

Catherina G Becker

List of Publications by Year in descending order

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91
papers

4,221
citations

94433

37
h-index

123424

61
g-index

102
all docs

102
docs citations

102
times ranked

3436
citing authors

#	ARTICLE	IF	CITATIONS
1	Axonal regrowth after spinal cord transection in adult zebrafish. <i>Journal of Comparative Neurology</i> , 1997, 377, 577-595.	1.6	359
2	Motor Neuron Regeneration in Adult Zebrafish. <i>Journal of Neuroscience</i> , 2008, 28, 8510-8516.	3.6	239
3	Dynamic control of proinflammatory cytokines $IL-1\beta$ and $Tnf-\alpha$ by macrophages in zebrafish spinal cord regeneration. <i>Nature Communications</i> , 2018, 9, 4670.	12.8	210
4	L1.1 Is Involved in Spinal Cord Regeneration in Adult Zebrafish. <i>Journal of Neuroscience</i> , 2004, 24, 7837-7842.	3.6	156
5	Dysregulation of ubiquitin homeostasis and β -catenin signaling promote spinal muscular atrophy. <i>Journal of Clinical Investigation</i> , 2014, 124, 1821-1834.	8.2	151
6	Wnt signaling controls pro-regenerative Collagen XII in functional spinal cord regeneration in zebrafish. <i>Nature Communications</i> , 2017, 8, 126.	12.8	146
7	Adult zebrafish as a model for successful central nervous system regeneration. <i>Restorative Neurology and Neuroscience</i> , 2008, 26, 71-80.	0.7	133
8	Sonic Hedgehog Is a Polarized Signal for Motor Neuron Regeneration in Adult Zebrafish. <i>Journal of Neuroscience</i> , 2009, 29, 15073-15082.	3.6	118
9	Dopamine from the Brain Promotes Spinal Motor Neuron Generation during Development and Adult Regeneration. <i>Developmental Cell</i> , 2013, 25, 478-491.	7.0	110
10	Regenerating descending axons preferentially reroute to the gray matter in the presence of a general macrophage/microglial reaction caudal to a spinal transection in adult zebrafish. <i>Journal of Comparative Neurology</i> , 2001, 433, 131-147.	1.6	102
11	Repellent Guidance of Regenerating Optic Axons by Chondroitin Sulfate Glycosaminoglycans in Zebrafish. <i>Journal of Neuroscience</i> , 2002, 22, 842-853.	3.6	96
12	Neuronal Regeneration from Ependymo-Radial Glial Cells: Cook, Little Pot, Cook!. <i>Developmental Cell</i> , 2015, 32, 516-527.	7.0	92
13	Spinal motor neurons are regenerated after mechanical lesion and genetic ablation in larval zebrafish. <i>Development (Cambridge)</i> , 2016, 143, 1464-74.	2.5	88
14	Therapeutic strategies for spinal muscular atrophy: SMN and beyond. <i>DMM Disease Models and Mechanisms</i> , 2017, 10, 943-954.	2.4	87
15	Notch Signaling Controls Generation of Motor Neurons in the Lesioned Spinal Cord of Adult Zebrafish. <i>Journal of Neuroscience</i> , 2012, 32, 3245-3252.	3.6	85
16	Expression of protein zero is increased in lesioned axon pathways in the central nervous system of adult zebrafish. <i>Glia</i> , 2003, 41, 301-317.	4.9	80
17	Claudin k is specifically expressed in cells that form myelin during development of the nervous system and regeneration of the optic nerve in adult zebrafish. <i>Glia</i> , 2012, 60, 253-270.	4.9	78
18	Axonal regeneration in zebrafish. <i>Current Opinion in Neurobiology</i> , 2014, 27, 186-191.	4.2	76

