Wieland B Huttner

List of Publications by Year
in descending order

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124
papers

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18482
62
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17105
122
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141
all docs

141
docs citations

141
times ranked

14776
citing authors

#	Article	IF	Citations
1	The cell biology of neurogenesis. Nature Reviews Molecular Cell Biology, 2005, 6, 777-788.	37.0	1,809
2	Human cerebral organoids recapitulate gene expression programs of fetal neocortex development. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15672-15677.	7.1	870
3	Neurons arise in the basal neuroepithelium of the early mammalian telencephalon: A major site of neurogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 3196-3201.	7.1	859
4	OSVZ progenitors of human and ferret neocortex are epithelial-like and expand by integrin signaling. Nature Neuroscience, 2010, 13, 690-699.	14.8	699
5	The Cell Biology of Neurogenesis: Toward an Understanding of the Development and Evolution of the Neocortex. Annual Review of Cell and Developmental Biology, 2014, 30, 465-502.	9.4	616
6	Retention of prominin in microvilli reveals distinct cholesterol-based lipid micro-domains in the apical plasma membrane. Nature Cell Biology, 2000, 2, 582-592.	10.3	530
7	Neural progenitors, neurogenesis and the evolution of the neocortex. Development (Cambridge), 2014, 141, 2182-2194.	2.5	526
8	Organoid single-cell genomic atlas uncovers human-specific features of brain development. Nature, 2019, 574, 418-422.	27.8	496
9	Cdk4/CyclinD1 Overexpression in Neural Stem Cells Shortens G1, Delays Neurogenesis, and Promotes the Generation and Expansion of Basal Progenitors. Cell Stem Cell, 2009, 5, 320-331.	11.1	490
10	Human-specific gene <i>ARHGAP11B</i> promotes basal progenitor amplification and neocortex expansion. Science, 2015, 347, 1465-1470.	12.6	487
11	Release of extracellular membrane particles carrying the stem cell marker prominin-1 (CD133) from neural progenitors and other epithelial cells. Journal of Cell Science, 2005, 118, 2849-2858.	2.0	415
12	Asymmetric distribution of the apical plasma membrane during neurogenic divisions of mammalian neuroepithelial cells. EMBO Journal, 2004, 23, 2314-2324.	7.8	387
13	Intermediate Neuronal Progenitors (Basal Progenitors) Produce Pyramidalâ€“Projection Neurons for All Layers of Cerebral Cortex. Cerebral Cortex, 2009, 19, 2439-2450.	2.9	369
14	Selective Lengthening of the Cell Cycle in the Neurogenic Subpopulation of Neural Progenitor Cells during Mouse Brain Development. Journal of Neuroscience, 2005, 25, 6533-6538.	3.6	351
15	Neural stem and progenitor cells shorten S-phase on commitment to neuron production. Nature Communications, 2011, 2, 154.	12.8	330
16	An inhibition of cyclin-dependent kinases that lengthens, but does not arrest, neuroepithelial cell cycle induces premature neurogenesis. Journal of Cell Science, 2003, 116, 4947-4955.	2.0	315
17	Transcriptomes of germinal zones of human and mouse fetal neocortex suggest a role of extracellular matrix in progenitor self-renewal. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11836-11841.	7.1	282
18	Prominin: A Story of Cholesterol, Plasma Membrane Protrusions and Human Pathology. Traffic, 2001, 2, 82-91.	2.7	274

