

# Rolf Heumann

## List of Publications by Year in descending order

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112  
papers

7,882  
citations

87401

40  
h-index

56606

87  
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115  
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115  
docs citations

115  
times ranked

6820  
citing authors

#	ARTICLE	IF	CITATIONS
1	Imaging of anthrax intoxication in mice reveals shared and individual functions of surface receptors CMG-2 and TEM-8 in cellular toxin entry. <i>Journal of Biological Chemistry</i> , 2022, 298, 101467.	1.6	4
2	Parallelized Manipulation of Adherent Living Cells by Magnetic Nanoparticles-Mediated Forces. <i>International Journal of Molecular Sciences</i> , 2020, 21, 6560.	1.8	13
3	Magnetic spatiotemporal control of SOS1 coupled nanoparticles for guided neurite growth in dopaminergic single cells. <i>Scientific Reports</i> , 2020, 10, 22452.	1.6	6
4	Lethal Factor Domain-Mediated Delivery of Nurr1 Transcription Factor Enhances Tyrosine Hydroxylase Activity and Protects from Neurotoxin-Induced Degeneration of Dopaminergic Cells. <i>Molecular Neurobiology</i> , 2019, 56, 3393-3403.	1.9	13
5	Novel Tools towards Magnetic Guidance of Neurite Growth: (I) Guidance of Magnetic Nanoparticles into Neurite Extensions of Induced Human Neurons and In Vitro Functionalization with RAS Regulating Proteins. <i>Journal of Functional Biomaterials</i> , 2019, 10, 32.	1.8	19
6	The binding affinity of PTPN13's tandem PDZ2/3 domain is allosterically modulated. <i>BMC Molecular and Cell Biology</i> , 2019, 20, 23.	1.0	3
7	Differential expression patterns of sodium potassium ATPase alpha and beta subunit isoforms in mouse brain during postnatal development. <i>Neurochemistry International</i> , 2019, 128, 163-174.	1.9	14
8	The role of (auto)-phosphorylation in the complex activation mechanism of LRRK2. <i>Biological Chemistry</i> , 2018, 399, 643-647.	1.2	7
9	Perspectives of RAS and RHEB GTPase Signaling Pathways in Regenerating Brain Neurons. <i>International Journal of Molecular Sciences</i> , 2018, 19, 4052.	1.8	23
10	Molecular Basis of Class III Ligand Recognition by PDZ3 in Murine Protein Tyrosine Phosphatase PTPN13. <i>Journal of Molecular Biology</i> , 2018, 430, 4275-4292.	2.0	4
11	Highlight Issue "Molecular Basis of Life 2017". <i>Biological Chemistry</i> , 2018, 399, 621-622.	1.2	0
12	Protection of Oligodendrocytes Through Neuronal Overexpression of the Small GTPase Ras in Hyperoxia-Induced Neonatal Brain Injury. <i>Frontiers in Neurology</i> , 2018, 9, 175.	1.1	12
13	Rheb in neuronal degeneration, regeneration, and connectivity. <i>Biological Chemistry</i> , 2017, 398, 589-606.	1.2	15
14	The small GTPases Ras and Rheb studied by multidimensional NMR spectroscopy: structure and function. <i>Biological Chemistry</i> , 2017, 398, 577-588.	1.2	15
15	Ras Activity Tunes the Period and Modulates the Entrainment of the Suprachiasmatic Clock. <i>Frontiers in Neurology</i> , 2017, 8, 264.	1.1	12
16	Highlight: Perspectives of molecular neuroscience in health and disease. <i>Biological Chemistry</i> , 2016, 397, 175-175.	1.2	0
17	Fingolimod protects against neonatal white matter damage and long-term cognitive deficits caused by hyperoxia. <i>Brain, Behavior, and Immunity</i> , 2016, 52, 106-119.	2.0	69
18	Human R1441C LRRK2 regulates the synaptic vesicle proteome and phosphoproteome in a <i>Drosophila</i> model of Parkinson's disease. <i>Human Molecular Genetics</i> , 2016, 25, ddw352.	1.4	61

