3	24
12	Reconstitution of Giant Mammalian Synapses in Culture for Molecular Functional and Imaging Studies. Journal of Neuroscience, 2016, 36, 3600-3610.	3.6	12
13	Strength and precision of neurotransmission at mammalian presynaptic terminals. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2015, 91, 305-320.	3.8	11
14	Nanoscale Distribution of Presynaptic Ca2+ Channels and Its Impact on Vesicular Release during Development. Neuron, 2015, 85, 145-158.	8.1	214
15	The Regulatory Mechanisms of Vesicle Endocytosis for High-fidelity Synaptic Transmission. Seibutsu Butsuri, 2014, 54, 015-018.	0.1	0
16	Rho-Kinase Accelerates Synaptic Vesicle Endocytosis by Linking Cyclic GMP-Dependent Protein Kinase Activity to Phosphatidylinositol-4,5-Bisphosphate Synthesis. Journal of Neuroscience, 2013, 33, 12099-12104.	3.6	26
17	Activity-Dependent Neurotrophin Signaling Underlies Developmental Switch of Ca²⁺Channel Subtypes Mediating Neurotransmitter Release. Journal of Neuroscience, 2013, 33, 18755-18763.	3.6	26
18	Kinetics of Synaptic Vesicle Refilling with Neurotransmitter Glutamate. Neuron, 2012, 76, 511-517.	8.1	65

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19	Maturation of a PKG-Dependent Retrograde Mechanism for Exoendocytic Coupling of Synaptic Vesicles. Neuron, 2012, 74, 517-529.	8.1	42
20	Patch-Clamp Recording Method in Slices for Studying Presynaptic Mechanisms. Springer Protocols, 2012, , 137-145.	0.3	1
21	Developmental shift to a mechanism of synaptic vesicle endocytosis requiring nanodomain Ca2+. Nature Neuroscience, 2010, 13, 838-844.	14.8	83
22	Involvement of Ca²⁺Channel Synprint Site in Synaptic Vesicle Endocytosis. Journal of Neuroscience, 2010, 30, 655-660.	3.6	26
23	Vesicular glutamate filling and AMPA receptor occupancy at the calyx of Held synapse of immature rats. Journal of Physiology, 2009, 587, 2327-2339.	2.9	21
24	Mechanisms underlying shortâ€term modulation of transmitter release by presynaptic depolarization. Journal of Physiology, 2009, 587, 2987-3000.	2.9	44
25	Developmental changes in calcium/calmodulinâ€dependent inactivation of calcium currents at the rat calyx of Held. Journal of Physiology, 2008, 586, 2253-2261.	2.9	28
26	Involvement of AMPA receptor desensitization in shortâ€term synaptic depression at the calyx of Held in developing rats. Journal of Physiology, 2008, 586, 2263-2275.	2.9	44
27	Presynaptic NMDA receptors regulates synaptic transmission by inhibiting voltage-gated calcium channel at a central glutamatergic synapse. Neuroscience Research, 2007, 58, S43.	1.9	0
28	Single action potential-evoked Ca2+ transients at the calyx of Held presynaptic terminal. Neuroscience Research, 2007, 58, S71.	1.9	2
29	Developmental changes in potassium currents at the rat calyx of Held presynaptic terminal. Journal of Physiology, 2007, 581, 1101-1112.	2.9	65
30	4â€Chloroâ€mâ€cresol, an activator of ryanodine receptors, inhibits voltageâ€gated K⁺ channels at the rat calyx of Held. European Journal of Neuroscience, 2007, 26, 1530-1536.	2.6	3
31	5-HT1Breceptor-mediated presynaptic inhibition at the calyx of Held of immature rats. European Journal of Neuroscience, 2006, 24, 1946-1954.	2.6	60
32	Neurosteroid pregnenolone sulfate enhances glutamatergic synaptic transmission by facilitating presynaptic calcium currents at the calyx of Held of immature rats. European Journal of Neuroscience, 2006, 24, 1955-1966.	2.6	25