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19	Plasticity of tyrosine hydroxylase and serotonergic systems in the regenerating spinal cord of adult zebrafish. <i>Journal of Comparative Neurology</i> , 2012, 520, 933-951.	1.6	71
20	Bioenergetic status modulates motor neuron vulnerability and pathogenesis in a zebrafish model of spinal muscular atrophy. <i>PLoS Genetics</i> , 2017, 13, e1006744.	3.5	69
21	Tenascin-R inhibits regrowth of optic fibers in vitro and persists in the optic nerve of mice after injury. , 2000, 29, 330-346.		66
22	Systemic restoration of UBA1 ameliorates disease in spinal muscular atrophy. <i>JCI Insight</i> , 2016, 1, e87908.	5.0	65
23	Serotonin Promotes Development and Regeneration of Spinal Motor Neurons in Zebrafish. <i>Cell Reports</i> , 2015, 13, 924-932.	6.4	64
24	The spinal ependymal zone as a source of endogenous repair cells across vertebrates. <i>Progress in Neurobiology</i> , 2018, 170, 67-80.	5.7	63
25	Growth and pathfinding of regenerating axons in the optic projection of adult fish. <i>Journal of Neuroscience Research</i> , 2007, 85, 2793-2799.	2.9	62
26	Chondrolectin affects cell survival and neuronal outgrowth in in vitro and in vivo models of spinal muscular atrophy. <i>Human Molecular Genetics</i> , 2014, 23, 855-869.	2.9	62
27	Gradients of ephrin-A2 and ephrin-A5b mRNA during retinotopic regeneration of the optic projection in adult zebrafish. <i>Journal of Comparative Neurology</i> , 2000, 427, 469-483.	1.6	61
28	Lesion-induced generation of interneuron cell types in specific dorsoventral domains in the spinal cord of adult zebrafish. <i>Journal of Comparative Neurology</i> , 2012, 520, 3604-3616.	1.6	56
29	Differences in the regenerative response of neuronal cell populations and indications for plasticity in intraspinal neurons after spinal cord transection in adult zebrafish. <i>Molecular and Cellular Neurosciences</i> , 2005, 30, 265-278.	2.2	55
30	Zebrafish regenerate full thickness optic nerve myelin after demyelination, but this fails with increasing age. <i>Acta Neuropathologica Communications</i> , 2014, 2, 77.	5.2	53
31	Tenascin-R as a repellent guidance molecule for newly growing and regenerating optic axons in adult zebrafish. <i>Molecular and Cellular Neurosciences</i> , 2004, 26, 376-389.	2.2	52
32	Tenascin-C is involved in motor axon outgrowth in the trunk of developing zebrafish. <i>Developmental Dynamics</i> , 2005, 234, 550-566.	1.8	51
33	Neuropilin-1a is involved in trunk motor axon outgrowth in embryonic zebrafish. <i>Developmental Dynamics</i> , 2005, 234, 535-549.	1.8	49
34	Proteasomal selection of multiprotein complexes recruited by LIM homeodomain transcription factors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 15000-15005.	7.1	46
35	A unique macrophage subpopulation signals directly to progenitor cells to promote regenerative neurogenesis in the zebrafish spinal cord. <i>Developmental Cell</i> , 2021, 56, 1617-1630.e6.	7.0	44
36	Tenascin-R as a Repellent Guidance Molecule for Developing Optic Axons in Zebrafish. <i>Journal of Neuroscience</i> , 2003, 23, 6232-6237.	3.6	43

