Martin Biel

List of Publications by Citations

209 papers	14,679 citations	63 h-index	116 g-index
219 ext. papers	16,470 ext. citations	8.7 avg, IF	6.15 L-index

#	Paper	IF	Citations
209	A family of hyperpolarization-activated mammalian cation channels. *Nature*, **1998**, 393, 587-91	50.4	775
208	Hyperpolarization-activated cation channels: from genes to function. *Physiological Reviews*, **2009**, 89, 847-85	47.9	680
207	Tissue distribution of 5-hydroxymethylcytosine and search for active demethylation intermediates. *PLoS ONE*, **2010**, 5, e15367	3.7	644
206	The roles of the subunits in the function of the calcium channel. *Science*, **1991**, 253, 1553-7	33.3	506
205	Lack of an endothelial store-operated Ca2+ current impairs agonist-dependent vasorelaxation in TRP4-/- mice. *Nature Cell Biology*, **2001**, 3, 121-7	23.4	492
204	Genetic reactivation of cone photoreceptors restores visual responses in retinitis pigmentosa. *Science*, **2010**, 329, 413-7	33.3	463
203	Absence epilepsy and sinus dysrhythmia in mice lacking the pacemaker channel HCN2. *EMBO Journal*, **2003**, 22, 216-24	13	389
202	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, 15235-40	11.5	357
201	Ebola virus. Two-pore channels control Ebola virus host cell entry and are drug targets for disease treatment. *Science*, **2015**, 347, 995-8	33.3	351
200	Primary structure of the beta subunit of the DHP-sensitive calcium channel from skeletal muscle. *Science*, **1989**, 245, 1115-8	33.3	330
199	Cellular expression and functional characterization of four hyperpolarization-activated pacemaker channels in cardiac and neuronal tissues. *FEBS Journal*, **2001**, 268, 1646-52		325
198	Quantification of the sixth DNA base hydroxymethylcytosine in the brain. *Angewandte Chemie - International Edition*, **2010**, 49, 5375-7	16.4	319
197	Two pacemaker channels from human heart with profoundly different activation kinetics. *EMBO Journal*, **1999**, 18, 2323-9	13	313
196	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, 7553-7	11.5	239
195	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, 3505-9	11.5	222
194	The two-pore channel TPCN2 mediates NAADP-dependent Ca(2+)-release from lysosomal stores. *Pflugers Archiv European Journal of Physiology*, **2009**, 458, 891-9	4.6	220
193	Primary structure and functional expression of a high voltage activated calcium channel from rabbit lung. *FEBS Letters*, **1990**, 269, 409-12	3.8	210

192	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, 70-4	36.3	207
191	Cardiac HCN channels: structure, function, and modulation. *Trends in Cardiovascular Medicine*, **2002**, 12, 206-12	6.9	188
190	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, 14507-12	11.5	182
189	Restoration of cone vision in the CNGA3-/- mouse model of congenital complete lack of cone photoreceptor function. *Molecular Therapy*, **2010**, 18, 2057-63	11.7	149
188	Primary structure and functional expression of a cyclic nucleotide-gated channel from rabbit aorta. *FEBS Letters*, **1993**, 329, 134-8	3.8	143
187	Exploring HCN channels as novel drug targets. *Nature Reviews Drug Discovery*, **2011**, 10, 903-14	64.1	139
186	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, 43781-6	5.4	139
185	High susceptibility to fatty liver disease in two-pore channel 2-deficient mice. *Nature Communications*, **2014**, 5, 4699	17.4	135
184	Impaired channel targeting and retinal degeneration in mice lacking the cyclic nucleotide-gated channel subunit CNGB1. *Journal of Neuroscience*, **2005**, 25, 130-8	6.6	124
