

# Martin Biel

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/7168750/martin-biel-publications-by-year.pdf>

**Version:** 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Lung emphysema and impaired macrophage elastase clearance in mucolipin 3 deficient mice.. <i>Nature Communications</i> , <b>2022</b> , 13, 318	17.4	6
208	MicroRNA-365 regulates human cardiac action potential duration.. <i>Nature Communications</i> , <b>2022</b> , 13, 220	17.4	3
207	In vivo and ex vivo electrophysiological study of the mouse heart to characterize the cardiac conduction system, including atrial and ventricular vulnerability.. <i>Nature Protocols</i> , <b>2022</b> ,	18.8	1
206	Endolysosomal cation channels point the way towards precision medicine of cancer and infectious diseases.. <i>Biomedicine and Pharmacotherapy</i> , <b>2022</b> , 148, 112751	7.5	1
205	Paradigm shift: new concepts for HCN4 function in cardiac pacemaking.. <i>Pflugers Archiv European Journal of Physiology</i> , <b>2022</b> , 1	4.6	0
204	Beyond pacemaking: HCN channels in sinoatrial node function. <i>Progress in Biophysics and Molecular Biology</i> , <b>2021</b> , 166, 51-60	4.7	4
203	Flavonoids increase melanin production and reduce proliferation, migration and invasion of melanoma cells by blocking endolysosomal/melanosomal TPC2. <i>Scientific Reports</i> , <b>2021</b> , 11, 8515	4.9	13
202	Three-year results of phase I retinal gene therapy trial for CNGA3-mutated achromatopsia: results of a non randomised controlled trial. <i>British Journal of Ophthalmology</i> , <b>2021</b> ,	5.5	8
201	Comparison of Different Liquid Chromatography-Based Purification Strategies for Adeno-Associated Virus Vectors. <i>Pharmaceutics</i> , <b>2021</b> , 13,	6.4	4
200	Speeding Up the Heart? Traditional and New Perspectives on HCN4 Function. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 669029	4.6	5
199	TPC2 promotes choroidal angiogenesis and inflammation in a mouse model of neovascular age-related macular degeneration. <i>Life Science Alliance</i> , <b>2021</b> , 4,	5.8	3
198	Redirected nuclear glutamate dehydrogenase supplies Tet3 with $\alpha$ -ketoglutarate in neurons. <i>Nature Communications</i> , <b>2021</b> , 12, 4100	17.4	1
197	Novel AAV capsids for intravitreal gene therapy of photoreceptor disorders. <i>EMBO Molecular Medicine</i> , <b>2021</b> , 13, e13392	12	19
196	Gene editing and synthetically accessible inhibitors reveal role for TPC2 in HCC cell proliferation and tumor growth. <i>Cell Chemical Biology</i> , <b>2021</b> , 28, 1119-1131.e27	8.2	17
195	Potency Testing of Subretinal rAAV5.hCNGB1 Gene Therapy in the Knockout Mouse Model of Retinitis Pigmentosa. <i>Human Gene Therapy</i> , <b>2021</b> , 32, 1158-1170	4.8	0
194	THE CONCISE GUIDE TO PHARMACOLOGY 2021/22: Ion channels. <i>British Journal of Pharmacology</i> , <b>2021</b> , 178 Suppl 1, S157-S245	8.6	21
193	cAMP-dependent regulation of HCN4 controls the tonic entrainment process in sinoatrial node pacemaker cells. <i>Nature Communications</i> , <b>2020</b> , 11, 5555	17.4	29

192	Safety and Vision Outcomes of Subretinal Gene Therapy Targeting Cone Photoreceptors in Achromatopsia: A Nonrandomized Controlled Trial. <i>JAMA Ophthalmology</i> , <b>2020</b> , 138, 643-651	3.9	49
191	Neuropathic and cAMP-induced pain behavior is ameliorated in mice lacking CNGB1. <i>Neuropharmacology</i> , <b>2020</b> , 171, 108087	5.5	2
190	The cGMP-Dependent Protein Kinase 2 Contributes to Cone Photoreceptor Degeneration in the -Deficient Mouse Model of Achromatopsia. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 22,	6.3	5
189	Agonist-mediated switching of ion selectivity in TPC2 differentially promotes lysosomal function. <i>ELife</i> , <b>2020</b> , 9,	8.9	64
188	Enigmatic rhodopsin mutation creates an exceptionally strong splice acceptor site. <i>Human Molecular Genetics</i> , <b>2020</b> , 29, 295-304	5.6	4
187	Antisense Oligonucleotide- and CRISPR-Cas9-Mediated Rescue of mRNA Splicing for a Deep Intronic CLRN1 Mutation. <i>Molecular Therapy - Nucleic Acids</i> , <b>2020</b> , 21, 1050-1061	10.7	5
186	TPC1 deficiency or blockade augments systemic anaphylaxis and mast cell activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 18068-18078	11.5	17
185	TRPML2 is an osmo/mechanosensitive cation channel in endolysosomal organelles. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	14
