

# Urs Rutishauser

## List of Publications by Year in descending order

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80  
papers

9,239  
citations

38742

50  
h-index

64796

79  
g-index

80  
all docs

80  
docs citations

80  
times ranked

4724  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polysialic acid in the plasticity of the developing and adult vertebrate nervous system. <i>Nature Reviews Neuroscience</i> , 2008, 9, 26-35.	10.2	526
2	Genetic deletion of a neural cell adhesion molecule variant (N-CAM-180) produces distinct defects in the central nervous system. <i>Neuron</i> , 1993, 11, 1163-1174.	8.1	466
3	N-CAM mutation inhibits tangential neuronal migration and is phenocopied by enzymatic removal of polysialic acid. <i>Neuron</i> , 1994, 13, 595-609.	8.1	397
4	Guidance of optic axons in vivo by a preformed adhesive pathway on neuroepithelial endfeet. <i>Developmental Biology</i> , 1984, 106, 485-499.	2.0	391
5	The Role of Polysialic Acid in Migration of Olfactory Bulb Interneuron Precursors in the Subventricular Zone. <i>Neuron</i> , 1996, 16, 735-743.	8.1	352
6	Polysialic acid as a regulator of intramuscular nerve branching during embryonic development. <i>Neuron</i> , 1990, 4, 655-667.	8.1	314
7	Maturation of astrocytes in vitro alters the extent and molecular basis of neurite outgrowth. <i>Developmental Biology</i> , 1990, 138, 377-390.	2.0	297
8	Developmental biology of a neural cell adhesion molecule. <i>Nature</i> , 1984, 310, 549-554.	27.8	280
9	Polysialic acid regulates growth cone behavior during sorting of motor axons in the plexus region. <i>Neuron</i> , 1994, 13, 405-414.	8.1	252
10	Removal of Polysialic Acid—Neural Cell Adhesion Molecule Induces Aberrant Mossy Fiber Innervation and Ectopic Synaptogenesis in the Hippocampus. <i>Journal of Neuroscience</i> , 1998, 18, 3757-3766.	3.6	242
11	Polysialic acid influences specific pathfinding by avian motoneurons. <i>Neuron</i> , 1992, 8, 1031-1044.	8.1	223
12	Distinct roles for adhesion molecules during innervation of embryonic chick muscle. <i>Developmental Biology</i> , 1988, 130, 645-670.	2.0	214
13	Neural cell adhesion molecule is on embryonic muscle cells and mediates adhesion to nerve cells in vitro. <i>Nature</i> , 1982, 295, 693-695.	27.8	198
14	Roles, regulation, and mechanism of polysialic acid function during neural development. <i>Biochimie</i> , 2001, 83, 635-643.	2.6	197
15	Direct Evidence That Neural Cell Adhesion Molecule (NCAM) Polysialylation Increases Intermembrane Repulsion and Abrogates Adhesion. <i>Journal of Biological Chemistry</i> , 2005, 280, 137-145.	3.4	195
16	Membrane Lipid Rafts Are Necessary for the Maintenance of the $\alpha 7$ Nicotinic Acetylcholine Receptor in Somatic Spines of Ciliary Neurons. <i>Journal of Neuroscience</i> , 2001, 21, 504-512.	3.6	192
17	Glial cells express N-CAM/D2-CAM-like polypeptides in vitro. <i>Nature</i> , 1985, 316, 725-728.	27.8	190
18	Activity-dependent PSA expression regulates inhibitory maturation and onset of critical period plasticity. <i>Nature Neuroscience</i> , 2007, 10, 1569-1577.	14.8	181

