

Dirk Feldmeyer

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80
papers

8,498
citations

44
h-index

88
g-index

88
ext. papers

9,775
ext. citations

8.9
avg, IF

5.89
L-index

#	Paper	IF	Citations
80	Petilla terminology: nomenclature of features of GABAergic interneurons of the cerebral cortex. <i>Nature Reviews Neuroscience</i> , 2008 , 9, 557-68	13.5	1092
79	Point mutation in an AMPA receptor gene rescues lethality in mice deficient in the RNA-editing enzyme ADAR2. <i>Nature</i> , 2000 , 406, 78-81	50.4	737
78	New insights into the classification and nomenclature of cortical GABAergic interneurons. <i>Nature Reviews Neuroscience</i> , 2013 , 14, 202-16	13.5	532
77	Early-onset epilepsy and postnatal lethality associated with an editing-deficient GluR-B allele in mice. <i>Science</i> , 1995 , 270, 1677-80	33.3	476
76	Synaptic connections between layer 4 spiny neurone-layer 2/3 pyramidal cell pairs in juvenile rat barrel cortex: physiology and anatomy of interlaminar signalling within a cortical column. <i>Journal of Physiology</i> , 2002 , 538, 803-22	3.9	353
75	Reliable synaptic connections between pairs of excitatory layer 4 neurones within a single barrel of developing rat somatosensory cortex. <i>Journal of Physiology</i> , 1999 , 521 Pt 1, 169-90	3.9	316
74	Coincidence detection and changes of synaptic efficacy in spiny stellate neurons in rat barrel cortex. <i>Nature Neuroscience</i> , 1999 , 2, 1098-105	25.5	315
73	NMDA-receptor channel diversity in the developing cerebellum. <i>Nature</i> , 1994 , 368, 335-9	50.4	277
72	Columnar organization of dendrites and axons of single and synaptically coupled excitatory spiny neurons in layer 4 of the rat barrel cortex. <i>Journal of Neuroscience</i> , 2000 , 20, 5300-11	6.6	237
71	Barrel cortex function. <i>Progress in Neurobiology</i> , 2013 , 103, 3-27	10.9	230
70	Connexin expression in electrically coupled postnatal rat brain neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000 , 97, 10260-5	11.5	218
69	Neuronal basic helix-loop-helix proteins (NEX and BETA2/Neuro D) regulate terminal granule cell differentiation in the hippocampus. <i>Journal of Neuroscience</i> , 2000 , 20, 3714-24	6.6	206
68	Efficacy and connectivity of intracolumnar pairs of layer 2/3 pyramidal cells in the barrel cortex of juvenile rats. <i>Journal of Physiology</i> , 2006 , 575, 583-602	3.9	202
67	Excitatory neuronal connectivity in the barrel cortex. <i>Frontiers in Neuroanatomy</i> , 2012 , 6, 24	3.6	194
66	Neurological dysfunctions in mice expressing different levels of the Q/R site-unedited AMPAR subunit GluR-B. <i>Nature Neuroscience</i> , 1999 , 2, 57-64	25.5	190
65	High-probability unquantal transmission at excitatory synapses in barrel cortex. <i>Science</i> , 2003 , 302, 1981-4	33.3	184
64	Morphometric analysis of the columnar innervation domain of neurons connecting layer 4 and layer 2/3 of juvenile rat barrel cortex. <i>Cerebral Cortex</i> , 2003 , 13, 1051-63	5.1	166

