

David E Clapham

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241
papers

43,805
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101
h-index

208
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266
ext. papers

48,102
ext. citations

17.8
avg, IF

7.83
L-index

#	Paper	IF	Citations
241	Calcium signaling. <i>Cell</i> , 2007 , 131, 1047-58	56.2	2756
240	Calcium signaling. <i>Cell</i> , 1995 , 80, 259-68	56.2	2229
239	TRP channels as cellular sensors. <i>Nature</i> , 2003 , 426, 517-24	50.4	2060
238	An introduction to TRP channels. <i>Annual Review of Physiology</i> , 2006 , 68, 619-47	23.1	1181
237	The beta gamma subunits of GTP-binding proteins activate the muscarinic K ⁺ channel in heart. <i>Nature</i> , 1987 , 325, 321-6	50.4	1067
236	The mitochondrial calcium uniporter is a highly selective ion channel. <i>Nature</i> , 2004 , 427, 360-4	50.4	1048
235	The TRP ion channel family. <i>Nature Reviews Neuroscience</i> , 2001 , 2, 387-96	13.5	907
234	Roles of G protein subunits in transmembrane signalling. <i>Nature</i> , 1988 , 333, 129-34	50.4	796
233	G protein beta gamma subunits. <i>Annual Review of Pharmacology and Toxicology</i> , 1997 , 37, 167-203	17.9	713
232	TRPV3 is a calcium-permeable temperature-sensitive cation channel. <i>Nature</i> , 2002 , 418, 181-6	50.4	682
231	A sperm ion channel required for sperm motility and male fertility. <i>Nature</i> , 2001 , 413, 603-9	50.4	672
230	New roles for G-protein beta gamma-dimers in transmembrane signalling. <i>Nature</i> , 1993 , 365, 403-6	50.4	648
229	TRPC6 is a glomerular slit diaphragm-associated channel required for normal renal function. <i>Nature Genetics</i> , 2005 , 37, 739-44	36.3	640
228	TRPC1 and TRPC5 form a novel cation channel in mammalian brain. <i>Neuron</i> , 2001 , 29, 645-55	13.9	635
227	TRP-PLIK, a bifunctional protein with kinase and ion channel activities. <i>Science</i> , 2001 , 291, 1043-7	33.3	593
226	A unified nomenclature for the superfamily of TRP cation channels. <i>Molecular Cell</i> , 2002 , 9, 229-31	17.6	525
225	Oregano, thyme and clove-derived flavors and skin sensitizers activate specific TRP channels. <i>Nature Neuroscience</i> , 2006 , 9, 628-35	25.5	470

224	A voltage-gated proton-selective channel lacking the pore domain. <i>Nature</i> , 2006 , 440, 1213-6	50.4	464
223	Rapid vesicular translocation and insertion of TRP channels. <i>Nature Cell Biology</i> , 2004 , 6, 709-20	23.4	450
222	Developmental origin of a bipotential myocardial and smooth muscle cell precursor in the mammalian heart. <i>Cell</i> , 2006 , 127, 1137-50	56.2	440
221	EMRE is an essential component of the mitochondrial calcium uniporter complex. <i>Science</i> , 2013 , 342, 1379-82	33.3	433
220	The TRPM7 channel is inactivated by PIP(2) hydrolysis. <i>Nature Cell Biology</i> , 2002 , 4, 329-36	23.4	432
219	Recombinant G-protein beta gamma-subunits activate the muscarinic-gated atrial potassium channel. <i>Nature</i> , 1994 , 368, 255-7	50.4	421
218	International Union of Basic and Clinical Pharmacology. LXXVI. Current progress in the mammalian TRP ion channel family. <i>Pharmacological Reviews</i> , 2010 , 62, 381-404	22.5	414
217	G-protein beta gamma-subunits activate the cardiac muscarinic K ⁺ -channel via phospholipase A2. <i>Nature</i> , 1989 , 337, 557-60	50.4	407
216	Genome-wide RNAi screen identifies Letm1 as a mitochondrial Ca ²⁺ /H ⁺ antiporter. <i>Science</i> , 2009 , 326, 144-7	33.3	398
215	A prokaryotic voltage-gated sodium channel. <i>Science</i> , 2001 , 294, 2372-5	33.3	390
214	Inositol 1,3,4,5-tetrakisphosphate activates an endothelial Ca ²⁺ -permeable channel. <i>Nature</i> , 1992 , 355, 356-8	50.4	389
213	TPC proteins are phosphoinositide-activated sodium-selective ion channels in endosomes and lysosomes. <i>Cell</i> , 2012 , 151, 372-83	56.2	379
212	All four CatSper ion channel proteins are required for male fertility and sperm cell hyperactivated motility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 1219-23	11.5	376
211	Crystal structure of an orthologue of the NaChBac voltage-gated sodium channel. <i>Nature</i> , 2012 , 486, 130-4	50.4	375
210	The NMDA receptor is coupled to the ERK pathway by a direct interaction between NR2B and RasGRF1. <i>Neuron</i> , 2003 , 40, 775-84	13.9	364
209	Molecular mechanisms of intracellular calcium excitability in <i>X. laevis</i> oocytes. <i>Cell</i> , 1992 , 69, 283-94	56.2	347
208	Formation of novel TRPC channels by complex subunit interactions in embryonic brain. <i>Journal of Biological Chemistry</i> , 2003 , 278, 39014-9	5.4	334
207	Phosphatidylinositol 3-kinase activates ERK in primary sensory neurons and mediates inflammatory heat hyperalgesia through TRPV1 sensitization. <i>Journal of Neuroscience</i> , 2004 , 24, 8300-9	6.6	332

