Christine Holt

List of Publications by Year
in descending order

110 papers	16,784 citations	20817 60 h-index	24258 110 g-index
145 all docs	145 docs citations	145 times ranked	13393 citing authors

#	Article	IF	Citations
1	A critical window for cooperation and competition among developing retinotectal synapses. Nature, 1998, 395, 37-44.	27.8	815
2	Chemotropic Responses of Retinal Growth Cones Mediated by Rapid Local Protein Synthesis and Degradation. Neuron, 2001, 32, 1013-1026.	8.1	754
3	ALS/FTD Mutation-Induced Phase Transition of FUS Liquid Droplets and Reversible Hydrogels into Irreversible Hydrogels Impairs RNP Granule Function. Neuron, 2015, 88, 678-690.	8.1	716
4	FUS Phase Separation Is Modulated by a Molecular Chaperone and Methylation of Arginine Cation-Ï€ Interactions. Cell, 2018, 173, 720-734.e15.	28.9	662
5	Cellular determination in the xenopus retina is independent of lineage and birth date. Neuron, 1988, 1, 15-26.	8.1	624
6	cAMP-Dependent Growth Cone Guidance by Netrin-1. Neuron, 1997, 19, 1225-1235.	8.1	542
7	Mechanosensing is critical for axon growth in the developing brain. Nature Neuroscience, 2016, 19, 1592-1598.	14.8	478
8	The Central Dogma Decentralized: New Perspectives on RNA Function and Local Translation in Neurons. Neuron, 2013, 80, 648-657.	8.1	473
9	Growth-cone attraction to netrin-1 is converted to repulsion by laminin-1. Nature, 1999, 401, 69-73.	27.8	465
10	Asymmetrical Î²-actin mRNA translation in growth cones mediates attractive turning to netrin-1. Nature Neuroscience, 2006, 9, 1247-1256.	14.8	443
11	Axonal mRNA localization and local protein synthesis in nervous system assembly, maintenance and repair. Nature Reviews Neuroscience, 2012, 13, 308-324.	10.2	424
12	Axonal Protein Synthesis and Degradation Are Necessary for Efficient Growth Cone Regeneration. Journal of Neuroscience, 2005, 25, 331-342.	3.6	391
13	Dynamic Axonal Translation in Developing and Mature Visual Circuits. Cell, 2016, 166, 181-192.	28.9	385
14	Local translation in neurons: visualization and function. Nature Structural and Molecular Biology, 2019, 26, 557-566.	8.2	355
15	Subcellular mRNA Localization in Animal Cells and Why It Matters. Science, 2009, 326, 1212-1216.	12.6	352
16	Transcriptome analysis of embryonic and adult sensory axons reveals changes in mRNA repertoire localization. Rna, 2011, 17, 85-98.	3.5	343
17	Late Endosomes Act as mRNA Translation Platforms and Sustain Mitochondria in Axons. Cell, 2019, 176, 56-72.e15.	28.9	300
18	Subcellular Profiling Reveals Distinct and Developmentally Regulated Repertoire of Growth Cone mRNAs. Journal of Neuroscience, 2010, 30, 15464-15478.	3.6	299

