Martin Biel

List of Publications by Year
in descending order

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218 papers	17,853 citations	16451 64 h-index	16183 124 g-index
219 all docs	219 docs citations	219 times ranked	14367 citing authors

#	Article	IF	Citations
1	A family of hyperpolarization-activated mammalian cation channels. Nature, 1998, 393, 587-591.	27.8	875
2	Hyperpolarization-Activated Cation Channels: From Genes to Function. Physiological Reviews, 2009, 89, 847-885.	28.8	868
3	Tissue Distribution of 5-Hydroxymethylcytosine and Search for Active Demethylation Intermediates. PLoS ONE, 2010, 5, e15367.	2.5	733
4	Genetic Reactivation of Cone Photoreceptors Restores Visual Responses in Retinitis Pigmentosa. Science, 2010, 329, 413-417.	12.6	578
5	Lack of an endothelial store-operated Ca2+ current impairs agonist-dependent vasorelaxation in TRP4â^'/â^' mice. Nature Cell Biology, 2001, 3, 121-127.	10.3	533
6	The Roles of the Subunits in the Function of the Calcium Channel. Science, 1991, 253, 1553-1557.	12.6	532
7	Absence epilepsy and sinus dysrhythmia in mice lacking the pacemaker channel HCN2. EMBO Journal, 2003, 22, 216-224.	7.8	471
8	Two-pore channels control Ebola virus host cell entry and are drug targets for disease treatment. Science, 2015, 347, 995-998.	12.6	454
9	The hyperpolarization-activated channel HCN4 is required for the generation of pacemaker action potentials in the embryonic heart. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15235-15240.	7.1	404
10	Cellular expression and functional characterization of four hyperpolarizationâ€activated pacemaker channels in cardiac and neuronal tissues. FEBS Journal, 2001, 268, 1646-1652.	0.2	378
11	Primary structure of the beta subunit of the DHP-sensitive calcium channel from skeletal muscle. Science, 1989, 245, 1115-1118.	12.6	351
12	Quantification of the Sixth DNA Base Hydroxymethylcytosine in the Brain. Angewandte Chemie - International Edition, 2010, 49, 5375-5377.	13.8	350
13	Two pacemaker channels from human heart with profoundly different activation kinetics. EMBO Journal, 1999, 18, 2323-2329.	7.8	343
14	Selective loss of cone function in mice lacking the cyclic nucleotide-gated channel CNG3. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 7553-7557.	7.1	262
15	The two-pore channel TPCN2 mediates NAADP-dependent Ca2+-release from lysosomal stores. Pflugers Archiv European Journal of Physiology, 2009, 458, 891-899.	2.8	244
16	Primary structure and functional expression of a high voltage activated calcium channel from rabbit lung. FEBS Letters, 1990, 269, 409-412.	2.8	237
17	Another member of the cyclic nucleotide-gated channel family, expressed in testis, kidney, and heart.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 3505-3509.	7.1	228
18	Cardiac HCN Channels Structure, Function, and Modulation. Trends in Cardiovascular Medicine, 2002, 12, 206-213.	4.9	224

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19	New views on RPE65 deficiency: the rod system is the source of vision in a mouse model of Leber congenital amaurosis. Nature Genetics, 2001, 29, 70-74.	21.4	222
20	Contribution of the receptor guanylyl cyclase GC-D to chemosensory function in the olfactory epithelium. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14507-14512.	7.1	199
21	Identification of a Common Non-Apoptotic Cell Death Mechanism in Hereditary Retinal Degeneration. PLoS ONE, 2014, 9, e112142.	2.5	191
22	THE CONCISE GUIDE TO PHARMACOLOGY 2021/22: Ion channels. British Journal of Pharmacology, 2021, 178, S157-S245.	5.4	187
23	Exploring HCN channels as novel drug targets. Nature Reviews Drug Discovery, 2011, 10, 903-914.	46.4	181
24	Restoration of Cone Vision in the CNGA3â^'/â^' Mouse Model of Congenital Complete Lack of Cone Photoreceptor Function. Molecular Therapy, 2010, 18, 2057-2063.	8.2	175
25	High susceptibility to fatty liver disease in two-pore channel 2-deficient mice. Nature Communications, 2014, 5, 4699.	12.8	164
26	Role of Subunit Heteromerization and N-Linked Glycosylation in the Formation of Functional Hyperpolarization-activated Cyclic Nucleotide-gated Channels. Journal of Biological Chemistry, 2003, 278, 43781-43786.	3.4	158
27	An Olfactory Subsystem that Detects Carbon Disulfide and Mediates Food-Related Social Learning. Current Biology, 2010, 20, 1438-1444.	3.9	151
28	Primary structure and functional expression of a cyclic nucleotidegated channel from rabbit aorta. FEBS Letters, 1993, 329, 134-138.	2.8	150
29	Impaired Channel Targeting and Retinal Degeneration in Mice Lacking the Cyclic Nucleotide-Gated Channel Subunit CNGB1. Journal of Neuroscience, 2005, 25, 130-138.	3.6	148
30	Expression of Ca ²⁺ â€permeable twoâ€pore channels rescues <scp>NAADP</scp> signalling in <scp>TPC</scp> â€deficient cells. EMBO Journal, 2015, 34, 1743-1758.	7.8	144
31	Cyclic Nucleotide-Gated Channels. Handbook of Experimental Pharmacology, 2009, , 111-136.	1.8	136
32	Characterization of Two-pore Channel 2 (TPCN2)-mediated Ca2+ Currents in Isolated Lysosomes. Journal of Biological Chemistry, 2010, 285, 21219-21222.	3.4	129
33	A small molecule restores function to TRPML1 mutant isoforms responsible for mucolipidosis type IV. Nature Communications, 2014, 5, 4681.	12.8	125
34	TET3 Is Recruited by REST for Context-Specific Hydroxymethylation and Induction of Gene Expression. Cell Reports, 2015, 11, 283-294.	6.4	117
35	Impaired Opsin Targeting and Cone Photoreceptor Migration in the Retina of Mice Lacking the Cyclic Nucleotide-Gated Channel CNGA3. , 2005, 46, 1516.		116
36	Molecular Cloning and Functional Characterization of a New Modulatory Cyclic Nucleotide-Gated Channel Subunit from Mouse Retina. Journal of Neuroscience, 2000, 20, 1324-1332.	3.6	115

