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	Whole Endosome Recording of Vesicular Neurotransmitter Transporter Currents. Methods in Molecular Biology, 2022, 2417, 29-44.	0.9	0
2	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
3	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
4	Diversity of function and mechanism in a family of organic anion transporters. Current Opinion in Structural Biology, 2022, 75, 102399.	5.7	6
5	The Membrane Interactions of Synuclein: Physiology and Pathology. Annual Review of Pathology: Mechanisms of Disease, 2021, 16, 465-485.	22.4	32
6	Alpha-synuclein research: defining strategic moves in the battle against Parkinsonâ€™s disease. Npj Parkinson's Disease, 2021, 7, 65.	5.3	74
7	Allosteric Inhibition of a Vesicular Glutamate Transporter by an Isoform-Specific Antibody. Biochemistry, 2021, 60, 2463-2470.	2.5	1
8	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
9	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
10	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
11	Ion transport and regulation in a synaptic vesicle glutamate transporter. Science, 2020, 368, 893-897.	12.6	53
12	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
13	The physiological role of Î±â€synuclein and its relationship to Parkinsonâ€™s Disease. Journal of Neurochemistry, 2019, 150, 475-486.	3.9	217
14	Structures suggest a mechanism for energy coupling by a family of organic anion transporters. PLoS Biology, 2019, 17, e3000260.	5.6	40
15	Synaptic Vesicle Recycling Pathway Determines Neurotransmitter Content and Release Properties. Neuron, 2019, 102, 786-800.e5.	8.1	74
16	A mouse model of autism implicates endosome pH in the regulation of presynaptic calcium entry. Nature Communications, 2018, 9, 330.	12.8	21
17	The dual role of chloride in synaptic vesicle glutamate transport. ELife, 2018, 7, .	6.0	19
18	One Cycle Fuels Another: The Energetics of Neurotransmitter Release. Neuron, 2017, 93, 470-472.	8.1	0

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19	Î±-Synuclein promotes dilation of the exocytotic fusion pore. Nature Neuroscience, 2017, 20, 681-689.	14.8	229
20	A slow excitatory postsynaptic current mediated by a novel metabotropic glutamate receptor in CA1 pyramidal neurons. Neuropharmacology, 2017, 115, 4-9.	4.1	5
21	Loss of Î±-Synuclein Does Not Affect Mitochondrial Bioenergetics in Rodent Neurons. ENeuro, 2017, 4, ENEURO.0216-16.2017.	1.9	16
22	Protons Regulate Vesicular Glutamate Transporters through an Allosteric Mechanism. Neuron, 2016, 90, 768-780.	8.1	57
23	Sensory-Derived Glutamate Regulates Presynaptic Inhibitory Terminals in Mouse Spinal Cord. Neuron, 2016, 90, 1189-1202.	8.1	40
24	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
25	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
26	A Non-canonical Pathway from Cochlea to Brain Signals Tissue-Damaging Noise. Current Biology, 2015, 25, 606-612.	3.9	119
27	Mobile binding sites regulate glutamate clearance. Nature Neuroscience, 2015, 18, 166-168.	14.8	4
28	The Role of Mitochondrially Derived ATP in Synaptic Vesicle Recycling. Journal of Biological Chemistry, 2015, 290, 22325-22336.	3.4	219
29	Is Aspartate an Excitatory Neurotransmitter?. Journal of Neuroscience, 2015, 35, 10168-10171.	3.6	56
30	Loss of Mitochondrial Fission Depletes Axonal Mitochondria in Midbrain Dopamine Neurons. Journal of Neuroscience, 2014, 34, 14304-14317.	3.6	165
31	A population of glomerular glutamatergic neurons controls sensory information transfer in the mouse olfactory bulb. Nature Communications, 2014, 5, 3791.	12.8	36
32	Efficient, Complete Deletion of Synaptic Proteins using CRISPR. Neuron, 2014, 83, 1051-1057.	8.1	104
33	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
34	The Function of Î±-Synuclein. Neuron, 2013, 79, 1044-1066.	8.1	664
35	Self-Assembly of VPS41 Promotes Sorting Required for Biogenesis of the Regulated Secretory Pathway. Developmental Cell, 2013, 27, 425-437.	7.0	76
36	Widespread Dysregulation of Peptide Hormone Release in Mice Lacking Adaptor Protein AP-3. PLoS Genetics, 2013, 9, e1003812.	3.5	31