184	A gene therapy for inherited blindness using dCas9-VPR-mediated transcriptional activation. <i>Science Advances</i> , <b>2020</b> , 6, eaba5614	14.3	16
183	Intrinsic Differential Scanning Fluorimetry for Fast and Easy Identification of Adeno-Associated Virus Serotypes. <i>Journal of Pharmaceutical Sciences</i> , <b>2020</b> , 109, 854-862	3.9	6
182	Safety and Toxicology of Ocular Gene Therapy with Recombinant AAV Vector rAAV.hCNGA3 in Nonhuman Primates. <i>Human Gene Therapy Clinical Development</i> , <b>2019</b> , 30, 50-56	3.2	8
181	HCN3 ion channels: roles in sensory neuronal excitability and pain. <i>Journal of Physiology</i> , <b>2019</b> , 597, 4661-4675	13.4	13
180	Abolishing cAMP sensitivity in HCN2 pacemaker channels induces generalized seizures. <i>JCI Insight</i> , <b>2019</b> , 4,	9.9	12
179	Advancing Gene Therapy for PDE6A Retinitis Pigmentosa. <i>Advances in Experimental Medicine and Biology</i> , <b>2019</b> , 1185, 103-107	3.6	4
178	The protein interaction networks of mucolipins and two-pore channels. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , <b>2019</b> , 1866, 1111-1123	4.9	24
177	In Vitro Evaluation of AAV Vectors for Retinal Gene Therapy. <i>Methods in Molecular Biology</i> , <b>2019</b> , 1834, 383-390	1.4	2
176	Optimized Subretinal Injection Technique for Gene Therapy Approaches. <i>Methods in Molecular Biology</i> , <b>2019</b> , 1834, 405-412	1.4	4
175	Hif1a inactivation rescues photoreceptor degeneration induced by a chronic hypoxia-like stress. <i>Cell Death and Differentiation</i> , <b>2018</b> , 25, 2071-2085	12.7	18

174	Endolysosomal Cation Channels and Cancer-A Link with Great Potential. <i>Pharmaceuticals</i> , <b>2018</b> , 11,	5.2	37
173	Optogenetic Control of Neural Circuits in the Mongolian Gerbil. <i>Frontiers in Cellular Neuroscience</i> , <b>2018</b> , 12, 111	6.1	4
172	Accessory heterozygous mutations in cone photoreceptor CNGA3 exacerbate CNG channel-associated retinopathy. <i>Journal of Clinical Investigation</i> , <b>2018</b> , 128, 5663-5675	15.9	14
171	Selective agonist of TRPML2 reveals direct role in chemokine release from innate immune cells. <i>ELife</i> , <b>2018</b> , 7,	8.9	46
170	Reversal of Chemoresistance in Leukemia Cells Using Synthetic Bisbenzylisoquinoline Derivatives. <i>Blood</i> , <b>2018</b> , 132, 3504-3504	2.2	
169	Design and Development of AAV-based Gene Supplementation Therapies for Achromatopsia and Retinitis Pigmentosa. <i>Methods in Molecular Biology</i> , <b>2018</b> , 1715, 33-46	1.4	3
168	Retinal Cyclic Nucleotide-Gated Channels: From Pathophysiology to Therapy. <i>International Journal of Molecular Sciences</i> , <b>2018</b> , 19,	6.3	36
167	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. <i>Human Gene Therapy Clinical Development</i> , <b>2018</b> , 29, 121-131	3.2	16
166	Humoral Immune Response After Intravitreal But Not After Subretinal AAV8 in Primates and Patients <b>2018</b> , 59, 1910-1915		41
165	Gene therapy for achromatopsia. <i>Journal of Gene Medicine</i> , <b>2017</b> , 19, e2944	3.5	29
164	Two-Pore Channel Function Is Crucial for the Migration of Invasive Cancer Cells. <i>Cancer Research</i> , <b>2017</b> , 77, 1427-1438	10.1	87
163	Cone Genesis Tracing by the Chrn4-EGFP Mouse Line: Evidences of Cellular Material Fusion after Cone Precursor Transplantation. <i>Molecular Therapy</i> , <b>2017</b> , 25, 634-653	11.7	47
162	Recombinant tandem of pore-domains in a Weakly Inward rectifying K channel 2 (TWIK2) forms active lysosomal channels. <i>Scientific Reports</i> , <b>2017</b> , 7, 649	4.9	15
161	Endoplasmic reticulum (ER) Ca-channel activity contributes to ER stress and cone death in cyclic nucleotide-gated channel deficiency. <i>Journal of Biological Chemistry</i> , <b>2017</b> , 292, 11189-11205	5.4	16
160	From mucopolidosis type IV to Ebola: TRPML and two-pore channels at the crossroads of endo-lysosomal trafficking and disease. <i>Cell Calcium</i> , <b>2017</b> , 67, 148-155	4	46
159	Peripherin-2 and Rom-1 have opposing effects on rod outer segment targeting of retinitis pigmentosa-linked peripherin-2 mutants. <i>Scientific Reports</i> , <b>2017</b> , 7, 2321	4.9	6
158	Superior Retinal Gene Transfer and Biodistribution Profile of Subretinal Versus Intravitreal Delivery of AAV8 in Nonhuman Primates <b>2017</b> , 58, 5792-5801		45