206	New mammalian chloride channel identified by expression cloning. <i>Nature</i> , 1992 , 356, 238-41	50.4	330
205	Abnormal heart rate regulation in GIRK4 knockout mice. <i>Neuron</i> , 1998 , 20, 103-14	13.9	329
204	Whole-cell patch-clamp measurements of spermatozoa reveal an alkaline-activated Ca ²⁺ channel. <i>Nature</i> , 2006 , 439, 737-40	50.4	325
203	Primary cilia are specialized calcium signalling organelles. <i>Nature</i> , 2013 , 504, 311-4	50.4	317
202	CaT1 manifests the pore properties of the calcium-release-activated calcium channel. <i>Nature</i> , 2001 , 410, 705-9	50.4	313
201	Deletion of Trpm7 disrupts embryonic development and thymopoiesis without altering Mg ²⁺ homeostasis. <i>Science</i> , 2008 , 322, 756-60	33.3	310
200	International Union of Pharmacology. XLIX. Nomenclature and structure-function relationships of transient receptor potential channels. <i>Pharmacological Reviews</i> , 2005 , 57, 427-50	22.5	308
199	TRPC5 is a regulator of hippocampal neurite length and growth cone morphology. <i>Nature Neuroscience</i> , 2003 , 6, 837-45	25.5	308
198	CatSper1 required for evoked Ca ²⁺ entry and control of flagellar function in sperm. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 14864-8	11.5	296
197	Ion channels--basic science and clinical disease. <i>New England Journal of Medicine</i> , 1997 , 336, 1575-86	59.2	292
196	Camphor activates and strongly desensitizes the transient receptor potential vanilloid subtype 1 channel in a vanilloid-independent mechanism. <i>Journal of Neuroscience</i> , 2005 , 25, 8924-37	6.6	290
195	TRP ion channels in the nervous system. <i>Current Opinion in Neurobiology</i> , 2004 , 14, 362-9	7.6	275
194	mTOR regulates lysosomal ATP-sensitive two-pore Na ⁽⁺⁾ channels to adapt to metabolic state. <i>Cell</i> , 2013 , 152, 778-790	56.2	262
193	Rheotaxis guides mammalian sperm. <i>Current Biology</i> , 2013 , 23, 443-52	6.3	253
192	International Union of Pharmacology. XLI. Compendium of voltage-gated ion channels: potassium channels. <i>Pharmacological Reviews</i> , 2003 , 55, 583-6	22.5	247
191	A voltage-gated ion channel expressed specifically in spermatozoa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001 , 98, 12527-31	11.5	247
190	TRPV4 is a regulator of adipose oxidative metabolism, inflammation, and energy homeostasis. <i>Cell</i> , 2012 , 151, 96-110	56.2	243
189	The control of male fertility by spermatozoan ion channels. <i>Annual Review of Physiology</i> , 2012 , 74, 453-75	3.1	240