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19	Identification of protein phosphatase 2A as an interacting protein of leucine-rich repeat kinase 2. <i>Biological Chemistry</i> , 2016, 397, 541-554.	1.2	15
20	Signaling pathways regulating Homer1a expression: implications for antidepressant therapy. <i>Biological Chemistry</i> , 2016, 397, 207-214.	1.2	33
21	Ras Activity Oscillates in the Mouse Suprachiasmatic Nucleus and Modulates Circadian Clock Dynamics. <i>Molecular Neurobiology</i> , 2016, 53, 1843-1855.	1.9	17
22	Dyskinesia in Parkinson's disease: mechanisms and current non-pharmacological interventions. <i>Journal of Neurochemistry</i> , 2014, 130, 472-489.	2.1	66
23	Ataxin-2 Modulates the Levels of Grb2 and Src but Not Ras Signaling. <i>Journal of Molecular Neuroscience</i> , 2013, 51, 68-81.	1.1	41
24	Bisphenol A Binds to Ras Proteins and Competes with Guanine Nucleotide Exchange: Implications for GTPase-Selective Antagonists. <i>Journal of Medicinal Chemistry</i> , 2013, 56, 9664-9672.	2.9	38
25	Nanoparticle-Mediated Gene Transfer From Electrophoretically Coated Metal Surfaces. <i>Journal of Physical Chemistry B</i> , 2013, 117, 1550-1555.	1.2	14
26	Ras and Rheb Signaling in Survival and Cell Death. <i>Cancers</i> , 2013, 5, 639-661.	1.7	25
27	MeCP2 phosphorylation in the brain: from transcription to behavior. <i>Biological Chemistry</i> , 2013, 394, 1595-1605.	1.2	20
28	Thrombin Has Biphasic Effects on the Nitric Oxide-cGMP Pathway in Endothelial Cells and Contributes to Experimental Pulmonary Hypertension. <i>PLoS ONE</i> , 2013, 8, e63504.	1.1	17
29	Erythropoietin Modulates Autophagy Signaling in the Developing Rat Brain in an In Vivo Model of Oxygen-Toxicity. <i>International Journal of Molecular Sciences</i> , 2012, 13, 12939-12951.	1.8	43
30	Hyperoxia changes the balance of the thioredoxin/peroxiredoxin system in the neonatal rat brain. <i>Brain Research</i> , 2012, 1484, 68-75.	1.1	23
31	Regrowing the Adult Brain: NF- $\kappa$ B Controls Functional Circuit Formation and Tissue Homeostasis in the Dentate Gyrus. <i>PLoS ONE</i> , 2012, 7, e30838.	1.1	64
32	Synthesis, characterisation and bioimaging of a fluorescent rhenium-containing PNA bioconjugate. <i>Dalton Transactions</i> , 2012, 41, 2304-2313.	1.6	83
33	Role of Neuronal Ras Activity in Adult Hippocampal Neurogenesis and Cognition. <i>Frontiers in Neuroscience</i> , 2011, 5, 18.	1.4	11
34	The Beneficial Effects of Physical Activity on Impaired Adult Neurogenesis and Cognitive Performance. <i>Frontiers in Neuroscience</i> , 2011, 5, 51.	1.4	31
35	Preparation and Biological Evaluation of Di-Hetero-Organometallic-Containing PNA Bioconjugates. <i>European Journal of Inorganic Chemistry</i> , 2011, 2011, 5471-5478.	1.0	40
36	Sequence-specific $^1\text{H}$ , $^{13}\text{C}$ , and $^{15}\text{N}$ assignment of the extended PDZ3 domain of the protein tyrosine phosphatase basophil-like PTP-BL. <i>Biomolecular NMR Assignments</i> , 2010, 4, 199-202.	0.4	3

