Christoph Fahlke

List of Publications by Year
in descending order

123	6,662	53660 45	71532 76
papers	citations	h-index	g-index

128	128	128	5995
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Somatic and germline CACNA1D calcium channel mutations in aldosterone-producing adenomas and primary aldosteronism. Nature Genetics, 2013, 45, 1050-1054.	9.4	519
2	Engaging neuroscience to advance translational research in brain barrier biology. Nature Reviews Neuroscience, 2011, 12, 169-182.	4.9	508
3	Mutations in CLCN2 encoding a voltage-gated chloride channel are associated with idiopathic generalized epilepsies. Nature Genetics, 2003, 33, 527-532.	9.4	297
4	Recurrent gain of function mutation in calcium channel CACNA1H causes early-onset hypertension with primary aldosteronism. ELife, 2015, 4, e06315.	2.8	271
5	CLCN2 chloride channel mutations in familial hyperaldosteronism type II. Nature Genetics, 2018, 50, 349-354.	9.4	188
6	Pore-forming segments in voltage-gated chloride channels. Nature, 1997, 390, 529-532.	13.7	181
7	Crystal structure of a light-driven sodium pump. Nature Structural and Molecular Biology, 2015, 22, 390-395.	3.6	146
8	Molecular basis for decreased muscle chloride conductance in the myotonic goat.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 11248-11252.	3.3	129
9	Barttin modulates trafficking and function of ClC-K channels. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 11411-11416.	3.3	117
10	An aspartic acid residue important for voltage-dependent gating of human muscle chloride channels. Neuron, 1995, 15, 463-472.	3.8	116
11	Mechanisms of Anion Conduction by Coupled Glutamate Transporters. Cell, 2015, 160, 542-553.	13.5	114
12	A Trimeric Quaternary Structure Is Conserved in Bacterial and Human Glutamate Transporters. Journal of Biological Chemistry, 2004, 279, 39505-39512.	1.6	107
13	A mutation in autosomal dominant myotonia congenita affects pore properties of the muscle chloride channel. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 2729-2734.	3.3	105
14	Subunit Stoichiometry of Human Muscle Chloride Channels. Journal of General Physiology, 1997, 109, 93-104.	0.9	96
15	The photophysics of LOV-based fluorescent proteins â€" new tools for cell biology. Photochemical and Photobiological Sciences, 2014, 13, 875-883.	1.6	95
16	Molecular Basis of DFNB73: Mutations of BSND Can Cause Nonsyndromic Deafness or Bartter Syndrome. American Journal of Human Genetics, 2009, 85, 273-280.	2.6	94
17	Ion permeation and selectivity in ClC-type chloride channels. American Journal of Physiology - Renal Physiology, 2001, 280, F748-F757.	1.3	93
18	Different effects on gating of three myotoniaâ€causing mutations in the inactivation gate of the human muscle sodium channel.. Journal of Physiology, 1995, 487, 107-114.	1.3	92