188	THE CONCISE GUIDE TO PHARMACOLOGY 2017/18: Overview. <i>British Journal of Pharmacology</i> , 2017 , 174 Suppl 1, S1-S16	8.6	231
187	Primary cilia are not calcium-responsive mechanosensors. <i>Nature</i> , 2016 , 531, 656-60	50.4	231
186	SynGAP-MUPP1-CaMKII synaptic complexes regulate p38 MAP kinase activity and NMDA receptor-dependent synaptic AMPA receptor potentiation. <i>Neuron</i> , 2004 , 43, 563-74	13.9	219
185	International Union of Pharmacology. LIV. Nomenclature and molecular relationships of inwardly rectifying potassium channels. <i>Pharmacological Reviews</i> , 2005 , 57, 509-26	22.5	217
184	The Concise Guide to PHARMACOLOGY 2015/16: Overview. <i>British Journal of Pharmacology</i> , 2015 , 172, 5729-43	8.6	207
183	Direct recording and molecular identification of the calcium channel of primary cilia. <i>Nature</i> , 2013 , 504, 315-8	50.4	206
182	International Union of Pharmacology. XLIII. Compendium of voltage-gated ion channels: transient receptor potential channels. <i>Pharmacological Reviews</i> , 2003 , 55, 591-6	22.5	206
181	TRP channel regulates EGFR signaling in hair morphogenesis and skin barrier formation. <i>Cell</i> , 2010 , 141, 331-43	56.2	205
180	Essential role for TRPC5 in amygdala function and fear-related behavior. <i>Cell</i> , 2009 , 137, 761-72	56.2	202
179	Functional TRPM7 channels accumulate at the plasma membrane in response to fluid flow. <i>Circulation Research</i> , 2006 , 98, 245-53	15.7	198
178	Evaluation of the role of I(KACh) in atrial fibrillation using a mouse knockout model. <i>Journal of the American College of Cardiology</i> , 2001 , 37, 2136-43	15.1	197
177	Hv1 proton channels are required for high-level NADPH oxidase-dependent superoxide production during the phagocyte respiratory burst. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 7642-7	11.5	192
176	Melanopsin signalling in mammalian iris and retina. <i>Nature</i> , 2011 , 479, 67-73	50.4	192
175	Molecular characterization of a swelling-induced chloride conductance regulatory protein, pICln. <i>Cell</i> , 1994 , 76, 439-48	56.2	192
174	G beta gamma binds directly to the G protein-gated K ⁺ channel, IKACH. <i>Journal of Biological Chemistry</i> , 1995 , 270, 29059-62	5.4	191
173	NMDA receptors amplify calcium influx into dendritic spines during associative pre- and postsynaptic activation. <i>Nature Neuroscience</i> , 1998 , 1, 114-8	25.5	185
172	Calcium release from the nucleus by InsP3 receptor channels. <i>Neuron</i> , 1995 , 14, 163-7	13.9	179
171	Subcellular patterns of calcium release determined by G protein-specific residues of muscarinic receptors. <i>Nature</i> , 1991 , 350, 505-8	50.4	179

170	CACNA1H mutations in autism spectrum disorders. <i>Journal of Biological Chemistry</i> , 2006 , 281, 22085-22094	13.9	168
169	Cloning of a <i>Xenopus laevis</i> inwardly rectifying K ⁺ channel subunit that permits GIRK1 expression of IKACH currents in oocytes. <i>Neuron</i> , 1996 , 16, 423-9	13.9	168
168	The TRPM7 ion channel functions in cholinergic synaptic vesicles and affects transmitter release. <i>Neuron</i> , 2006 , 52, 485-96	13.9	166
167	The voltage-gated proton channel Hv1 enhances brain damage from ischemic stroke. <i>Nature Neuroscience</i> , 2012 , 15, 565-73	25.5	165
166	Activating mutation in a mucolipin transient receptor potential channel leads to melanocyte loss in varitint-waddler mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 18321-6	11.5	165
165	A thermodynamic framework for understanding temperature sensing by transient receptor potential (TRP) channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 19492-7	11.5	164
164	The Structure of the Polycystic Kidney Disease Channel PKD2 in Lipid Nanodiscs. <i>Cell</i> , 2016 , 167, 763-773	6.1	157
163	A novel inward rectifier K ⁺ channel with unique pore properties. <i>Neuron</i> , 1998 , 20, 995-1005	13.9	154
162	KSper, a pH-sensitive K ⁺ current that controls sperm membrane potential. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 7688-92	11.5	154
161	Mammalian MagT1 and TUSC3 are required for cellular magnesium uptake and vertebrate embryonic development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 15750-5	11.5	150
160	Structurally distinct Ca(2 ⁺) signaling domains of sperm flagella orchestrate tyrosine phosphorylation and motility. <i>Cell</i> , 2014 , 157, 808-22	56.2	147
159	Transient receptor potential cation channel, subfamily C, member 5 (TRPC5) is a cold-transducer in the peripheral nervous system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 18114-9	11.5	146
158	TRPM1 forms ion channels associated with melanin content in melanocytes. <i>Science Signaling</i> , 2009 , 2, ra21	8.8	139
157	A superfamily of voltage-gated sodium channels in bacteria. <i>Journal of Biological Chemistry</i> , 2004 , 279, 9532-8	5.4	133
156	An aqueous H ⁺ permeation pathway in the voltage-gated proton channel Hv1. <i>Nature Structural and Molecular Biology</i> , 2010 , 17, 869-875	17.6	131
155	Phenotyping sensory nerve endings in vitro in the mouse. <i>Nature Protocols</i> , 2009 , 4, 174-96	18.8	128
154	A novel gene required for male fertility and functional CATSPER channel formation in spermatozoa. <i>Nature Communications</i> , 2011 , 2, 153	17.4	127
153	The cation selectivity filter of the bacterial sodium channel, NaChBac. <i>Journal of General Physiology</i> , 2002 , 120, 845-53	3.4	127