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37	An outer shell of positively charged poly(ethyleneimine) strongly increases the transfection efficiency of calcium phosphate/DNA nanoparticles. <i>Journal of Materials Science</i> , 2010, 45, 4952-4957.	1.7	45
38	Ras Homolog Enriched in Brain (Rheb) Enhances Apoptotic Signaling*. <i>Journal of Biological Chemistry</i> , 2010, 285, 33979-33991.	1.6	49
39	PDZ-domain-directed basolateral targeting of the peripheral membrane protein FRMPD2 in epithelial cells. <i>Journal of Cell Science</i> , 2009, 122, 3374-3384.	1.2	22
40	The use of size-defined DNA-functionalized calcium phosphate nanoparticles to minimise intracellular calcium disturbance during transfection. <i>Biomaterials</i> , 2009, 30, 6794-6802.	5.7	101
41	Interneuronal growth and expression of interneuronal markers in visual cortex of mice with transgenic activation of Ras. <i>Experimental Brain Research</i> , 2009, 199, 265-278.	0.7	2
42	Regulation and function of neuronal GTPâ€Ras in facial motor nerve regeneration. <i>Journal of Neurochemistry</i> , 2009, 108, 1453-1463.	2.1	14
43	Exercise can rescue recognition memory impairment in a model with reduced adult hippocampal neurogenesis. <i>Frontiers in Behavioral Neuroscience</i> , 2009, 3, 34.	1.0	60
44	Corticosteroids reverse cytokine-induced block of survival and differentiation of oligodendrocyte progenitor cells from rats. <i>Journal of Neuroinflammation</i> , 2008, 5, 39.	3.1	40
45	Calcium phosphate nanoparticles: colloiddally stabilized and made fluorescent by a phosphate-functionalized porphyrin. <i>Journal of Materials Chemistry</i> , 2008, 18, 3655.	6.7	44
46	Prospective of Ras signaling in stem cells. <i>Biological Chemistry</i> , 2008, 389, 791-8.	1.2	13
47	Functionalisation of calcium phosphate nanoparticles by oligonucleotides and their application for gene silencing. <i>Journal of Materials Chemistry</i> , 2007, 17, 721-727.	6.7	108
48	Enhancement of dopaminergic properties and protection mediated by neuronal activation of Ras in mouse ventral mesencephalic neurones. <i>European Journal of Neuroscience</i> , 2007, 25, 1971-1981.	1.2	19
49	Antagonistic effects of TrkB and p75NTRon NMDA receptor currents in post-synaptic densities transplanted into <i>Xenopus</i> oocytes. <i>Journal of Neurochemistry</i> , 2007, 101, 1672-1684.	2.1	16
50	Tracking the pathway of calcium phosphate/DNA nanoparticles during cell transfection by incorporation of red-fluorescing tetramethylrhodamine isothiocyanateâ€bovine serum albumin into these nanoparticles. <i>Journal of Biological Inorganic Chemistry</i> , 2007, 12, 174-179.	1.1	41
51	Sequence-specific 1H, 13C, and 15N backbone assignment of the GTPase rRheb in its GDP-bound form. <i>Biomolecular NMR Assignments</i> , 2007, 1, 45-47.	0.4	10
52	Sequence-specific 1H, 13C, and 15N backbone assignment of the activated 21 kDa GTPase rRheb. <i>Biomolecular NMR Assignments</i> , 2007, 1, 105-108.	0.4	8
53	Sequence-specific 1H, 13C, and 15N backbone assignment of the 28 kDa PDZ2/PDZ3 tandem domain of the protein tyrosine phosphatase PTP-BL. <i>Biomolecular NMR Assignments</i> , 2007, 1, 151-153.	0.4	4
54	Constitutive Activation of Ras in Neurons: Implications for the Regulation of the Mammalian Circadian Clock. <i>Chronobiology International</i> , 2006, 23, 191-200.	0.9	15

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55	Effective transfection of cells with multi-shell calcium phosphate-DNA nanoparticles. <i>Biomaterials</i> , 2006, 27, 3147-3153.	5.7	265
56	Electrochemical High-Content Screening of Nitric Oxide Release from Endothelial Cells. <i>ChemBioChem</i> , 2006, 7, 662-668.	1.3	37
57	Enhanced Ras activity promotes spine formation in synRas mice neocortex. <i>NeuroReport</i> , 2005, 16, 149-152.	0.6	20
58	Photic inhibition of TrkB/Ras activity in the pigeon's tectum during development: impact on brain asymmetry formation. <i>European Journal of Neuroscience</i> , 2005, 22, 2180-2186.	1.2	25
59	Effects of Interferon- $\beta$ and Tumor Necrosis Factor- $\alpha$ on Survival and Differentiation of Oligodendrocyte Progenitors. <i>Journal of the Society for Gynecologic Investigation</i> , 2004, 11, 89-96.	1.9	48
60	Neuronal activation of Ras regulates synaptic connectivity. <i>European Journal of Neuroscience</i> , 2004, 19, 2953-2966.	1.2	63
61	Constitutive Ras activity induces hippocampal hypertrophy and remodeling of pyramidal neurons in synRas mice. <i>Journal of Neuroscience Research</i> , 2004, 77, 630-641.	1.3	21
62	Erythropoietin protects the developing brain against N-methyl-d-aspartate receptor antagonist neurotoxicity. <i>Neurobiology of Disease</i> , 2004, 15, 177-187.	2.1	135
63	Mechanisms leading to disseminated apoptosis following NMDA receptor blockade in the developing rat brain. <i>Neurobiology of Disease</i> , 2004, 16, 440-453.	2.1	149
64	Oxygen causes cell death in the developing brain. <i>Neurobiology of Disease</i> , 2004, 17, 273-282.	2.1	211
65	Enhanced Ras activity in pyramidal neurons induces cellular hypertrophy and changes in afferent and intrinsic connectivity in synRas mice. <i>International Journal of Developmental Neuroscience</i> , 2004, 22, 165-173.	0.7	22
66	Activation of Ras in neurons modifies synaptic vesicle docking and release. <i>NeuroReport</i> , 2004, 15, 2651-2654.	0.6	11
67	Structure Determination and Ligand Interactions of the PDZ2b Domain of PTP-Bas (hPTP1E): Splicing-induced Modulation of Ligand Specificity. <i>Journal of Molecular Biology</i> , 2003, 334, 143-155.	2.0	29
68	EphrinB Phosphorylation and Reverse Signaling. <i>Molecular Cell</i> , 2002, 9, 725-737.	4.5	274
69	The protein kinase C-related kinase PRK2 interacts with the protein tyrosine phosphatase PTP-BL via a novel PDZ domain binding motif. <i>FEBS Letters</i> , 2001, 496, 101-104.	1.3	55
70	Immunosuppressant FK506 does not exert beneficial effects in symptomatic G93A superoxide dismutase-1 transgenic mice. <i>NeuroReport</i> , 2001, 12, 2663-2665.	0.6	18
71	Semaphorin4F interacts with the synapse-associated protein SAP90/PSD-95. <i>Journal of Neurochemistry</i> , 2001, 78, 482-489.	2.1	38
72	Reduced number of functional glutamatergic synapses in hippocampal neurons overexpressing full-length TrkB receptors. <i>Journal of Neuroscience Research</i> , 2001, 66, 327-336.	1.3	16