157	Early Microglia Activation Precedes Photoreceptor Degeneration in a Mouse Model of CNGB1-Linked Retinitis Pigmentosa. <i>Frontiers in Immunology</i> , <b>2017</b> , 8, 1930	8.4	19

156	Disturbed Processing of Contextual Information in HCN3 Channel Deficient Mice. <i>Frontiers in Molecular Neuroscience</i> , <b>2017</b> , 10, 436	6.1	12
155	TPC2 polymorphisms associated with a hair pigmentation phenotype in humans result in gain of channel function by independent mechanisms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E8595-E8602	11.5	33
154	The two-pore channel TPC1 is required for efficient protein processing through early and recycling endosomes. <i>Scientific Reports</i> , <b>2017</b> , 7, 10038	4.9	32
153	AAV8 Can Induce Innate and Adaptive Immune Response in the Primate Eye. <i>Molecular Therapy</i> , <b>2017</b> , 25, 2648-2660	11.7	67
152	Patch-clamp technique to characterize ion channels in enlarged individual endolysosomes. <i>Nature Protocols</i> , <b>2017</b> , 12, 1639-1658	18.8	36
151	Small Molecules for Early Endosome-Specific Patch Clamping. <i>Cell Chemical Biology</i> , <b>2017</b> , 24, 907-916.e4	8.2	26
150	Protein kinase A regulates inflammatory pain sensitization by modulating HCN2 channel activity in nociceptive sensory neurons. <i>Pain</i> , <b>2017</b> , 158, 2012-2024	8	12
149	Gene Therapy Successfully Delays Degeneration in a Mouse Model of -Linked Retinitis Pigmentosa (RP43). <i>Human Gene Therapy</i> , <b>2017</b> , 28, 1180-1188	4.8	13
148	Gene Supplementation Rescues Rod Function and Preserves Photoreceptor and Retinal Morphology in Dogs, Leading the Way Toward Treating Human -Retinitis Pigmentosa. <i>Human Gene Therapy</i> , <b>2017</b> , 28, 1189-1201	4.8	18
147	Subretinal Injection for Gene Therapy Does Not Cause Clinically Significant Outer Nuclear Layer Thinning in Normal Primate Foveae <b>2017</b> , 58, 4155-4160		21
146	Two-Pore Channels: Catalyzers of Endolysosomal Transport and Function. <i>Frontiers in Pharmacology</i> , <b>2017</b> , 8, 45	5.6	55
145	AAV-Mediated Gene Supplementation Therapy in Achromatopsia Type 2: Preclinical Data on Therapeutic Time Window and Long-Term Effects. <i>Frontiers in Neuroscience</i> , <b>2017</b> , 11, 292	5.1	18
144	Photopharmacological control of bipolar cells restores visual function in blind mice. <i>Journal of Clinical Investigation</i> , <b>2017</b> , 127, 2598-2611	15.9	37
143	Quantifying macromolecular interactions in living cells using FRET two-hybrid assays. <i>Nature Protocols</i> , <b>2016</b> , 11, 2470-2498	18.8	36
142	Remote and reversible inhibition of neurons and circuits by small molecule induced potassium channel stabilization. <i>Scientific Reports</i> , <b>2016</b> , 6, 19293	4.9	6
141	Comprehensive multilevel in vivo and in vitro analysis of heart rate fluctuations in mice by ECG telemetry and electrophysiology. <i>Nature Protocols</i> , <b>2016</b> , 11, 61-86	18.8	29
140	Determination of Rod and Cone Influence to the Early and Late Dynamic of the Pupillary Light Response <b>2016</b> , 57, 2501-8		28
139	AAV Vectors for FRET-Based Analysis of Protein-Protein Interactions in Photoreceptor Outer Segments. <i>Frontiers in Neuroscience</i> , <b>2016</b> , 10, 356	5.1	17

138	In Vivo Analysis of Disease-Associated Point Mutations Unveils Profound Differences in mRNA Splicing of Peripherin-2 in Rod and Cone Photoreceptors. <i>PLoS Genetics</i> , <b>2016</b> , 12, e1005811	6	18
137	HCN1 Channels Enhance Rod System Responsivity in the Retina under Conditions of Light Exposure. <i>PLoS ONE</i> , <b>2016</b> , 11, e0147728	3.7	6
136	Peripherin-2 differentially interacts with cone opsins in outer segments of cone photoreceptors. <i>Human Molecular Genetics</i> , <b>2016</b> , 25, 2367-2377	5.6	9
135	Loss of HCN1 enhances disease progression in mouse models of CNG channel-linked retinitis pigmentosa and achromatopsia. <i>Human Molecular Genetics</i> , <b>2016</b> , 25, 1165-75	5.6	17
134	Ebola virus. Two-pore channels control Ebola virus host cell entry and are drug targets for disease treatment. <i>Science</i> , <b>2015</b> , 347, 995-8	33.3	351
133	Retinal gene delivery by adeno-associated virus (AAV) vectors: Strategies and applications. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , <b>2015</b> , 95, 343-52	5.7	51
