Robert H Edwards

List of Publications by Year
in descending order

94 papers	16,661 citations	30070 54 h-index	46799 89 g-index
104 all docs	104 docs citations	104 times ranked	14565 citing authors

#	Article	IF	Citations
1	The Expression of Vesicular Glutamate Transporters Defines Two Classes of Excitatory Synapse. Neuron, 2001, 31, 247-260.	8.1	1,114
2	Increased Expression of Î±-Synuclein Reduces Neurotransmitter Release by Inhibiting Synaptic Vesicle Reclustering after Endocytosis. Neuron, 2010, 65, 66-79.	8.1	885
3	Identification and characterization of the vesicular GABA transporter. Nature, 1997, 389, 870-876.	27.8	809
4	Uptake of Glutamate into Synaptic Vesicles by an Inorganic Phosphate Transporter. Science, 2000, 289, 957-960.	12.6	731
5	VGLUTs define subsets of excitatory neurons and suggest novel roles for glutamate. Trends in Neurosciences, 2004, 27, 98-103.	8.6	668
6	The Function of Î±-Synuclein. Neuron, 2013, 79, 1044-1066.	8.1	664
7	The Vesicular GABA Transporter, VGAT, Localizes to Synaptic Vesicles in Sets of Glycinergic as Well as GABAergic Neurons. Journal of Neuroscience, 1998, 18, 9733-9750.	3.6	555
8	Direct Membrane Association Drives Mitochondrial Fission by the Parkinson Disease-associated Protein Î±-Synuclein. Journal of Biological Chemistry, 2011, 286, 20710-20726.	3.4	499
9	The identification of vesicular glutamate transporter 3 suggests novel modes of signaling by glutamate. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 14488-14493.	7.1	498
10	Lipid Rafts Mediate the Synaptic Localization of Â-Synuclein. Journal of Neuroscience, 2004, 24, 6715-6723.	3.6	485
11	Vesicular Glutamate Transporters 1 and 2 Target to Functionally Distinct Synaptic Release Sites. Science, 2004, 304, 1815-1819.	12.6	419
12	Distinct Endocytic Pathways Control the Rate and Extent of Synaptic Vesicle Protein Recycling. Neuron, 2006, 51, 71-84.	8.1	379
13	Â-Synuclein Overexpression in PC12 and Chromaffin Cells Impairs Catecholamine Release by Interfering with a Late Step in Exocytosis. Journal of Neuroscience, 2006, 26, 11915-11922.	3.6	377
14	Vesicular Glutamate Transport Promotes Dopamine Storage and Glutamate Corelease In Vivo. Neuron, 2010, 65, 643-656.	8.1	363
15	Sensorineural Deafness and Seizures in Mice Lacking Vesicular Glutamate Transporter 3. Neuron, 2008, 57, 263-275.	8.1	340
16	Metabolic Control of Vesicular Glutamate Transport and Release. Neuron, 2010, 68, 99-112.	8.1	331
17	The Localization of the Brain-Specific Inorganic Phosphate Transporter Suggests a Specific Presynaptic Role in Glutamatergic Transmission. Journal of Neuroscience, 1998, 18, 8648-8659.	3.6	303
18	The Neurotransmitter Cycle and Quantal Size. Neuron, 2007, 55, 835-858.	8.1	302