183	An olfactory subsystem that detects carbon disulfide and mediates food-related social learning. *Current Biology*, **2010**, 20, 1438-44	6.3	123
182	Identification of a common non-apoptotic cell death mechanism in hereditary retinal degeneration. *PLoS ONE*, **2014**, 9, e112142	3.7	122
181	Characterization of two-pore channel 2 (TPCN2)-mediated Ca2+ currents in isolated lysosomes. *Journal of Biological Chemistry*, **2010**, 285, 21219-22	5.4	117
180	Expression of Ca□+-permeable two-pore channels rescues NAADP signalling in TPC-deficient cells. *EMBO Journal*, **2015**, 34, 1743-58	13	114
179	An isoform of the rod photoreceptor cyclic nucleotide-gated channel beta subunit expressed in olfactory neurons. *Proceedings of the National Academy of Sciences of the United States of America*, **1998**, 95, 4696-701	11.5	109
178	Cyclic nucleotide-gated channels. *Handbook of Experimental Pharmacology*, **2009**, 111-36	3.2	106
177	Impaired opsin targeting and cone photoreceptor migration in the retina of mice lacking the cyclic nucleotide-gated channel CNGA3. *Investigative Ophthalmology and Visual Science*, **2005**, 46, 1516-24		105
176	Molecular cloning and functional characterization of a new modulatory cyclic nucleotide-gated channel subunit from mouse retina. *Journal of Neuroscience*, **2000**, 20, 1324-32	6.6	104
175	Differential and age-dependent expression of hyperpolarization-activated, cyclic nucleotide-gated cation channel isoforms 1-4 suggests evolving roles in the developing rat hippocampus. *Neuroscience*, **2001**, 106, 689-98	3.9	101

174	A small molecule restores function to TRPML1 mutant isoforms responsible for mucolipidosis type IV. *Nature Communications*, **2014**, 5, 4681	17.4	100
173	Functional characterization of the L-type Ca2+ channel Cav1.4alpha1 from mouse retina. *Investigative Ophthalmology and Visual Science*, **2004**, 45, 708-13		97
172	TET3 is recruited by REST for context-specific hydroxymethylation and induction of gene expression. *Cell Reports*, **2015**, 11, 283-94	10.6	92
171	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, 5248-55	6.6	91
170	Dominant-negative suppression of HCN channels markedly reduces the native pacemaker current I(f) and undermines spontaneous beating of neonatal cardiomyocytes. *Circulation*, **2003**, 107, 485-9	16.7	88
169	Two-Pore Channel Function Is Crucial for the Migration of Invasive Cancer Cells. *Cancer Research*, **2017**, 77, 1427-1438	10.1	87
168	Absence of the gamma subunit of the skeletal muscle dihydropyridine receptor increases L-type Ca2+ currents and alters channel inactivation properties. *Journal of Biological Chemistry*, **2000**, 275, 1447-81	5.4	87
167	A key role for cyclic nucleotide gated (CNG) channels in cGMP-related retinitis pigmentosa. *Human Molecular Genetics*, **2011**, 20, 941-7	5.6	81
166	Gene therapy restores vision and delays degeneration in the CNGB1(-/-) mouse model of retinitis pigmentosa. *Human Molecular Genetics*, **2012**, 21, 4486-96	5.6	81
165	Tissue-specific expression of high-voltage-activated dihydropyridine-sensitive L-type calcium channels. *FEBS Journal*, **1991**, 200, 81-8		79
164	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, 27056-61	5.4	78
163	Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. *Journal of Clinical Investigation*, **2011**, 121, 454-454	15.9	78
162	Structure and function of cardiac pacemaker channels. *Cellular Physiology and Biochemistry*, **1999**, 9, 179-86	3.9	77
161	Cyclic nucleotide-regulated cation channels. *Journal of Biological Chemistry*, **2009**, 284, 9017-21	5.4	76