132	Retinitis pigmentosa: impact of different Pde6a point mutations on the disease phenotype. <i>Human Molecular Genetics</i> , <b>2015</b> , 24, 5486-99	5.6	34
131	Vitreous delivery of AAV vectored Cnga3 restores cone function in CNGA3 <sup>-/-</sup> /Nrl <sup>-/-</sup> mice, an all-cone model of CNGA3 achromatopsia. <i>Human Molecular Genetics</i> , <b>2015</b> , 24, 3699-707	5.6	18
130	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. <i>Journal of Biological Chemistry</i> , <b>2015</b> , 290, 20880-20892	5.4	28
129	Expression of Ca <sup>2+</sup> -permeable two-pore channels rescues NAADP signalling in TPC-deficient cells. <i>EMBO Journal</i> , <b>2015</b> , 34, 1743-58	13	114
128	Electroretinographic assessment of rod- and cone-mediated bipolar cell pathways using flicker stimuli in mice. <i>Scientific Reports</i> , <b>2015</b> , 5, 10731	4.9	35
127	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. <i>Anesthesiology</i> , <b>2015</b> , 122, 1047-59	4.3	9
126	Corticotropin-Releasing Hormone Receptor Type 1 (CRHR1) Clustering with MAGUKs Is Mediated via Its C-Terminal PDZ Binding Motif. <i>PLoS ONE</i> , <b>2015</b> , 10, e0136768	3.7	13
125	TET3 is recruited by REST for context-specific hydroxymethylation and induction of gene expression. <i>Cell Reports</i> , <b>2015</b> , 11, 283-94	10.6	92
124	Investigation of the immunogenicity of different types of aggregates of a murine monoclonal antibody in mice. <i>Pharmaceutical Research</i> , <b>2015</b> , 32, 430-44	4.5	47
123	A30P $\beta$ synuclein interferes with the stable integration of adult-born neurons into the olfactory network. <i>Scientific Reports</i> , <b>2014</b> , 4, 3931	4.9	14
122	HCN channels: new roles in sinoatrial node function. <i>Current Opinion in Pharmacology</i> , <b>2014</b> , 15, 83-90	5.1	32
121	Rods in daylight act as relay cells for cone-driven horizontal cell-mediated surround inhibition. <i>Nature Neuroscience</i> , <b>2014</b> , 17, 1728-35	25.5	47

120	Cellular zinc levels are modulated by TRPML1-TMEM163 interaction. <i>Traffic</i> , <b>2014</b> , 15, 1247-65	5.7	38
119	Peripherin-2 couples rhodopsin to the CNG channel in outer segments of rod photoreceptors. <i>Human Molecular Genetics</i> , <b>2014</b> , 23, 5989-97	5.6	20
118	High susceptibility to fatty liver disease in two-pore channel 2-deficient mice. <i>Nature Communications</i> , <b>2014</b> , 5, 4699	17.4	135
117	Pathological $\beta$ synuclein impairs adult-born granule cell development and functional integration in the olfactory bulb. <i>Nature Communications</i> , <b>2014</b> , 5, 3915	17.4	16
116	KCNMA1 encoded cardiac BK channels afford protection against ischemia-reperfusion injury. <i>PLoS ONE</i> , <b>2014</b> , 9, e103402	3.7	69
115	Identification of a common non-apoptotic cell death mechanism in hereditary retinal degeneration. <i>PLoS ONE</i> , <b>2014</b> , 9, e112142	3.7	122
114	A small molecule restores function to TRPML1 mutant isoforms responsible for mucopolidosis type IV. <i>Nature Communications</i> , <b>2014</b> , 5, 4681	17.4	100
113	Mosaic synaptopathy and functional defects in Cav1.4 heterozygous mice and human carriers of CSNB2. <i>Human Molecular Genetics</i> , <b>2014</b> , 23, 1538-50	5.6	30
112	NAADP and the two-pore channel protein 1 participate in the acrosome reaction in mammalian spermatozoa. <i>Molecular Biology of the Cell</i> , <b>2014</b> , 25, 948-64	3.5	44
111	Gene therapy restores vision and delays degeneration in the CNGB1(-/-) mouse model of retinitis pigmentosa. <i>Advances in Experimental Medicine and Biology</i> , <b>2014</b> , 801, 733-9	3.6	12
110	Auditory event-related signals in mouse ERG recordings. <i>Documenta Ophthalmologica</i> , <b>2014</b> , 128, 25-32	2.2	3
109	Characterization of neurite outgrowth and ectopic synaptogenesis in response to photoreceptor dysfunction. <i>Cellular and Molecular Life Sciences</i> , <b>2013</b> , 70, 1831-47	10.3	33
108	Gene replacement therapy for retinal CNG channelopathies. <i>Molecular Genetics and Genomics</i> , <b>2013</b> , 288, 459-67	3.1	24
107	Status of EUV reflectometry at PTB <b>2013</b> ,		11
106	Odorant-evoked electrical responses in Grueneberg ganglion neurons rely on cGMP-associated signaling proteins. <i>Neuroscience Letters</i> , <b>2013</b> , 539, 38-42	3.3	20
105	Detection of cGMP in the degenerating retina. <i>Methods in Molecular Biology</i> , <b>2013</b> , 1020, 235-45	1.4	7