152	MCU encodes the pore conducting mitochondrial calcium currents. <i>ELife</i> , 2013 , 2, e00704	8.9	125
151	CatSperbeta, a novel transmembrane protein in the CatSper channel complex. <i>Journal of Biological Chemistry</i> , 2007 , 282, 18945-52	5.4	122
150	The channel kinase, TRPM7, is required for early embryonic development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, E225-33	11.5	120
149	Molecular dynamics of ion transport through the open conformation of a bacterial voltage-gated sodium channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 6364-9	11.5	119
148	Intracellular calcium strongly potentiates agonist-activated TRPC5 channels. <i>Journal of General Physiology</i> , 2009 , 133, 525-46	3.4	111
147	Bisandrographolide from <i>Andrographis paniculata</i> activates TRPV4 channels. <i>Journal of Biological Chemistry</i> , 2006 , 281, 29897-904	5.4	111
146	Molecular determinants for subcellular localization of PSD-95 with an interacting K ⁺ channel. <i>Neuron</i> , 1999 , 23, 149-57	13.9	107
145	SnapShot: mammalian TRP channels. <i>Cell</i> , 2007 , 129, 220	56.2	105
144	Targeted cytosolic delivery of cell-impermeable compounds by nanoparticle-mediated, light-triggered endosome disruption. <i>Nano Letters</i> , 2010 , 10, 2211-9	11.5	104
143	Calbindin-D28K dynamically controls TRPV5-mediated Ca ²⁺ transport. <i>EMBO Journal</i> , 2006 , 25, 2978-88	13	101
142	Ion channels that control fertility in mammalian spermatozoa. <i>International Journal of Developmental Biology</i> , 2008 , 52, 607-13	1.9	99
141	Brain localization and behavioral impact of the G-protein-gated K ⁺ channel subunit GIRK4. <i>Journal of Neuroscience</i> , 2000 , 20, 5608-15	6.6	99
140	Cleavage of TRPM7 releases the kinase domain from the ion channel and regulates its participation in Fas-induced apoptosis. <i>Developmental Cell</i> , 2012 , 22, 1149-62	10.2	98
139	Not so funny anymore: pacing channels are cloned. <i>Neuron</i> , 1998 , 21, 5-7	13.9	98
138	Prokaryotic NavMs channel as a structural and functional model for eukaryotic sodium channel antagonism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 8428-33	11.5	96
137	Functional reconstitution of the mitochondrial Ca ²⁺ /H ⁺ antiporter Letm1. <i>Journal of General Physiology</i> , 2014 , 143, 67-73	3.4	95
136	The TRPM7 chanzyme is cleaved to release a chromatin-modifying kinase. <i>Cell</i> , 2014 , 157, 1061-72	56.2	94
135	Nucleoplasmic and cytoplasmic differences in the fluorescence properties of the calcium indicator Fluo-3. <i>Cell Calcium</i> , 1997 , 21, 275-82	4	94

134	The voltage-gated Na ⁺ channel NaVBP has a role in motility, chemotaxis, and pH homeostasis of an alkaliphilic Bacillus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 10566-71	11.5	92
133	Specificity of receptor-G protein interactions: searching for the structure behind the signal. <i>Cellular Signalling</i> , 1993 , 5, 505-18	4.9	92
132	Number and stoichiometry of subunits in the native atrial G-protein-gated K ⁺ channel, IKACH. <i>Journal of Biological Chemistry</i> , 1998 , 273, 5271-8	5.4	89
131	Letm1, the mitochondrial Ca ²⁺ /H ⁺ antiporter, is essential for normal glucose metabolism and alters brain function in Wolf-Hirschhorn syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E2249-54	11.5	85
130	Functional and biochemical evidence for G-protein-gated inwardly rectifying K ⁺ (GIRK) channels composed of GIRK2 and GIRK3. <i>Journal of Biological Chemistry</i> , 2000 , 275, 36211-6	5.4	84
129	Citral sensing by Transient [corrected] receptor potential channels in dorsal root ganglion neurons. <i>PLoS ONE</i> , 2008 , 3, e2082	3.7	83
128	Real-time imaging of nuclear permeation by EGFP in single intact cells. <i>Biophysical Journal</i> , 2003 , 84, 1317-27	2.9	83
127	pICln inhibits snRNP biogenesis by binding core spliceosomal proteins. <i>Molecular and Cellular Biology</i> , 1999 , 19, 4113-20	4.8	83
126	POST, partner of stromal interaction molecule 1 (STIM1), targets STIM1 to multiple transporters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 19234-9	11.5	81
125	Identification of native atrial G-protein-regulated inwardly rectifying K ⁺ (GIRK4) channel homomultimers. <i>Journal of Biological Chemistry</i> , 1998 , 273, 27499-504	5.4	81
124	Conformational changes of the in situ nuclear pore complex. <i>Biophysical Journal</i> , 1999 , 77, 241-7	2.9	81
123	CatSper ¹ regulates the structural continuity of sperm Ca signaling domains and is required for normal fertility. <i>ELife</i> , 2017 , 6,	8.9	79
122	Correction for Sah et al., Ion channel-kinase TRPM7 is required for maintaining cardiac automaticity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 6528-6528	11.5	78
121	TRPM7 facilitates cholinergic vesicle fusion with the plasma membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 8304-8	11.5	78
120	Evidence for direct physical association between a K ⁺ channel (Kir6.2) and an ATP-binding cassette protein (SUR1) which affects cellular distribution and kinetic behavior of an ATP-sensitive K ⁺ channel. <i>Molecular and Cellular Biology</i> , 1998 , 18, 1652-9	4.8	78
119	The K ⁺ channel inward rectifier subunits form a channel similar to neuronal G protein-gated K ⁺ channel. <i>FEBS Letters</i> , 1996 , 379, 31-7	3.8	78
118	Calcium waves. <i>Current Opinion in Neurobiology</i> , 1993 , 3, 375-82	7.6	78
117	Structure of the mouse TRPC4 ion channel. <i>Nature Communications</i> , 2018 , 9, 3102	17.4	76