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19	Antibodies to a neural cell adhesion molecule disrupt histogenesis in cultured chick retinae. <i>Nature</i> , 1980, 285, 488-489.	27.8	166
20	Focal Ventricular Origin and Migration of Oligodendrocyte Precursors into the Chick Optic Nerve. <i>Neuron</i> , 1997, 19, 283-292.	8.1	159
21	Polysialic acid and the regulation of cell interactions. <i>Current Opinion in Cell Biology</i> , 1996, 8, 679-684.	5.4	154
22	CHARACTERIZATION OF SPLENIC LYMPHOID CELLS IN FETAL AND NEWBORN MICE. <i>Journal of Experimental Medicine</i> , 1973, 138, 557-573.	8.5	143
23	Sequence characteristics of functional siRNAs. <i>Rna</i> , 2005, 11, 864-872.	3.5	135
24	A Septum-Derived Chemorepulsive Factor for Migrating Olfactory Interneuron Precursors. <i>Neuron</i> , 1996, 16, 933-940.	8.1	134
25	Regulation of Cell Adhesion by Polysialic Acid. <i>Journal of Biological Chemistry</i> , 2001, 276, 31745-31751.	3.4	134
26	Polysialic acid at the cell surface: Biophysics in service of cell interactions and tissue plasticity. <i>Journal of Cellular Biochemistry</i> , 1998, 70, 304-312.	2.6	133
27	Use of polysialic acid in repair of the central nervous system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 16989-16994.	7.1	133
28	Identification of embryonic stem cell-derived midbrain dopaminergic neurons for engraftment. <i>Journal of Clinical Investigation</i> , 2012, 122, 2928-2939.	8.2	131
29	The distribution of NCAM in the chick hindlimb during axon outgrowth and synaptogenesis. <i>Developmental Biology</i> , 1986, 114, 437-452.	2.0	128
30	Topological distribution of different forms of neural cell adhesion molecule in the developing chick visual system. <i>Nature</i> , 1984, 310, 141-143.	27.8	120
31	Polysialylated Neural Cell Adhesion Molecule Is Necessary for Selective Targeting of Regenerating Motor Neurons. <i>Journal of Neuroscience</i> , 2005, 25, 2081-2091.	3.6	120
32	Polysialic Acid Facilitates Migration of Luteinizing Hormone-Releasing Hormone Neurons on Vomeronasal Axons. <i>Journal of Neuroscience</i> , 1999, 19, 794-801.	3.6	117
33	Preclinical Efficacy and Safety of a Human Embryonic Stem Cell-Derived Midbrain Dopamine Progenitor Product, MSK-DA01. <i>Cell Stem Cell</i> , 2021, 28, 217-229.e7.	11.1	116
34	Protein Determinants for Specific Polysialylation of the Neural Cell Adhesion Molecule. <i>Journal of Biological Chemistry</i> , 1995, 270, 17171-17179.	3.4	115
35	Role of Neural Cell Adhesion Molecule and Polysialic Acid in Mouse Circadian Clock Function. <i>Journal of Neuroscience</i> , 1997, 17, 5221-5229.	3.6	108
36	A Role for Polysialic Acid in Neural Cell Adhesion Molecule Heterophilic Binding to Proteoglycans. <i>Journal of Biological Chemistry</i> , 1998, 273, 27124-27129.	3.4	105

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37	NCAM: the molecule and its genetics. <i>Trends in Genetics</i> , 1986, 2, 72-76.	6.7	103
38	Polysialic acid on the surface of axons regulates patterns of normal and activity-dependent innervation. <i>Trends in Neurosciences</i> , 1991, 14, 528-532.	8.6	101
39	Induction of neural cell adhesion molecule (NCAM) in <i>Xenopus</i> embryos. <i>Developmental Biology</i> , 1986, 116, 524-531.	2.0	100
40	NCAM-180 knockout mice display increased lateral ventricle size and reduced prepulse inhibition of startle. <i>NeuroReport</i> , 1998, 9, 461-466.	1.2	98
41	Unique Changes of Ganglion Cell Growth Cone Behavior Following Cell Adhesion Molecule Perturbations: A Time-Lapse Study of the Living Retina. <i>Molecular and Cellular Neurosciences</i> , 1995, 6, 433-449.	2.2	97
42	Adhesion molecules of the nervous system. <i>Current Opinion in Neurobiology</i> , 1993, 3, 709-715.	4.2	89
43	Spatially Restricted Increase in Polysialic Acid Enhances Corticospinal Axon Branching Related to Target Recognition and Innervation. <i>Journal of Neuroscience</i> , 1996, 16, 5488-5497.	3.6	82
44	Regulation of Neural Cell Adhesion Molecule Polysialylation: Evidence for Nontranscriptional Control and Sensitivity to an Intracellular Pool of Calcium. <i>Journal of Cell Biology</i> , 1998, 140, 1177-1186.	5.2	72
45	Extensive cell migration, axon regeneration, and improved function with polysialic acid-modified Schwann cells after spinal cord injury. <i>Glia</i> , 2012, 60, 979-992.	4.9	71
46	Adherens Junctions in Myelinating Schwann Cells Stabilize Schmidt-Lanterman Incisures via Recruitment of p120 Catenin to E-Cadherin. <i>Journal of Neuroscience</i> , 2005, 25, 3259-3269.	3.6	69
47	Intrinsic neuronal properties control selective targeting of regenerating motoneurons. <i>Brain</i> , 2008, 131, 1492-1505.	7.6	68
48	Polysialic acid regulates the clustering, migration, and neuronal differentiation of progenitor cells in the adult hippocampus. <i>Developmental Neurobiology</i> , 2008, 68, 1580-1590.	3.0	63
49	Inhibitory Mechanism by Polysialic Acid for Lamina-Specific Branch Formation of Thalamocortical Axons. <i>Journal of Neuroscience</i> , 2000, 20, 9145-9151.	3.6	62
50	Polysialylated neuropilin-2 enhances human dendritic cell migration through the basic C-terminal region of CCL21. <i>Glycobiology</i> , 2010, 20, 1139-1146.	2.5	53
51	The Neural Cell Adhesion Molecules L1 and NCAM-180 Act in Different Steps of Neurite Outgrowth. <i>Journal of Neuroscience</i> , 1999, 19, 9469-9479.	3.6	50
52	Differential cell adhesion through spatial and temporal variations of NCAM. <i>Trends in Neurosciences</i> , 1986, 9, 374-378.	8.6	49
53	Removal of polysialic acid induces aberrant pathways, synaptic vesicle distribution, and terminal arborization of retinotectal axons. <i>Journal of Comparative Neurology</i> , 2003, 460, 203-211.	1.6	47
54	Properties and Developmental Regulation of Polysialyltransferase Activity in the Chicken Embryo Brain. <i>Journal of Biological Chemistry</i> , 1995, 270, 19357-19363.	3.4	46