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19	Conserved Dimeric Subunit Stoichiometry of SLC26 Multifunctional Anion Exchangers. Journal of Biological Chemistry, 2008, 283, 4177-4188.	1.6	85
20	Novel CLCN1 mutations with unique clinical and electrophysiological consequences. Brain, 2002, 125, 2392-2407.	3.7	78
21	A point mutation associated with episodic ataxia 6 increases glutamate transporter anion currents. Brain, 2012, 135, 3416-3425.	3.7	78
22	Excitatory amino acid transporters: recent insights into molecular mechanisms, novel modes of modulation and new therapeutic possibilities. Current Opinion in Pharmacology, 2015, 20, 116-123.	1.7	78
23	A Î²-Lactam Antibiotic Dampens Excitotoxic Inflammatory CNS Damage in a Mouse Model of Multiple Sclerosis. PLoS ONE, 2008, 3, e3149.	1.1	76
24	ClC-3 Is an Intracellular Chloride/Proton Exchanger with Large Voltage-Dependent Nonlinear Capacitance. ACS Chemical Neuroscience, 2013, 4, 994-1003.	1.7	76
25	Mechanism of voltage-dependent gating in skeletal muscle chloride channels. Biophysical Journal, 1996, 71, 695-706.	0.2	75
26	Disease-Causing Dysfunctions of Barttin in Bartter Syndrome Type IV. Journal of the American Society of Nephrology: JASN, 2009, 20, 145-153.	3.0	75
27	CLC channel function and dysfunction in health and disease. Frontiers in Physiology, 2014, 5, 378.	1.3	74
28	Molecular and cellular physiology of sodium-dependent glutamate transporters. Brain Research Bulletin, 2018, 136, 3-16.	1.4	74
29	The Role of the Carboxyl Terminus in ClC Chloride Channel Function. Journal of Biological Chemistry, 2004, 279, 13140-13147.	1.6	73
30	Glutamate transporter-associated anion channels adjust intracellular chloride concentrations during glial maturation. Glia, 2017, 65, 388-400.	2.5	71
31	Two novelCLCN2mutations accelerating chloride channel deactivation are associated with idiopathic generalized epilepsy. Human Mutation, 2009, 30, 397-405.	1.1	70
32	A missense mutation in canine ClC-1 causes recessive myotonia congenita in the dog1. FEBS Letters, 1999, 456, 54-58.	1.3	67
33	Channel-like slippage modes in the human anion/proton exchanger ClC-4. Journal of General Physiology, 2009, 133, 485-496.	0.9	66
34	Barttin Activates ClC-K Channel Function by Modulating Gating. Journal of the American Society of Nephrology: JASN, 2010, 21, 1281-1289.	3.0	65
35	VGLUT1 functions as a glutamate/proton exchanger with chloride channel activity in hippocampal glutamatergic synapses. Nature Communications, 2017, 8, 2279.	5.8	62
36	Pore stoichiometry of a voltage-gated chloride channel. Nature, 1998, 394, 687-690.	13.7	61

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37	Glutamate Modifies Ion Conduction and Voltage-dependent Gating of Excitatory Amino Acid Transporter-associated Anion Channels. Journal of Biological Chemistry, 2003, 278, 50112-50119.	1.6	60
38	Physiology and pathophysiology of ClC-K/barttin channels. Frontiers in Physiology, 2010, 1, 155.	1.3	59
39	Unique structure and function of viral rhodopsins. Nature Communications, 2019, 10, 4939.	5.8	59
40	Mechanism of Ion Permeation in Skeletal Muscle Chloride Channels. Journal of General Physiology, 1997, 110, 551-564.	0.9	57
41	Anion Permeation in Human ClC-4 Channels. Biophysical Journal, 2003, 84, 2306-2318.	0.2	56
42	Allosteric Modulation of an Excitatory Amino Acid Transporter: The Subtype-Selective Inhibitor UCPH-101 Exerts Sustained Inhibition of EAAT1 through an Intramonomeric Site in the Trimerization Domain. Journal of Neuroscience, 2013, 33, 1068-1087.	1.7	55
43	Functional Properties of the Retinal Glutamate Transporters GLT-1c and EAAT5. Journal of Biological Chemistry, 2014, 289, 1815-1824.	1.6	53
44	Gating of human ClCâ€2 chloride channels and regulation by carboxyâ€terminal domains. Journal of Physiology, 2008, 586, 5325-5336.	1.3	51
45	CLCN2 variants in idiopathic generalized epilepsy. Nature Genetics, 2009, 41, 954-955.	9.4	50
46	Impaired K+ binding to glial glutamate transporter EAAT1 in migraine. Scientific Reports, 2017, 7, 13913.	1.6	50
47	Regulation of the human skeletal muscle chloride channel hClC-1 by protein kinase C. Journal of Physiology, 1999, 514, 677-685.	1.3	47
48	Molecular physiology of EAAT anion channels. Pflugers Archiv European Journal of Physiology, 2016, 468, 491-502.	1.3	47
49	Induced fit substrate binding to an archeal glutamate transporter homologue. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12486-12491.	3.3	45
50	Carboxy-Terminal Truncations Modify the Outer Pore Vestibule of Muscle Chloride Channels. Biophysical Journal, 2005, 89, 1710-1720.	0.2	42
51	Neuronal Glutamate Transporters Vary in Substrate Transport Rate but Not in Unitary Anion Channel Conductance. Journal of Biological Chemistry, 2007, 282, 34719-34726.	1.6	42
52	Neuronal ClC-3 Splice Variants Differ in Subcellular Localizations, but Mediate Identical Transport Functions. Journal of Biological Chemistry, 2015, 290, 25851-25862.	1.6	42
53	A Conserved Aspartate Determines Pore Properties of Anion Channels Associated with Excitatory Amino Acid Transporter 4 (EAAT4). Journal of Biological Chemistry, 2010, 285, 23676-23686.	1.6	38
54	Regulation of ClC-2 gating by intracellular ATP. Pflugers Archiv European Journal of Physiology, 2013, 465, 1423-1437.	1.3	37