160	A novel mechanism of modulation of hyperpolarization-activated cyclic nucleotide-gated channels by Src kinase. *Journal of Biological Chemistry*, **2005**, 280, 34224-32	5.4	76
159	International Union of Pharmacology. LI. Nomenclature and structure-function relationships of cyclic nucleotide-regulated channels. *Pharmacological Reviews*, **2005**, 57, 455-62	22.5	76
158	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, 15657-62	11.5	75
157	The cDNA and deduced amino acid sequence of the gamma subunit of the L-type calcium channel from rabbit skeletal muscle. *FEBS Letters*, **1990**, 267, 153-6	3.8	75

156	Morphological characterization of the retina of the CNGA3(-/-)Rho(-/-) mutant mouse lacking functional cones and rods. *Investigative Ophthalmology and Visual Science*, **2004**, 45, 2039-48		72
155	Grating acuity at different luminances in wild-type mice and in mice lacking rod or cone function. *Investigative Ophthalmology and Visual Science*, **2005**, 46, 398-407		71
154	KCNMA1 encoded cardiac BK channels afford protection against ischemia-reperfusion injury. *PLoS ONE*, **2014**, 9, e103402	3.7	69
153	Loss of CNGB1 protein leads to olfactory dysfunction and subciliary cyclic nucleotide-gated channel trapping. *Journal of Biological Chemistry*, **2006**, 281, 35156-66	5.4	69
152	Function and dysfunction of CNG channels: insights from channelopathies and mouse models. *Molecular Neurobiology*, **2007**, 35, 266-77	6.2	68
151	AAV8 Can Induce Innate and Adaptive Immune Response in the Primate Eye. *Molecular Therapy*, **2017**, 25, 2648-2660	11.7	67
150	Role of TRPML and two-pore channels in endolysosomal cation homeostasis. *Journal of Pharmacology and Experimental Therapeutics*, **2012**, 342, 236-44	4.7	66
149	Vision tests in the mouse: Functional phenotyping with electroretinography. *Frontiers in Bioscience - Landmark*, **2009**, 14, 2730-7	2.8	65
148	Agonist-mediated switching of ion selectivity in TPC2 differentially promotes lysosomal function. *ELife*, **2020**, 9,	8.9	64
147	Three amino acids in the C-linker are major determinants of gating in cyclic nucleotide-gated channels. *EMBO Journal*, **1998**, 17, 353-62	13	63
146	Sick sinus syndrome in HCN1-deficient mice. *Circulation*, **2013**, 128, 2585-94	16.7	61
145	Expression of cyclic nucleotide-gated cation channels in non-sensory tissues and cells. *Neuropharmacology*, **1994**, 33, 1275-82	5.5	60
144	Molecular cloning and expression of the Modulatory subunit of the cyclic nucleotide-gated cation channel. *Journal of Biological Chemistry*, **1996**, 271, 6349-55	5.4	59
143	Modulation of cardiac Ca2+ channels in Xenopus oocytes by protein kinase C. *FEBS Letters*, **1992**, 306, 113-8	3.8	59
142	Two-Pore Channels: Catalyzers of Endolysosomal Transport and Function. *Frontiers in Pharmacology* , **2017**, 8, 45	5.6	55
141	cGMP accumulation causes photoreceptor degeneration in CNG channel deficiency: evidence of cGMP cytotoxicity independently of enhanced CNG channel function. *Journal of Neuroscience*, **2013**, 33, 14939-48	6.6	52
140	HCN3 contributes to the ventricular action potential waveform in the murine heart. *Circulation Research*, **2011**, 109, 1015-23	15.7	52
139	Retinal gene delivery by adeno-associated virus (AAV) vectors: Strategies and applications. *European Journal of Pharmaceutics and Biopharmaceutics*, **2015**, 95, 343-52	5.7	51

138	Molecular basis for the different activation kinetics of the pacemaker channels HCN2 and HCN4. *Journal of Biological Chemistry*, **2003**, 278, 33672-80	5.4	51