33	Presynaptic N-type and P/Q-type Ca2+channels mediating synaptic transmission at the calyx of Held of mice. Journal of Physiology, 2005, 568, 199-209.	2.9	115
34	Dynamic aspects of presynaptic calcium currents mediating synaptic transmission. Cell Calcium, 2005, 37, 507-511.	2.4	16
35	Mechanisms Underlying Developmental Speeding in AMPA-EPSC Decay Time at the Calyx of Held. Journal of Neuroscience, 2005, 25, 199-207.	3.6	87
36	G protein-dependent presynaptic inhibition mediated by AMPA receptors at the calyx of Held. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7368-7373.	7.1	57

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37	Vesicle Endocytosis Requires Dynamin-Dependent GTP Hydrolysis at a Fast CNS Synapse. Science, 2005, 307, 124-127.	12.6	155
38	Postsynaptic receptor mechanisms underlying developmental speeding of synaptic transmission. Neuroscience Research, 2005, 53, 229-240.	1.9	46
39	Presynaptic Mechanism Underlying cAMP-Dependent Synaptic Potentiation. Journal of Neuroscience, 2004, 24, 5202-5208.	3.6	140
40	Cannabinoid-induced presynaptic inhibition at the primary afferent trigeminal synapse of juvenile rat brainstem slices. Journal of Physiology, 2004, 555, 85-96.	2.9	40
41	Developmental Decrease in Synaptic Facilitation at the Mouse Hippocampal Mossy Fibre Synapse. Journal of Physiology, 2003, 553, 37-48.	2.9	47
42	Adenosine A 1 receptorâ€mediated presynaptic inhibition at the calyx of Held of immature rats. Journal of Physiology, 2003, 553, 415-426.	2.9	60
43	Distinct Roles of Kv1 and Kv3 Potassium Channels at the Calyx of Held Presynaptic Terminal. Journal of Neuroscience, 2003, 23, 10445-10453.	3.6	159
44	Developmental Increase in Vesicular Glutamate Content Does Not Cause Saturation of AMPA Receptors at the Calyx of Held Synapse. Journal of Neuroscience, 2003, 23, 3633-3638.	3.6	63
45	Neuronal Calcium Sensor 1 and Activity-Dependent Facilitation of P/Q-Type Calcium Currents at Presynaptic Nerve Terminals. Science, 2002, 295, 2276-2279.	12.6	206
46	A Single Packet of Transmitter Does Not Saturate Postsynaptic Glutamate Receptors. Neuron, 2002, 34, 613-621.	8.1	146
47	High-Fidelity Transmission Acquired via a Developmental Decrease in NMDA Receptor Expression at an Auditory Synapse. Journal of Neuroscience, 2001, 21, 3342-3349.	3.6	114
48	Quantal components of the excitatory postsynaptic currents at a rat central auditory synapse. Journal of Physiology, 2001, 536, 189-197.	2.9	64
49	Developmental regulation of transmitter release at the calyx of Held in rat auditory brainstem. Journal of Physiology, 2001, 534, 861-871.	2.9	149
50	Mechanisms underlying presynaptic facilitatory effect of cyclothiazide at the calyx of Held of juvenile rats. Journal of Physiology, 2001, 533, 423-431.	2.9	73
51	GTP-binding protein ÂÂ subunits mediate presynaptic calcium current inhibition by GABAB receptor. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 8054-8058.	7.1	81
52	Activation of the epsilon isoform of protein kinase C in the mammalian nerve terminal. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 14017-14021.	7.1	50
53	Presynaptic inhibition by muscimol through GABABreceptors. European Journal of Neuroscience, 2000, 12, 3433-3436.	2.6	35
54	Long-term potentiation of primary afferent neurotransmission at trigeminal synapses of juvenile rats. European Journal of Neuroscience, 2000, 12, 1128-1134.	2.6	23