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19	Turning of Retinal Growth Cones in a Netrin-1 Gradient Mediated by the Netrin Receptor DCC. Neuron, 1997, 19, 1211-1224.	8.1	284
20	Signaling Mechanisms Underlying Slit2-Induced Collapse of Xenopus Retinal Growth Cones. Neuron, 2006, 49, 215-228.	8.1	275
21	Remote Control of Gene Function by Local Translation. Cell, 2014, 157, 26-40.	28.9	273
22	Apoptotic Pathway and MAPKs Differentially Regulate Chemotropic Responses of Retinal Growth Cones. Neuron, 2003, 37, 939-952.	8.1	271
23	Cadherin Function Is Required for Axon Outgrowth in Retinal Ganglion Cells In Vivo. Neuron, 1996, 17, 837-848.	8.1	266
24	Navigational errors made by growth cones without filopodia in the embryonic xenopus brain. Neuron, 1993, 11, 237-251.	8.1	264
25	Lipofection of cDNAs in the embryonic vertebrate central nervous system. Neuron, 1990, 4, 203-214.	8.1	259
26	Local Translation of Extranuclear Lamin B Promotes Axon Maintenance. Cell, 2012, 148, 752-764.	28.9	244
27	The transcription factor Engrailed-2 guides retinal axons. Nature, 2005, 438, 94-98.	27.8	243
28	E3 Ligase Nedd4 Promotes Axon Branching by Downregulating PTEN. Neuron, 2010, 65, 341-357.	8.1	220
29	RNA TRANSLATION IN AXONS. Annual Review of Cell and Developmental Biology, 2004, 20, 505-523.	9.4	189
30	Semaphorin 3A Elicits Stage-Dependent Collapse, Turning, and Branching in<i>Xenopus</i>Retinal Growth Cones. Journal of Neuroscience, 2001, 21, 8538-8547.	3.6	187
31	Local translation and directional steering in axons. EMBO Journal, 2007, 26, 3729-3736.	7.8	169
32	FGF signaling and target recognition in the developing xenopus visual system. Neuron, 1995, 15, 1017-1028.	8.1	168
33	RNA Docking and Local Translation Regulate Site-Specific Axon Remodeling InÂVivo. Neuron, 2017, 95, 852-868.e8.	8.1	163
34	Endocytosis-dependent desensitization and protein synthesisâ€“dependent resensitization in retinal growth cone adaptation. Nature Neuroscience, 2005, 8, 179-186.	14.8	161
35	A functional equivalent of endoplasmic reticulum and Golgi in axons for secretion of locally synthesized proteins. Molecular and Cellular Neurosciences, 2009, 40, 128-142.	2.2	148
36	Xenopus Sprouty2 inhibits FGF-mediated gastrulation movements but does not affect mesoderm induction and patterning. Genes and Development, 2001, 15, 1152-1166.	5.9	141

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37	Inhibition of FGF Receptor Activity in Retinal Ganglion Cell Axons Causes Errors in Target Recognition. Neuron, 1996, 17, 245-254.	8.1	137
38	Rapid Cue-Specific Remodeling of the Nascent Axonal Proteome. Neuron, 2018, 99, 29-46.e4.	8.1	136
39	SFRP1 regulates the growth of retinal ganglion cell axons through the Fz2 receptor. Nature Neuroscience, 2005, 8, 1301-1309.	14.8	132
40	Function and regulation of local axonal translation. Current Opinion in Neurobiology, 2008, 18, 60-68.	4.2	131
41	Molecular control of local translation in axon development and maintenance. Current Opinion in Neurobiology, 2018, 51, 86-94.	4.2	125
42	Position, guidance, and mapping in the developing visual system. Journal of Neurobiology, 1993, 24, 1400-1422.	3.6	117
43	miR-124 acts through CoREST to control onset of Sema3A sensitivity in navigating retinal growth cones. Nature Neuroscience, 2012, 15, 29-38.	14.8	107
44	Extracellular Engrailed Participates in the Topographic Guidance of Retinal Axons In Vivo. Neuron, 2009, 64, 355-366.	8.1	105
45	On-Site Ribosome Remodeling by Locally Synthesized Ribosomal Proteins in Axons. Cell Reports, 2019, 29, 3605-3619.e10.	6.4	103
46	Sugar Codes for Axons?. Neuron, 2005, 46, 169-172.	8.1	102
47	Rapid changes in tissue mechanics regulate cell behaviour in the developing embryonic brain. ELife, 2019, 8, .	6.0	101
48	A Molecular Mechanism for the Heparan Sulfate Dependence of Slit-Robo Signaling. Journal of Biological Chemistry, 2006, 281, 39693-39698.	3.4	99
49	Electroporation of cDNA/Morpholinos to targeted areas of embryonic CNS in Xenopus. BMC Developmental Biology, 2007, 7, 107.	2.1	95
50	Specific heparan sulfate structures involved in retinal axon targeting. Development (Cambridge), 2002, 129, 61-70.	2.5	90
51	B-type Eph receptors and ephrins induce growth cone collapse through distinct intracellular pathways. Journal of Neurobiology, 2003, 57, 323-336.	3.6	86
52	Development. Current Opinion in Neurobiology, 2006, 16, 1-4.	4.2	86
53	miR-182 Regulates Slit2-Mediated Axon Guidance by Modulating the Local Translation of a Specific mRNA. Cell Reports, 2017, 18, 1171-1186.	6.4	82
54	Axonal mRNAs: Characterisation and role in the growth and regeneration of dorsal root ganglion axons and growth cones. Molecular and Cellular Neurosciences, 2009, 42, 102-115.	2.2	81