137	Safety and Vision Outcomes of Subretinal Gene Therapy Targeting Cone Photoreceptors in Achromatopsia: A Nonrandomized Controlled Trial. *JAMA Ophthalmology*, **2020**, 138, 643-651	3.9	49
136	Grueneberg ganglion neurons are finely tuned cold sensors. *Journal of Neuroscience*, **2010**, 30, 7563-8	6.6	48
135	Cone Genesis Tracing by the Chrnb4-EGFP Mouse Line: Evidences of Cellular Material Fusion after Cone Precursor Transplantation. *Molecular Therapy*, **2017**, 25, 634-653	11.7	47
134	Rods in daylight act as relay cells for cone-driven horizontal cell-mediated surround inhibition. *Nature Neuroscience*, **2014**, 17, 1728-35	25.5	47
133	Investigation of the immunogenicity of different types of aggregates of a murine monoclonal antibody in mice. *Pharmaceutical Research*, **2015**, 32, 430-44	4.5	47
132	Regulation of hyperpolarization-activated cyclic nucleotide-gated (HCN) channel activity by cCMP. *Journal of Biological Chemistry*, **2012**, 287, 26506-12	5.4	47
131	A single histidine residue determines the pH sensitivity of the pacemaker channel HCN2. *Journal of Biological Chemistry*, **2001**, 276, 6313-9	5.4	47
130	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	4	46
129	Selective agonist of TRPML2 reveals direct role in chemokine release from innate immune cells. *ELife*, **2018**, 7,	8.9	46
128	Superior Retinal Gene Transfer and Biodistribution Profile of Subretinal Versus Intravitreal Delivery of AAV8 in Nonhuman Primates **2017**, 58, 5792-5801		45
127	NAADP and the two-pore channel protein 1 participate in the acrosome reaction in mammalian spermatozoa. *Molecular Biology of the Cell*, **2014**, 25, 948-64	3.5	44
126	Planar patch clamp approach to characterize ionic currents from intact lysosomes. *Science Signaling*, **2010**, 3, pl3	8.8	44
125	Endoplasmic reticulum stress-associated cone photoreceptor degeneration in cyclic nucleotide-gated channel deficiency. *Journal of Biological Chemistry*, **2012**, 287, 18018-29	5.4	41
124	Humoral Immune Response After Intravitreal But Not After Subretinal AAV8 in Primates and Patients **2018**, 59, 1910-1915		41
123	Biocompatibility of a genetically encoded calcium indicator in a transgenic mouse model. *Nature Communications*, **2012**, 3, 1031	17.4	40
122	Cellular zinc levels are modulated by TRPML1-TMEM163 interaction. *Traffic*, **2014**, 15, 1247-65	5.7	38
121	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, 36312-21	5.4	38

120	Direct inhibition of cardiac hyperpolarization-activated cyclic nucleotide-gated pacemaker channels by clonidine. *Circulation*, **2007**, 115, 872-80	16.7	38
119	Mutations in the S4 domain of a pacemaker channel alter its voltage dependence. *FEBS Letters*, **2000**, 479, 35-40	3.8	38
118	Endolysosomal Cation Channels and Cancer-A Link with Great Potential. *Pharmaceuticals*, **2018**, 11,	5.2	37
117	Photopharmacological control of bipolar cells restores visual function in blind mice. *Journal of Clinical Investigation*, **2017**, 127, 2598-2611	15.9	37
116	Quantifying macromolecular interactions in living cells using FRET two-hybrid assays. *Nature Protocols*, **2016**, 11, 2470-2498	18.8	36
115	Patch-clamp technique to characterize ion channels in enlarged individual endolysosomes. *Nature Protocols*, **2017**, 12, 1639-1658	18.8	36
114	Retinal Cyclic Nucleotide-Gated Channels: From Pathophysiology to Therapy. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	36
113	Electroretinographic assessment of rod- and cone-mediated bipolar cell pathways using flicker stimuli in mice. *Scientific Reports*, **2015**, 5, 10731	4.9	35
112	Retinitis pigmentosa: impact of different Pde6a point mutations on the disease phenotype. *Human Molecular Genetics*, **2015**, 24, 5486-99	5.6	34