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55	Primary afferent synaptic responses recorded from trigeminal caudal neurons in a mandibular nerveâ€"brainstem preparation of neonatal rats. Journal of Physiology, 2000, 524, 503-512.	2.9	16
56	Functional Correlation of GABA_AReceptor Î± Subunits Expression with the Properties of IPSCs in the Developing Thalamus. Journal of Neuroscience, 2000, 20, 2202-2208.	3.6	138
57	Developmental Changes in Calcium Channel Types Mediating Central Synaptic Transmission. Journal of Neuroscience, 2000, 20, 59-65.	3.6	270
58	The Role of GTP-Binding Protein Activity in Fast Central Synaptic Transmission. Science, 2000, 289, 460-463.	12.6	44
59	Presynaptic Mechanism for Phorbol Ester-Induced Synaptic Potentiation. Journal of Neuroscience, 1999, 19, 7262-7267.	3.6	138
60	Impairment of Inhibitory Synaptic Transmission in Mice Lacking Synapsin I. Journal of Cell Biology, 1999, 145, 1039-1048.	5.2	74
61	Platelet-activating factor receptor is not required for long-term potentiation in the hippocampal CA1 region. European Journal of Neuroscience, 1999, 11, 1313-1316.	2.6	37
62	Calcium-dependent mechanisms involved in presynaptic long-term depression at the hippocampal mossy fibre-CA3 synapse. European Journal of Neuroscience, 1999, 11, 1633-1638.	2.6	35
63	Doc2Î± is an activity-dependent modulator of excitatory synaptic transmission. European Journal of Neuroscience, 1999, 11, 4262-4268.	2.6	59
64	Facilitation of long-term potentiation and memory in mice lacking nociceptin receptors. Nature, 1998, 394, 577-581.	27.8	301
65	Developmental changes in calcium channel types mediating synaptic transmission in rat auditory brainstem. Journal of Physiology, 1998, 509, 419-423.	2.9	172
66	Facilitation of the presynaptic calcium current at an auditory synapse in rat brainstem. Journal of Physiology, 1998, 512, 723-729.	2.9	165
67	Role of the Carboxy-Terminal Region of the GluRÎµ2 Subunit in Synaptic Localization of the NMDA Receptor Channel. Neuron, 1998, 21, 571-580.	8.1	129
68	Inactivation of Presynaptic Calcium Current Contributes to Synaptic Depression at a Fast Central Synapse. Neuron, 1998, 20, 797-807.	8.1	321
69	G-Protein-Coupled Modulation of Presynaptic Calcium Currents and Transmitter Release by a GABA_BReceptor. Journal of Neuroscience, 1998, 18, 3138-3146.	3.6	243
70	Nicotinic receptor mediates nitric oxide synthase expression in the rat gastric myenteric plexus.. Journal of Clinical Investigation, 1998, 101, 1479-1489.	8.2	46
71	Impairment of Suckling Response, Trigeminal Neuronal Pattern Formation, and Hippocampal LTD in NMDA Receptor Îµ2 Subunit Mutant Mice. Neuron, 1996, 16, 333-344.	8.1	473
72	Impairment of Hippocampal Mossy Fiber LTD in Mice Lacking mGluR2. Science, 1996, 273, 645-647.	12.6	321

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73	Presynaptic Long-Term Depression at the Hippocampal Mossy Fiber–CA3 Synapse. Science, 1996, 273, 648-650.	12.6	156
74	Presynaptic Calcium Current Modulation by a Metabotropic Glutamate Receptor. Science, 1996, 274, 594-597.	12.6	378
75	Functional Correlation of NMDA Receptor ÎµÂSubunits Expression with the Properties of Single-Channel and Synaptic Currents in the Developing Cerebellum. Journal of Neuroscience, 1996, 16, 4376-4382.	3.6	167
76	NMDA-receptor channel diversity in the developing cerebellum. Nature, 1994, 368, 335-339.	27.8	310
77	Calcium channels responsible for potassiumâ€‐induced transmitter release at rat cerebellar synapses.. Journal of Physiology, 1994, 476, 197-202.	2.9	45