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55	Involvement of ClC-3 chloride/proton exchangers in controlling glutamatergic synaptic strength in cultured hippocampal neurons. Frontiers in Cellular Neuroscience, 2014, 8, 143.	1.8	35
56	Residues Lining the Inner Pore Vestibule of Human Muscle Chloride Channels. Journal of Biological Chemistry, 2001, 276, 1759-1765.	1.6	34
57	Elevated aldosterone and blood pressure in a mouse model of familial hyperaldosteronism with ClC-2 mutation. Nature Communications, 2019, 10, 5155.	5.8	34
58	Anion- and Proton-Dependent Gating of ClC-4 Anion/Proton Transporter under Uncoupling Conditions. Biophysical Journal, 2011, 100, 1233-1241.	0.2	32
59	Hetero-oligomerization of Neuronal Glutamate Transporters. Journal of Biological Chemistry, 2011, 286, 3935-3943.	1.6	32
60	Diseaseâ€causing mutations C277R and C277Y modify gating of human ClCâ€1 chloride channels in myotonia congenita. Journal of Physiology, 2012, 590, 3449-3464.	1.3	32
61	Anion transport by the cochlear motor protein prestin. Journal of Physiology, 2012, 590, 259-272.	1.3	31
62	Functional consequences of SLC1A3 mutations associated with episodic ataxia 6. Human Mutation, 2020, 41, 1892-1905.	1.1	31
63	A dynamic switch between inhibitory and excitatory currents in a neuronal glutamate transporter. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 19214-19218.	3.3	30
64	Regulation of Glial Glutamate Transporters by C-terminal Domains. Journal of Biological Chemistry, 2011, 286, 1927-1937.	1.6	30
65	Intersubunit Interactions in EAAT4 Glutamate Transporters. Journal of Neuroscience, 2006, 26, 7513-7522.	1.7	28
66	Allosteric gate modulation confers K ⁺ coupling in glutamate transporters. EMBO Journal, 2019, 38, e101468.	3.5	28
67	Chloride channels with reduced single-channel conductance in recessive myotonia congenita. Neuron, 1993, 10, 225-232.	3.8	27
68	Increased glutamate transporter-associated anion currents cause glial apoptosis in episodic ataxia 6. Brain Communications, 2020, 2, fcaa022.	1.5	25
69	ClC-1 and ClC-2 form hetero-dimeric channels with novel protopore functions. Pflugers Archiv European Journal of Physiology, 2014, 466, 2191-2204.	1.3	24
70	Dysregulation of Astrocyte Ion Homeostasis and Its Relevance for Stroke-Induced Brain Damage. International Journal of Molecular Sciences, 2021, 22, 5679.	1.8	24
71	Role of the cytoskeleton in the regulation of Cl? channels in human embryonic skeletal muscle cells. Pflugers Archiv European Journal of Physiology, 1994, 428, 323-330.	1.3	23
72	Na ⁺ -dependent gate dynamics and electrostatic attraction ensure substrate coupling in glutamate transporters. Science Advances, 2020, 6, .	4.7	23