111	Rod and cone contributions to horizontal cell light responses in the mouse retina. *Journal of Neuroscience*, **2008**, 28, 6818-25	6.6	34
110	Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. *Journal of Clinical Investigation*, **2009**, 119, 3597-3612	15.9	34
109	Characterization of neurite outgrowth and ectopic synaptogenesis in response to photoreceptor dysfunction. *Cellular and Molecular Life Sciences*, **2013**, 70, 1831-47	10.3	33
108	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	11.5	33
107	Isotope-based analysis of modified tRNA nucleosides correlates modification density with translational efficiency. *Angewandte Chemie - International Edition*, **2012**, 51, 11162-5	16.4	33
106	HCN2 channels in local inhibitory interneurons constrain LTP in the hippocampal direct perforant path. *Cellular and Molecular Life Sciences*, **2011**, 68, 125-37	10.3	33
105	CNGA3: a target of spinal nitric oxide/cGMP signaling and modulator of inflammatory pain hypersensitivity. *Journal of Neuroscience*, **2011**, 31, 11184-92	6.6	33
104	HCN channels: new roles in sinoatrial node function. *Current Opinion in Pharmacology*, **2014**, 15, 83-90	5.1	32
103	The two-pore channel TPC1 is required for efficient protein processing through early and recycling endosomes. *Scientific Reports*, **2017**, 7, 10038	4.9	32

102	Chemo- and thermosensory responsiveness of Grueneberg ganglion neurons relies on cyclic guanosine monophosphate signaling elements. *NeuroSignals*, **2011**, 19, 198-209	1.9	31
101	Mosaic synaptopathy and functional defects in Cav1.4 heterozygous mice and human carriers of CSNB2. *Human Molecular Genetics*, **2014**, 23, 1538-50	5.6	30
100	Tissue-specific expression of calcium channels. *Trends in Cardiovascular Medicine*, **1993**, 3, 48-53	6.9	30
99	Gene therapy for achromatopsia. *Journal of Gene Medicine*, **2017**, 19, e2944	3.5	29
98	cAMP-dependent regulation of HCN4 controls the tonic entrainment process in sinoatrial node pacemaker cells. *Nature Communications*, **2020**, 11, 5555	17.4	29
97	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	18.8	29
96	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	5.4	28
95	The cyclic nucleotide-gated ion channel CNGA3 contributes to coolness-induced responses of Grueneberg ganglion neurons. *Cellular and Molecular Life Sciences*, **2010**, 67, 1859-69	10.3	28
94	Determination of Rod and Cone Influence to the Early and Late Dynamic of the Pupillary Light Response **2016**, 57, 2501-8		28
93	The glutamic acid-rich protein is a gating inhibitor of cyclic nucleotide-gated channels. *Journal of Neuroscience*, **2011**, 31, 133-41	6.6	27
92	Small Molecules for Early Endosome-Specific Patch Clamping. *Cell Chemical Biology*, **2017**, 24, 907-916.e4	8.2	26
91	Calmodulin is a functional regulator of Cav1.4 L-type Ca2+ channels. *Journal of Biological Chemistry*, **2009**, 284, 29809-16	5.4	26
90	Molecular cloning of cyclic nucleotide-gated cation channel subunits from rat pineal gland. *Molecular Brain Research*, **1997**, 48, 171-5		26
89	Gene replacement therapy for retinal CNG channelopathies. *Molecular Genetics and Genomics*, **2013**, 288, 459-67	3.1	24
88	The protein interaction networks of mucolipins and two-pore channels. *Biochimica Et Biophysica Acta - Molecular Cell Research*, **2019**, 1866, 1111-1123	4.9	24
87	In vivo analysis of cone survival in mice **2010**, 51, 493-7		23
86	Cyclic nucleotide-gated channels--mediators of NO:cGMP-regulated processes. *Naunyn-Schmiedebergs Archives of Pharmacology*, **1998**, 358, 140-4	3.4	23
