Christine Holt

List of Publications by Citations

109 papers	13,372 citations	57 h-index	115 g-index
145 ext. papers	15,670 ext. citations	12.9 avg, IF	6.53 L-index

#	Paper	IF	Citations
109	A critical window for cooperation and competition among developing retinotectal synapses. *Nature* , **1998**, 395, 37-44	50.4	678
108	Chemotropic responses of retinal growth cones mediated by rapid local protein synthesis and degradation. *Neuron*, **2001**, 32, 1013-26	13.9	671
107	Cellular determination in the Xenopus retina is independent of lineage and birth date. *Neuron*, **1988**, 1, 15-26	13.9	588
106	ALS/FTD Mutation-Induced Phase Transition of FUS Liquid Droplets and Reversible Hydrogels into Irreversible Hydrogels Impairs RNP Granule Function. *Neuron*, **2015**, 88, 678-90	13.9	503
105	cAMP-dependent growth cone guidance by netrin-1. *Neuron*, **1997**, 19, 1225-35	13.9	495
104	Growth-cone attraction to netrin-1 is converted to repulsion by laminin-1. *Nature*, **1999**, 401, 69-73	50.4	426
103	FUS Phase Separation Is Modulated by a Molecular Chaperone and Methylation of Arginine Cation- Interactions. *Cell*, **2018**, 173, 720-734.e15	56.2	409
102	Asymmetrical beta-actin mRNA translation in growth cones mediates attractive turning to netrin-1. *Nature Neuroscience*, **2006**, 9, 1247-56	25.5	365
101	The central dogma decentralized: new perspectives on RNA function and local translation in neurons. *Neuron*, **2013**, 80, 648-57	13.9	359
100	Axonal mRNA localization and local protein synthesis in nervous system assembly, maintenance and repair. *Nature Reviews Neuroscience*, **2012**, 13, 308-24	13.5	344
99	Axonal protein synthesis and degradation are necessary for efficient growth cone regeneration. *Journal of Neuroscience*, **2005**, 25, 331-42	6.6	321
98	Subcellular mRNA localization in animal cells and why it matters. *Science*, **2009**, 326, 1212-6	33.3	299
97	Mechanosensing is critical for axon growth in the developing brain. *Nature Neuroscience*, **2016**, 19, 1592-1598	15.8	297
96	Transcriptome analysis of embryonic and adult sensory axons reveals changes in mRNA repertoire localization. *Rna*, **2011**, 17, 85-98	5.8	264
95	Dynamic Axonal Translation in Developing and Mature Visual Circuits. *Cell*, **2016**, 166, 181-92	56.2	254
94	Cadherin function is required for axon outgrowth in retinal ganglion cells in vivo. *Neuron*, **1996**, 17, 837-48	13.9	252
93	Lipofection of cDNAs in the embryonic vertebrate central nervous system. *Neuron*, **1990**, 4, 203-14	13.9	249

92	Apoptotic pathway and MAPKs differentially regulate chemotropic responses of retinal growth cones. *Neuron*, **2003**, 37, 939-52	13.9	245
91	Turning of retinal growth cones in a netrin-1 gradient mediated by the netrin receptor DCC. *Neuron*, **1997**, 19, 1211-24	13.9	244
90	Subcellular profiling reveals distinct and developmentally regulated repertoire of growth cone mRNAs. *Journal of Neuroscience*, **2010**, 30, 15464-78	6.6	241
89	Signaling mechanisms underlying Slit2-induced collapse of Xenopus retinal growth cones. *Neuron*, **2006**, 49, 215-28	13.9	229
88	Navigational errors made by growth cones without filopodia in the embryonic Xenopus brain. *Neuron*, **1993**, 11, 237-51	13.9	226
87	Remote control of gene function by local translation. *Cell*, **2014**, 157, 26-40	56.2	215
86	The transcription factor Engrailed-2 guides retinal axons. *Nature*, **2005**, 438, 94-8	50.4	212
85	Local translation of extranuclear lamin B promotes axon maintenance. *Cell*, **2012**, 148, 752-64	56.2	191
84	Semaphorin 3A elicits stage-dependent collapse, turning, and branching in Xenopus retinal growth cones. *Journal of Neuroscience*, **2001**, 21, 8538-47	6.6	174
83	Local translation in neurons: visualization and function. *Nature Structural and Molecular Biology*, **2019**, 26, 557-566	17.6	171
82	RNA translation in axons. *Annual Review of Cell and Developmental Biology*, **2004**, 20, 505-23	12.6	170
81	Late Endosomes Act as mRNA Translation Platforms and Sustain Mitochondria in Axons. *Cell*, **2019**, 176, 56-72.e15	56.2	168
80	FGF signaling and target recognition in the developing Xenopus visual system. *Neuron*, **1995**, 15, 1017-28	13.9	156
79	E3 ligase Nedd4 promotes axon branching by downregulating PTEN. *Neuron*, **2010**, 65, 341-57	13.9	154
78	Local translation and directional steering in axons. *EMBO Journal*, **2007**, 26, 3729-36	13	150
77	Endocytosis-dependent desensitization and protein synthesis-dependent resensitization in retinal growth cone adaptation. *Nature Neuroscience*, **2005**, 8, 179-86	25.5	137
76	Inhibition of FGF receptor activity in retinal ganglion cell axons causes errors in target recognition. *Neuron*, **1996**, 17, 245-54	13.9	132
75	Xenopus Sprouty2 inhibits FGF-mediated gastrulation movements but does not affect mesoderm induction and patterning. *Genes and Development*, **2001**, 15, 1152-66	12.6	129