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73	Protein expression patterns of identified neurons and of sprouting cells from the leech central nervous system. <i>Journal of Neurobiology</i> , 2000, 44, 320-332.	3.7	7
74	The Adenomatous Polyposis Coli-protein (APC) interacts with the protein tyrosine phosphatase PTP-BL via an alternatively spliced PDZ domain. <i>Oncogene</i> , 2000, 19, 3894-3901.	2.6	75
75	Transgenic Activation of Ras in Neurons Promotes Hypertrophy and Protects from Lesion-Induced Degeneration. <i>Journal of Cell Biology</i> , 2000, 151, 1537-1548.	2.3	125
76	Sensory Impairments and Delayed Regeneration of Sensory Axons in Interleukin-6-Deficient Mice. <i>Journal of Neuroscience</i> , 1999, 19, 4305-4313.	1.7	174
77	Nerve growth factor-induced PKB/Akt activity is sustained by phosphoinositide 3-kinase dependent and independent signals in sympathetic neurons. <i>Brain Research</i> , 1999, 837, 127-142.	1.1	46
78	Nerve growth factor stimulates MAPK via the low affinity receptor p75LNTR. <i>FEBS Letters</i> , 1999, 463, 231-234.	1.3	37
79	Ectopic Expression of a Chimeric Colony-Stimulating Factor-1/TrkB-Receptor Promotes CSF-1-Dependent Survival of Cultured Sympathetic Neurons. <i>Biochemical and Biophysical Research Communications</i> , 1998, 249, 891-897.	1.0	6
80	NGF-Mediated Survival Depends on p21ras in Chick Sympathetic Neurons from the Superior Cervical but Not from Lumbosacral Ganglia. <i>Developmental Biology</i> , 1997, 191, 306-310.	0.9	12
81	Cyclic AMP endogenously enhances synaptic strength of developing glutamatergic synapses in serum-free microcultures of rat hippocampal neurons. <i>Brain Research</i> , 1997, 763, 111-122.	1.1	21
82	Nerve growth factor-stimulated mitogen-activated protein kinase activity is not necessary for neurite outgrowth of chick dorsal root ganglion sensory and sympathetic neurons. , 1996, 46, 720-726.		28
83	Time-Resolved Signaling Pathways of Nerve Growth Factor Diverge Downstream of the p140trk Receptor Activation Between Chick Sympathetic and Dorsal Root Ganglion Sensory Neurons. <i>Journal of Neurochemistry</i> , 1995, 65, 1046-1053.	2.1	14
84	Lesion-Induced Interleukin-6 mRNA Expression in Rat Sciatic Nerve. <i>Annals of the New York Academy of Sciences</i> , 1995, 762, 488-490.	1.8	20
85	Neurotrophin signalling. <i>Current Opinion in Neurobiology</i> , 1994, 4, 668-679.	2.0	148
86	Cloning and sequence analysis of a cDNA encoding a novel truncated form of the chicken TrkB receptor. <i>Gene</i> , 1994, 149, 383-384.	1.0	5
87	BDNF, and NT-4/5 enhance glutamatergic synaptic transmission in cultured hippocampal neurones. <i>NeuroReport</i> , 1994, 6, 21-25.	0.6	383
88	Macrophage dependence of peripheral sensory nerve regeneration: Possible involvement of nerve growth factor. <i>Neuron</i> , 1991, 6, 359-370.	3.8	295
89	Regulation of Nerve Growth Factor (NGF) Synthesis in the Rat Central Nervous System: Comparison between the Effects of Interleukin-1 and Various Growth Factors in Astrocyte Cultures and in vivo. <i>European Journal of Neuroscience</i> , 1990, 2, 69-76.	1.2	370
90	Glucocorticoid Hormones Negatively Regulate Nerve Growth Factor Expression In Vivo and in Cultured Rat Fibroblasts. <i>European Journal of Neuroscience</i> , 1990, 2, 795-801.	1.2	55