63	Excitatory signal flow and connectivity in a cortical column: focus on barrel cortex. <i>Brain Structure and Function</i> , 2007 , 212, 3-17	4	164
62	Functional correlation of NMDA receptor epsilon subunits expression with the properties of single-channel and synaptic currents in the developing cerebellum. <i>Journal of Neuroscience</i> , 1996 , 16, 4376-82	6.6	156
61	Effect of RNA editing and subunit co-assembly single-channel properties of recombinant kainate receptors. <i>Journal of Physiology</i> , 1996 , 492 (Pt 1), 129-42	3.9	144
60	Identification of a native low-conductance NMDA channel with reduced sensitivity to Mg ²⁺ in rat central neurones. <i>Journal of Physiology</i> , 1996 , 494 (Pt 2), 479-92	3.9	130
59	Monosynaptic connections between pairs of spiny stellate cells in layer 4 and pyramidal cells in layer 5A indicate that lemniscal and paralemniscal afferent pathways converge in the infragranular somatosensory cortex. <i>Journal of Neuroscience</i> , 2005 , 25, 3423-31	6.6	97
58	Morphological and physiological characterization of pyramidal neuron subtypes in rat medial prefrontal cortex. <i>Cerebral Cortex</i> , 2015 , 25, 788-805	5.1	91
57	Axonal projection, input and output synapses, and synaptic physiology of Cajal-Retzius cells in the developing rat neocortex. <i>Journal of Neuroscience</i> , 2002 , 22, 6908-19	6.6	88
56	Neuronal correlates of local, lateral, and translaminar inhibition with reference to cortical columns. <i>Cerebral Cortex</i> , 2009 , 19, 926-37	5.1	85
55	Cholinergic filtering in the recurrent excitatory microcircuit of cortical layer 4. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 11753-8	11.5	81
54	Efficient recruitment of layer 2/3 interneurons by layer 4 input in single columns of rat somatosensory cortex. <i>Journal of Neuroscience</i> , 2008 , 28, 8273-84	6.6	81
53	Modeling a layer 4-to-layer 2/3 module of a single column in rat neocortex: interweaving in vitro and in vivo experimental observations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 16353-8	11.5	77
52	A community-based transcriptomics classification and nomenclature of neocortical cell types. <i>Nature Neuroscience</i> , 2020 , 23, 1456-1468	25.5	76
51	Monosynaptic connections between pairs of L5A pyramidal neurons in columns of juvenile rat somatosensory cortex. <i>Cerebral Cortex</i> , 2008 , 18, 397-406	5.1	75
50	Improved biocytin labeling and neuronal 3D reconstruction. <i>Nature Protocols</i> , 2012 , 7, 394-407	18.8	73
49	NMDA receptor diversity in the cerebellum: identification of subunits contributing to functional receptors. <i>Neuropharmacology</i> , 1998 , 37, 1369-80	5.5	72
48	Reconstruction of an average cortical column in silico. <i>Brain Research Reviews</i> , 2007 , 55, 193-203		72
47	Inhibitory interneurons and their circuit motifs in the many layers of the barrel cortex. <i>Neuroscience</i> , 2018 , 368, 132-151	3.9	64
46	Synaptic efficacy and reliability of excitatory connections between the principal neurones of the input (layer 4) and output layer (layer 5) of the neocortex. <i>Journal of Physiology</i> , 2000 , 525 Pt 1, 31-9	3.9	64

45	Functional consequences of changes in NMDA receptor subunit expression during development. <i>Journal of Neurocytology</i> , 1996 , 25, 857-67		64
44	Layer- and Cell Type-Specific Modulation of Excitatory Neuronal Activity in the Neocortex. <i>Frontiers in Neuroanatomy</i> , 2018 , 12, 1	3.6	62
43	Postnatal development of synaptic transmission in local networks of L5A pyramidal neurons in rat somatosensory cortex. <i>Journal of Physiology</i> , 2007 , 585, 103-16	3.9	60
42	The relation between dendritic geometry, electrical excitability, and axonal projections of L2/3 interneurons in rat barrel cortex. <i>Cerebral Cortex</i> , 2009 , 19, 938-50	5.1	55
41	L2/3 interneuron groups defined by multiparameter analysis of axonal projection, dendritic geometry, and electrical excitability. <i>Cerebral Cortex</i> , 2009 , 19, 951-62	5.1	54
40	Morphology and physiology of excitatory neurons in layer 6b of the somatosensory rat barrel cortex. <i>Cerebral Cortex</i> , 2013 , 23, 2803-17	5.1	48
39	Fast gating kinetics of the slow Ca ²⁺ current in cut skeletal muscle fibres of the frog. <i>Journal of Physiology</i> , 1990 , 425, 347-67	3.9	46
38	A barrel-related interneuron in layer 4 of rat somatosensory cortex with a high intrabarrel connectivity. <i>Cerebral Cortex</i> , 2015 , 25, 713-25	5.1	45
37	Cell type-specific effects of adenosine on cortical neurons. <i>Cerebral Cortex</i> , 2015 , 25, 772-87	5.1	44
36	Developmental alterations in the functional properties of excitatory neocortical synapses. <i>Journal of Physiology</i> , 2009 , 587, 1889-96	3.9	43
35	Sociability Deficits and Altered Amygdala Circuits in Mice Lacking Pcdh10, an Autism Associated Gene. <i>Biological Psychiatry</i> , 2017 , 81, 193-202	7.9	38
34	Neocortical Layer 6B as a Remnant of the Subplate - A Morphological Comparison. <i>Cerebral Cortex</i> , 2017 , 27, 1011-1026	5.1	31
33	Effects of gallopamil on calcium release and intramembrane charge movements in frog skeletal muscle fibres. <i>Journal of Physiology</i> , 1990 , 421, 343-62	3.9	24
32	Adenosine Differentially Modulates Synaptic Transmission of Excitatory and Inhibitory Microcircuits in Layer 4 of Rat Barrel Cortex. <i>Cerebral Cortex</i> , 2017 , 27, 4411-4422	5.1	22
31	Structural determinants underlying the high efficacy of synaptic transmission and plasticity at synaptic boutons in layer 4 of the adult rat barrel cortex. <i>Brain Structure and Function</i> , 2015 , 220, 3185-209	4.9	21
30	Modulation of calcium current gating in frog skeletal muscle by conditioning depolarization. <i>Journal of Physiology</i> , 1992 , 457, 639-53	3.9	21
29	A possible role of sarcoplasmic Ca ²⁺ release in modulating the slow Ca ²⁺ current of skeletal muscle. <i>Pflugers Archiv European Journal of Physiology</i> , 1993 , 425, 54-61	4.6	20
28	Neurotransmitters. Elusive glutamate receptors. <i>Current Biology</i> , 1994 , 4, 82-4	6.3	19