104	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. <i>Human Molecular Genetics</i> , <b>2013</b> , 22, 3906-19	5.6	19
103	Sick sinus syndrome in HCN1-deficient mice. <i>Circulation</i> , <b>2013</b> , 128, 2585-94	16.7	61

102	Up-regulation of hyperpolarization-activated cyclic nucleotide-gated channel 3 (HCN3) by specific interaction with K <sup>+</sup> channel tetramerization domain-containing protein 3 (KCTD3). <i>Journal of Biological Chemistry</i> , <b>2013</b> , 288, 7580-7589	5.4	14
101	cGMP accumulation causes photoreceptor degeneration in CNG channel deficiency: evidence of cGMP cytotoxicity independently of enhanced CNG channel function. <i>Journal of Neuroscience</i> , <b>2013</b> , 33, 14939-48	6.6	52
100	Optimized technique for subretinal injections in mice. <i>Methods in Molecular Biology</i> , <b>2013</b> , 935, 343-9	1.4	23
99	Isotope-based analysis of modified tRNA nucleosides correlates modification density with translational efficiency. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 11162-5	16.4	33
98	Endoplasmic reticulum stress-associated cone photoreceptor degeneration in cyclic nucleotide-gated channel deficiency. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 18018-29	5.4	41
97	Regulation of hyperpolarization-activated cyclic nucleotide-gated (HCN) channel activity by cCMP. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 26506-12	5.4	47
96	Biocompatibility of a genetically encoded calcium indicator in a transgenic mouse model. <i>Nature Communications</i> , <b>2012</b> , 3, 1031	17.4	40
95	Gene therapy restores missing cone-mediated vision in the CNGA3 <sup>-/-</sup> mouse model of achromatopsia. <i>Advances in Experimental Medicine and Biology</i> , <b>2012</b> , 723, 183-9	3.6	20
94	CNGA3 deficiency affects cone synaptic terminal structure and function and leads to secondary rod dysfunction and degeneration <b>2012</b> , 53, 1117-29		21
93	Gene therapy restores vision and delays degeneration in the CNGB1 <sup>(-/-)</sup> mouse model of retinitis pigmentosa. <i>Human Molecular Genetics</i> , <b>2012</b> , 21, 4486-96	5.6	81
92	Role of TRPML and two-pore channels in endolysosomal cation homeostasis. <i>Journal of Pharmacology and Experimental Therapeutics</i> , <b>2012</b> , 342, 236-44	4.7	66
91	Complex regulation of voltage-dependent activation and inactivation properties of retinal voltage-gated Cav1.4 L-type Ca <sup>2+</sup> channels by Ca <sup>2+</sup> -binding protein 4 (CaBP4). <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 36312-21	5.4	38
90	The role of HCN channels in ventricular repolarization. <i>Trends in Cardiovascular Medicine</i> , <b>2011</b> , 21, 216-20.9		13
89	The cGMP-dependent protein kinase II is an inhibitory modulator of the hyperpolarization-activated HCN2 channel. <i>PLoS ONE</i> , <b>2011</b> , 6, e17078	3.7	6
88	Exploring HCN channels as novel drug targets. <i>Nature Reviews Drug Discovery</i> , <b>2011</b> , 10, 903-14	64.1	139
87	HCN2 channels in local inhibitory interneurons constrain LTP in the hippocampal direct perforant path. <i>Cellular and Molecular Life Sciences</i> , <b>2011</b> , 68, 125-37	10.3	33
86	The glutamic acid-rich protein is a gating inhibitor of cyclic nucleotide-gated channels. <i>Journal of Neuroscience</i> , <b>2011</b> , 31, 133-41	6.6	27
85	A key role for cyclic nucleotide gated (CNG) channels in cGMP-related retinitis pigmentosa. <i>Human Molecular Genetics</i> , <b>2011</b> , 20, 941-7	5.6	81



84	CNGA3: a target of spinal nitric oxide/cGMP signaling and modulator of inflammatory pain hypersensitivity. <i>Journal of Neuroscience</i> , <b>2011</b> , 31, 11184-92	6.6	33
83	HCN3 contributes to the ventricular action potential waveform in the murine heart. <i>Circulation Research</i> , <b>2011</b> , 109, 1015-23	15.7	52
82	Chemo- and thermosensory responsiveness of Grueneberg ganglion neurons relies on cyclic guanosine monophosphate signaling elements. <i>NeuroSignals</i> , <b>2011</b> , 19, 198-209	1.9	31
81	Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. <i>Journal of Clinical Investigation</i> , <b>2011</b> , 121, 454-454	15.9	78
80	Cyclic Nucleotide-Regulated Cation Channels <b>2010</b> , 1519-1523		
79	In vivo analysis of cone survival in mice <b>2010</b> , 51, 493-7		23
