Matthew N Rasband

List of Publications by Year
in descending order

138	11,691	17440 63	30087 103
papers	citations	h-index	g-index

162	162	162	9653
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Compact Myelin Dictates the Differential Targeting of Two Sodium Channel Isoforms in the Same Axon. Neuron, 2001, 30, 91-104.	8.1	373
2	The axon initial segment and the maintenance of neuronal polarity. Nature Reviews Neuroscience, 2010, 11, 552-562.	10.2	368
3	Neurofascin as a novel target for autoantibody-mediated axonal injury. Journal of Experimental Medicine, 2007, 204, 2363-2372.	8.5	355
4	Anti-GM1 Antibodies Cause Complement-Mediated Disruption of Sodium Channel Clusters in Peripheral Motor Nerve Fibers. Journal of Neuroscience, 2007, 27, 3956-3967.	3.6	331
5	AnkyrinG is required for maintenance of the axon initial segment and neuronal polarity. Journal of Cell Biology, 2008, 183, 635-640.	5.2	329
6	Distinct potassium channels on pain-sensing neurons. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 13373-13378.	7.1	326
7	Dependence of Nodal Sodium Channel Clustering on Paranodal Axoglial Contact in the Developing CNS. Journal of Neuroscience, 1999, 19, 7516-7528.	3.6	304
8	Neonatal Chimerization with Human Glial Progenitor Cells Can Both Remyelinate and Rescue the Otherwise Lethally Hypomyelinated Shiverer Mouse. Cell Stem Cell, 2008, 2, 553-565.	11.1	293
9	Potassium Channel Distribution, Clustering, and Function in Remyelinating Rat Axons. Journal of Neuroscience, 1998, 18, 36-47.	3.6	256
10	A Distal Axonal Cytoskeleton Forms an Intra-Axonal Boundary that Controls Axon Initial Segment Assembly. Cell, 2012, 149, 1125-1139.	28.9	230
11	Neurofascin assembles a specialized extracellular matrix at the axon initial segment. Journal of Cell Biology, 2007, 178, 875-886.	5.2	229
12	A Î²IV-spectrin/CaMKII signaling complex is essential for membrane excitability in mice. Journal of Clinical Investigation, 2010, 120, 3508-3519.	8.2	227
13	Mice Deficient for Tenascin-R Display Alterations of the Extracellular Matrix and Decreased Axonal Conduction Velocities in the CNS. Journal of Neuroscience, 1999, 19, 4245-4262.	3.6	223
14	Neurofascin as a target for autoantibodies in peripheral neuropathies. Neurology, 2012, 79, 2241-2248.	1.1	211
15	Disruption of the Axon Initial Segment Cytoskeleton Is a New Mechanism for Neuronal Injury. Journal of Neuroscience, 2009, 29, 13242-13254.	3.6	204
16	Gangliosides contribute to stability of paranodal junctions and ion channel clusters in myelinated nerve fibers. Glia, 2007, 55, 746-757.	4.9	189
17	A central role for Necl4 (SynCAM4) in Schwann cellâ€“axon interaction and myelination. Nature Neuroscience, 2007, 10, 861-869.	14.8	178
18	Î²IV spectrin is recruited to axon initial segments and nodes of Ranvier by ankyrinG. Journal of Cell Biology, 2007, 176, 509-519.	5.2	169