27	Electrophysiological and morphological characterization of neuronal microcircuits in acute brain slices using paired patch-clamp recordings. <i>Journal of Visualized Experiments</i> , 2015 , 52358	1.6	18
26	Dendritic Target Region-Specific Formation of Synapses Between Excitatory Layer 4 Neurons and Layer 6 Pyramidal Cells. <i>Cerebral Cortex</i> , 2016 , 26, 1569-1579	5.1	16
25	Morphological and Functional Characterization of Non-fast-Spiking GABAergic Interneurons in Layer 4 Microcircuitry of Rat Barrel Cortex. <i>Cerebral Cortex</i> , 2018 , 28, 1439-1457	5.1	16
24	Contribution of intracolumnar layer 2/3-to-layer 2/3 excitatory connections in shaping the response to whisker deflection in rat barrel cortex. <i>Cerebral Cortex</i> , 2015 , 25, 849-58	5.1	16
23	Comment on "Principles of connectivity among morphologically defined cell types in adult neocortex". <i>Science</i> , 2016 , 353, 1108	33.3	16
22	Sensory encoding in Neuregulin 1 mutants. <i>Brain Structure and Function</i> , 2016 , 221, 1067-81	4	12
21	Calcium current reactivation after flash photolysis of nifedipine in skeletal muscle fibres of the frog. <i>Journal of Physiology</i> , 1995 , 487, 51-6	3.9	11
20	Axons Predict Neuronal Connectivity Within and Between Cortical Columns and Serve as Primary Classifiers of Interneurons in a Cortical Column 2010 , 141-155		10
19	Effects of guanidinium on EC coupling and tension generation in frog skeletal muscle. <i>Journal of Muscle Research and Cell Motility</i> , 1988 , 9, 541-51	3.5	6
18	Synaptic Microcircuits in the Barrel Cortex 2015 , 59-108		5
17	Unveiling the Synaptic Function and Structure Using Paired Recordings From Synaptically Coupled Neurons. <i>Frontiers in Synaptic Neuroscience</i> , 2020 , 12, 5	3.5	5
16	The Axon of Excitatory Neurons in the Neocortex: Projection Patterns and Target Specificity 2010 , 157-178		5
15	Muscarinic and Nicotinic Modulation of Neocortical Layer 6A Synaptic Microcircuits Is Cooperative and Cell-Specific. <i>Cerebral Cortex</i> , 2020 , 30, 3528-3542	5.1	4
14	Altered resonance properties of somatosensory responses in mice deficient for the schizophrenia risk gene Neuregulin 1. <i>Brain Structure and Function</i> , 2016 , 221, 4383-4398	4	4
13	Morpho-Functional Mapping of Cortical Networks in Brain Slice Preparations Using Paired Electrophysiological Recordings. <i>NeuroMethods</i> , 2011 , 405-431	0.4	4
12	Cell Type-Specific Modulation of Layer 6A Excitatory Microcircuits by Acetylcholine in Rat Barrel Cortex		3
11	Cholinergic and Adenosinergic Modulation of Synaptic Release. <i>Neuroscience</i> , 2021 , 456, 114-130	3.9	3
10	Layer-Specific Inhibitory Microcircuits of Layer 6 Interneurons in Rat Prefrontal Cortex. <i>Cerebral Cortex</i> , 2021 , 31, 32-47	5.1	3

9	Paired Recordings from Synaptically Coupled Neurones in Acute Neocortical Slices. <i>Neuromethods</i> , 2016 , 171-191	0.4	2
8	Synaptic connections between layer 4 spiny neurone- layer 2/3 pyramidal cell pairs in juvenile rat barrel cortex: physiology and anatomy of interlaminar signalling within a cortical column 2002 , 538, 803		1
7	Layer-specific inhibitory microcircuits of layer 6 interneurons in rat prefrontal cortex		1
6	Cell-Type Specific Neuromodulation of Excitatory and Inhibitory Neurons Muscarinic Acetylcholine Receptors in Layer 4 of Rat Barrel Cortex.. <i>Frontiers in Neural Circuits</i> , 2022 , 16, 843025	3.5	0
5	Electrical Activity in Neurons 2013 , 113-143		
4	Morphologie und synaptische Interaktion von Neuronen einer kortikalen Kolumne. <i>E-Neuroforum</i> , 2004 , 10, 220-228		
3	Effects of lanthanum on contractile inactivation and D600-induced paralysis in twitch muscle fibres of the frog. <i>Pflugers Archiv European Journal of Physiology</i> , 1989 , 414, 373-5	4.6	
2	S1 Microcircuits 2016 , 547-563		
1	Neuronale Schaltkreise als kleinste Einheit kortikaler Netzwerke Struktur und Funktion 2012 , 15-20		