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19	Molecular Analysis of System N Suggests Novel Physiological Roles in Nitrogen Metabolism and Synaptic Transmission. Cell, 1999, 99, 769-780.	28.9	299
20	Vesicular Transport Regulates Monoamine Storage and Release but Is Not Essential for Amphetamine Action. Neuron, 1997, 19, 1271-1283.	8.1	298
21	THE ROLE OF VESICULAR TRANSPORT PROTEINS IN SYNAPTIC TRANSMISSION AND NEURAL DEGENERATION. Annual Review of Neuroscience, 1997, 20, 125-156.	10.7	288
22	Neural Activity Controls the Synaptic Accumulation of Î±-Synuclein. Journal of Neuroscience, 2005, 25, 10913-10921.	3.6	256
23	Expression of the vesicular glutamate transporters during development indicates the widespread corelease of multiple neurotransmitters. Journal of Comparative Neurology, 2004, 480, 264-280.	1.6	239
24	Neurotransmitter Corelease: Mechanism and Physiological Role. Annual Review of Physiology, 2012, 74, 225-243.	13.1	238
25	Subcellular localization and molecular topology of the dopamine transporter in the striatum and substantia nigra. Journal of Comparative Neurology, 1997, 388, 211-227.	1.6	233
26	Î±-Synuclein promotes dilation of the exocytotic fusion pore. Nature Neuroscience, 2017, 20, 681-689.	14.8	229
27	The Role of Mitochondrially Derived ATP in Synaptic Vesicle Recycling. Journal of Biological Chemistry, 2015, 290, 22325-22336.	3.4	219
28	The physiological role of Î±â€synuclein and its relationship to Parkinsonâ€™s Disease. Journal of Neurochemistry, 2019, 150, 475-486.	3.9	217
29	Synaptic Vesicle Transporter Expression Regulates Vesicle Phenotype and Quantal Size. Journal of Neuroscience, 2000, 20, 7297-7306.	3.6	188
30	Glutamine Uptake by Neurons: Interaction of Protons with System A Transporters. Journal of Neuroscience, 2002, 22, 62-72.	3.6	188
31	The glutamine commute. Journal of Cell Biology, 2002, 157, 349-355.	5.2	186
32	Optical Reporters for the Conformation of Î±-Synuclein Reveal a Specific Interaction with Mitochondria. Journal of Neuroscience, 2008, 28, 12305-12317.	3.6	185
33	Fluorescent False Neurotransmitters Visualize Dopamine Release from Individual Presynaptic Terminals. Science, 2009, 324, 1441-1444.	12.6	184
34	A Combinatorial Code for the Interaction of Î±-Synuclein with Membranes. Journal of Biological Chemistry, 2005, 280, 31664-31672.	3.4	180
35	Expression of a Putative Vesicular Acetylcholine Transporter Facilitates Quantal Transmitter Packaging. Neuron, 1997, 18, 815-826.	8.1	166
36	Loss of Mitochondrial Fission Depletes Axonal Mitochondria in Midbrain Dopamine Neurons. Journal of Neuroscience, 2014, 34, 14304-14317.	3.6	165

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37	Cholinergic Interneurons Mediate Fast VGluT3-Dependent Glutamatergic Transmission in the Striatum. PLoS ONE, 2011, 6, e19155.	2.5	155
38	Organic anion transport is the primary function of the SLC17/type I phosphate transporter family. Pflugers Archiv European Journal of Physiology, 2004, 447, 629-635.	2.8	154
39	v-SNARE Composition Distinguishes Synaptic Vesicle Pools. Neuron, 2011, 71, 474-487.	8.1	142
40	Screening a large reference sample to identify very low frequency sequence variants: comparisons between two genes. Nature Genetics, 2001, 27, 435-438.	21.4	140
41	A Non-canonical Pathway from Cochlea to Brain Signals Tissue-Damaging Noise. Current Biology, 2015, 25, 606-612.	3.9	119
42	Regulation of the glutamine transporter SN1 by extracellular pH and intracellular sodium ions. Journal of Physiology, 2002, 539, 3-14.	2.9	111
43	Efficient, Complete Deletion of Synaptic Proteins using CRISPR. Neuron, 2014, 83, 1051-1057.	8.1	104
44	A Leucine-based Motif Mediates the Endocytosis of Vesicular Monoamine and Acetylcholine Transporters. Journal of Biological Chemistry, 1998, 273, 17351-17360.	3.4	103
45	Endocannabinoid-Independent Retrograde Signaling at Inhibitory Synapses in Layer 2/3 of Neocortex: Involvement of Vesicular Glutamate Transporter 3. Journal of Neuroscience, 2004, 24, 4978-4988.	3.6	90
46	Differential Localization of Vesicular Acetylcholine and Monoamine Transporters in PC12 Cells but Not CHO Cells. Journal of Cell Biology, 1997, 139, 907-916.	5.2	86
47	Vesicular Neurotransmitter Transporters as Targets for Endogenous and Exogenous Toxic Substances. Annual Review of Pharmacology and Toxicology, 2008, 48, 277-301.	9.4	77
48	Self-Assembly of VPS41 Promotes Sorting Required for Biogenesis of the Regulated Secretory Pathway. Developmental Cell, 2013, 27, 425-437.	7.0	76
49	Vesicular monoamine transporter-2: Immunogold localization in striatal axons and terminals. , 1997, 26, 194-198.		74
50	Synaptic Vesicle Recycling Pathway Determines Neurotransmitter Content and Release Properties. Neuron, 2019, 102, 786-800.e5.	8.1	74
51	Alpha-synuclein research: defining strategic moves in the battle against Parkinsonâ€™s disease. Npj Parkinson's Disease, 2021, 7, 65.	5.3	74
52	Sorting of Vesicular Monoamine Transporter 2 to the Regulated Secretory Pathway Confers the Somatodendritic Exocytosis of Monoamines. Neuron, 2005, 48, 619-633.	8.1	72
53	Dysfunction of homeostatic control of dopamine by astrocytes in the developing prefrontal cortex leads to cognitive impairments. Molecular Psychiatry, 2020, 25, 732-749.	7.9	71
54	Presynaptic regulation of quantal size: K+/H+ exchange stimulates vesicular glutamate transport. Nature Neuroscience, 2011, 14, 1285-1292.	14.8	66