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19	Three Mechanisms Assemble Central Nervous System Nodes of Ranvier. Neuron, 2013, 78, 469-482.	8.1	151
20	Integrin-linked kinase is required for laminin-2â€“induced oligodendrocyte cell spreading and CNS myelination. Journal of Cell Biology, 2003, 163, 397-408.	5.2	148
21	Spectrins and AnkyrinB Constitute a Specialized Paranodal Cytoskeleton. Journal of Neuroscience, 2006, 26, 5230-5239.	3.6	148
22	Where Is the Spike Generator of the Cochlear Nerve? Voltage-Gated Sodium Channels in the Mouse Cochlea. Journal of Neuroscience, 2005, 25, 6857-6868.	3.6	147
23	Short- and Long-Term Plasticity at the Axon Initial Segment. Journal of Neuroscience, 2011, 31, 16049-16055.	3.6	143
24	The Nodes of Ranvier: Molecular Assembly and Maintenance. Cold Spring Harbor Perspectives in Biology, 2016, 8, a020495.	5.5	136
25	Axon initial segments: structure, function, and disease. Annals of the New York Academy of Sciences, 2018, 1420, 46-61.	3.8	136
26	Developmental Clustering of Ion Channels at and near the Node of Ranvier. Developmental Biology, 2001, 236, 5-16.	2.0	129
27	Dysfunction of nodes of Ranvier: A mechanism for anti-ganglioside antibody-mediated neuropathies. Experimental Neurology, 2012, 233, 534-542.	4.1	129
28	Does Paranode Formation and Maintenance Require Partitioning of Neurofascin 155 into Lipid Rafts?. Journal of Neuroscience, 2004, 24, 3176-3185.	3.6	127
29	ÂIV Spectrins Are Essential for Membrane Stability and the Molecular Organization of Nodes of Ranvier. Journal of Neuroscience, 2004, 24, 7230-7240.	3.6	125
30	Î²IVÎ£1 spectrin stabilizes the nodes of Ranvier and axon initial segments. Journal of Cell Biology, 2004, 166, 983-990.	5.2	124
31	CNP is required for maintenance of axon-glia interactions at nodes of Ranvier in the CNS. Glia, 2005, 50, 86-90.	4.9	124
32	Mechanisms of Hearing Loss after Blast Injury to the Ear. PLoS ONE, 2013, 8, e67618.	2.5	117
33	An AnkyrinG-Binding Motif Is Necessary and Sufficient for Targeting Na_v1.6 Sodium Channels to Axon Initial Segments and Nodes of Ranvier. Journal of Neuroscience, 2012, 32, 7232-7243.	3.6	115
34	Postsynaptic Density-93 Clusters Kv1 Channels at Axon Initial Segments Independently of Caspr2. Journal of Neuroscience, 2008, 28, 5731-5739.	3.6	114
35	Alterations in Intrinsic Membrane Properties and the Axon Initial Segment in a Mouse Model of Angelman Syndrome. Journal of Neuroscience, 2011, 31, 17637-17648.	3.6	114
36	ADAM22, A Kv1 Channel-Interacting Protein, Recruits Membrane-Associated Guanylate Kinases to Juxtaparanodes of Myelinated Axons. Journal of Neuroscience, 2010, 30, 1038-1048.	3.6	111

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37	Proteomic mapping provides powerful insights into functional myelin biology. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4643-4648.	7.1	109
38	Axon Initial Segmentâ€“Associated Microglia. Journal of Neuroscience, 2015, 35, 2283-2292.	3.6	107
39	Molecular mechanisms of node of Ranvier formation. Current Opinion in Cell Biology, 2008, 20, 616-623.	5.4	106
40	Multiple Molecular Interactions Determine the Clustering of Caspr2 and Kv1 Channels in Myelinated Axons. Journal of Neuroscience, 2008, 28, 14213-14222.	3.6	106
41	Ion channel sequestration in central nervous system axons. Journal of Physiology, 2000, 525, 63-73.	2.9	102
42	The axon initial segment in nervous system disease and injury. European Journal of Neuroscience, 2011, 34, 1609-1619.	2.6	101
43	K+ channel distribution and clustering in developing and hypomyelinated axons of the optic nerve. Journal of Neurocytology, 1999, 28, 319-331.	1.5	100
44	The functional organization and assembly of the axon initial segment. Current Opinion in Neurobiology, 2008, 18, 307-313.	4.2	100
45	Remodeling of the Axon Initial Segment After Focal Cortical and White Matter Stroke. Stroke, 2013, 44, 182-189.	2.0	97
46	Electrical Excitability of Early Neurons in the Human Cerebral Cortex during the Second Trimester of Gestation. Cerebral Cortex, 2009, 19, 1795-1805.	2.9	95
47	A hierarchy of ankyrin-spectrin complexes clusters sodium channels at nodes of Ranvier. Nature Neuroscience, 2014, 17, 1664-1672.	14.8	94
48	WAVE1 Is Required for Oligodendrocyte Morphogenesis and Normal CNS Myelination. Journal of Neuroscience, 2006, 26, 5849-5859.	3.6	89
49	Mechanisms of node of Ranvier assembly. Nature Reviews Neuroscience, 2021, 22, 7-20.	10.2	89
50	Blast Wave Exposure Impairs Memory and Decreases Axon Initial Segment Length. Journal of Neurotrauma, 2013, 30, 741-751.	3.4	83
51	Computation identifies structural features that govern neuronal firing properties in slowly adapting touch receptors. ELife, 2014, 3, e01488.	6.0	83
52	Î±II-Spectrin Is Essential for Assembly of the Nodes of Ranvier in Myelinated Axons. Current Biology, 2007, 17, 562-568.	3.9	82
53	Glial ankyrins facilitate paranodal axoglial junction assembly. Nature Neuroscience, 2014, 17, 1673-1681.	14.8	82
54	Clustering of neuronal potassium channels is independent of their interaction with PSD-95. Journal of Cell Biology, 2002, 159, 663-672.	5.2	79