116	Evolutionary genomics reveals lineage-specific gene loss and rapid evolution of a sperm-specific ion channel complex: CatSpers and CatSperbeta. <i>PLoS ONE</i> , 2008 , 3, e3569	3.7	76
115	Molecular basis of ion permeability in a voltage-gated sodium channel. <i>EMBO Journal</i> , 2016 , 35, 820-30	13	76
114	Caspase-11 controls interleukin-1 β release through degradation of TRPC1. <i>Cell Reports</i> , 2014 , 6, 1122-1128	10.6	73
113	Ion channel-kinase TRPM7 is required for maintaining cardiac automaticity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E3037-46	11.5	73
112	GIRK4 confers appropriate processing and cell surface localization to G-protein-gated potassium channels. <i>Journal of Biological Chemistry</i> , 1999 , 274, 2571-82	5.4	73
111	Ancestral Ca ²⁺ signaling machinery in early animal and fungal evolution. <i>Molecular Biology and Evolution</i> , 2012 , 29, 91-100	8.3	72
110	Fundamental Ca ²⁺ signaling mechanisms in mouse dendritic cells: CRAC is the major Ca ²⁺ entry pathway. <i>Journal of Immunology</i> , 2001 , 166, 6126-33	5.3	72
109	G-protein regulation of ion channels. <i>Current Opinion in Neurobiology</i> , 1995 , 5, 278-85	7.6	71
108	TRP is cracked but is CRAC TRP?. <i>Neuron</i> , 1996 , 16, 1069-72	13.9	71
107	Timing of myocardial trpm7 deletion during cardiogenesis variably disrupts adult ventricular function, conduction, and repolarization. <i>Circulation</i> , 2013 , 128, 101-14	16.7	70
106	Gbeta binding to GIRK4 subunit is critical for G protein-gated K ⁺ channel activation. <i>Journal of Biological Chemistry</i> , 1998 , 273, 16946-52	5.4	69
105	The G protein beta gamma subunit transduces the muscarinic receptor signal for Ca ²⁺ release in <i>Xenopus</i> oocytes. <i>Journal of Biological Chemistry</i> , 1995 , 270, 30068-74	5.4	67
104	Chloride channels in the nuclear membrane. <i>Journal of Membrane Biology</i> , 1991 , 123, 49-54	2.3	67
103	Mitochondrial calcium uniporter regulator 1 (MCUR1) regulates the calcium threshold for the mitochondrial permeability transition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E1872-80	11.5	66
102	Decreased anxiety-like behavior and G β /11-dependent responses in the amygdala of mice lacking TRPC4 channels. <i>Journal of Neuroscience</i> , 2014 , 34, 3653-67	6.6	66
101	Detailed comparison of expressed and native voltage-gated proton channel currents. <i>Journal of Physiology</i> , 2008 , 586, 2477-86	3.9	66
100	Structure of the mammalian TRPM7, a magnesium channel required during embryonic development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E8201-E8210	11.5	63
99	Mutations in G protein-linked receptors: novel insights on disease. <i>Cell</i> , 1993 , 75, 1237-9	56.2	63