78	Characterization of two-pore channel 2 (TPCN2)-mediated Ca <sup>2+</sup> currents in isolated lysosomes. <i>Journal of Biological Chemistry</i> , <b>2010</b> , 285, 21219-22	5.4	117
77	Grueneberg ganglion neurons are finely tuned cold sensors. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 7563-8	6.6	48
76	Planar patch clamp approach to characterize ionic currents from intact lysosomes. <i>Science Signaling</i> , <b>2010</b> , 3, p13	8.8	44
75	Restoration of cone vision in the CNGA3 <sup>-/-</sup> mouse model of congenital complete lack of cone photoreceptor function. <i>Molecular Therapy</i> , <b>2010</b> , 18, 2057-63	11.7	149
74	Tissue distribution of 5-hydroxymethylcytosine and search for active demethylation intermediates. <i>PLoS ONE</i> , <b>2010</b> , 5, e15367	3.7	644
73	Genetic reactivation of cone photoreceptors restores visual responses in retinitis pigmentosa. <i>Science</i> , <b>2010</b> , 329, 413-7	33.3	463
72	The cyclic nucleotide-gated ion channel CNGA3 contributes to coolness-induced responses of Grueneberg ganglion neurons. <i>Cellular and Molecular Life Sciences</i> , <b>2010</b> , 67, 1859-69	10.3	28
71	Induction of STAT3-related genes in fast degenerating cone photoreceptors of cpfl1 mice. <i>Cellular and Molecular Life Sciences</i> , <b>2010</b> , 67, 3173-86	10.3	21
70	An olfactory subsystem that detects carbon disulfide and mediates food-related social learning. <i>Current Biology</i> , <b>2010</b> , 20, 1438-44	6.3	123
69	Quantification of the sixth DNA base hydroxymethylcytosine in the brain. <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 5375-7	16.4	319
68	The retinitis pigmentosa mutation c.3444+1G>A in CNGB1 results in skipping of exon 32. <i>PLoS ONE</i> , <b>2010</b> , 5, e8969	3.7	8
67	Structural and functional phenotyping in the cone-specific photoreceptor function loss 1 (cpfl1) mouse mutant - a model of cone dystrophies. <i>Advances in Experimental Medicine and Biology</i> , <b>2010</b> , 664, 593-9	3.6	7

66	Calmodulin is a functional regulator of Cav1.4 L-type Ca <sup>2+</sup> channels. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 29809-16	5.4	26
65	Cyclic nucleotide-regulated cation channels. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 9017-21	5.4	76
64	The two-pore channel TPCN2 mediates NAADP-dependent Ca(2+)-release from lysosomal stores. <i>Pflugers Archiv European Journal of Physiology</i> , <b>2009</b> , 458, 891-9	4.6	220
63	Hyperpolarization-activated cation channels: from genes to function. <i>Physiological Reviews</i> , <b>2009</b> , 89, 847-85	47.9	680
62	Phosducin influences sympathetic activity and prevents stress-induced hypertension in humans and mice. <i>Journal of Clinical Investigation</i> , <b>2009</b> , 119, 3597-3612	15.9	34
61	Vision tests in the mouse: Functional phenotyping with electroretinography. <i>Frontiers in Bioscience - Landmark</i> , <b>2009</b> , 14, 2730-7	2.8	65
60	Cyclic nucleotide-gated channels. <i>Handbook of Experimental Pharmacology</i> , <b>2009</b> , 111-36	3.2	106
59	Rod and cone contributions to horizontal cell light responses in the mouse retina. <i>Journal of Neuroscience</i> , <b>2008</b> , 28, 6818-25	6.6	34
58	Function and dysfunction of CNG channels: insights from channelopathies and mouse models. <i>Molecular Neurobiology</i> , <b>2007</b> , 35, 266-77	6.2	68
57	Contribution of the receptor guanylyl cyclase GC-D to chemosensory function in the olfactory epithelium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 14507-12	11.5	182
56	Direct inhibition of cardiac hyperpolarization-activated cyclic nucleotide-gated pacemaker channels by clonidine. <i>Circulation</i> , <b>2007</b> , 115, 872-80	16.7	38
55	Loss of CNGB1 protein leads to olfactory dysfunction and subciliary cyclic nucleotide-gated channel trapping. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 35156-66	5.4	69
54	Switching off calcium-dependent inactivation in L-type calcium channels by an autoinhibitory domain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2006</b> , 103, 15657-62	11.5	75
53	Synaptic plasticity in CNGA3(-/-) mice: cone bipolar cells react on the missing cone input and form ectopic synapses with rods. <i>Journal of Neuroscience</i> , <b>2006</b> , 26, 5248-55	6.6	91