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37	Contactin1a expression is associated with oligodendrocyte differentiation and axonal regeneration in the central nervous system of zebrafish. <i>Molecular and Cellular Neurosciences</i> , 2007, 35, 194-207.	2.2	43
38	Multiple functions of LIM domain-binding CLIM/NLI/Ldb cofactors during zebrafish development. <i>Mechanisms of Development</i> , 2002, 117, 75-85.	1.7	42
39	Semaphorin3D Regulates Axon-Axon Interactions by Modulating Levels of L1 Cell Adhesion Molecule. <i>Journal of Neuroscience</i> , 2007, 27, 9653-9663.	3.6	42
40	Developmentally Regulated Impediments to Skin Reinnervation by Injured Peripheral Sensory Axon Terminals. <i>Current Biology</i> , 2009, 19, 2086-2090.	3.9	42
41	PlexinA3 Restricts Spinal Exit Points and Branching of Trunk Motor Nerves in Embryonic Zebrafish. <i>Journal of Neuroscience</i> , 2007, 27, 4978-4983.	3.6	38
42	Reduce, reuse, recycle – Developmental signals in spinal cord regeneration. <i>Developmental Biology</i> , 2017, 432, 53-62.	2.0	36
43	CRISPR gRNA phenotypic screening in zebrafish reveals pro-regenerative genes in spinal cord injury. <i>PLoS Genetics</i> , 2021, 17, e1009515.	3.5	36
44	Tenascin-R Inhibits the Growth of Optic Fibers In Vitro But Is Rapidly Eliminated during Nerve Regeneration in the Salamander <i>Pleurodeles waltl</i> . <i>Journal of Neuroscience</i> , 1999, 19, 813-827.	3.6	34
45	Expression and mapping of duplicate neuropilin-1 and neuropilin-2 genes in developing zebrafish. <i>Gene Expression Patterns</i> , 2004, 4, 361-370.	0.8	34
46	Antibody to the HNK-1 glycoepitope affects fasciculation and axonal pathfinding in the developing posterior lateral line nerve of embryonic zebrafish. <i>Mechanisms of Development</i> , 2001, 109, 37-49.	1.7	29
47	Amphibian-specific regulation of polysialic acid and the neural cell adhesion molecule in development and regeneration of the retinotectal system of the salamander <i>Pleurodeles waltl</i> . <i>Journal of Comparative Neurology</i> , 1993, 336, 532-544.	1.6	26
48	Analysis of the astray/robo2 Zebrafish Mutant Reveals that Degenerating Tracts Do Not Provide Strong Guidance Cues for Regenerating Optic Axons. <i>Journal of Neuroscience</i> , 2010, 30, 13838-13849.	3.6	26
49	Regeneration of Dopaminergic Neurons in Adult Zebrafish Depends on Immune System Activation and Differs for Distinct Populations. <i>Journal of Neuroscience</i> , 2019, 39, 4694-4713.	3.6	26
50	Distribution of glycinergic neurons in the brain of glycine transporter-2 transgenic Tg(<i>glyt2:Cfp</i>) adult zebrafish: Relationship to brain spinal descending systems. <i>Journal of Comparative Neurology</i> , 2013, 521, 389-425.	1.6	25
51	Expression of Polysialylated NCAM but Not L1 or N-Cadherin by Regenerating Adult Mouse Optic Fibers In Vitro. <i>Experimental Neurology</i> , 1999, 155, 128-139.	4.1	24
52	<i>Chondrolectin</i> Mediates Growth Cone Interactions of Motor Axons with an Intermediate Target. <i>Journal of Neuroscience</i> , 2012, 32, 4426-4439.	3.6	23
53	A synthetic cell permeable antioxidant protects neurons against acute oxidative stress. <i>Scientific Reports</i> , 2017, 7, 11857.	3.3	20
54	Increased NCAM-180 Immunoreactivity and Maintenance of L1 Immunoreactivity in Injured Optic Fibers of Adult Mice. <i>Experimental Neurology</i> , 2001, 169, 438-448.	4.1	17

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55	Expression of collapsin response mediator proteins in the nervous system of embryonic zebrafish. <i>Gene Expression Patterns</i> , 2005, 5, 809-816.	0.8	17
56	Distribution of NCAM-180 and polysialic acid in the developing tectum mesencephali of the frog <i>Discoglossus pictus</i> and the salamander <i>Pleurodeles waltl</i> . <i>Cell and Tissue Research</i> , 1993, 272, 289-301.	2.9	16
57	Double labeling of neurons by retrograde axonal tracing and non-radioactive in situ hybridization in the CNS of adult zebrafish. <i>Cytotechnology</i> , 2003, 25, 65-70.	0.7	15
58	Immunohistological localization of tenascin-c in the developing and regenerating retinotectal system of two amphibian species. <i>Journal of Comparative Neurology</i> , 1995, 360, 643-657.	1.6	13
59	Interaction of Axonal Chondrolectin with Collagen XIXa1 Is Necessary for Precise Neuromuscular Junction Formation. <i>Cell Reports</i> , 2019, 29, 1082-1098.e10.	6.4	13
60	Truly Biocompatible Gold Catalysis Enables Vivo Orthogonal Intra-CNS Release of Anxiolytics. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	13
61	Integrin antagonists affect growth and pathfinding of ventral motor nerves in the trunk of embryonic zebrafish. <i>Molecular and Cellular Neurosciences</i> , 2003, 23, 54-68.	2.2	12
62	Neural development and regeneration: it's all in your spinal cord. <i>Development (Cambridge)</i> , 2015, 142, 811-816.	2.5	12
63	Automated <i>in vivo</i> drug screen in zebrafish identifies synapse-stabilising drugs with relevance to spinal muscular atrophy. <i>DMM Disease Models and Mechanisms</i> , 2021, 14, .	2.4	12
64	Restoration of anatomical continuity after spinal cord transection depends on Wnt/ β -catenin signaling in larval zebrafish. <i>Data in Brief</i> , 2018, 16, 65-70.	1.0	10
65	Neural circuit reorganisation after spinal cord injury in zebrafish. <i>Current Opinion in Genetics and Development</i> , 2020, 64, 44-51.	3.3	9
66	Dynamic cell interactions allow spinal cord regeneration in zebrafish. <i>Current Opinion in Physiology</i> , 2020, 14, 64-69.	1.8	9
67	Regenerative neurogenesis: the integration of developmental, physiological and immune signals. <i>Development (Cambridge)</i> , 2022, 149, .	2.5	9
68	Zebrafish as a Model System for Successful Spinal Cord Regeneration. , 0, , 289-319.		8
69	Expression of the zebrafish recognition molecule F3/F11/contactin in a subset of differentiating neurons is regulated by cofactors associated with LIM domains. <i>Mechanisms of Development</i> , 2002, 119, S135-S141.	1.7	7
70	Polysialic acid expression in the salamander retina is inducible by thyroxine. <i>Developmental Brain Research</i> , 1994, 79, 140-146.	1.7	5
71	Comparing protein stabilities during zebrafish embryogenesis. <i>Cytotechnology</i> , 2003, 25, 85-89.	0.7	5
72	SSDP cofactors regulate neural patterning and differentiation of specific axonal projections. <i>Developmental Biology</i> , 2011, 349, 213-224.	2.0	5