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37	An isoform of the rod photoreceptor cyclic nucleotide-gated channel Â subunit expressed in olfactory neurons. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 4696-4701.	7.1	114
38	Differential and age-dependent expression of hyperpolarization-activated, cyclic nucleotide-gated cation channel isoforms 1â€“4 suggests evolving roles in the developing rat hippocampus. Neuroscience, 2001, 106, 689-698.	2.3	113
39	Synaptic Plasticity in CNGA3-/- Mice: Cone Bipolar Cells React on the Missing Cone Input and Form Ectopic Synapses with Rods. Journal of Neuroscience, 2006, 26, 5248-5255.	3.6	108
40	Agonist-mediated switching of ion selectivity in TPC2 differentially promotes lysosomal function. ELife, 2020, 9, .	6.0	108
41	Functional Characterization of the L-type Ca2+Channel Cav1.4Î±1 from Mouse Retina. , 2004, 45, 708.		107
42	Two-Pore Channel Function Is Crucial for the Migration of Invasive Cancer Cells. Cancer Research, 2017, 77, 1427-1438.	0.9	107
43	A key role for cyclic nucleotide gated (CNG) channels in cGMP-related retinitis pigmentosa. Human Molecular Genetics, 2011, 20, 941-947.	2.9	103
44	Safety and Vision Outcomes of Subretinal Gene Therapy Targeting Cone Photoreceptors in Achromatopsia. JAMA Ophthalmology, 2020, 138, 643.	2.5	100
45	Dominant-Negative Suppression of HCN Channels Markedly Reduces the Native Pacemaker CurrentIfand Undermines Spontaneous Beating of Neonatal Cardiomyocytes. Circulation, 2003, 107, 485-489.	1.6	96
46	Absence of the Î³ Subunit of the Skeletal Muscle Dihydropyridine Receptor Increases L-type Ca2+ Currents and Alters Channel Inactivation Properties. Journal of Biological Chemistry, 2000, 275, 14476-14481.	3.4	95
47	The Murine HCN3 Gene Encodes a Hyperpolarization-activated Cation Channel with Slow Kinetics and Unique Response to Cyclic Nucleotides. Journal of Biological Chemistry, 2005, 280, 27056-27061.	3.4	95
48	Gene therapy restores vision and delays degeneration in the CNGB1-/- mouse model of retinitis pigmentosa. Human Molecular Genetics, 2012, 21, 4486-4496.	2.9	95
49	AAV8 Can Induce Innate and Adaptive Immune Response in the Primate Eye. Molecular Therapy, 2017, 25, 2648-2660.	8.2	95
50	Tissue-specific expression of high-voltage-activated dihydropyridine-sensitive L-type calcium channels. FEBS Journal, 1991, 200, 81-88.	0.2	94
51	The cDNA and deduced amino acid sequence of the Î³ subunit of the L-type calcium channel from rabbit skeletal muscle. FEBS Letters, 1990, 267, 153-156.	2.8	88
52	A Novel Mechanism of Modulation of Hyperpolarization-activated Cyclic Nucleotide-gated Channels by Src Kinase. Journal of Biological Chemistry, 2005, 280, 34224-34232.	3.4	87
53	International Union of Pharmacology. LI. Nomenclature and Structure-Function Relationships of Cyclic Nucleotide-Regulated Channels. Pharmacological Reviews, 2005, 57, 455-462.	16.0	87
54	Switching off calcium-dependent inactivation in L-type calcium channels by an autoinhibitory domain. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15657-15662.	7.1	86