78	Different types of calcium channels mediate central synaptic transmission. Nature, 1993, 366, 156-158.	27.8	688
79	Role of a metabotropic glutamate receptor in synaptic modulation in the accessory olfactory bulb. Nature, 1993, 366, 687-690.	27.8	354
80	Development of Inhibitory Synaptic Currents in Rat Spinal Neurons. Annals of the New York Academy of Sciences, 1993, 707, 447-448.	3.8	4
81	Quantal Properties of Single Glutamatergic Synaptic Boutons in Thin Slices from Rat Neostriatum. Annals of the New York Academy of Sciences, 1993, 707, 458-459.	3.8	1
82	Presynaptic inhibitory action of enkephalin on excitatory transmission in superficial dorsal horn of rat spinal cord.. Journal of Physiology, 1992, 450, 673-685.	2.9	122
83	The minimal inhibitory synaptic currents evoked in neonatal rat motoneurones.. Journal of Physiology, 1992, 450, 593-611.	2.9	63
84	Functional correlation of fetal and adult forms of glycine receptors with developmental changes in inhibitory synaptic receptor channels. Neuron, 1992, 9, 1155-1161.	8.1	304
85	Single-channel currents underlying glycinergic inhibitory postsynaptic responses in spinal neurons. Neuron, 1991, 7, 965-969.	8.1	59
86	Structure and physiology of developing neuromuscular synapses in culture. Journal of Neuroscience, 1987, 7, 473-481.	3.6	62
87	Molecular distinction between fetal and adult forms of muscle acetylcholine receptor. Nature, 1986, 321, 406-411.	27.8	949
88	Effects of calcium and magnesium on transmitter release at Ia synapses of rat spinal motoneurones in vitro.. Journal of Physiology, 1986, 376, 543-553.	2.9	35
89	Characterization of miniature inhibitory post-synaptic potentials in rat spinal motoneurones.. Journal of Physiology, 1985, 368, 627-640.	2.9	17
90	Cloning, sequencing and expression of cDNA for a novel subunit of acetylcholine receptor from calf muscle. Nature, 1985, 315, 761-764.	27.8	173

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91	Thyrotropin-releasing hormone mimics descending slow synaptic potentials in rat spinal motoneurons. Proceedings of the Royal Society of London Series B, Containing Papers of A Biological Character, 1985, 225, 391-398.	1.8	33
92	Expression of functional acetylcholine receptor from cloned cDNAs. Nature, 1984, 307, 604-608.	27.8	394
93	Inhibitory miniature synaptic potentials in rat motoneurons. Proceedings of the Royal Society of London Series B, Containing Papers of A Biological Character, 1984, 221, 103-109.	1.8	52
94	Calcium spike in the mammalian spinal motoneurom.. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 1981, 57, 394-397.	3.8	2
95	Electrical synapses between motoneurons in the spinal cord of the newborn rat. Proceedings of the Royal Society of London Series B, Containing Papers of A Biological Character, 1980, 208, 115-120.	1.8	104
96	THE MECHANISM AND TREATMENT OF RECTAL PROLAPSE. The Journal of the Japanese Practical Surgeon Society, 1979, 40, 1107-1115.	0.0	0
97	The Presence of a Motoneuron-Depolarizing Peptide in Bovine Dorsal Roots of Spinal Nerves. Proceedings of the Japan Academy, 1972, 48, 342-346.	0.4	57
98	A Further Study of the Motoneuron-Depolarizing Peptide Extracted from Dorsal Roots of Bovine Spinal Nerves. Proceedings of the Japan Academy, 1972, 48, 747-752.	0.4	43
99	Vesicular GABA Uptake Can Be Rate-Limiting for Recovery of IPSCs from Synaptic Depression. SSRN Electronic Journal, 0, , .	0.4	0