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55	Age-related molecular reorganization at the node of Ranvier. Journal of Comparative Neurology, 2006, 495, 351-362.	1.6	76
56	It's ?juxta? potassium channel!. Journal of Neuroscience Research, 2004, 76, 749-757.	2.9	74
57	Loss of Frataxin induces iron toxicity, sphingolipid synthesis, and Pdk1/Mef2 activation, leading to neurodegeneration. ELife, 2016, 5, .	6.0	74
58	Axon initial segments: diverse and dynamic neuronal compartments. Current Opinion in Neurobiology, 2014, 27, 96-102.	4.2	73
59	Serotonin modulates spike probability in the axon initial segment through HCN channels. Nature Neuroscience, 2016, 19, 826-834.	14.8	73
60	Mapping axon initial segment structure and function by multiplexed proximity biotinylation. Nature Communications, 2020, 11, 100.	12.8	73
61	Early events in node of Ranvier formation during myelination and remyelination in the PNS. Neuron Glia Biology, 2006, 2, 69-79.	1.6	72
62	Membrane domain organization of myelinated axons requires Î²II spectrin. Journal of Cell Biology, 2013, 203, 437-443.	5.2	70
63	Daam2-PIP5K Is a Regulatory Pathway for Wnt Signaling and Therapeutic Target for Remyelination in the CNS. Neuron, 2015, 85, 1227-1243.	8.1	69
64	Remyelination alters the pattern of myelin in the cerebral cortex. ELife, 2020, 9, .	6.0	67
65	Genetic Reduction of the Î±1 Subunit of Na/K-ATPase Corrects Multiple Hippocampal Phenotypes in Angelman Syndrome. Cell Reports, 2013, 4, 405-412.	6.4	66
66	Dysregulation of axonal sodium channel isoforms after adult-onset chronic demyelination. Journal of Neuroscience Research, 2003, 73, 465-470.	2.9	65
67	Subunit composition and novel localization of K+ channels in spinal cord. Journal of Comparative Neurology, 2001, 429, 166-176.	1.6	64
68	Î±II Spectrin Forms a Periodic Cytoskeleton at the Axon Initial Segment and Is Required for Nervous System Function. Journal of Neuroscience, 2017, 37, 11311-11322.	3.6	63
69	Nerve Conduction Block by Nitric Oxide That Is Mediated by the Axonal Environment. Journal of Neurophysiology, 1998, 79, 529-536.	1.8	62
70	Loss of Frataxin activates the iron/sphingolipid/PDK1/Mef2 pathway in mammals. ELife, 2016, 5, .	6.0	61
71	Intrinsic and extrinsic determinants of ion channel localization in neurons. Journal of Neurochemistry, 2006, 98, 1345-1352.	3.9	58
72	An Î±II Spectrin-Based Cytoskeleton Protects Large-Diameter Myelinated Axons from Degeneration. Journal of Neuroscience, 2017, 37, 11323-11334.	3.6	58