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55	Cyclic Nucleotide-regulated Cation Channels. Journal of Biological Chemistry, 2009, 284, 9017-9021.	3.4	85
56	KCNMA1 Encoded Cardiac BK Channels Afford Protection against Ischemia-Reperfusion Injury. PLoS ONE, 2014, 9, e103402.	2.5	83
57	Vision tests in the mouse: Functional phenotyping with electroretinography. Frontiers in Bioscience - Landmark, 2009, Volume, 2730.	3.0	81
58	Structure and Function of Cardiac Pacemaker Channels. Cellular Physiology and Biochemistry, 1999, 9, 179-186.	1.6	80
59	Morphological Characterization of the Retina of the CNGA3â˜'/â˜'Rhoâ˜'/â˜'Mutant Mouse Lacking Functional Cones and Rods. , 2004, 45, 2039.		80
60	Sick Sinus Syndrome in HCN1-Deficient Mice. Circulation, 2013, 128, 2585-2594.	1.6	80
61	Grating Acuity at Different Luminances in Wild-Type Mice and in Mice Lacking Rod or Cone Function. , 2005, 46, 398.		78
62	Function and Dysfunction of CNG Channels: Insights from Channelopathies and Mouse Models. Molecular Neurobiology, 2007, 35, 266-277.	4.0	75
63	Superior Retinal Gene Transfer and Biodistribution Profile of Subretinal Versus Intravitreal Delivery of AAV8 in Nonhuman Primates. , 2017, 58, 5792.		75
64	Loss of CNGB1 Protein Leads to Olfactory Dysfunction and Subciliary Cyclic Nucleotide-gated Channel Trapping. Journal of Biological Chemistry, 2006, 281, 35156-35166.	3.4	73
65	Role of TRPML and Two-Pore Channels in Endolysosomal Cation Homeostasis. Journal of Pharmacology and Experimental Therapeutics, 2012, 342, 236-244.	2.5	72
66	Selective agonist of TRPML2 reveals direct role in chemokine release from innate immune cells. ELife, 2018, 7, .	6.0	71
67	Modulation of cardiac Ca2+channels inXenopusoocytes by protein kinase C. FEBS Letters, 1992, 306, 113-118.	2.8	69
68	Three amino acids in the C-linker are major determinants of gating in cyclic nucleotide-gated channels. EMBO Journal, 1998, 17, 353-362.	7.8	68
69	Patch-clamp technique to characterize ion channels in enlarged individual endolysosomes. Nature Protocols, 2017, 12, 1639-1658.	12.0	68
70	Two-Pore Channels: Catalyzers of Endolysosomal Transport and Function. Frontiers in Pharmacology, 2017, 08, 45.	3.5	67
71	HCN3 Contributes to the Ventricular Action Potential Waveform in the Murine Heart. Circulation Research, 2011, 109, 1015-1023.	4.5	66
72	Investigation of the Immunogenicity of Different Types of Aggregates of a Murine Monoclonal Antibody in Mice. Pharmaceutical Research, 2015, 32, 430-444.	3.5	66

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73	Expression of cyclic nucleotide-gated cation channels in non-sensory tissues and cells. Neuropharmacology, 1994, 33, 1275-1282.	4.1	65
74	Molecular Cloning and Expression of a Modulatory Subunit of the Cyclic Nucleotide-gated Cation Channel. Journal of Biological Chemistry, 1996, 271, 6349-6355.	3.4	64
75	cGMP Accumulation Causes Photoreceptor Degeneration in CNG Channel Deficiency: Evidence of cGMP Cytotoxicity Independently of Enhanced CNG Channel Function. Journal of Neuroscience, 2013, 33, 14939-14948.	3.6	64
76	Humoral Immune Response After Intravitreal But Not After Subretinal AAV8 in Primates and Patients. , 2018, 59, 1910.		64
77	cAMP-dependent regulation of HCN4 controls the tonic entrainment process in sinoatrial node pacemaker cells. Nature Communications, 2020, 11, 5555.	12.8	63
78	Retinal Cyclic Nucleotide-Gated Channels: From Pathophysiology to Therapy. International Journal of Molecular Sciences, 2018, 19, 749.	4.1	61
79	Novel AAV capsids for intravitreal gene therapy of photoreceptor disorders. EMBO Molecular Medicine, 2021, 13, e13392.	6.9	61
80	Retinal gene delivery by adeno-associated virus (AAV) vectors: Strategies and applications. European Journal of Pharmaceutics and Biopharmaceutics, 2015, 95, 343-352.	4.3	59
81	Rods in daylight act as relay cells for cone-driven horizontal cellâ€“mediated surround inhibition. Nature Neuroscience, 2014, 17, 1728-1735.	14.8	58
82	A Single Histidine Residue Determines the pH Sensitivity of the Pacemaker Channel HCN2. Journal of Biological Chemistry, 2001, 276, 6313-6319.	3.4	57
83	From mucolipidosis type IV to Ebola: TRPML and two-pore channels at the crossroads of endo-lysosomal trafficking and disease. Cell Calcium, 2017, 67, 148-155.	2.4	57
84	Cone Genesis Tracing by the Chrnb4-EGFP Mouse Line: Evidences of Cellular Material Fusion after Cone Precursor Transplantation. Molecular Therapy, 2017, 25, 634-653.	8.2	56
85	TPC2 polymorphisms associated with a hair pigmentation phenotype in humans result in gain of channel function by independent mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8595-E8602.	7.1	55
86	Molecular Basis for the Different Activation Kinetics of the Pacemaker Channels HCN2 and HCN4. Journal of Biological Chemistry, 2003, 278, 33672-33680.	3.4	54
87	Grueneberg Ganglion Neurons Are Finely Tuned Cold Sensors. Journal of Neuroscience, 2010, 30, 7563-7568.	3.6	54
88	NAADP and the two-pore channel protein 1 participate in the acrosome reaction in mammalian spermatozoa. Molecular Biology of the Cell, 2014, 25, 948-964.	2.1	53
89	Cellular Zinc Levels Are Modulated by <scp>TRPML1â€“TMEM163</scp> Interaction. Traffic, 2014, 15, 1247-1265.	2.7	53
90	Planar Patch Clamp Approach to Characterize Ionic Currents from Intact Lysosomes. Science Signaling, 2010, 3, pl3.	3.6	51