98	Nuclear calcium and the regulation of the nuclear pore complex. <i>BioEssays</i> , 1997 , 19, 787-92	4.1	62
97	Polycystin-2 is an essential ion channel subunit in the primary cilium of the renal collecting duct epithelium. <i>ELife</i> , 2018 , 7,	8.9	62
96	Role of the C-terminal domain in the structure and function of tetrameric sodium channels. <i>Nature Communications</i> , 2013 , 4, 2465	17.4	59
95	The list of potential volume-sensitive chloride currents continues to swell (and shrink). <i>Journal of General Physiology</i> , 1998 , 111, 623-4	3.4	58
94	Structure of full-length human TRPM4. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 2377-2382	11.5	56
93	The G-protein-gated K ⁺ channel, IK _{ACh} , is required for regulation of pacemaker activity and recovery of resting heart rate after sympathetic stimulation. <i>Journal of General Physiology</i> , 2013 , 142, 113-26	3.4	56
92	TRPM7, the Mg ²⁺ inhibited channel and kinase. <i>Advances in Experimental Medicine and Biology</i> , 2011 , 704, 173-83	3.6	56
91	Calcium release and influx colocalize to the endoplasmic reticulum. <i>Current Biology</i> , 1997 , 7, 599-602	6.3	55
90	Calcium regulation of nuclear pore permeability. <i>Cell Calcium</i> , 1998 , 23, 91-101	4	54
89	Sorting out MIC, TRP, and CRAC ion channels. <i>Journal of General Physiology</i> , 2002 , 120, 217-20	3.4	54
88	TRPV3 channels mediate strontium-induced mouse-egg activation. <i>Cell Reports</i> , 2013 , 5, 1375-86	10.6	51
87	TRPM7 senses oxidative stress to release Zn from unique intracellular vesicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E6079-E6088	11.5	51
86	A spontaneous, recurrent mutation in divalent metal transporter-1 exposes a calcium entry pathway. <i>PLoS Biology</i> , 2004 , 2, E50	9.7	50
85	Calcium wave propagation by calcium-induced calcium release: an unusual excitable system. <i>Bulletin of Mathematical Biology</i> , 1993 , 55, 315-44	2.1	49
84	Development of electrical coupling and action potential synchrony between paired aggregates of embryonic heart cells. <i>Journal of Membrane Biology</i> , 1979 , 51, 75-96	2.3	48
83	Insights into the early evolution of animal calcium signaling machinery: a unicellular point of view. <i>Cell Calcium</i> , 2015 , 57, 166-73	4	47
82	Calpain cleaves and activates the TRPC5 channel to participate in semaphorin 3A-induced neuronal growth cone collapse. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 7888-92	11.5	47
81	ATP-activated P2X2 current in mouse spermatozoa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 14342-7	11.5	47

80	A switch mechanism for G beta gamma activation of I(KACh). <i>Journal of Biological Chemistry</i> , 2000 , 275, 29709-16	5-4	47
79	Functional expression and characterization of G-protein-gated inwardly rectifying K ⁺ channels containing GIRK3. <i>Journal of Membrane Biology</i> , 1999 , 169, 123-9	2-3	47
78	The cardiac inward rectifier K ⁺ channel subunit, CIR, does not comprise the ATP-sensitive K ⁺ channel, IKATP. <i>Journal of Biological Chemistry</i> , 1995 , 270, 28777-9	5-4	47
77	Mechanism of persistent protein kinase D1 translocation and activation. <i>Developmental Cell</i> , 2003 , 4, 561-74	10.2	45
76	pICln binds to a mammalian homolog of a yeast protein involved in regulation of cell morphology. <i>Journal of Biological Chemistry</i> , 1998 , 273, 10811-4	5-4	45
75	Active nuclear import and export is independent of luminal Ca ²⁺ stores in intact mammalian cells. <i>Journal of General Physiology</i> , 1999 , 113, 239-48	3-4	45
74	Cryo-EM structure of TRPC5 at 2.8-Å resolution reveals unique and conserved structural elements essential for channel function. <i>Science Advances</i> , 2019 , 5, eaaw7935	14.3	42
73	Analysis of the selectivity filter of the voltage-gated sodium channel Na(v)Rh. <i>Cell Research</i> , 2013 , 23, 409-22	24.7	42
72	International Union of Pharmacology. L. Nomenclature and structure-function relationships of CatSper and two-pore channels. <i>Pharmacological Reviews</i> , 2005 , 57, 451-4	22.5	42
71	Controlled delivery of bioactive molecules into live cells using the bacterial mechanosensitive channel MscL. <i>Nature Communications</i> , 2012 , 3, 990	17.4	41
70	Cardiac chloride channels. <i>Trends in Cardiovascular Medicine</i> , 1993 , 3, 23-8	6.9	40
69	Simultaneous knockout of Slo3 and CatSper1 abolishes all alkalization- and voltage-activated current in mouse spermatozoa. <i>Journal of General Physiology</i> , 2013 , 142, 305-13	3-4	39
68	The Stoichiometry of Gbeta gamma binding to G-protein-regulated inwardly rectifying K ⁺ channels (GIRKs). <i>Journal of Biological Chemistry</i> , 2001 , 276, 11409-13	5-4	38
67	TATA-binding protein (TBP)-like factor (TLF) is a functional regulator of transcription: reciprocal regulation of the neurofibromatosis type 1 and c-fos genes by TLF/TRF2 and TBP. <i>Molecular and Cellular Biology</i> , 2005 , 25, 2632-43	4.8	37
66	TRP channels and mice deficient in TRP channels. <i>Pflugers Archiv European Journal of Physiology</i> , 2005 , 451, 11-8	4.6	36
65	Signal transduction. Hot and cold TRP ion channels. <i>Science</i> , 2002 , 295, 2228-9	33.3	35
64	Therapeutic restoration of spinal inhibition via druggable enhancement of potassium-chloride cotransporter KCC2-mediated chloride extrusion in peripheral neuropathic pain. <i>JAMA Neurology</i> , 2014 , 71, 640-5	17.2	33
63	Distinct ion channel classes are expressed on the outer nuclear envelope of T- and B-lymphocyte cell lines. <i>Biophysical Journal</i> , 2000 , 79, 202-14	2.9	33