52	The enhancement of HCN channel instantaneous current facilitated by slow deactivation is regulated by intracellular chloride concentration. <i>Pflugers Archiv European Journal of Physiology</i> , <b>2006</b> , 452, 718-27	4.6	20
51	Grating acuity at different luminances in wild-type mice and in mice lacking rod or cone function. <i>Investigative Ophthalmology and Visual Science</i> , <b>2005</b> , 46, 398-407		71
50	Impaired opsin targeting and cone photoreceptor migration in the retina of mice lacking the cyclic nucleotide-gated channel CNGA3. <i>Investigative Ophthalmology and Visual Science</i> , <b>2005</b> , 46, 1516-24		105
49	A novel mechanism of modulation of hyperpolarization-activated cyclic nucleotide-gated channels by Src kinase. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 34224-32	5.4	76

48	An arginine residue in the pore region is a key determinant of chloride dependence in cardiac pacemaker channels. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 13694-700	5.4	17
47	Impaired channel targeting and retinal degeneration in mice lacking the cyclic nucleotide-gated channel subunit CNGB1. <i>Journal of Neuroscience</i> , <b>2005</b> , 25, 130-8	6.6	124
46	International Union of Pharmacology. LI. Nomenclature and structure-function relationships of cyclic nucleotide-regulated channels. <i>Pharmacological Reviews</i> , <b>2005</b> , 57, 455-62	22.5	76
45	The murine HCN3 gene encodes a hyperpolarization-activated cation channel with slow kinetics and unique response to cyclic nucleotides. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 27056-61	5.4	78
44	Morphological characterization of the retina of the CNGA3(-/-)Rho(-/-) mutant mouse lacking functional cones and rods. <i>Investigative Ophthalmology and Visual Science</i> , <b>2004</b> , 45, 2039-48		72
43	Functional characterization of the L-type Ca <sup>2+</sup> channel Cav1.4alpha1 from mouse retina. <i>Investigative Ophthalmology and Visual Science</i> , <b>2004</b> , 45, 708-13		97
42	HCN Channels: From Genes to Function <b>2004</b> , 59-65		2
41	Residual photosensitivity in mice lacking both rod opsin and cone photoreceptor cyclic nucleotide gated channel 3 alpha subunit. <i>Visual Neuroscience</i> , <b>2004</b> , 21, 675-83	1.7	20
40	Cyclic Nucleotide-Regulated Cation Channels <b>2004</b> , 512-515		
39	International Union of Pharmacology. XLII. Compendium of voltage-gated ion channels: cyclic nucleotide-modulated channels. <i>Pharmacological Reviews</i> , <b>2003</b> , 55, 587-9	22.5	22
38	Molecular basis for the different activation kinetics of the pacemaker channels HCN2 and HCN4. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 33672-80	5.4	51
37	The hyperpolarization-activated channel HCN4 is required for the generation of pacemaker action potentials in the embryonic heart. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 15235-40	11.5	357
36	Absence epilepsy and sinus dysrhythmia in mice lacking the pacemaker channel HCN2. <i>EMBO Journal</i> , <b>2003</b> , 22, 216-24	13	389
35	Role of subunit heteromerization and N-linked glycosylation in the formation of functional hyperpolarization-activated cyclic nucleotide-gated channels. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 43781-6	5.4	139
34	Dominant-negative suppression of HCN channels markedly reduces the native pacemaker current I(f) and undermines spontaneous beating of neonatal cardiomyocytes. <i>Circulation</i> , <b>2003</b> , 107, 485-9	16.7	88
33	Cyclic Nucleotide-Regulated Cation Channels <b>2003</b> , 515-519		
32	Cardiac HCN channels: structure, function, and modulation. <i>Trends in Cardiovascular Medicine</i> , <b>2002</b> , 12, 206-12	6.9	188
31	Cellular expression and functional characterization of four hyperpolarization-activated pacemaker channels in cardiac and neuronal tissues. <i>FEBS Journal</i> , <b>2001</b> , 268, 1646-52		325

30	New views on RPE65 deficiency: the rod system is the source of vision in a mouse model of Leber congenital amaurosis. <i>Nature Genetics</i> , <b>2001</b> , 29, 70-4	36.3	207
29	Lack of an endothelial store-operated Ca <sup>2+</sup> current impairs agonist-dependent vasorelaxation in TRP4 <sup>-/-</sup> mice. <i>Nature Cell Biology</i> , <b>2001</b> , 3, 121-7	23.4	492
28	A single histidine residue determines the pH sensitivity of the pacemaker channel HCN2. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 6313-9	5.4	47