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91	Regulation of Hyperpolarization-activated Cyclic Nucleotide-gated (HCN) Channel Activity by cCMP. Journal of Biological Chemistry, 2012, 287, 26506-26512.	3.4	51
92	Quantifying macromolecular interactions in living cells using FRET two-hybrid assays. Nature Protocols, 2016, 11, 2470-2498.	12.0	50
93	Endoplasmic Reticulum Stress-associated Cone Photoreceptor Degeneration in Cyclic Nucleotide-gated Channel Deficiency. Journal of Biological Chemistry, 2012, 287, 18018-18029.	3.4	49
94	Electroretinographic assessment of rod- and cone-mediated bipolar cell pathways using flicker stimuli in mice. Scientific Reports, 2015, 5, 10731.	3.3	49
95	HCN2 channels in local inhibitory interneurons constrain LTP in the hippocampal direct perforant path. Cellular and Molecular Life Sciences, 2011, 68, 125-137.	5.4	48
96	Endolysosomal Cation Channels and Cancerâ€"A Link with Great Potential. Pharmaceuticals, 2018, 11, 4.	3.8	48
97	Direct Inhibition of Cardiac Hyperpolarization-Activated Cyclic Nucleotideâ€"Gated Pacemaker Channels by Clonidine. Circulation, 2007, 115, 872-880.	1.6	47
98	Photopharmacological control of bipolar cells restores visual function in blind mice. Journal of Clinical Investigation, 2017, 127, 2598-2611.	8.2	47
99	Biocompatibility of a genetically encoded calcium indicator in a transgenic mouse model. Nature Communications, 2012, 3, 1031.	12.8	45
100	Mutations in the S4 domain of a pacemaker channel alter its voltage dependence. FEBS Letters, 2000, 479, 35-40.	2.8	44
101	HCN channels: new roles in sinoatrial node function. Current Opinion in Pharmacology, 2014, 15, 83-90.	3.5	44
102	Complex Regulation of Voltage-dependent Activation and Inactivation Properties of Retinal Voltage-gated Cav1.4 L-type Ca2+ Channels by Ca2+-binding Protein 4 (CaBP4)*. Journal of Biological Chemistry, 2012, 287, 36312-36321.	3.4	43
103	Comprehensive multilevel in vivo and in vitro analysis of heart rate fluctuations in mice by ECG telemetry and electrophysiology. Nature Protocols, 2016, 11, 61-86.	12.0	42
104	Rod and Cone Contributions to Horizontal Cell Light Responses in the Mouse Retina. Journal of Neuroscience, 2008, 28, 6818-6825.	3.6	41
105	Characterization of neurite outgrowth and ectopic synaptogenesis in response to photoreceptor dysfunction. Cellular and Molecular Life Sciences, 2013, 70, 1831-1847.	5.4	41
106	Retinitis pigmentosa: impact of differentPde6apoint mutations on the disease phenotype. Human Molecular Genetics, 2015, 24, 5486-5499.	2.9	41
107	Isotopeâ€Based Analysis of Modified tRNA Nucleosides Correlates Modification Density with Translational Efficiency. Angewandte Chemie - International Edition, 2012, 51, 11162-11165.	13.8	40
108	The two-pore channel TPC1 is required for efficient protein processing through early and recycling endosomes. Scientific Reports, 2017, 7, 10038.	3.3	40