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73	Glial regulation of the axonal membrane at nodes of Ranvier. Current Opinion in Neurobiology, 2006, 16, 508-514.	4.2	57
74	Î²IV Spectrinopathies Cause Profound Intellectual Disability, Congenital Hypotonia, and Motor Axonal Neuropathy. American Journal of Human Genetics, 2018, 102, 1158-1168.	6.2	57
75	The paranodal cytoskeleton clusters Na+ channels at nodes of Ranvier. ELife, 2017, 6, .	6.0	57
76	Schwann cell spectrins modulate peripheral nerve myelination. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8009-8014.	7.1	56
77	Dysfunction in the Î²II Spectrinâ€“Dependent Cytoskeleton Underlies Human Arrhythmia. Circulation, 2015, 131, 695-708.	1.6	56
78	Postnatal development of synaptic structure proteins in pyramidal neuron axon initial segments in monkey prefrontal cortex. Journal of Comparative Neurology, 2009, 514, 353-367.	1.6	52
79	Cytoskeletal control of axon domain assembly and function. Current Opinion in Neurobiology, 2016, 39, 116-121.	4.2	52
80	Spectrin and Ankyrin-Based Cytoskeletons at Polarized Domains in Myelinated Axons. Experimental Biology and Medicine, 2008, 233, 394-400.	2.4	51
81	Clustered K+ channel complexes in axons. Neuroscience Letters, 2010, 486, 101-106.	2.1	51
82	Composition, assembly, and maintenance of excitable membrane domains in myelinated axons. Seminars in Cell and Developmental Biology, 2011, 22, 178-184.	5.0	51
83	Na⁺Channel-Dependent Recruitment of Na_vÎ²4 to Axon Initial Segments and Nodes of Ranvier. Journal of Neuroscience, 2013, 33, 6191-6202.	3.6	50
84	Mature myelin maintenance requires Qki to coactivate PPARÎ²-RXRÎ±â€“mediated lipid metabolism. Journal of Clinical Investigation, 2020, 130, 2220-2236.	8.2	50
85	Mice with Conditional Inactivation of Fibroblast Growth Factor Receptor-2 Signaling in Oligodendrocytes Have Normal Myelin But Display Dramatic Hyperactivity when Combined with Cnp1 Inactivation. Journal of Neuroscience, 2006, 26, 12339-12350.	3.6	49
86	Amyloid-Î² plaques disrupt axon initial segments. Experimental Neurology, 2016, 281, 93-98.	4.1	49
87	Neural ECM molecules in axonal and synaptic homeostatic plasticity. Progress in Brain Research, 2014, 214, 81-100.	1.4	48
88	The myelin-axolemmal complex: biochemical dissection and the role of galactosphingolipids. Journal of Neurochemistry, 2004, 87, 995-1009.	3.9	47
89	Glial Contributions to Neural Function and Disease. Molecular and Cellular Proteomics, 2016, 15, 355-361.	3.8	41
90	Excitable Domains of Myelinated Nerves. Current Topics in Membranes, 2013, 72, 159-192.	0.9	35

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91	Reassembly of Excitable Domains after CNS Axon Regeneration. Journal of Neuroscience, 2016, 36, 9148-9160.	3.6	32
92	Paranodal transverse bands are required for maintenance but not initiation of Nav1.6 sodium channel clustering in CNS optic nerve axons. Glia, 2003, 44, 173-182.	4.9	31
93	Novel forms of neurofascin 155 in the central nervous system: alterations in paranodal disruption models and multiple sclerosis. Brain, 2010, 133, 389-405.	7.6	29
94	Subcellular Patterning: Axonal Domains with Specialized Structure and Function. Developmental Cell, 2015, 32, 459-468.	7.0	29
95	BK Channels Localize to the Paranodal Junction and Regulate Action Potentials in Myelinated Axons of Cerebellar Purkinje Cells. Journal of Neuroscience, 2015, 35, 7082-7094.	3.6	28
96	ÎºBÎ± is not required for axon initial segment assembly. Molecular and Cellular Neurosciences, 2012, 50, 1-9.	2.2	27
97	Ankyrins and neurological disease. Current Opinion in Neurobiology, 2021, 69, 51-57.	4.2	27
98	Oligodendrocyte Myelin Glycoprotein Does Not Influence Node of Ranvier Structure or Assembly. Journal of Neuroscience, 2010, 30, 14476-14481.	3.6	26
99	Ankyrin-R regulates fast-spiking interneuron excitability through perineuronal nets and Kv3.1b K+ channels. ELife, 2021, 10, .	6.0	26
100	Proteomic analysis of optic nerve lipid rafts reveals new paranodal proteins. Journal of Neuroscience Research, 2009, 87, 3502-3510.	2.9	25
101	Submembranous cytoskeletons stabilize nodes of Ranvier. Experimental Neurology, 2016, 283, 446-451.	4.1	25
102	Developmental Changes in Expression of Î²IV Spectrin Splice Variants at Axon Initial Segments and Nodes of Ranvier. Frontiers in Cellular Neuroscience, 2016, 10, 304.	3.7	25
103	Glial Î²II Spectrin Contributes to Paranode Formation and Maintenance. Journal of Neuroscience, 2018, 38, 6063-6075.	3.6	25
104	Myelin Structure and Biochemistry. , 2012, , 180-199.		24
105	Dysfunction of the Î²₂-spectrin-based pathway in human heart failure. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 310, H1583-H1591.	3.2	23
106	Maintenance of neuronal polarity. Developmental Neurobiology, 2011, 71, 474-482.	3.0	22
107	NuMA1 promotes axon initial segment assembly through inhibition of endocytosis. Journal of Cell Biology, 2020, 219, jcb.201907048.	5.2	22
108	The Ins and Outs of Polarized Axonal Domains. Annual Review of Cell and Developmental Biology, 2015, 31, 647-667.	9.4	21