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55	Removal of Polysialic Acid Triggers Dispersion of Subventricularly Derived Neuroblasts into Surrounding CNS Tissues. <i>Journal of Neuroscience</i> , 2010, 30, 3995-4003.	3.6	46
56	Intrinsic Role of Polysialylated Neural Cell Adhesion Molecule in Photic Phase Resetting of the Mammalian Circadian Clock. <i>Journal of Neuroscience</i> , 2003, 23, 652-658.	3.6	44
57	NCAM in the differentiation of embryonic lens tissue. <i>Developmental Biology</i> , 1989, 135, 414-423.	2.0	43
58	Phylogeny of a neural cell adhesion molecule. <i>Developmental Biology</i> , 1985, 110, 39-46.	2.0	37
59	N-Cadherin Juxtamembrane Domain Modulates Voltage-Gated Ca <sup>2+</sup> Current via RhoA GTPase and Rho-Associated Kinase. <i>Journal of Neuroscience</i> , 2004, 24, 10918-10923.	3.6	32
60	Polysialic acid-induced plasticity reduces neuropathic insult to the central nervous system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 11516-11520.	7.1	31
61	P120 catenin is required for thickening of Schwann cell myelin. <i>Molecular and Cellular Neurosciences</i> , 2007, 35, 120-129.	2.2	23
62	Defining a Role and Mechanism for Igcam Function in Vertebrate Axon Guidance. <i>Journal of Cell Biology</i> , 2000, 149, 757-760.	5.2	19
63	Polysialic acid and the formation of oculomotor synapses on chick ciliary neurons. <i>Journal of Comparative Neurology</i> , 2002, 446, 244-256.	1.6	19
64	Enhancement of Polysialic Acid Expression Improves Function of Embryonic Stem-Derived Dopamine Neuron Grafts in Parkinsonian Mice. <i>Stem Cells Translational Medicine</i> , 2014, 3, 108-113.	3.3	19
65	Posterior extension of the chick nephric (Wolffian) duct: The role of fibronectin and NCAM polysialic acid. <i>Developmental Dynamics</i> , 1995, 202, 333-342.	1.8	18
66	Molecules involved in cell-cell adhesion during development. <i>Journal of Supramolecular Structure and Cellular Biochemistry</i> , 1981, 16, 259-268.	1.4	16
67	Enzymatic Engineering of Polysialic Acid on Cells in Vitro and in Vivo Using a Purified Bacterial Polysialyltransferase. <i>Journal of Biological Chemistry</i> , 2012, 287, 32770-32779.	3.4	16
68	Enzymatic Depletion of the Polysialic Acid Moiety Associated with the Neural Cell Adhesion Molecule Inhibits Antidepressant Efficacy. <i>Neuropsychopharmacology</i> , 2016, 41, 1670-1680.	5.4	16
69	Removal of polysialic acid from the SCN potentiates nonphotic circadian phase resetting. <i>Physiology and Behavior</i> , 2002, 77, 361-369.	2.1	14
70	Alteration of neural tissue structure by expression of polysialic acid induced by viral delivery of PST polysialyltransferase. <i>Glycobiology</i> , 2003, 14, 83-93.	2.5	14
71	The covalent structure of an entire gamma G immunoglobulin molecule. 1969. <i>Journal of Immunology</i> , 2004, 173, 5335-42.	0.8	12
72	N-cadherin: a cell adhesion molecule in neural development. <i>Trends in Neurosciences</i> , 1989, 12, 275-276.	8.6	8

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73	Role of polysialylated neural cell adhesion molecule in rapid eye movement sleep regulation in rats. European Journal of Neuroscience, 2009, 30, 2190-2204.	2.6	8
74	Polysialylated Neural Cell Adhesion Molecule Protects Against Light-Induced Retinal Degeneration. , 2016, 57, 5066.		7
75	Improved Stem Cell-Derived Motoneuron Survival, Migration, Sprouting, and Innervation with Enhanced Expression of Polysialic Acid. Cell Transplantation, 2015, 24, 797-809.	2.5	6
76	Removal of polysialylated neural cell adhesion molecule increases morphine analgesia and interferes with tolerance in mice. Brain Research, 2011, 1404, 55-62.	2.2	5
77	Specific fractionation and manipulation of lymphocytes with derivatized nylon fibers. Immunochemistry, 1975, 12, 603-606.	1.2	3
78	Engineering polysialic acid on Schwann cells using polysialyltransferase gene transfer or purified enzyme exposure for spinal cord injury transplantation. Neuroscience Letters, 2021, 748, 135690.	2.1	2
79	Zuordnung der LFI-Probeflächen zu NaiS-Standorttypen. Schweizerische Zeitschrift Fur Forstwesen, 2021, 172, 216-225.	0.1	2
80	Gerald Edelman (1929â€“2014). Nature, 2014, 510, 474-474.	27.8	1