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109	CNGA3: A Target of Spinal Nitric Oxide/cGMP Signaling and Modulator of Inflammatory Pain Hypersensitivity. Journal of Neuroscience, 2011, 31, 11184-11192.	3.6	38
110	Mosaic synaptopathy and functional defects in Cav1.4 heterozygous mice and human carriers of CSNB2. Human Molecular Genetics, 2014, 23, 1538-1550.	2.9	38
111	cGMP/Protein Kinase G Signaling Suppresses Inositol 1,4,5-Trisphosphate Receptor Phosphorylation and Promotes Endoplasmic Reticulum Stress in Photoreceptors of Cyclic Nucleotide-gated Channel-deficient Mice. Journal of Biological Chemistry, 2015, 290, 20880-20892.	3.4	37
112	Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. Journal of Clinical Investigation, 2009, 119, 3597-3612.	8.2	37
113	A gene therapy for inherited blindness using dCas9-VPRâ€“mediated transcriptional activation. Science Advances, 2020, 6, eaba5614.	10.3	36
114	Gene editing and synthetically accessible inhibitors reveal role for TPC2 in HCC cell proliferation and tumor growth. Cell Chemical Biology, 2021, 28, 1119-1131.e27.	5.2	36
115	Gene therapy for achromatopsia. Journal of Gene Medicine, 2017, 19, e2944.	2.8	35
116	Determination of Rod and Cone Influence to the Early and Late Dynamic of the Pupillary Light Response. , 2016, 57, 2501.		34
117	Small Molecules for Early Endosome-Specific Patch Clamping. Cell Chemical Biology, 2017, 24, 907-916.e4.	5.2	34
118	Early Microglia Activation Precedes Photoreceptor Degeneration in a Mouse Model of CNGB1-Linked Retinitis Pigmentosa. Frontiers in Immunology, 2017, 8, 1930.	4.8	34
119	Flavonoids increase melanin production and reduce proliferation, migration and invasion of melanoma cells by blocking endolysosomal/melanosomal TPC2. Scientific Reports, 2021, 11, 8515.	3.3	34
120	Tissue-specific expression of calcium channels. Trends in Cardiovascular Medicine, 1993, 3, 48-53.	4.9	33
121	Chemo- and Thermosensory Responsiveness of Grueneberg Ganglion Neurons Relies on Cyclic Guanosine Monophosphate Signaling Elements. NeuroSignals, 2011, 19, 198-209.	0.9	33
122	Three-year results of phase I retinal gene therapy trial for CNGA3-mutated achromatopsia: results of a non randomised controlled trial. British Journal of Ophthalmology, 2022, 106, 1567-1572.	3.9	33
123	Optimized Technique for Subretinal Injections in Mice. Methods in Molecular Biology, 2012, 935, 343-349.	0.9	33
124	The cyclic nucleotide-gated ion channel CNGA3 contributes to coolness-induced responses of Grueneberg ganglion neurons. Cellular and Molecular Life Sciences, 2010, 67, 1859-1869.	5.4	31
125	Loss of HCN1 enhances disease progression in mouse models of CNG channel-linked retinitis pigmentosa and achromatopsia. Human Molecular Genetics, 2016, 25, 1165-1175.	2.9	31
126	Subretinal Injection for Gene Therapy Does Not Cause Clinically Significant Outer Nuclear Layer Thinning in Normal Primate Foveae. , 2017, 58, 4155.		31

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127	HCN3 ion channels: roles in sensory neuronal excitability and pain. Journal of Physiology, 2019, 597, 4661-4675.	2.9	31
128	Calmodulin Is a Functional Regulator of Cav1.4 L-type Ca2+ Channels. Journal of Biological Chemistry, 2009, 284, 29809-29816.	3.4	30
129	The Glutamic Acid-Rich Protein Is a Gating Inhibitor of Cyclic Nucleotide-Gated Channels. Journal of Neuroscience, 2011, 31, 133-141.	3.6	30
130	Hif1a inactivation rescues photoreceptor degeneration induced by a chronic hypoxia-like stress. Cell Death and Differentiation, 2018, 25, 2071-2085.	11.2	29
131	Cyclic nucleotide-gated channels â€“ mediators of NO:cGMP-regulated processes. Naunyn-Schmiedeberg's Archives of Pharmacology, 1998, 358, 140-144.	3.0	28
132	Induction of STAT3-related genes in fast degenerating cone photoreceptors of cpfl1 mice. Cellular and Molecular Life Sciences, 2010, 67, 3173-3186.	5.4	28
133	Gene replacement therapy for retinal CNG channelopathies. Molecular Genetics and Genomics, 2013, 288, 459-467.	2.1	28
134	The protein interaction networks of mucolipins and two-pore channels. Biochimica Et Biophysica Acta - Molecular Cell Research, 2019, 1866, 1111-1123.	4.1	28
135	TRPML2 is an osmo/mechanosensitive cation channel in endolysosomal organelles. Science Advances, 2020, 6, .	10.3	28
136	Gene Supplementation Rescues Rod Function and Preserves Photoreceptor and Retinal Morphology in Dogs, Leading the Way Toward Treating HumanPDE6A-Retinitis Pigmentosa. Human Gene Therapy, 2017, 28, 1189-1201.	2.7	27
137	Molecular cloning of cyclic nucleotide-gated cation channel subunits from rat pineal gland. Molecular Brain Research, 1997, 48, 171-175.	2.3	26
138	International Union of Pharmacology. XLII. Compendium of Voltage-Gated Ion Channels: Cyclic Nucleotide-Modulated Channels. Pharmacological Reviews, 2003, 55, 587-589.	16.0	26
139	Up-regulation of Hyperpolarization-activated Cyclic Nucleotide-gated Channel 3 (HCN3) by Specific Interaction with K+ Channel Tetramerization Domain-containing Protein 3 (KCTD3). Journal of Biological Chemistry, 2013, 288, 7580-7589.	3.4	26
140	AAV-Mediated Gene Supplementation Therapy in Achromatopsia Type 2: Preclinical Data on Therapeutic Time Window and Long-Term Effects. Frontiers in Neuroscience, 2017, 11, 292.	2.8	26
141	Loss of cone cyclic nucleotide-gated channel leads to alterations in light response modulating system and cellular stress response pathways: a gene expression profiling study. Human Molecular Genetics, 2013, 22, 3906-3919.	2.9	25
142	Accessory heterozygous mutations in cone photoreceptor CNGA3 exacerbate CNG channelâ€“associated retinopathy. Journal of Clinical Investigation, 2018, 128, 5663-5675.	8.2	25
143	Lung emphysema and impaired macrophage elastase clearance in mucolipin 3 deficient mice. Nature Communications, 2022, 13, 318.	12.8	25
144	CNGA3 Deficiency Affects Cone Synaptic Terminal Structure and Function and Leads to Secondary Rod Dysfunction and Degeneration. , 2012, 53, 1117.		24