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55	Coupling of NF-protocadherin signaling to axon guidance by cue-induced translation. Nature Neuroscience, 2013, 16, 166-173.	14.8	70
56	Noncanonical Modulation of the eIF2 Pathway Controls an Increase in Local Translation during Neural Wiring. Molecular Cell, 2019, 73, 474-489.e5.	9.7	70
57	Effects of intraocular tetrodotoxin on the development of the retinocollicular pathway in the syrian hamster. Journal of Comparative Neurology, 1989, 282, 371-388.	1.6	69
58	Single-molecule analysis of endogenous Î²-actin mRNA trafficking reveals a mechanism for compartmentalized mRNA localization in axons. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9697-E9706.	7.1	69
59	NF-Protocadherin and TAF1 Regulate Retinal Axon Initiation and Elongation<i>In Vivo</i>. Journal of Neuroscience, 2008, 28, 100-105.	3.6	66
60	Fibroblast growth factor receptor signaling inXenopus retinal axon extension. Journal of Neurobiology, 1998, 37, 633-641.	3.6	65
61	RNA-binding proteins and translational regulation in axons and growth cones. Frontiers in Neuroscience, 2013, 7, 81.	2.8	65
62	Ena/VASP function in retinal axons is required for terminal arborization but not pathway navigation. Development (Cambridge), 2007, 134, 2137-2146.	2.5	62
63	Axon-Axon Interactions Regulate Topographic Optic Tract Sorting via CYFIP2-Dependent WAVE Complex Function. Neuron, 2018, 97, 1078-1093.e6.	8.1	59
64	The structure and global distribution of the endoplasmic reticulum network are actively regulated by lysosomes. Science Advances, 2020, 6, .	10.3	58
65	New views on retinal axon development: a navigation guide. International Journal of Developmental Biology, 2004, 48, 957-964.	0.6	57
66	Retinal axon guidance: novel mechanisms for steering. Current Opinion in Neurobiology, 2004, 14, 61-66.	4.2	55
67	Rab5 and Rab4 Regulate Axon Elongation in the<i>Xenopus</i>Visual System. Journal of Neuroscience, 2014, 34, 373-391.	3.6	53
68	Differential requirement of F-actin and microtubule cytoskeleton in cue-induced local protein synthesis in axonal growth cones. Neural Development, 2015, 10, 3.	2.4	53
69	Single Molecule Translation Imaging Visualizes the Dynamics of Local Î²-Actin Synthesis in Retinal Axons. Scientific Reports, 2017, 7, 709.	3.3	53
70	RNA-Binding Protein Hermes/RBPMS Inversely Affects Synapse Density and Axon Arbor Formation in Retinal Ganglion Cells In Vivo. Journal of Neuroscience, 2013, 33, 10384-10395.	3.6	50
71	The multiple decisions made by growth cones of RGCs as they navigate from the retina to the tectum inXenopus embryos. Journal of Neurobiology, 2000, 44, 246-259.	3.6	49
72	Live visualization of protein synthesis in axonal growth cones by microinjection of photoconvertible Kaede into Xenopus embryos. Nature Protocols, 2008, 3, 1318-1327.	12.0	49

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73	Receptor-specific interactome as a hub for rapid cue-induced selective translation in axons. ELife, 2019, 8, .	6.0	48
74	Cytoplasmic polyadenylation and cytoplasmic polyadenylation element-dependent mRNA regulation are involved in Xenopus retinal axon development. Neural Development, 2009, 4, 8.	2.4	47
75	Differing Semaphorin 3A Concentrations Trigger Distinct Signaling Mechanisms in Growth Cone Collapse. Journal of Neuroscience, 2012, 32, 8554-8559.	3.6	47
76	Filopodyan: An open-source pipeline for the analysis of filopodia. Journal of Cell Biology, 2017, 216, 3405-3422.	5.2	46
77	Receptor protein tyrosine phosphatases regulate retinal ganglion cell axon outgrowth in the developingXenopus visual system. Journal of Neurobiology, 2001, 49, 99-117.	3.6	45
78	A role for S1P signalling in axon guidance in the<i>Xenopus</i>visual system. Development (Cambridge), 2008, 135, 333-342.	2.5	45
79	ESCRT-II controls retinal axon growth by regulating DCC receptor levels and local protein synthesis. Open Biology, 2016, 6, 150218.	3.6	45
80	Tumor protein Tctp regulates axon development in the embryonic visual system. Development (Cambridge), 2016, 143, 1134-48.	2.5	45
81	Local Translation and mRNA Trafficking in Axon Pathfinding. Results and Problems in Cell Differentiation, 2009, 48, 108-138.	0.7	44
82	Chondroitin sulfate disrupts axon pathfinding in the optic tract and alters growth cone dynamics. Journal of Neurobiology, 2002, 53, 330-342.	3.6	37
83	The Role of Cyclic Nucleotides in Axon Guidance. Advances in Experimental Medicine and Biology, 2007, 621, 134-143.	1.6	33
84	RNA-based mechanisms underlying axon guidance. Journal of Cell Biology, 2013, 202, 991-999.	5.2	32
85	Control of retinal growth and axon divergence at the chiasm: lessons fromXenopus. BioEssays, 2001, 23, 319-326.	2.5	31
86	Translational regulation in growth cones. Current Opinion in Genetics and Development, 2011, 21, 458-464.	3.3	31
87	Local translation of mRNAs in neural development. Wiley Interdisciplinary Reviews RNA, 2011, 2, 153-165.	6.4	28
88	Regulation of chemotropic guidance of nerve growth cones by microRNA. Molecular Brain, 2011, 4, 40.	2.6	28
89	Role of microRNAs in Semaphorin function and neural circuit formation. Seminars in Cell and Developmental Biology, 2013, 24, 146-155.	5.0	24
90	RNAâ€binding protein Vg1RBP regulates terminal arbor formation but not longâ€range axon navigation in the developing visual system. Developmental Neurobiology, 2014, 74, 303-318.	3.0	23