85	Optimized technique for subretinal injections in mice. *Methods in Molecular Biology*, **2013**, 935, 343-9	1.4	23

84	International Union of Pharmacology. XLII. Compendium of voltage-gated ion channels: cyclic nucleotide-modulated channels. *Pharmacological Reviews*, **2003**, 55, 587-9	22.5	22
83	Subretinal Injection for Gene Therapy Does Not Cause Clinically Significant Outer Nuclear Layer Thinning in Normal Primate Foveae **2017**, 58, 4155-4160		21
82	CNGA3 deficiency affects cone synaptic terminal structure and function and leads to secondary rod dysfunction and degeneration **2012**, 53, 1117-29		21
81	Induction of STAT3-related genes in fast degenerating cone photoreceptors of cpfl1 mice. *Cellular and Molecular Life Sciences*, **2010**, 67, 3173-86	10.3	21
80	THE CONCISE GUIDE TO PHARMACOLOGY 2021/22: Ion channels. *British Journal of Pharmacology*, **2021**, 178 Suppl 1, S157-S245	8.6	21
79	Peripherin-2 couples rhodopsin to the CNG channel in outer segments of rod photoreceptors. *Human Molecular Genetics*, **2014**, 23, 5989-97	5.6	20
78	Odorant-evoked electrical responses in Grueneberg ganglion neurons rely on cGMP-associated signaling proteins. *Neuroscience Letters*, **2013**, 539, 38-42	3.3	20
77	Gene therapy restores missing cone-mediated vision in the CNGA3-/- mouse model of achromatopsia. *Advances in Experimental Medicine and Biology*, **2012**, 723, 183-9	3.6	20
76	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, 718-27	4.6	20
75	Residual photosensitivity in mice lacking both rod opsin and cone photoreceptor cyclic nucleotide gated channel 3 alpha subunit. *Visual Neuroscience*, **2004**, 21, 675-83	1.7	20
74	Early Microglia Activation Precedes Photoreceptor Degeneration in a Mouse Model of CNGB1-Linked Retinitis Pigmentosa. *Frontiers in Immunology*, **2017**, 8, 1930	8.4	19
73	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, 3906-19	5.6	19
72	Molecular diversity of cyclic nucleotide-gated cation channels. *Naunyn-Schmiedebergıs Archives of Pharmacology*, **1995**, 353, 1-10	3.4	19
71	Novel AAV capsids for intravitreal gene therapy of photoreceptor disorders. *EMBO Molecular Medicine*, **2021**, 13, e13392	12	19
70	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	5.6	18
69	Hif1a inactivation rescues photoreceptor degeneration induced by a chronic hypoxia-like stress. *Cell Death and Differentiation*, **2018**, 25, 2071-2085	12.7	18
68	Gene Supplementation Rescues Rod Function and Preserves Photoreceptor and Retinal Morphology in Dogs, Leading the Way Toward Treating Human -Retinitis Pigmentosa. *Human Gene Therapy*, **2017**, 28, 1189-1201	4.8	18
67	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	5.1	18

66	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	6	18
65	An arginine residue in the pore region is a key determinant of chloride dependence in cardiac pacemaker channels. *Journal of Biological Chemistry*, **2005**, 280, 13694-700	5.4	17
64	Cyclic nucleotide gated channels. *Advances in Second Messenger and Phosphoprotein Research*, **1999**, 33, 231-50		17
63	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	11.5	17
62	AAV Vectors for FRET-Based Analysis of Protein-Protein Interactions in Photoreceptor Outer Segments. *Frontiers in Neuroscience*, **2016**, 10, 356	5.1	17
61	Loss of HCN1 enhances disease progression in mouse models of CNG channel-linked retinitis pigmentosa and achromatopsia. *Human Molecular Genetics*, **2016**, 25, 1165-75	5.6	17
60	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	8.2	17