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145	AAV Vectors for FRET-Based Analysis of Protein-Protein Interactions in Photoreceptor Outer Segments. Frontiers in Neuroscience, 2016, 10, 356.	2.8	24
146	Comparison of Different Liquid Chromatography-Based Purification Strategies for Adeno-Associated Virus Vectors. Pharmaceutics, 2021, 13, 748.	4.5	24
147	Molecular diversity of cyclic nucleotide-gated cation channels. Naunyn-Schmiedeberg's Archives of Pharmacology, 1995, 353, 1-10.	3.0	23
148	The enhancement of HCN channel instantaneous current facilitated by slow deactivation is regulated by intracellular chloride concentration. Pflugers Archiv European Journal of Physiology, 2006, 452, 718-727.	2.8	23
149	In Vivo Analysis of Cone Survival in Mice. , 2010, 51, 493.		23
150	Gene Therapy Restores Missing Cone-Mediated Vision in the CNGA3â^'/â^' Mouse Model of Achromatopsia. Advances in Experimental Medicine and Biology, 2012, 723, 183-189.	1.6	23
151	Peripherin-2 couples rhodopsin to the CNG channel in outer segments of rod photoreceptors. Human Molecular Genetics, 2014, 23, 5989-5997.	2.9	23
152	Endoplasmic reticulum (ER) Ca2+-channel activity contributes to ER stress and cone death in cyclic nucleotide-gated channel deficiency. Journal of Biological Chemistry, 2017, 292, 11189-11205.	3.4	23
153	Abolishing cAMP sensitivity in HCN2 pacemaker channels induces generalized seizures. JCI Insight, 2019, 4, .	5.0	23
154	Residual photosensitivity in mice lacking both rod opsin and cone photoreceptor cyclic nucleotide gated channel 3 Î± subunit. Visual Neuroscience, 2004, 21, 675-683.	1.0	22
155	An Arginine Residue in the Pore Region Is a Key Determinant of Chloride Dependence in Cardiac Pacemaker Channels. Journal of Biological Chemistry, 2005, 280, 13694-13700.	3.4	22
156	Pathological Î±-synuclein impairs adult-born granule cell development and functional integration in the olfactory bulb. Nature Communications, 2014, 5, 3915.	12.8	22
157	In Vivo Analysis of Disease-Associated Point Mutations Unveils Profound Differences in mRNA Splicing of Peripherin-2 in Rod and Cone Photoreceptors. PLoS Genetics, 2016, 12, e1005811.	3.5	22
158	Recombinant tandem of pore-domains in a Weakly Inward rectifying K+ channel 2 (TWIK2) forms active lysosomal channels. Scientific Reports, 2017, 7, 649.	3.3	22
159	Development of Methodology and Study Protocol: Safety and Efficacy of a Single Subretinal Injection of rAAV.hCNGA3 in Patients withCNGA3-Linked Achromatopsia Investigated in an Exploratory Dose-Escalation Trial. Human Gene Therapy Clinical Development, 2018, 29, 121-131.	3.1	22
160	TPC1 deficiency or blockade augments systemic anaphylaxis and mast cell activity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18068-18078.	7.1	21
161	Cyclic Nucleotide-Gated Cation Channels. Trends in Cardiovascular Medicine, 1996, 6, 274-280.	4.9	20
162	Odorant-evoked electrical responses in Grueneberg ganglion neurons rely on cGMP-associated signaling proteins. Neuroscience Letters, 2013, 539, 38-42.	2.1	20