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73	Mutating a Conserved Proline Residue within the Trimerization Domain Modifies Na+ Binding to Excitatory Amino Acid Transporters and Associated Conformational Changes. Journal of Biological Chemistry, 2013, 288, 36492-36501.	1.6	22
74	Impaired surface membrane insertion of homo- and heterodimeric human muscle chloride channels carrying amino-terminal myotonia-causing mutations. Scientific Reports, 2015, 5, 15382.	1.6	21
75	Preferential association with ClC-3 permits sorting of ClC-4 into endosomal compartments. Journal of Biological Chemistry, 2017, 292, 19055-19065.	1.6	21
76	Single-channel recordings of chloride currents in cultured human skeletal muscle. Pflugers Archiv European Journal of Physiology, 1992, 421, 108-116.	1.3	20
77	Substrate-dependent Gating of Anion Channels Associated with Excitatory Amino Acid Transporter 4. Journal of Biological Chemistry, 2011, 286, 23780-23788.	1.6	20
78	Molecular Basis of CLC Antiporter Inhibition by Fluoride. Journal of the American Chemical Society, 2020, 142, 7254-7258.	6.6	20
79	Glial Chloride Homeostasis Under Transient Ischemic Stress. Frontiers in Cellular Neuroscience, 2021, 15, 735300.	1.8	20
80	Efficient non-cytotoxic fluorescent staining of halophiles. Scientific Reports, 2018, 8, 2549.	1.6	19
81	Giga-seal formation alters properties of sodium channels of human myoballs. Pflugers Archiv European Journal of Physiology, 1992, 420, 248-254.	1.3	18
82	Human CLC-K Channels Require Palmitoylation of Their Accessory Subunit Barttin to Be Functional. Journal of Biological Chemistry, 2015, 290, 17390-17400.	1.6	18
83	A novel alteration of muscle chloride channel gating in myotonia levior. Journal of Physiology, 2002, 545, 345-354.	1.3	17
84	Carboxyl-terminal Truncations of ClC-Kb Abolish Channel Activation by Barttin Via Modified Common Gating and Trafficking. Journal of Biological Chemistry, 2015, 290, 30406-30416.	1.6	17
85	The Myotonia Congenita Mutation A331T Confers a Novel Hyperpolarization-Activated Gate to the Muscle Chloride Channel ClC-1. Journal of Neuroscience, 2002, 22, 7462-7470.	1.7	16
86	Reduced Membrane Insertion of CLC-K by V33L Barttin Results in Loss of Hearing, but Leaves Kidney Function Intact. Frontiers in Physiology, 2017, 8, 269.	1.3	14
87	Cellular Physiology and Pathophysiology of EAAT Anion Channels. Frontiers in Cellular Neuroscience, 2021, 15, 815279.	1.8	14
88	Characterization of the high-conductance Ca2+-activated K+ channel in adult human skeletal muscle. Pflugers Archiv European Journal of Physiology, 1995, 429, 738-747.	1.3	13
89	Quantitative determination of cellular [Na+] by fluorescence lifetime imaging with CoroNaGreen. Journal of General Physiology, 2019, 151, 1319-1331.	0.9	13
90	The molecular and phenotypic spectrum of CLCN4â€related epilepsy. Epilepsia, 2021, 62, 1401-1415.	2.6	13