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109	Nodal Î² spectrins are required to maintain Na+ channel clustering and axon integrity. ELife, 2020, 9, .	6.0	20
110	The Polarity Protein Pals1 Regulates Radial Sorting of Axons. Journal of Neuroscience, 2015, 35, 10474-10484.	3.6	17
111	Î² spectrin-dependent and domain specific mechanisms for Na+ channel clustering. ELife, 2020, 9, .	6.0	17
112	Cytoskeleton: Axons Earn Their Stripes. Current Biology, 2013, 23, R197-R198.	3.9	15
113	Organization of the axon initial segment: Actin like a fence. Journal of Cell Biology, 2016, 215, 9-11.	5.2	15
114	Disruption of MeCP2â€“TCF20 complex underlies distinct neurodevelopmental disorders. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	15
115	Qki regulates myelinogenesis through Srebp2-dependent cholesterol biosynthesis. ELife, 2021, 10, .	6.0	13
116	Ankyrin-R Links Kv3.3 to the Spectrin Cytoskeleton and Is Required for Purkinje Neuron Survival. Journal of Neuroscience, 2022, 42, 2-15.	3.6	13
117	Preparation of Primary Neurons for Visualizing Neurites in a Frozen-hydrated State Using Cryo-Electron Tomography. Journal of Visualized Experiments, 2014, , e50783.	0.3	10
118	Endogenously expressed Ranbp2 is not at the axon initial segment. Journal of Cell Science, 2021, 134, .	2.0	10
119	Neuron-Glia Interactions at the Node of Ranvier. , 2006, 43, 129-149.		9
120	Na+ channels get anchoredâ€¦with a little help. Journal of Cell Biology, 2008, 183, 975-977.	5.2	9
121	Defining new mechanistic roles for Î±II spectrin in cardiac function. Journal of Biological Chemistry, 2019, 294, 9576-9591.	3.4	9
122	Precise Spatiotemporal Control of Nodal Na+ Channel Clustering by Bone Morphogenetic Protein-1/Tolloid-like Proteinases. Neuron, 2020, 106, 806-815.e6.	8.1	9
123	Ankyrin-dependent Na+ channel clustering prevents neuromuscular synapse fatigue. Current Biology, 2021, 31, 3810-3819.e4.	3.9	8
124	Spectrins. Current Biology, 2021, 31, R504-R506.	3.9	7
125	Potassium Channel Organization of Myelinated and Demyelinated Axons. , 2005, , 57-67.		6
126	Converging on the Origins of Axonal Ion Channel Clustering. PLoS Genetics, 2009, 5, e1000340.	3.5	5

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127	Î²IV-Spectrin Autoantibodies in 2 Individuals With Neuropathy of Possible Paraneoplastic Origin. Neurology: Neuroimmunology and NeuroInflammation, 2022, 9, .	6.0	4
128	Di-rectifying Tau. EMBO Journal, 2011, 30, 4699-4700.	7.8	3
129	The SIZ of Pain. Neuron, 2019, 102, 709-711.	8.1	3
130	Saltatory Conduction: Jumping to New Conclusions. Current Biology, 2020, 30, R326-R328.	3.9	3
131	Formation and Maintenance of Myelin. , 2012, , 569-581.		2
132	Chapter 11 Voltageâ€Gated Potassium Channels in Sensory Neurons. Current Topics in Membranes, 2006, 57, 323-351.	0.9	1
133	Reassembly of the axon initial segment and nodes of Ranvier in regenerated axons of the central nervous system. Neural Regeneration Research, 2017, 12, 1276.	3.0	1
134	Cell Surface Protein-protein Binding on COS-7 Cells. Bio-protocol, 2014, 4, .	0.4	1
135	Correction: Integrin-linked kinase is required for laminin-2â€“induced oligodendrocyte cell spreading and CNS myelination. Journal of Cell Biology, 2006, 174, 315-315.	5.2	0
136	Lose it to use it. Journal of Cell Biology, 2021, 220, .	5.2	0
137	Membrane domain organization of myelinated axons requires Î²II spectrin. Journal of General Physiology, 2013, 142, 1426OIA45.	1.9	0
138	Dynorphin, wonâ€™t you myelinate my neighbor?. Neuron, 2021, 109, 3537-3539.	8.1	0