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19	Midbody and primary cilium of neural progenitors release extracellular membrane particles enriched in the stem cell marker prominin-1. Journal of Cell Biology, 2007, 176, 483-495.	5.2	262
20	Asymmetric Inheritance of Centrosome-Associated Primary Cilium Membrane Directs Ciliogenesis after Cell Division. Cell, 2013, 155, 333-344.	28.9	253
21	Loss of Occludin and Functional Tight Junctions, but Not ZO-1, during Neural Tube Closureâ€"Remodeling of the Neuroepithelium Prior to Neurogenesis. Developmental Biology, 1996, 180, 664-679.	2.0	252
22	Making bigger brainsâ€"the evolution of neural-progenitor-cell division. Journal of Cell Science, 2008, 121, 2783-2793.	2.0	250
23	Symmetric versus asymmetric cell division during neurogenesis in the developing vertebrate central nervous system. Current Opinion in Cell Biology, 2005, 17, 648-657.	5.4	248
24	Cortical progenitor expansion, self-renewal and neurogenesisâ€"a polarized perspective. Current Opinion in Neurobiology, 2011, 21, 23-35.	4.2	248
25	The cell biology of neural stem and progenitor cells and its significance for their proliferation versus differentiation during mammalian brain development. Current Opinion in Cell Biology, 2008, 20, 707-715.	5.4	216
26	Abundant Occurrence of Basal Radial Glia in the Subventricular Zone of Embryonic Neocortex of a Lissencephalic Primate, the Common Marmoset Callithrix jacchus. Cerebral Cortex, 2012, 22, 469-481.	2.9	201
27	Differences and similarities between human and chimpanzee neural progenitors during cerebral cortex development. ELife, 2016, 5, .	6.0	200
28	Neural Progenitor Nuclei IN Motion. Neuron, 2010, 67, 906-914.	8.1	196
29	Mutant prominin 1 found in patients with macular degeneration disrupts photoreceptor disk morphogenesis in mice. Journal of Clinical Investigation, 2008, 118, 2908-16.	8.2	194
30	Synaptic Vesicle Biogenesis. Annual Review of Cell and Developmental Biology, 1999, 15, 733-798.	9.4	179
31	How the extracellular matrix shapes neural development. Open Biology, 2019, 9, 180216.	3.6	166
32	Loss of the Cholesterol-Binding Protein Prominin-1/CD133 Causes Disk Dysmorphogenesis and Photoreceptor Degeneration. Journal of Neuroscience, 2009, 29, 2297-2308.	3.6	164
33	Relief of hypoxia by angiogenesis promotes neural stem cell differentiation by targeting glycolysis. EMBO Journal, 2016, 35, 924-941.	7.8	161
34	Evolution and cell-type specificity of human-specific genes preferentially expressed in progenitors of fetal neocortex. ELife, 2018, 7, .	6.0	160
35	Live Imaging at the Onset of Cortical Neurogenesis Reveals Differential Appearance of the Neuronal Phenotype in Apical versus Basal Progenitor Progeny. PLoS ONE, 2008, 3, e2388.	2.5	157
36	Insulinoma-Associated 1 Has a Panneurogenic Role and Promotes the Generation and Expansion of Basal Progenitors in the Developing Mouse Neocortex. Neuron, 2008, 60, 40-55.	8.1	150

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37	Myosin II is required for interkinetic nuclear migration of neural progenitors. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16487-16492.	7.1	142
38	An Adaptive Threshold in Mammalian Neocortical Evolution. PLoS Biology, 2014, 12, e1002000.	5.6	139
39	Extracellular Matrix Components HAPLN1, Lumican, and Collagen I Cause Hyaluronic Acid-Dependent Folding of the Developing Human Neocortex. Neuron, 2018, 99, 702-719.e6.	8.1	139
40	A tunable refractive index matching medium for live imaging cells, tissues and model organisms. ELife, 2017, 6, .	6.0	128
41	Human-specific <i>ARHGAP11B</i> increases size and folding of primate neocortex in the fetal marmoset. Science, 2020, 369, 546-550.	12.6	127
42	Cholesterol is Required for the Formation of Regulated and Constitutive Secretory Vesicles from the <i>trans</i>â€Golgi Network. Traffic, 2000, 1, 952-962.	2.7	126
43	The Stem Cell Marker CD133 (Prominin-1) Is Expressed in Various Human Glandular Epithelia. Journal of Histochemistry and Cytochemistry, 2008, 56, 977-993.	2.5	124
44	Neocortical Expansion Due to Increased Proliferation of Basal Progenitors Is Linked to Changes in Their Morphology. Cell Stem Cell, 2019, 24, 535-550.e9.	11.1	114
45	Characterization of Prominin-2, a New Member of the Prominin Family of Pentaspan Membrane Glycoproteins. Journal of Biological Chemistry, 2003, 278, 8586-8596.	3.4	106
46	Haematopoietic stem cell differentiation promotes the release of prominininâ€1/CD133â€containing membrane vesiclesâ€"a role of the endocyticâ€"exocytic pathway. EMBO Molecular Medicine, 2011, 3, 398-409.	6.9	102
47	Neural progenitor cells and their role in the development and evolutionary expansion of the neocortex. Wiley Interdisciplinary Reviews: Developmental Biology, 2017, 6, e256.	5.9	102
48	Human-Specific ARHGAP11B Acts in Mitochondria to Expand Neocortical Progenitors by Glutaminolysis. Neuron, 2020, 105, 867-881.e9.	8.1	101
49	Trimeric G-proteins of thetrans-Golgi network are involved in the formation of constitutive secretory vesicles and immature secretory granules. FEBS Letters, 1991, 294, 239-243.	2.8	100
50	Conical expansion of the outer subventricular zone and the role of neocortical folding in evolution and development. Frontiers in Human Neuroscience, 2013, 7, 424.	2.0	99
51	Cytokinesis of neuroepithelial cells can divide their basal process before anaphase. EMBO Journal, 2008, 27, 3151-3163.	7.8	97
52	Integrin Î±vÎ²3 and thyroid hormones promote expansion of progenitors in embryonic neocortex. Development (Cambridge), 2014, 141, 795-806.	2.5	97
53	The role of Pax6 in regulating the orientation and mode of cell division of progenitors in the mouse cerebral cortex. Development (Cambridge), 2011, 138, 5067-5078.	2.5	94
54	Epigenome profiling and editing of neocortical progenitor cells during development. EMBO Journal, 2017, 36, 2642-2658.	7.8	94