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55	An Acidic Motif Retains Vesicular Monoamine Transporter 2 on Large Dense Core Vesicles. Journal of Cell Biology, 2001, 152, 1159-1168.	5.2	62
56	RNAi screen identifies a role for adaptor protein AP-3 in sorting to the regulated secretory pathway. Journal of Cell Biology, 2010, 191, 1173-1187.	5.2	62
57	Protons Regulate Vesicular Glutamate Transporters through an Allosteric Mechanism. Neuron, 2016, 90, 768-780.	8.1	57
58	Molecular mechanisms of neurotransmitter release. Muscle and Nerve, 2001, 24, 581-601.	2.2	56
59	Is Aspartate an Excitatory Neurotransmitter?. Journal of Neuroscience, 2015, 35, 10168-10171.	3.6	56
60	Pharmacology of Neurotransmitter Transport into Secretory Vesicles. Handbook of Experimental Pharmacology, 2008, , 77-106.	1.8	54
61	Loss of VGLUT3 Produces Circadian-Dependent Hyperdopaminergia and Ameliorates Motor Dysfunction and l-Dopa-Mediated Dyskinesias in a Model of Parkinson's Disease. Journal of Neuroscience, 2015, 35, 14983-14999.	3.6	53
62	Ion transport and regulation in a synaptic vesicle glutamate transporter. Science, 2020, 368, 893-897.	12.6	53
63	New Fluorescent Substrate Enables Quantitative and High-Throughput Examination of Vesicular Monoamine Transporter 2 (VMAT2). ACS Chemical Biology, 2013, 8, 1947-1954.	3.4	52
64	Membrane trafficking of neurotransmitter transporters in the regulation of synaptic transmission. Trends in Cell Biology, 1999, 9, 356-363.	7.9	51
65	Multiple Dileucine-like Motifs Direct VGLUT1 Trafficking. Journal of Neuroscience, 2013, 33, 10647-10660.	3.6	50
66	Drug delivery via the bloodâ€"brain barrier. Nature Neuroscience, 2001, 4, 221-222.	14.8	48
67	Vesicular Monoamine and Glutamate Transporters Select Distinct Synaptic Vesicle Recycling Pathways. Journal of Neuroscience, 2010, 30, 7917-7927.	3.6	48
68	Complementary distribution of vesicular glutamate transporters 1 and 2 in the nucleus accumbens of rat: Relationship to calretinin-containing extrinsic innervation and calbindin-immunoreactive neurons. Journal of Comparative Neurology, 2003, 465, 1-10.	1.6	43
69	A dual role for Î±-synuclein in facilitation and depression of dopamine release from substantia nigra neurons in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 32701-32710.	7.1	41
70	Sensory-Derived Glutamate Regulates Presynaptic Inhibitory Terminals in Mouse Spinal Cord. Neuron, 2016, 90, 1189-1202.	8.1	40
71	Structures suggest a mechanism for energy coupling by a family of organic anion transporters. PLoS Biology, 2019, 17, e3000260.	5.6	40
72	Sex-dependent changes in metabolism and behavior, as well as reduced anxiety after eliminating ventromedial hypothalamus excitatory output. Molecular Metabolism, 2015, 4, 857-866.	6.5	37