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163	Gene Therapy Restores Vision and Delays Degeneration in the CNGB1â˜'/â˜' Mouse Model of Retinitis Pigmentosa. Advances in Experimental Medicine and Biology, 2014, 801, 733-739.	1.6	19
164	A30P Î±-Synuclein interferes with the stable integration of adult-born neurons into the olfactory network. Scientific Reports, 2014, 4, 3931.	3.3	19
165	Vitreal delivery of AAV vectored Cnga3 restores cone function in CNGA3-/-/Nrl-/- mice, an all-cone model of CNGA3 achromatopsia. Human Molecular Genetics, 2015, 24, 3699-707.	2.9	19
166	10 Cyclic nucleotide gated channels. Advances in Second Messenger and Phosphoprotein Research, 1999, 33, 231-250.	4.5	19
167	Impact of Hyperpolarization-activated, Cyclic Nucleotide-gated Cation Channel Type 2 for the Xenon-mediated Anesthetic Effect. Anesthesiology, 2015, 122, 1047-1059.	2.5	18
168	Protein kinase A regulates inflammatory pain sensitization by modulating HCN2 channel activity in nociceptive sensory neurons. Pain, 2017, 158, 2012-2024.	4.2	17
169	Safety and Toxicology of Ocular Gene Therapy with Recombinant AAV Vector rAAV.hCNGA3 in Nonhuman Primates. Human Gene Therapy Clinical Development, 2019, 30, 50-56.	3.1	17
170	Intrinsic Differential Scanning Fluorimetry for Fast and Easy Identification of Adeno-Associated Virus Serotypes. Journal of Pharmaceutical Sciences, 2020, 109, 854-862.	3.3	17
171	Beyond pacemaking: HCN channels in sinoatrial node function. Progress in Biophysics and Molecular Biology, 2021, 166, 51-60.	2.9	17
172	The Role of HCN Channels in Ventricular Repolarization. Trends in Cardiovascular Medicine, 2011, 21, 216-220.	4.9	16
173	Gene Therapy Successfully Delays Degeneration in a Mouse Model ofPDE6A-Linked Retinitis Pigmentosa (RP43). Human Gene Therapy, 2017, 28, 1180-1188.	2.7	16
174	Disturbed Processing of Contextual Information in HCN3 Channel Deficient Mice. Frontiers in Molecular Neuroscience, 2017, 10, 436.	2.9	15
175	Antisense Oligonucleotide- and CRISPR-Cas9-Mediated Rescue of mRNA Splicing for a Deep Intronic CLRN1 Mutation. Molecular Therapy - Nucleic Acids, 2020, 21, 1050-1061.	5.1	15
176	MicroRNA-365 regulates human cardiac action potential duration. Nature Communications, 2022, 13, 220.	12.8	15
177	Status of EUV reflectometry at PTB. , 2013, , .		14
178	Corticotropin-Releasing Hormone Receptor Type 1 (CRHR1) Clustering with MAGUKs Is Mediated via Its C-Terminal PDZ Binding Motif. PLoS ONE, 2015, 10, e0136768.	2.5	14
179	HCN1 Channels Enhance Rod System Responsivity in the Retina under Conditions of Light Exposure. PLoS ONE, 2016, 11, e0147728.	2.5	14
180	Speeding Up the Heart? Traditional and New Perspectives on HCN4 Function. Frontiers in Physiology, 2021, 12, 669029.	2.8	14