62	Voltage-activated k channels in embryonic chick heart. <i>Biophysical Journal</i> , 1984 , 45, 40-2	2.9	33
61	Cryo-EM structure of the polycystin 2-l1 ion channel. <i>ELife</i> , 2018 , 7,	8.9	31
60	Gbetagamma binding increases the open time of IKACH: kinetic evidence for multiple Gbetagamma binding sites. <i>Biophysical Journal</i> , 1999 , 76, 246-52	2.9	31
59	Signal transduction through G proteins in the cardiac myocyte. <i>Trends in Cardiovascular Medicine</i> , 1992 , 2, 6-11	6.9	31
58	Somatostatin activates an inwardly rectifying K ⁺ channel in neonatal rat atrial cells. <i>Pflugers Archiv European Journal of Physiology</i> , 1989 , 414, 492-4	4.6	31
57	Early evolution of the eukaryotic Ca ²⁺ signaling machinery: conservation of the CatSper channel complex. <i>Molecular Biology and Evolution</i> , 2014 , 31, 2735-40	8.3	27
56	Atypical calcium regulation of the PKD2-L1 polycystin ion channel. <i>ELife</i> , 2016 , 5,	8.9	27
55	Leucine-rich repeat containing 8A (LRRC8A)-dependent volume-regulated anion channel activity is dispensable for T-cell development and function. <i>Journal of Allergy and Clinical Immunology</i> , 2017 , 140, 1651-1659.e1	11.5	26
54	Ionic selectivity and thermal adaptations within the voltage-gated sodium channel family of alkaliphilic Bacillus. <i>ELife</i> , 2014 , 3,	8.9	26
53	Ion channels and calcium signaling in motile cilia. <i>ELife</i> , 2015 , 4,	8.9	26
52	Progress in ciliary ion channel physiology. <i>Journal of General Physiology</i> , 2017 , 149, 37-47	3.4	25
51	Anion-sensitive fluorophore identifies the Drosophila swell-activated chloride channel in a genome-wide RNA interference screen. <i>PLoS ONE</i> , 2012 , 7, e46865	3.7	25
50	Histone phosphorylation by TRPM6 β cleaved kinase attenuates adjacent arginine methylation to regulate gene expression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E7092-E7100	11.5	24
49	Modified herpes simplex virus delivery of enhanced GFP into the central nervous system. <i>Journal of Neuroscience Methods</i> , 2002 , 121, 211-9	3	24
48	How to lose your hippocampus by working on chloride channels. <i>Neuron</i> , 2001 , 29, 1-3	13.9	24
47	Structure, G protein activation, and functional relevance of the cardiac G protein-gated K ⁺ channel, IKACH. <i>Annals of the New York Academy of Sciences</i> , 1999 , 868, 386-98	6.5	24
46	Intracellular calcium waves. <i>Advances in Second Messenger and Phosphoprotein Research</i> , 1995 , 30, 1-24		24
45	Isomeric Tuning Yields Bright and Targetable Red Ca Indicators. <i>Journal of the American Chemical Society</i> , 2019 , 141, 13734-13738	16.4	23