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55	Sustained Pax6 Expression Generates Primate-like Basal Radial Glia in Developing Mouse Neocortex. PLoS Biology, 2015, 13, e1002217.	5.6	93
56	<scp>GEMC</scp> 1 is a critical regulator of multiciliated cell differentiation. EMBO Journal, 2016, 35, 942-960.	7.8	91
57	Basolateral rather than apical primary cilia on neuroepithelial cells committed to delamination. Development (Cambridge), 2012, 139, 95-105.	2.5	88
58	Human-specific ARHGAP11B induces hallmarks of neocortical expansion in developing ferret neocortex. ELife, 2018, 7, .	6.0	84
59	A single splice site mutation in human-specific <i>ARHGAP11B</i> causes basal progenitor amplification. Science Advances, 2016, 2, e1601941.	10.3	77
60	Human-specific genomic signatures of neocortical expansion. Current Opinion in Neurobiology, 2017, 42, 33-44.	4.2	77
61	Insm1 Induces Neural Progenitor Delamination in Developing Neocortex via Downregulation of the Adherens Junction Belt-Specific Protein Plekha7. Neuron, 2018, 97, 1299-1314.e8.	8.1	73
62	<scp>CRISPR</scp> /Cas9â€induced disruption of gene expression in mouse embryonic brain and single neural stem cells <i>in vivo</i>. EMBO Reports, 2016, 17, 338-348.	4.5	72
63	Prominin-2 is a cholesterol-binding protein associated with apical and basolateral plasmalemmal protrusions in polarized epithelial cells and released into urine. Cell and Tissue Research, 2007, 328, 31-47.	2.9	70
64	The secondary loss of gyrencephaly as an example of evolutionary phenotypical reversal. Frontiers in Neuroanatomy, 2013, 7, 16.	1.7	69
65	The centrosome protein AKNA regulates neurogenesis via microtubule organization. Nature, 2019, 567, 113-117.	27.8	67
66	Neocortex expansion in development and evolution â€” from cell biology to single genes. Current Opinion in Neurobiology, 2016, 39, 122-132.	4.2	66
67	A novel population of Hopx-dependent basal radial glial cells in the developing mouse neocortex. Development (Cambridge), 2018, 145, .	2.5	62
68	Specific polar subpopulations of astral microtubules control spindle orientation and symmetric neural stem cell division. ELife, 2014, 3, .	6.0	61
69	Brain organoids as models to study human neocortex development and evolution. Current Opinion in Cell Biology, 2018, 55, 8-16.	5.4	59
70	Basal Progenitor Morphology and Neocortex Evolution. Trends in Neurosciences, 2020, 43, 843-853.	8.6	57
71	Sâ€phase duration is the main target of cell cycle regulation in neural progenitors of developing ferret neocortex. Journal of Comparative Neurology, 2016, 524, 456-470.	1.6	56
72	Transport, Metabolism, and Function of Thyroid Hormones in the Developing Mammalian Brain. Frontiers in Endocrinology, 2019, 10, 209.	3.5	53