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91	Axonal mRNA translation in neurological disorders. RNA Biology, 2021, 18, 936-961.	3.1	21
92	Targeted Electroporation in the CNS in Xenopus Embryos. Methods in Molecular Biology, 2018, 1865, 119-131.	0.9	21
93	Axon-TRAP-RiboTag: Affinity Purification of Translated mRNAs from Neuronal Axons in Mouse In Vivo. Methods in Molecular Biology, 2018, 1649, 85-94.	0.9	20
94	Cue-Polarized Transport of Î²-actin mRNA Depends on 3â€²UTR and Microtubules in Live Growth Cones. Frontiers in Cellular Neuroscience, 2018, 12, 300.	3.7	20
95	14â€3â€3 proteins regulate retinal axon growth by modulating ADF/cofilin activity. Developmental Neurobiology, 2012, 72, 600-614.	3.0	19
96	Hermes Regulates Axon Sorting in the Optic Tract by Post-Trancriptional Regulation of Neuropilin 1. Journal of Neuroscience, 2016, 36, 12697-12706.	3.6	18
97	Growth factors: a role in guiding axons?. Trends in Cell Biology, 1997, 7, 424-430.	7.9	17
98	A Cytoskeletal Platform for Local Translation in Axons. Science Signaling, 2008, 1, pe11.	3.6	17
99	Growth Cone Tctp Is Dynamically Regulated by Guidance Cues. Frontiers in Molecular Neuroscience, 2018, 11, 399.	2.9	14
100	Axon microdissection and transcriptome profiling reveals the in vivo RNA content of fully differentiated myelinated motor axons. Rna, 2020, 26, 595-612.	3.5	13
101	NF-Protocadherin Regulates Retinal Ganglion Cell Axon Behaviour in the Developing Visual System. PLoS ONE, 2015, 10, e0141290.	2.5	11
102	Protein Synthesis Dependence of Growth Cone Collapse Induced by Different Nogo-A-Domains. PLoS ONE, 2014, 9, e86820.	2.5	10
103	Expression and herbimycin A-sensitive localization of pp125FAK in retinal growth cones. NeuroReport, 1996, 7, 1133-1137.	1.2	9
104	Introduction to the special issue on local protein synthesis in axons. Developmental Neurobiology, 2014, 74, 207-209.	3.0	8
105	Overexpression of c-src and n-src in the DevelopingXenopusRetina Differentially Impairs Axonogenesis. Molecular and Cellular Neurosciences, 1997, 9, 276-292.	2.2	7
106	Receptor-Ribosome Coupling: A Link Between Extrinsic Signals and mRNA Translation in Neuronal Compartments. Annual Review of Neuroscience, 2022, 45, .	10.7	5
107	Tctp in Neuronal Circuitry Assembly. Results and Problems in Cell Differentiation, 2017, 64, 201-215.	0.7	4
108	The multiple decisions made by growth cones of RGCs as they navigate from the retina to the tectum in Xenopus embryos. Journal of Neurobiology, 2000, 44, 246.	3.6	3

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109	Dedication to Friedrich Bonhoeffer. Journal of Neurobiology, 2004, 59, 1-2.	3.6	0
110	A Protocol for Single-Molecule Translation Imaging in Xenopus Retinal Ganglion Cells. Neuromethods, 2020, , 295-308.	0.3	0