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37	Multiple Dileucine-like Motifs Direct VGLUT1 Trafficking. Journal of Neuroscience, 2013, 33, 10647-10660.	3.6	50
38	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
39	Neurotransmitter Corelease: Mechanism and Physiological Role. Annual Review of Physiology, 2012, 74, 225-243.	13.1	238
40	Presynaptic regulation of quantal size: K+/H+ exchange stimulates vesicular glutamate transport. Nature Neuroscience, 2011, 14, 1285-1292.	14.8	66
41	v-SNARE Composition Distinguishes Synaptic Vesicle Pools. Neuron, 2011, 71, 474-487.	8.1	142
42	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
43	Cholinergic Interneurons Mediate Fast VGluT3-Dependent Glutamatergic Transmission in the Striatum. PLoS ONE, 2011, 6, e19155.	2.5	155
44	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
45	Vesicular Monoamine and Glutamate Transporters Select Distinct Synaptic Vesicle Recycling Pathways. Journal of Neuroscience, 2010, 30, 7917-7927.	3.6	48
46	Increased Expression of Î±-Synuclein Reduces Neurotransmitter Release by Inhibiting Synaptic Vesicle Reclustering after Endocytosis. Neuron, 2010, 65, 66-79.	8.1	885
47	Vesicular Glutamate Transport Promotes Dopamine Storage and Glutamate Corelease In Vivo. Neuron, 2010, 65, 643-656.	8.1	363
48	Metabolic Control of Vesicular Glutamate Transport and Release. Neuron, 2010, 68, 99-112.	8.1	331
49	Fluorescent False Neurotransmitters Visualize Dopamine Release from Individual Presynaptic Terminals. Science, 2009, 324, 1441-1444.	12.6	184
50	What the Neuron Tells Glia. Neuron, 2009, 61, 811-812.	8.1	2
51	Pharmacology of Neurotransmitter Transport into Secretory Vesicles. Handbook of Experimental Pharmacology, 2008, , 77-106.	1.8	54
52	Sensorineural Deafness and Seizures in Mice Lacking Vesicular Glutamate Transporter 3. Neuron, 2008, 57, 263-275.	8.1	340
53	Vesicular Neurotransmitter Transporters as Targets for Endogenous and Exogenous Toxic Substances. Annual Review of Pharmacology and Toxicology, 2008, 48, 277-301.	9.4	77
54	Optical Reporters for the Conformation of Î±-Synuclein Reveal a Specific Interaction with Mitochondria. Journal of Neuroscience, 2008, 28, 12305-12317.	3.6	185

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55	The Neurotransmitter Cycle and Quantal Size. Neuron, 2007, 55, 835-858.	8.1	302
56	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
57	Distinct Endocytic Pathways Control the Rate and Extent of Synaptic Vesicle Protein Recycling. Neuron, 2006, 51, 71-84.	8.1	379
58	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
59	A Combinatorial Code for the Interaction of Î±-Synuclein with Membranes. Journal of Biological Chemistry, 2005, 280, 31664-31672.	3.4	180
60	Neural Activity Controls the Synaptic Accumulation of Î±-Synuclein. Journal of Neuroscience, 2005, 25, 10913-10921.	3.6	256
61	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
62	Vesicular Glutamate Transporters 1 and 2 Target to Functionally Distinct Synaptic Release Sites. Science, 2004, 304, 1815-1819.	12.6	419
63	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
64	Lipid Rafts Mediate the Synaptic Localization of Â-Synuclein. Journal of Neuroscience, 2004, 24, 6715-6723.	3.6	485
65	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
66	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
67	VGLUTs define subsets of excitatory neurons and suggest novel roles for glutamate. Trends in Neurosciences, 2004, 27, 98-103.	8.6	668
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	The glutamine commute. Journal of Cell Biology, 2002, 157, 349-355.	5.2	186
70	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
71	Glutamine Uptake by Neurons: Interaction of Protons with System A Transporters. Journal of Neuroscience, 2002, 22, 62-72.	3.6	188
72	Regulation of the glutamine transporter SN1 by extracellular pH and intracellular sodium ions. Journal of Physiology, 2002, 539, 3-14.	2.9	111

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73	Regulation of the glutamine transporter SN1 by extracellular pH and intracellular sodium ions. , 2002, 539, 3.		1
74	The Expression of Vesicular Glutamate Transporters Defines Two Classes of Excitatory Synapse. Neuron, 2001, 31, 247-260.	8.1	1,114
75	Molecular mechanisms of neurotransmitter release. Muscle and Nerve, 2001, 24, 581-601.	2.2	56
76	Drug delivery via the bloodâ€“brain barrier. Nature Neuroscience, 2001, 4, 221-222.	14.8	48
77	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
78	An Acidic Motif Retains Vesicular Monoamine Transporter 2 on Large Dense Core Vesicles. Journal of Cell Biology, 2001, 152, 1159-1168.	5.2	62
79	Synaptic Vesicle Transporter Expression Regulates Vesicle Phenotype and Quantal Size. Journal of Neuroscience, 2000, 20, 7297-7306.	3.6	188
80	Uptake of Glutamate into Synaptic Vesicles by an Inorganic Phosphate Transporter. Science, 2000, 289, 957-960.	12.6	731
81	Membrane trafficking of neurotransmitter transporters in the regulation of synaptic transmission. Trends in Cell Biology, 1999, 9, 356-363.	7.9	51
82	Molecular Analysis of System N Suggests Novel Physiological Roles in Nitrogen Metabolism and Synaptic Transmission. Cell, 1999, 99, 769-780.	28.9	299
83	A Leucine-based Motif Mediates the Endocytosis of Vesicular Monoamine and Acetylcholine Transporters. Journal of Biological Chemistry, 1998, 273, 17351-17360.	3.4	103
84	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
85	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
86	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
87	THE ROLE OF VESICULAR TRANSPORT PROTEINS IN SYNAPTIC TRANSMISSION AND NEURAL DEGENERATION. Annual Review of Neuroscience, 1997, 20, 125-156.	10.7	288
88	Ultrastructural Localization of the Vesicular Monoamine Transporter 2 in Mesolimbic and Nigrostriatal Dopaminergic Neurons. Advances in Pharmacology, 1997, 42, 240-243.	2.0	15
89	Expression of a Putative Vesicular Acetylcholine Transporter Facilitates Quantal Transmitter Packaging. Neuron, 1997, 18, 815-826.	8.1	166
90	Vesicular Transport Regulates Monoamine Storage and Release but Is Not Essential for Amphetamine Action. Neuron, 1997, 19, 1271-1283.	8.1	298

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91	Identification and characterization of the vesicular GABA transporter. Nature, 1997, 389, 870-876.	27.8	809
92	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
93	Vesicular monoamine transporter-2: Immunogold localization in striatal axons and terminals. , 1997, 26, 194-198.		74
94	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