74	A functional equivalent of endoplasmic reticulum and Golgi in axons for secretion of locally synthesized proteins. *Molecular and Cellular Neurosciences*, **2009**, 40, 128-42	4.8	127
73	Function and regulation of local axonal translation. *Current Opinion in Neurobiology*, **2008**, 18, 60-8	7.6	125
72	SFRP1 regulates the growth of retinal ganglion cell axons through the Fz2 receptor. *Nature Neuroscience*, **2005**, 8, 1301-9	25.5	118
71	Position, guidance, and mapping in the developing visual system. *Journal of Neurobiology*, **1993**, 24, 1400-22		108
70	RNA Docking and Local Translation Regulate Site-Specific Axon Remodeling In Vivo. *Neuron*, **2017**, 95, 852-868.e8	13.9	104
69	Sugar codes for axons?. *Neuron*, **2005**, 46, 169-72	13.9	93
68	miR-124 acts through CoREST to control onset of Sema3A sensitivity in navigating retinal growth cones. *Nature Neuroscience*, **2011**, 15, 29-38	25.5	89
67	Extracellular Engrailed participates in the topographic guidance of retinal axons in vivo. *Neuron*, **2009**, 64, 355-366	13.9	88
66	A molecular mechanism for the heparan sulfate dependence of slit-robo signaling. *Journal of Biological Chemistry*, **2006**, 281, 39693-8	5.4	88
65	Specific heparan sulfate structures involved in retinal axon targeting. *Development (Cambridge)*, **2002**, 129, 61-70	6.6	82
64	Rapid Cue-Specific Remodeling of the Nascent Axonal Proteome. *Neuron*, **2018**, 99, 29-46.e4	13.9	79
63	B-type Eph receptors and ephrins induce growth cone collapse through distinct intracellular pathways. *Journal of Neurobiology*, **2003**, 57, 323-36		72
62	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	4.8	71
61	Molecular control of local translation in axon development and maintenance. *Current Opinion in Neurobiology*, **2018**, 51, 86-94	7.6	70
60	Electroporation of cDNA/Morpholinos to targeted areas of embryonic CNS in Xenopus. *BMC Developmental Biology*, **2007**, 7, 107	3.1	66
59	miR-182 Regulates Slit2-Mediated Axon Guidance by Modulating the Local Translation of a Specific mRNA. *Cell Reports*, **2017**, 18, 1171-1186	10.6	62
58	Fibroblast growth factor receptor signaling in Xenopus retinal axon extension. *Journal of Neurobiology*, **1998**, 37, 633-41		62
57	Effects of intraocular tetrodotoxin on the development of the retinocollicular pathway in the Syrian hamster. *Journal of Comparative Neurology*, **1989**, 282, 371-88	3.4	62