27	Differential and age-dependent expression of hyperpolarization-activated, cyclic nucleotide-gated cation channel isoforms 1-4 suggests evolving roles in the developing rat hippocampus. <i>Neuroscience</i> , <b>2001</b> , 106, 689-98	3.9	101
26	Molecular cloning and functional characterization of a new modulatory cyclic nucleotide-gated channel subunit from mouse retina. <i>Journal of Neuroscience</i> , <b>2000</b> , 20, 1324-32	6.6	104
25	Absence of the gamma subunit of the skeletal muscle dihydropyridine receptor increases L-type Ca <sup>2+</sup> currents and alters channel inactivation properties. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 14476-81	5.4	87
24	Mutations in the S4 domain of a pacemaker channel alter its voltage dependence. <i>FEBS Letters</i> , <b>2000</b> , 479, 35-40	3.8	38
23	Structure and function of cardiac pacemaker channels. <i>Cellular Physiology and Biochemistry</i> , <b>1999</b> , 9, 179-86	3.9	77
22	Selective loss of cone function in mice lacking the cyclic nucleotide-gated channel CNG3. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1999</b> , 96, 7553-7	11.5	239
21	Two pacemaker channels from human heart with profoundly different activation kinetics. <i>EMBO Journal</i> , <b>1999</b> , 18, 2323-9	13	313
20	Cyclic nucleotide gated channels. <i>Advances in Second Messenger and Phosphoprotein Research</i> , <b>1999</b> , 33, 231-50		17
19	Three amino acids in the C-linker are major determinants of gating in cyclic nucleotide-gated channels. <i>EMBO Journal</i> , <b>1998</b> , 17, 353-62	13	63
18	A family of hyperpolarization-activated mammalian cation channels. <i>Nature</i> , <b>1998</b> , 393, 587-91	50.4	775
17	Cyclic nucleotide-gated channels--mediators of NO:cGMP-regulated processes. <i>Naunyn-Schmiedeberg's Archives of Pharmacology</i> , <b>1998</b> , 358, 140-4	3.4	23
16	An isoform of the rod photoreceptor cyclic nucleotide-gated channel beta subunit expressed in olfactory neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1998</b> , 95, 4696-701	11.5	109
15	Molecular cloning of cyclic nucleotide-gated cation channel subunits from rat pineal gland. <i>Molecular Brain Research</i> , <b>1997</b> , 48, 171-5		26
14	Molecular cloning and expression of the Modulatory subunit of the cyclic nucleotide-gated cation channel. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 6349-55	5.4	59
13	Cyclic nucleotide-gated cation channels molecular diversity, structure, and cellular functions. <i>Trends in Cardiovascular Medicine</i> , <b>1996</b> , 6, 274-80	6.9	16

12	L-type calcium channel structure and function. <i>Developments in Cardiovascular Medicine</i> , <b>1996</b> , 63-69		
11	Molecular diversity of cyclic nucleotide-gated cation channels. <i>Naunyn-Schmiedeberg's Archives of Pharmacology</i> , <b>1995</b> , 353, 1-10	3.4	19
10	Expression of cyclic nucleotide-gated cation channels in non-sensory tissues and cells. <i>Neuropharmacology</i> , <b>1994</b> , 33, 1275-82	5.5	60
9	Another member of the cyclic nucleotide-gated channel family, expressed in testis, kidney, and heart. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1994</b> , 91, 3505-9	11.5	222
8	Tissue-specific expression of calcium channels. <i>Trends in Cardiovascular Medicine</i> , <b>1993</b> , 3, 48-53	6.9	30
7	Primary structure and functional expression of a cyclic nucleotide-gated channel from rabbit aorta. <i>FEBS Letters</i> , <b>1993</b> , 329, 134-8	3.8	143
6	Modulation of cardiac Ca <sup>2+</sup> channels in <i>Xenopus</i> oocytes by protein kinase C. <i>FEBS Letters</i> , <b>1992</b> , 306, 113-8	3.8	59
5	Tissue-specific expression of high-voltage-activated dihydropyridine-sensitive L-type calcium channels. <i>FEBS Journal</i> , <b>1991</b> , 200, 81-8		79
4	The roles of the subunits in the function of the calcium channel. <i>Science</i> , <b>1991</b> , 253, 1553-7	33.3	506
3	The cDNA and deduced amino acid sequence of the gamma subunit of the L-type calcium channel from rabbit skeletal muscle. <i>FEBS Letters</i> , <b>1990</b> , 267, 153-6	3.8	75
2	Primary structure and functional expression of a high voltage activated calcium channel from rabbit lung. <i>FEBS Letters</i> , <b>1990</b> , 269, 409-12	3.8	210
1	Primary structure of the beta subunit of the DHP-sensitive calcium channel from skeletal muscle. <i>Science</i> , <b>1989</b> , 245, 1115-8	33.3	330