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73	Truly Biocompatible Gold Catalysis Enables Vivo Orthogonal Intra-CNS Release of Anxiolytics. <i>Angewandte Chemie</i> , 2022, 134, e202111461.	2.0	4
74	An exception to the rule? Regeneration of the injured spinal cord in the spiny mouse. <i>Developmental Cell</i> , 2022, 57, 415-416.	7.0	4
75	Regeneration in the Lamprey Spinal Cord. , 0, , 227-262.		4
76	Comparative Analysis of Descending Supraspinal Projections in Amphibians. , 0, , 187-226.		2
77	Spinal Motor Functions in Lamprey. , 0, , 127-145.		2
78	Optic Nerve Regeneration in Goldfish. , 0, , 355-371.		2
79	Coaxing stem cells to repair the spinal cord. <i>Science</i> , 2020, 370, 36-37.	12.6	2
80	Genetic Approaches to Spinal Locomotor Function in Mammals. , 0, , 147-186.		1
81	Intrinsic Factors Contributing to Axon Regeneration in the Mammalian Nervous System. , 0, , 51-72.		1
82	Stimulating Intrinsic Growth Potential in Mammalian Neurons. , 0, , 73-97.		1
83	Functional Regeneration in the Larval Zebrafish Spinal Cord. , 0, , 263-288.		1
84	Controlled Semi-Automated Lased-Induced Injuries for Studying Spinal Cord Regeneration in Zebrafish Larvae. <i>Journal of Visualized Experiments</i> , 2021, , .	0.3	1
85	Cellular Grafting Strategies to Enhance Regeneration in the Mammalian Spinal Cord. , 0, , 99-125.		0
86	The Role of Inhibitory Molecules in Limiting Axonal Regeneration in the Mammalian Spinal Cord. , 0, , 1-50.		0
87	Gene Regulation During Axon and Tissue Regeneration in the Retina of Zebrafish. , 0, , 373-394.		0
88	Functional Aspects of Optic Nerve Regeneration in Non-Mammalian Vertebrates. , 0, , 321-353.		0
89	ISDN2014_0175: Serotonin promotes motor neuron development and adult regeneration in zebrafish. <i>International Journal of Developmental Neuroscience</i> , 2015, 47, 51-51.	1.6	0
90	Polysialic Acid (PSA) Associated with the Neural Cell Adhesion Molecule (N-CAM) May Play a Role in Spatial Learning and LTP in Rats. , 1997, , 863-868.		0

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91	Interaction of Axonal Chondrolectin with Collagen XIXa1 Is Necessary for Precise Neuromuscular Junction Formation. SSRN Electronic Journal, 0, , .	0.4	0