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73	Normal Biogenesis and Cycling of Empty Synaptic Vesicles in Dopamine Neurons of Vesicular Monoamine Transporter 2 Knockout Mice. Molecular Biology of the Cell, 2005, 16, 306-315.	2.1	36
74	A population of glomerular glutamatergic neurons controls sensory information transfer in the mouse olfactory bulb. Nature Communications, 2014, 5, 3791.	12.8	36
75	The Membrane Interactions of Synuclein: Physiology and Pathology. Annual Review of Pathology: Mechanisms of Disease, 2021, 16, 465-485.	22.4	32
76	Widespread Dysregulation of Peptide Hormone Release in Mice Lacking Adaptor Protein AP-3. PLoS Genetics, 2013, 9, e1003812.	3.5	31
77	A mouse model of autism implicates endosome pH in the regulation of presynaptic calcium entry. Nature Communications, 2018, 9, 330.	12.8	21
78	The mechanism and regulation of vesicular glutamate transport: Coordination with the synaptic vesicle cycle. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183259.	2.6	19
79	Glutamatergic Neurotransmission from Melanopsin Retinal Ganglion Cells Is Required for Neonatal Photoaversion but Not Adult Pupillary Light Reflex. PLoS ONE, 2013, 8, e83974.	2.5	19
80	The dual role of chloride in synaptic vesicle glutamate transport. ELife, 2018, 7, .	6.0	19
81	Loss of Î±-Synuclein Does Not Affect Mitochondrial Bioenergetics in Rodent Neurons. ENeuro, 2017, 4, ENEURO.0216-16.2017.	1.9	16
82	Ultrastructural Localization of the Vesicular Monoamine Transporter 2 in Mesolimbic and Nigrostriatal Dopaminergic Neurons. Advances in Pharmacology, 1997, 42, 240-243.	2.0	15
83	Perinatal interference with the serotonergic system affects VTA function in the adult via glutamate co-transmission. Molecular Psychiatry, 2020, 26, 4795-4812.	7.9	10
84	Input-specific control of interneuron numbers in nascent striatal networks. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2118430119.	7.1	6
85	Diversity of function and mechanism in a family of organic anion transporters. Current Opinion in Structural Biology, 2022, 75, 102399.	5.7	6
86	A slow excitatory postsynaptic current mediated by a novel metabotropic glutamate receptor in CA1 pyramidal neurons. Neuropharmacology, 2017, 115, 4-9.	4.1	5
87	SNX5 targets a monoamine transporter to the TGN for assembly into dense core vesicles by AP-3. Journal of Cell Biology, 2022, 221, .	5.2	5
88	Mobile binding sites regulate glutamate clearance. Nature Neuroscience, 2015, 18, 166-168.	14.8	4
89	Subcellular localization and molecular topology of the dopamine transporter in the striatum and substantia nigra. Journal of Comparative Neurology, 1997, 388, 211-227.	1.6	4
90	What the Neuron Tells Glia. Neuron, 2009, 61, 811-812.	8.1	2

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91	Allosteric Inhibition of a Vesicular Glutamate Transporter by an Isoform-Specific Antibody. Biochemistry, 2021, 60, 2463-2470.	2.5	1
92	Regulation of the glutamine transporter SN1 by extracellular pH and intracellular sodium ions. , 2002, 539, 3.		1
93	One Cycle Fuels Another: The Energetics of Neurotransmitter Release. Neuron, 2017, 93, 470-472.	8.1	0
94	Whole Endosome Recording of Vesicular Neurotransmitter Transporter Currents. Methods in Molecular Biology, 2022, 2417, 29-44.	0.9	0