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73	Metabolic Regulation of Neocortical Expansion in Development and Evolution. Neuron, 2021, 109, 408-419.	8.1	51
74	Prominina€1 controls stem cell activation by orchestrating ciliary dynamics. EMBO Journal, 2019, 38, .	7.8	47
75	YAP Activity Is Necessary and Sufficient for Basal Progenitor Abundance and Proliferation in the Developing Neocortex. Cell Reports, 2019, 27, 1103-1118.e6.	6.4	43
76	3â€² UTR-Dependent, miR-92-Mediated Restriction of Tis21 Expression Maintains Asymmetric Neural Stem Cell Division to Ensure Proper Neocortex Size. Cell Reports, 2014, 7, 398-411.	6.4	42
77	Expression of humanâ€specific <i>ARHGAP11B</i> in mice leads to neocortex expansion and increased memory flexibility. EMBO Journal, 2021, 40, e107093.	7.8	40
78	Lengthening Neurogenic Period during Neocortical Development Causes a Hallmark of Neocortex Expansion. Current Biology, 2020, 30, 4227-4237.e5.	3.9	35
79	Extracellular matrix-inducing Sox9 promotes both basal progenitor proliferation and gliogenesis in developing neocortex. ELife, 2020, 9, .	6.0	33
80	Novel insights into mammalian embryonic neural stem cell division: focus on microtubules. Molecular Biology of the Cell, 2015, 26, 4302-4306.	2.1	32
81	Abnormal spindle-like microcephaly-associated (ASPM) mutations strongly disrupt neocortical structure but spare the hippocampus and long-term memory. Cortex, 2016, 74, 158-176.	2.4	32
82	Malformations of Human Neocortex in Development â€“ Their Progenitor Cell Basis and Experimental Model Systems. Frontiers in Cellular Neuroscience, 2019, 13, 305.	3.7	32
83	Prominina€1 (CD133) modulates the architecture and dynamics of microvilli. Traffic, 2019, 20, 39-60.	2.7	32
84	Genetic Modification of Brain Organoids. Frontiers in Cellular Neuroscience, 2019, 13, 558.	3.7	32
85	Microinjection of membrane-impermeable molecules into single neural stem cells in brain tissue. Nature Protocols, 2014, 9, 1170-1182.	12.0	31
86	A new approach to manipulate the fate of single neural stem cells in tissue. Nature Neuroscience, 2012, 15, 329-337.	14.8	30
87	Epigenetic and Transcriptional Pre-patterningâ€"An Emerging Theme in Cortical Neurogenesis. Frontiers in Neuroscience, 2018, 12, 359.	2.8	29
88	Neocortex expansion in development and evolutionâ€"from genes to progenitor cell biology. Current Opinion in Cell Biology, 2021, 73, 9-18.	5.4	28
89	Length of the Neurogenic Periodâ€"A Key Determinant for the Generation of Upper-Layer Neurons During Neocortex Development and Evolution. Frontiers in Cell and Developmental Biology, 2021, 9, 676911.	3.7	27
90	Serotonin Receptor 2A Activation Promotes Evolutionarily Relevant Basal Progenitor Proliferation in the Developing Neocortex. Neuron, 2020, 108, 1113-1129.e6.	8.1	26