44	The voltage-gated Na ⁺ channel NaVBP co-localizes with methyl-accepting chemotaxis protein at cell poles of alkaliphilic <i>Bacillus pseudofirmus</i> OF4. <i>Microbiology (United Kingdom)</i> , 2007 , 153, 4027-4038 ^{2.9}		23
43	Structural characterization of the mouse Girk genes. <i>Gene</i> , 2002 , 284, 241-50	3.8	23
42	Alpha-helical distorting substitution disrupt coupling between m3 muscarinic receptor and G proteins. <i>FEBS Letters</i> , 1993 , 324, 103-8	3.8	22
41	Partial structure, chromosome localization, and expression of the mouse Girk4 gene. <i>Genomics</i> , 1997 , 40, 395-401	4.3	21
40	Sperm patch-clamp. <i>Methods in Enzymology</i> , 2013 , 525, 59-83	1.7	20
39	ICln is essential for cellular and early embryonic viability. <i>Journal of Biological Chemistry</i> , 2000 , 275, 12363-6	3.6	20
38	Employing NaChBac for cryo-EM analysis of toxin action on voltage-gated Na channels in nanodisc. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14187-14193 ^{11.5}		16
37	Arachidonic acid and its metabolites in the regulation of G-protein gated K ⁺ channels in atrial myocytes. <i>Biochemical Pharmacology</i> , 1990 , 39, 813-5	6	16
36	Intracellular signalling: more jobs for G beta gamma. <i>Current Biology</i> , 1996 , 6, 814-6	6.3	15
35	Structural biology: Pain-sensing TRPA1 channel resolved. <i>Nature</i> , 2015 , 520, 439-41	50.4	12
34	Intracellular regulation of ion channels in cell membranes. <i>Mayo Clinic Proceedings</i> , 1990 , 65, 1127-43	6.4	12
33	Odontoblast TRPC5 channels signal cold pain in teeth. <i>Science Advances</i> , 2021 , 7,	14.3	12
32	Unlocking family secrets: K ⁺ channel transmembrane domains. <i>Cell</i> , 1999 , 97, 547-50	56.2	11
31	The theoretical small signal impedance of the frog node, <i>Rana pipiens</i> . <i>Pflugers Archiv European Journal of Physiology</i> , 1976 , 366, 273-6	4.6	11
30	Small signal impedance of heart cell membranes. <i>Journal of Membrane Biology</i> , 1982 , 67, 63-71	2.3	10
29	Structure and Function of G-Protein β subunit 1990 , 41-61		9
28	The MUPP1-SynGAPalpha protein complex does not mediate activity-induced LTP. <i>Molecular and Cellular Neurosciences</i> , 2008 , 38, 183-8	4.8	8
27	International Union of Pharmacology: Approaches to the Nomenclature of Voltage-Gated Ion Channels. <i>Pharmacological Reviews</i> , 2003 , 55, 573-574	22.5	8

26	Symmetry, selectivity, and the 2003 Nobel Prize. <i>Cell</i> , 2003 , 115, 641-6	56.2	8
25	G protein opening of K ⁺ channels. <i>Nature</i> , 1987 , 327, 22-22	50.4	8
24	Naturally Produced Defensive Alkenal Compounds Activate TRPA1. <i>Chemical Senses</i> , 2016 , 41, 281-92	4.8	6
23	Outstanding questions regarding the permeation, selectivity, and regulation of the mitochondrial calcium uniporter. <i>Biochemical and Biophysical Research Communications</i> , 2014 , 449, 367-9	3.4	6
22	Partial structure, chromosome localization, and expression of the mouse Icln gene. <i>Genomics</i> , 1997 , 40, 402-8	4.3	6
21	Simultaneous near ultraviolet and visible excitation confocal microscopy of calcium transients in <i>Xenopus</i> oocytes. <i>Methods in Cell Biology</i> , 1994 , 40, 263-84	1.8	6
20	Sperm BerserKers. <i>ELife</i> , 2013 , 2, e01469	8.9	6
19	Structure of the mouse TRPC4 ion channel		6
18	Intracellular Signaling and Regulation of Cardiac Ion Channels 2004 , 33-41		5
17	The Fungal Sexual Pheromone Sirenin Activates the Human CatSper Channel Complex. <i>ACS Chemical Biology</i> , 2016 , 11, 452-9	4.9	4
16	The mother of all endocytosis. <i>ELife</i> , 2013 , 2, e01738	8.9	3
15	Cryo-EM structure of the receptor-activated TRPC5 ion channel at 2.9 angstrom resolution		3
14	Author response: CatSper1 regulates the structural continuity of sperm Ca ²⁺ signaling domains and is required for normal fertility 2017 ,		2
13	Excitability and Conduction 2001 , 311-335		1
12	Chapter 16 G-Protein-Gated Potassium Channels: Implication for the weaver Mouse. <i>Current Topics in Membranes</i> , 1999 , 46, 295-320	2.2	1
11	Simultaneous Ultraviolet and Visible Wavelength Confocal Microscopy 1994 , 95-100		1
10	Intercellular Coupling between Embryonic Heart Cell Aggregates. <i>Developments in Cardiovascular Medicine</i> , 1982 , 265-281		1
9	Recording Electrical Currents across the Plasma Membrane of Mammalian Sperm Cells. <i>Journal of Visualized Experiments</i> , 2021 ,	1.6	1

- 8 Touch channels sense blood pressure. *Neuron*, **1998**, 21, 1224-6 13.9 ○
- 7 Influences: Short circuits. *Journal of General Physiology*, **2018**, 150, 513-515 3.4 ○
- 6 Mechanisms of Transmembrane Signaling **1997**, 689-742
- 5 Near-membrane protein dynamics revealed by evanescent field microscopy **2004**, 5467, 326
- 4 G-protein-mediated pathways assayed by electrophysiology and confocal microscopy. *Methods in Enzymology*, **1994**, 238, 321-35 1.7
- 3 Reply. *Trends in Cardiovascular Medicine*, **1993**, 3, 114 6.9
- 2 Primary cilia and other mysteries. *Proceedings for Annual Meeting of the Japanese Pharmacological Society*, **2019**, 92, 3-SL10 ○
- 1 Feeling the heat: Temperature sensing by ion channels [How do they do it?]. *Biochemist*, **2011**, 33, 22-25 0.5