56	Rapid changes in tissue mechanics regulate cell behaviour in the developing embryonic brain. *ELife*, **2019**, 8,	8.9	61
55	NF-protocadherin and TAF1 regulate retinal axon initiation and elongation in vivo. *Journal of Neuroscience*, **2008**, 28, 100-5	6.6	58
54	Coupling of NF-protocadherin signaling to axon guidance by cue-induced translation. *Nature Neuroscience*, **2013**, 16, 166-73	25.5	55
53	Ena/VASP function in retinal axons is required for terminal arborization but not pathway navigation. *Development (Cambridge)*, **2007**, 134, 2137-46	6.6	50
52	New views on retinal axon development: a navigation guide. *International Journal of Developmental Biology*, **2004**, 48, 957-64	1.9	50
51	On-Site Ribosome Remodeling by Locally Synthesized Ribosomal Proteins in Axons. *Cell Reports*, **2019**, 29, 3605-3619.e10	10.6	50
50	RNA-binding proteins and translational regulation in axons and growth cones. *Frontiers in Neuroscience*, **2013**, 7, 81	5.1	48
49	Retinal axon guidance: novel mechanisms for steering. *Current Opinion in Neurobiology*, **2004**, 14, 61-6	7.6	48
48	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, 246-259		47
47	Rab5 and Rab4 regulate axon elongation in the Xenopus visual system. *Journal of Neuroscience*, **2014**, 34, 373-91	6.6	46
46	Single-molecule analysis of endogenous β-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	11.5	45
45	Differing semaphorin 3A concentrations trigger distinct signaling mechanisms in growth cone collapse. *Journal of Neuroscience*, **2012**, 32, 8554-9	6.6	43
44	Receptor protein tyrosine phosphatases regulate retinal ganglion cell axon outgrowth in the developing Xenopus visual system. *Journal of Neurobiology*, **2001**, 49, 99-117		43
43	A role for S1P signalling in axon guidance in the Xenopus visual system. *Development (Cambridge)*, **2008**, 135, 333-42	6.6	42
42	RNA-binding protein Hermes/RBPMS inversely affects synapse density and axon arbor formation in retinal ganglion cells in vivo. *Journal of Neuroscience*, **2013**, 33, 10384-95	6.6	40
41	Live visualization of protein synthesis in axonal growth cones by microinjection of photoconvertible Kaede into Xenopus embryos. *Nature Protocols*, **2008**, 3, 1318-27	18.8	40
40	Noncanonical Modulation of the eIF2 Pathway Controls an Increase in Local Translation during Neural Wiring. *Molecular Cell*, **2019**, 73, 474-489.e5	17.6	39
39	Local translation and mRNA trafficking in axon pathfinding. *Results and Problems in Cell Differentiation*, **2009**, 48, 269-88	1.4	36

38	Chondroitin sulfate disrupts axon pathfinding in the optic tract and alters growth cone dynamics. *Journal of Neurobiology*, **2002**, 53, 330-42		36
37	Single Molecule Translation Imaging Visualizes the Dynamics of Local β-Actin Synthesis in Retinal Axons. *Scientific Reports*, **2017**, 7, 709	4.9	35
36	Axon-Axon Interactions Regulate Topographic Optic Tract Sorting via CYFIP2-Dependent WAVE Complex Function. *Neuron*, **2018**, 97, 1078-1093.e6	13.9	31
35	Cell biology in neuroscience: RNA-based mechanisms underlying axon guidance. *Journal of Cell Biology*, **2013**, 202, 991-9	7.3	30
34	Cytoplasmic polyadenylation and cytoplasmic polyadenylation element-dependent mRNA regulation are involved in Xenopus retinal axon development. *Neural Development*, **2009**, 4, 8	3.9	30
33	Differential requirement of F-actin and microtubule cytoskeleton in cue-induced local protein synthesis in axonal growth cones. *Neural Development*, **2015**, 10, 3	3.9	29
32	Translational regulation in growth cones. *Current Opinion in Genetics and Development*, **2011**, 21, 458-64	4.9	29
31	The role of cyclic nucleotides in axon guidance. *Advances in Experimental Medicine and Biology*, **2007**, 621, 134-43	3.6	29
30	Regulation of chemotropic guidance of nerve growth cones by microRNA. *Molecular Brain*, **2011**, 4, 40	4.5	28
29	Control of retinal growth and axon divergence at the chiasm: lessons from Xenopus. *BioEssays*, **2001**, 23, 319-26	4.1	28
28	Receptor-specific interactome as a hub for rapid cue-induced selective translation in axons. *ELife*, **2019**, 8,	8.9	28
27	ESCRT-II controls retinal axon growth by regulating DCC receptor levels and local protein synthesis. *Open Biology*, **2016**, 6, 150218	7	28
26	Local translation of mRNAs in neural development. *Wiley Interdisciplinary Reviews RNA*, **2011**, 2, 153-65	9.3	27
25	Tumor protein Tctp regulates axon development in the embryonic visual system. *Development (Cambridge)*, **2016**, 143, 1134-48	6.6	26
24	Filopodyan: An open-source pipeline for the analysis of filopodia. *Journal of Cell Biology*, **2017**, 216, 3405-3422	7.3	25
23	Role of microRNAs in Semaphorin function and neural circuit formation. *Seminars in Cell and Developmental Biology*, **2013**, 24, 146-55	7.5	21
22	RNA-binding protein Vg1RBP regulates terminal arbor formation but not long-range axon navigation in the developing visual system. *Developmental Neurobiology*, **2014**, 74, 303-18	3.2	20
21	14-3-3 proteins regulate retinal axon growth by modulating ADF/cofilin activity. *Developmental Neurobiology*, **2012**, 72, 600-14	3.2	15