59	Endoplasmic reticulum (ER) Ca-channel activity contributes to ER stress and cone death in cyclic nucleotide-gated channel deficiency. *Journal of Biological Chemistry*, **2017**, 292, 11189-11205	5.4	16
58	Pathological □synuclein impairs adult-born granule cell development and functional integration in the olfactory bulb. *Nature Communications*, **2014**, 5, 3915	17.4	16
57	Cyclic nucleotide-gated cation channels molecular diversity, structure, and cellular functions. *Trends in Cardiovascular Medicine*, **1996**, 6, 274-80	6.9	16
56	A gene therapy for inherited blindness using dCas9-VPR-mediated transcriptional activation. *Science Advances*, **2020**, 6, eaba5614	14.3	16
55	Development of Methodology and Study Protocol: Safety and Efficacy of a Single Subretinal Injection of rAAV.hCNGA3 in Patients with CNGA3-Linked Achromatopsia Investigated in an Exploratory Dose-Escalation Trial. *Human Gene Therapy Clinical Development*, **2018**, 29, 121-131	3.2	16
54	Recombinant tandem of pore-domains in a Weakly Inward rectifying K channel 2 (TWIK2) forms active lysosomal channels. *Scientific Reports*, **2017**, 7, 649	4.9	15
53	A30P □Synuclein interferes with the stable integration of adult-born neurons into the olfactory network. *Scientific Reports*, **2014**, 4, 3931	4.9	14
52	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	5.4	14
51	Accessory heterozygous mutations in cone photoreceptor CNGA3 exacerbate CNG channel-associated retinopathy. *Journal of Clinical Investigation*, **2018**, 128, 5663-5675	15.9	14
50	TRPML2 is an osmo/mechanosensitive cation channel in endolysosomal organelles. *Science Advances*, **2020**, 6,	14.3	14
49	HCN3 ion channels: roles in sensory neuronal excitability and pain. *Journal of Physiology*, **2019**, 597, 4661-4675	3.9	13

48	Gene Therapy Successfully Delays Degeneration in a Mouse Model of -Linked Retinitis Pigmentosa (RP43). *Human Gene Therapy*, **2017**, 28, 1180-1188	4.8	13
47	Corticotropin-Releasing Hormone Receptor Type 1 (CRHR1) Clustering with MAGUKs Is Mediated via Its C-Terminal PDZ Binding Motif. *PLoS ONE*, **2015**, 10, e0136768	3.7	13
46	The role of HCN channels in ventricular repolarization. *Trends in Cardiovascular Medicine*, **2011**, 21, 216-20	6.9	13
45	Flavonoids increase melanin production and reduce proliferation, migration and invasion of melanoma cells by blocking endolysosomal/melanosomal TPC2. *Scientific Reports*, **2021**, 11, 8515	4.9	13
44	Disturbed Processing of Contextual Information in HCN3 Channel Deficient Mice. *Frontiers in Molecular Neuroscience*, **2017**, 10, 436	6.1	12
43	Protein kinase A regulates inflammatory pain sensitization by modulating HCN2 channel activity in nociceptive sensory neurons. *Pain*, **2017**, 158, 2012-2024	8	12
42	Gene therapy restores vision and delays degeneration in the CNGB1(-/-) mouse model of retinitis pigmentosa. *Advances in Experimental Medicine and Biology*, **2014**, 801, 733-9	3.6	12
41	Abolishing cAMP sensitivity in HCN2 pacemaker channels induces generalized seizures. *JCI Insight*, **2019**, 4,	9.9	12
40	Status of EUV reflectometry at PTB **2013**,		11
39	Impact of Hyperpolarization-activated, Cyclic Nucleotide-gated Cation Channel Type 2 for the Xenon-mediated Anesthetic Effect: Evidence from In Vitro and In Vivo Experiments. *Anesthesiology*, **2015**, 122, 1047-59	4.3	9
38	Peripherin-2 differentially interacts with cone opsins in outer segments of cone photoreceptors. *Human Molecular Genetics*, **2016**, 25, 2367-2377	5.6	9
37	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	3.2	8
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