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91	Molecular mechanisms of ion conduction in ClC-type chloride channels: Lessons from disease-causing mutations. Kidney International, 2000, 57, 780-786.	2.6	12
92	Parawixin1: A Spider Toxin Opening New Avenues for Glutamate Transporter Pharmacology. Molecular Pharmacology, 2007, 72, 1100-1102.	1.0	12
93	Neutralizing Aspartate 83 Modifies Substrate Translocation of Excitatory Amino Acid Transporter 3 (EAAT3) Glutamate Transporters. Journal of Biological Chemistry, 2012, 287, 20016-20026.	1.6	12
94	CNS Schwann cells display oligodendrocyte precursor-like potassium channel activation and antigenic expression in vitro. Journal of Neural Transmission, 2014, 121, 569-581.	1.4	12
95	Tryptophan Scanning Mutagenesis Identifies the Molecular Determinants of Distinct Barttin Functions. Journal of Biological Chemistry, 2015, 290, 18732-18743.	1.6	12
96	Whole-cell recordings of chloride currents in cultured human skeletal muscle. Pflugers Archiv European Journal of Physiology, 1992, 421, 101-107.	1.3	11
97	Anion Channels: Regulation of ClC-3 by an Orphan Second Messenger. Current Biology, 2008, 18, R1061-R1064.	1.8	11
98	Gating Charge Calculations by Computational Electrophysiology Simulations. Biophysical Journal, 2017, 112, 1396-1405.	0.2	11
99	Barttin Regulates the Subcellular Localization and Posttranslational Modification of Human Cl-/H+ Antiporter ClC-5. Frontiers in Physiology, 2018, 9, 1490.	1.3	11
100	Excitatory Amino Acid Transporter EAAT5 Improves Temporal Resolution in the Retina. ENeuro, 2021, 8, ENEURO.0406-21.2021.	0.9	11
101	Chloride channels take center stage in a muscular drama. Journal of General Physiology, 2011, 137, 17-19.	0.9	10
102	Mechanisms Underlying Proton Release in CLC-type F^{â€“}/H⁺ Antiporters. Journal of Physical Chemistry Letters, 2021, 12, 4415-4420.	2.1	10
103	Determination of Intracellular Chloride Concentrations by Fluorescence Lifetime Imaging. Springer Series in Chemical Physics, 2015, , 189-211.	0.2	10
104	Metabolic energy sensing by mammalian <scp>CLC</scp> anion/proton exchangers. EMBO Reports, 2020, 21, e47872.	2.0	10
105	Chloride channels in cultured human skeletal muscle are regulated by G proteins. Pflugers Archiv European Journal of Physiology, 1992, 421, 566-571.	1.3	9
106	Molecular Determinants of Substrate Specificity in Sodium-coupled Glutamate Transporters. Journal of Biological Chemistry, 2015, 290, 28988-28996.	1.6	9
107	Aspergillus fumigatusInfection-Induced Neutrophil Recruitment and Location in the Conducting Airway of Immunocompetent, Neutropenic, and Immunosuppressed Mice. Journal of Immunology Research, 2018, 2018, 1-12.	0.9	9
108	Molecular Basis of Coupled Transport and Anion Conduction in Excitatory Amino Acid Transporters. Neurochemical Research, 2022, 47, 9-22.	1.6	9

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109	Mutations associated with epileptic encephalopathy modify EAAT2 anion channel function. Epilepsia, 2022, 63, 388-401.	2.6	9
110	Noise analysis to study unitary properties of transporter-associated ion channels. Channels, 2011, 5, 468-474.	1.5	8
111	Functional Characterization of CLCN4 Variants Associated With X-Linked Intellectual Disability and Epilepsy. Frontiers in Molecular Neuroscience, 2022, 15, .	1.4	7
112	An amino-terminal point mutation increases EAAT2 anion currents without affecting glutamate transport rates. Journal of Biological Chemistry, 2020, 295, 14936-14947.	1.6	6
113	Chloride channels in renal salt and water transport. Acta Physiologica, 2017, 219, 11-13.	1.8	4
114	CLC Anion/Proton Exchangers Regulate Secretory Vesicle Filling and Granule Exocytosis in Chromaffin Cells. Journal of Neuroscience, 2022, 42, 3080-3095.	1.7	4
115	Molecular physiology and pathophysiology of ClC-type chloride channels. Advances in Molecular and Cell Biology, 2004, , 189-217.	0.1	3
116	Reconstitution and NMR Characterization of the Ion-Channel Accessory Subunit Barttin in Detergents and Lipid-Bilayer Nanodiscs. Frontiers in Molecular Biosciences, 2019, 6, 13.	1.6	3
117	Molecular physiology of anion channels: dual function proteins and new structural motifsâ€”a special issue. Pflugers Archiv European Journal of Physiology, 2016, 468, 369-370.	1.3	2
118	ClCâ€3: biophysical properties clarify cellular functions. Journal of Physiology, 2018, 596, 3823-3824.	1.3	2
119	Membrane Physiology and Biophysicsâ€”What Remains to Be Done?. Frontiers in Physiology, 2020, 11, 892.	1.3	1
120	Dent's disease. , 2000, , 255-276.		0
121	Behind the Scenes of CLC Gating: Deriving the Voltage Dependence of Membrane Proteins by Admittance Measurements. Biophysical Journal, 2014, 107, 1261-1262.	0.2	0
122	Electrophysiological Characterization of eGFP-Labeled Intrastriatal Dopamine Grafts. Cell Transplantation, 2015, 24, 1451-1467.	1.2	0
123	Molecular Basis of Voltage-Dependent Gating in ClC Transporters. Biophysical Journal, 2015, 108, 428a.	0.2	0