20	Growth factors: a role in guiding axons?. *Trends in Cell Biology*, **1997**, 7, 424-30	18.3	15
19	Axon-TRAP-RiboTag: Affinity Purification of Translated mRNAs from Neuronal Axons in Mouse In Vivo. *Methods in Molecular Biology*, **2018**, 1649, 85-94	1.4	15
18	Hermes Regulates Axon Sorting in the Optic Tract by Post-Trancriptional Regulation of Neuropilin 1. *Journal of Neuroscience*, **2016**, 36, 12697-12706	6.6	14
17	A cytoskeletal platform for local translation in axons. *Science Signaling*, **2008**, 1, pe11	8.8	14
16	The structure and global distribution of the endoplasmic reticulum network are actively regulated by lysosomes. *Science Advances*, **2020**, 6,	14.3	14
15	Cue-Polarized Transport of β-actin mRNA Depends on 3′UTR and Microtubules in Live Growth Cones. *Frontiers in Cellular Neuroscience*, **2018**, 12, 300	6.1	13
14	NF-Protocadherin Regulates Retinal Ganglion Cell Axon Behaviour in the Developing Visual System. *PLoS ONE*, **2015**, 10, e0141290	3.7	10
13	Growth Cone Tctp Is Dynamically Regulated by Guidance Cues. *Frontiers in Molecular Neuroscience*, **2018**, 11, 399	6.1	10
12	Protein synthesis dependence of growth cone collapse induced by different Nogo-A-domains. *PLoS ONE*, **2014**, 9, e86820	3.7	9
11	Expression and herbimycin A-sensitive localization of pp125FAK in retinal growth cones. *NeuroReport*, **1996**, 7, 1133-7	1.7	9
10	Targeted Electroporation in the CNS in Xenopus Embryos. *Methods in Molecular Biology*, **2018**, 1865, 119-131	1.4	8
9	On-site ribosome remodeling by locally synthesized ribosomal proteins in axons		8
8	Axon microdissection and transcriptome profiling reveals the in vivo RNA content of fully differentiated myelinated motor axons. *Rna*, **2020**, 26, 595-612	5.8	7
7	Overexpression of c-src and n-src in the developing Xenopus retina differentially impairs axonogenesis. *Molecular and Cellular Neurosciences*, **1997**, 9, 276-92	4.8	7
6	Axonal mRNA translation in neurological disorders. *RNA Biology*, **2021**, 18, 936-961	4.8	5
5	Receptor-specific interactome as a hub for rapid cue-induced selective translation in axons		2
4	Tctp in Neuronal Circuitry Assembly. *Results and Problems in Cell Differentiation*, **2017**, 64, 201-215	1.4	1
3	The multiple decisions made by growth cones of RGCs as they navigate from the retina to the tectum in Xenopus embryos **2000**, 44, 246		1

2	Festschrift for Professor Friedrich Bonhoeffer. Molecular topography in the nervous system. *Journal of Neurobiology*, **2004**, 59, 1-180	
1	A Protocol for Single-Molecule Translation Imaging in Xenopus Retinal Ganglion Cells. *Neuromethods*, **2020**, 295-308	0.4