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91	Inhibition of exocytosis by intracellularly applied antibodies against a chromaffin granule-binding protein. <i>Nature</i> , 1989, 339, 709-712.	13.7	51
92	ras p21 protein promotes survival and fiber outgrowth of cultured embryonic neurons. <i>Neuron</i> , 1989, 2, 1087-1096.	3.8	197
93	Nerve growth factor: Cellular localization and regulation of synthesis. <i>Cellular and Molecular Neurobiology</i> , 1988, 8, 35-40.	1.7	61
94	The synthesis of nerve growth factor (NGF) in developing skin is independent of innervation. <i>Developmental Biology</i> , 1988, 128, 240-244.	0.9	80
95	Nerve growth factor synthesis in cultured rat iris: Modulation by endogenous transmitter substances. <i>Experimental Cell Research</i> , 1988, 179, 18-30.	1.2	21
96	The physiological function of nerve growth factor in the central nervous system: Comparison with the periphery. <i>Reviews of Physiology, Biochemistry and Pharmacology</i> , 1987, 109, 145-178.	0.9	478
97	The structure-function relationship of the nerve growth factor molecule and the regulation of its synthesis. <i>Biochemical Society Transactions</i> , 1987, 15, 131-132.	1.6	0
98	Products of macrophages stimulate nerve growth factor mRNA synthesis in the injured perihelal nerve. <i>Journal of Neuroimmunology</i> , 1987, 16, 107.	1.1	3
99	Developmental changes of nerve growth factor and its mRNA in the rat hippocampus: Comparison with choline acetyltransferase. <i>Developmental Biology</i> , 1987, 120, 322-328.	0.9	159
100	Nerve growth factor potentiates the agonist-stimulated accumulation of inositol phosphates in PC-12 pheochromocytoma cells. <i>European Journal of Pharmacology</i> , 1987, 135, 259-260.	1.7	16
101	Timing and site of nerve growth factor synthesis in developing skin in relation to innervation and expression of the receptor. <i>Nature</i> , 1987, 326, 353-358.	13.7	580
102	Interleukin-1 regulates synthesis of nerve growth factor in non-neuronal cells of rat sciatic nerve. <i>Nature</i> , 1987, 330, 658-659.	13.7	997
103	Cholinergic denervation of the rat hippocampus by fimbrial transection leads to a transient accumulation of nerve growth factor (NGF) without change in mRNANGF content. <i>Neuroscience Letters</i> , 1986, 66, 175-180.	1.0	168
104	The production of NGF mRNA in peripheral organs. <i>Trends in Neurosciences</i> , 1985, 8, 373-374.	4.2	1
105	Nerve Growth Factor. <i>Novartis Foundation Symposium</i> , 1985, 116, 113-128.	1.2	14
106	Relationship between NGF-mediated volume increase and "priming effect" in fast and slow reacting clones of PC12 pheochromocytoma cells. <i>Experimental Cell Research</i> , 1983, 145, 179-190.	1.2	69
107	Polyploid rat glioma cells. <i>Experimental Cell Research</i> , 1982, 139, 117-126.	1.2	31
108	A second messenger required for nerve growth factor biological activity?. <i>Nature</i> , 1981, 292, 838-340.	13.7	137

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109	Acetylcholine Synthesis in the Schwann Cell and Axon in the Giant Nerve Fiber of the Squid. Journal of Neurochemistry, 1981, 36, 765-768.	2.1	24
110	Factors from glial cells regulate choline acetyltransferase and tyrosine hydroxylase activities in a hybrid-hybrid cell line. FEBS Letters, 1979, 107, 37-41.	1.3	13
111	Influence of cations on the electrical activity of neuroblastoma Å— glioma hybrid cells. Brain Research, 1977, 130, 495-504.	1.1	32
112	Tumorigenicity of neuroblastoma Å— glioma hybrid cells in nude mice and reintroduction of transplanted cells into culture. European Journal of Cancer, 1977, 13, 1417-1420.	1.0	7