#	Article	IF	Citations
181	In Vivo Potency Testing of Subretinal rAAV5.hCNGB1 Gene Therapy in the Cngb1 Knockout Mouse Model of Retinitis Pigmentosa. Human Gene Therapy, 2021, 32, 1158-1170.	2.7	12
182	The Retinitis Pigmentosa Mutation c.3444+1G>A in CNGB1 Results in Skipping of Exon 32. PLoS ONE, 2010, 5, e8969.	2.5	12
183	The cGMP-Dependent Protein Kinase 2 Contributes to Cone Photoreceptor Degeneration in the Cnga3-Deficient Mouse Model of Achromatopsia. International Journal of Molecular Sciences, 2021, 22, 52.	4.1	11
184	Lysosomal TRPML1 regulates mitochondrial function in hepatocellular carcinoma cells. Journal of Cell Science, 2022, 135, .	2.0	11
185	Paradigm shift: new concepts for HCN4 function in cardiac pacemaking. Pflugers Archiv European Journal of Physiology, 2022, 474, 649-663.	2.8	11
186	The cGMP-Dependent Protein Kinase II Is an Inhibitory Modulator of the Hyperpolarization-Activated HCN2 Channel. PLoS ONE, 2011, 6, e17078.	2.5	10
187	Peripherin-2 differentially interacts with cone opsins in outer segments of cone photoreceptors. Human Molecular Genetics, 2016, 25, ddw103.	2.9	10
188	Peripherin-2 and Rom-1 have opposing effects on rod outer segment targeting of retinitis pigmentosa-linked peripherin-2 mutants. Scientific Reports, 2017, 7, 2321.	3.3	10
189	Remote and reversible inhibition of neurons and circuits by small molecule induced potassium channel stabilization. Scientific Reports, 2016, 6, 19293.	3.3	9
190	TPC2 promotes choroidal angiogenesis and inflammation in a mouse model of neovascular age-related macular degeneration. Life Science Alliance, 2021, 4, e202101047.	2.8	9
191	In vivo and ex vivo electrophysiological study of the mouse heart to characterize the cardiac conduction system, including atrial and ventricular vulnerability. Nature Protocols, 2022, 17, 1189-1222.	12.0	9
192	Endolysosomal cation channels point the way towards precision medicine of cancer and infectious diseases. Biomedicine and Pharmacotherapy, 2022, 148, 112751.	5.6	9
193	Detection of cGMP in the Degenerating Retina. Methods in Molecular Biology, 2013, 1020, 235-245.	0.9	8
194	Structural and Functional Phenotyping in the Cone-Specific Photoreceptor Function Loss 1 (cpfl1) Mouse Mutant â€“ A Model of Cone Dystrophies. Advances in Experimental Medicine and Biology, 2010, 664, 593-599.	1.6	8
195	Optimized Subretinal Injection Technique for Gene Therapy Approaches. Methods in Molecular Biology, 2019, 1834, 405-412.	0.9	7
196	Enigmatic rhodopsin mutation creates an exceptionally strong splice acceptor site. Human Molecular Genetics, 2020, 29, 295-304.	2.9	7
197	Redirected nuclear glutamate dehydrogenase supplies Tet3 with Î±-ketoglutarate in neurons. Nature Communications, 2021, 12, 4100.	12.8	7
198	Systematic Studies on Stabilization of AAV Vector Formulations by Lyophilization. Journal of Pharmaceutical Sciences, 2022, 111, 2288-2298.	3.3	7

#	Article	IF	Citations
199	Neuropathic and cAMP-induced pain behavior is ameliorated in mice lacking CNGB1. Neuropharmacology, 2020, 171, 108087.	4.1	6
200	Optogenetic Control of Neural Circuits in the Mongolian Gerbil. Frontiers in Cellular Neuroscience, 2018, 12, 111.	3.7	5
201	Advancing Gene Therapy for PDE6A Retinitis Pigmentosa. Advances in Experimental Medicine and Biology, 2019, 1185, 103-107.	1.6	5
202	Auditory event-related signals in mouse ERG recordings. Documenta Ophthalmologica, 2014, 128, 25-32.	2.2	4
203	Design and Development of AAV-based Gene Supplementation Therapies for Achromatopsia and Retinitis Pigmentosa. Methods in Molecular Biology, 2018, 1715, 33-46.	0.9	4
204	In Vitro Evaluation of AAV Vectors for Retinal Gene Therapy. Methods in Molecular Biology, 2019, 1834, 383-390.	0.9	3
205	HCN Channels: From Genes to Function. , 2004, , 59-65.		2
206	14-3-3. , 2008, , 1-1.		2
207	High Susceptibility to Non-Alcoholic Fatty Liver Disease in Two-Pore Channel 2-Deficient Mice. Biophysical Journal, 2015, 108, 582a.	0.5	1
208	Electrophysiological Evaluation of Novel Blockers of If Current. Biophysical Journal, 2009, 96, 477a.	0.5	0
209	Cyclic Nucleotide-Regulated Cation Channels. , 2010, , 1519-1523.		0
210	Visual Function in CaV1.4-Deficient Mice. Biophysical Journal, 2012, 102, 127a.	0.5	0
211	Implantation of Combined Telemetric ECG and Blood Pressure Transmitters to Determine Spontaneous Baroreflex Sensitivity in Conscious Mice. Journal of Visualized Experiments, 2021, , .	0.3	0
212	Cyclic nucleotide-regulated channels (CNG) in GtoPdb v.2021.3. IUPHAR/BPS Guide To Pharmacology CITE, 2021, 2021, .	0.2	0
213	Cyclic Nucleotide-Regulated Cation Channels. , 2003, , 515-519.		0
214	Analysis of HCN2 and HCN4 knockout mice. BMC News and Views, 2003, 3, .	0.0	0
215	Cyclic Nucleotide-Regulated Cation Channels. , 2004, , 512-515.		0
216	Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. Journal of Clinical Investigation, 2011, 121, 454-454.	8.2	0

#	Article	IF	Citations
217	L-type calcium channel structure and function. Developments in Cardiovascular Medicine, 1996, , 63-69.	0.1	0
218	Reversal of Chemoresistance in Leukemia Cells Using Synthetic Bisbenzylisoquinoline Derivatives. Blood, 2018, 132, 3504-3504.	1.4	0