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91	Mitotic WNT signalling orchestrates neurogenesis in the developing neocortex. EMBO Journal, 2021, 40, e108041.	7.8	26
92	Primary Cilia and Centrosomes in Neocortex Development. Frontiers in Neuroscience, 2021, 15, 755867.	2.8	24
93	Neurotransmitters as Modulators of Neural Progenitor Cell Proliferation During Mammalian Neocortex Development. Frontiers in Cell and Developmental Biology, 2020, 8, 391.	3.7	23
94	Transcriptional Regulators and Human-Specific/Primate-Specific Genes in Neocortical Neurogenesis. International Journal of Molecular Sciences, 2020, 21, 4614.	4.1	23
95	Human-Specific Genes, Cortical Progenitor Cells, and Microcephaly. Cells, 2021, 10, 1209.	4.1	23
96	Novel gene function and regulation in neocortex expansion. Current Opinion in Cell Biology, 2017, 49, 22-30.	5.4	22
97	How neural stem cells contribute to neocortex development. Biochemical Society Transactions, 2021, 49, 1997-2006.	3.4	22
98	Robotic platform for microinjection into single cells in brain tissue. EMBO Reports, 2019, 20, e47880.	4.5	17
99	Prominins control ciliary length throughout the animal kingdom: New lessons from human prominin-1 and zebrafish prominin-3. Journal of Biological Chemistry, 2020, 295, 6007-6022.	3.4	17
100	H3 acetylation selectively promotes basal progenitor proliferation and neocortex expansion. Science Advances, 2021, 7, eabc6792.	10.3	16
101	Neurodevelopmental LincRNA Microsyteny Conservation and Mammalian Brain Size Evolution. PLoS ONE, 2015, 10, e0131818.	2.5	15
102	Monoclonal Antibodies 13A4 and AC133 Do Not Recognize the Canine Ortholog of Mouse and Human Stem Cell Antigen Prominin-1 (CD133). PLoS ONE, 2016, 11, e0164079.	2.5	14
103	Comment on â€œCortical folding scales universally with surface area and thickness, not number of neuronsâ€• Science, 2016, 351, 825-825.	12.6	14
104	Progenitor-Based Cell Biological Aspects of Neocortex Development and Evolution. Frontiers in Cell and Developmental Biology, 2022, 10, .	3.7	14
105	Analysis of primary cilia in the developing mouse brain. Methods in Cell Biology, 2015, 127, 93-129.	1.1	13
106	The Role of the Extracellular Matrix in Neural Progenitor Cell Proliferation and Cortical Folding During Human Neocortex Development. Frontiers in Cellular Neuroscience, 2021, 15, 804649.	3.7	13
107	Sulfonated cryogel scaffolds for focal delivery in ex-vivo brain tissue cultures. Biomaterials, 2021, 271, 120712.	11.4	12
108	From stem and progenitor cells to neurons in the developing neocortex: key differences among hominids. FEBS Journal, 2022, 289, 1524-1535.	4.7	11

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109	A truncating Aspm allele leads to a complex cognitive phenotype and region-specific reductions in parvalbuminergic neurons. Translational Psychiatry, 2020, 10, 66.	4.8	11
110	The Mode of Stem Cell Division Is Dependent on the Differential Interaction of Î²-Catenin with the Kat3 Coactivators CBP or p300. Cancers, 2019, 11, 962.	3.7	9
111	Primate neocortex development and evolution: Conserved versus evolved folding. Journal of Comparative Neurology, 2019, 527, 1621-1632.	1.6	8
112	What Are the Human-Specific Aspects of Neocortex Development?. Frontiers in Neuroscience, 2022, 16, 878950.	2.8	7
113	Developmental HCN channelopathy results in decreased neural progenitor proliferation and microcephaly in mice. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	6
114	The Golgi Apparatus in Polarized Neuroepithelial Stem Cells and Their Progeny: Canonical and Noncanonical Features. Results and Problems in Cell Differentiation, 2019, 67, 359-375.	0.7	6
115	Signs of Reduced Basal Progenitor Levels and Cortical Neurogenesis in Human Fetuses with Open Spina Bifida at 11â€“15 Weeks of Gestation. Journal of Neuroscience, 2020, 40, 1766-1777.	3.6	5
116	Neural Stem Cells in Cerebral Cortex Development. , 2015, , 1-25.		4
117	Stem cells: slow and steady wins the race. Nature Neuroscience, 2015, 18, 613-614.	14.8	4
118	In Vivo Targeting of Neural Progenitor Cells in Ferret Neocortex by In Utero Electroporation. Journal of Visualized Experiments, 2020, , .	0.3	4
119	Progenitor Networking in the Fetal Primate Neocortex. Neuron, 2013, 80, 259-262.	8.1	3
120	Expression of Tyrosine-Sulfated Secretory Proteins in Xenopus laevis Oocytes. Differential Export of Constitutive and Regulated Proteins. FEBS Journal, 1996, 239, 111-116.	0.2	2
121	Manipulation of Single Neural Stem Cells and Neurons in Brain Slices using Robotic Microinjection. Journal of Visualized Experiments, 2021, , .	0.3	2
122	Ex vivo Tissue Culture Protocols for Studying the Developing Neocortex. Bio-protocol, 2021, 11, e4031.	0.4	1
123	Formation of gyri and sulci. , 2020, , 223-252.		0
124	Generation of interspecies mouse-rat chimeric embryos by embryonic stem (ES) cell microinjection. STAR Protocols, 2021, 2, 100494.	1.2	0