Brian K Kobilka

List of Publications by Year in Descending Order

260 papers	45,138 citations	100 h-index	212 g-index
281 ext. papers	51,058 ext. citations	17.7 avg, IF	7.46 L-index

#	Paper	IF	Citations
260	Atypical structural snapshots of human cytomegalovirus GPCR interactions with host G proteins.. *Science Advances*, **2022**, 8, eabl5442	14.3	0
259	Structural determinants of dual incretin receptor agonism by tirzepatide.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2116506119	11.5	0
258	Cannabinoid receptor 1 antagonist genistein attenuates marijuana-induced vascular inflammation.. *Cell*, **2022**,	56.2	5
257	Structures of active melanocortin-4 receptor-Gs-protein complexes with NDP-MSH and setmelanotide. *Cell Research*, **2021**, 31, 1176-1189	24.7	5
256	Chemical Synthesis of a Full-Length G-Protein-Coupled Receptor Adrenergic Receptor with Defined Modification Patterns at the C-Terminus. *Journal of the American Chemical Society*, **2021**, 143, 17566-17576	16.4	5
255	G-protein activation by a metabotropic glutamate receptor. *Nature*, **2021**, 595, 450-454	50.4	24
254	Crystal structure of dopamine D1 receptor in complex with G protein and a non-catechol agonist. *Nature Communications*, **2021**, 12, 3305	17.4	8
253	Structural basis for the constitutive activity and immunomodulatory properties of the Epstein-Barr virus-encoded G protein-coupled receptor BILF1. *Immunity*, **2021**, 54, 1405-1416.e7	32.3	3
252	Conformationally flexible core-bearing detergents with a hydrophobic or hydrophilic pendant: Effect of pendant polarity on detergent conformation and membrane protein stability. *Acta Biomaterialia*, **2021**, 128, 393-407	10.8	4
251	Binding pathway determines norepinephrine selectivity for the human AR over AR. *Cell Research*, **2021**, 31, 569-579	24.7	23
250	Maltose-bis(hydroxymethyl)phenol (MBPs) and Maltose-tris(hydroxymethyl)phenol (MTPs) Amphiphiles for Membrane Protein Stability. *ACS Chemical Biology*, **2021**, 16, 1779-1790	4.9	0
249	How GPCR Phosphorylation Patterns Orchestrate Arrestin-Mediated Signaling. *Cell*, **2020**, 183, 1813-1825.e18	36.2	35
248	Diastereomeric Cyclopentane-Based Maltosides (CPMs) as Tools for Membrane Protein Study. *Journal of the American Chemical Society*, **2020**, 142, 21382-21392	16.4	0
247	An allosteric modulator binds to a conformational hub in the adrenergic receptor. *Nature Chemical Biology*, **2020**, 16, 749-755	11.7	16
246	New Malonate-Derived Tetraglucoside Detergents for Membrane Protein Stability. *ACS Chemical Biology*, **2020**, 15, 1697-1707	4.9	1
245	Pendant-bearing glucose-neopentyl glycol (P-GNG) amphiphiles for membrane protein manipulation: Importance of detergent pendant chain for protein stabilization. *Acta Biomaterialia*, **2020**, 112, 250-261	10.8	5
244	Activation of the adrenoceptor by the sedative sympatholytic dexmedetomidine. *Nature Chemical Biology*, **2020**, 16, 507-512	11.7	20

243	Time-resolved Conformational Analysis during GPCR-Gs Coupling. *Proceedings for Annual Meeting of the Japanese Pharmacological Society*, **2020**, 93, 3-S28-3	0	0
242	Structure and selectivity engineering of the M muscarinic receptor toxin complex. *Science*, **2020**, 369, 161-167	33.3	13
241	Structure of the neurotensin receptor 1 in complex with β-arrestin 1. *Nature*, **2020**, 579, 303-308	50.4	124
240	Structures of G-Proteins in Complex with Their Chaperone Reveal Quality Control Mechanisms. *Cell Reports*, **2020**, 30, 3699-3709.e6	10.6	4
239	Structural insights into the subtype-selective antagonist binding to the M2 muscarinic receptor. *Proceedings for Annual Meeting of the Japanese Pharmacological Society*, **2020**, 93, 3-P-359	0	
238	Viewing rare conformations of the β-adrenergic receptor with pressure-resolved DEER spectroscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 31824-31831	11.5	13
237	Structural basis for GLP-1 receptor activation by LY3502970, an orally active nonpeptide agonist. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 29959-29967	11.5	19
236	Structural insights into probe-dependent positive allosterism of the GLP-1 receptor. *Nature Chemical Biology*, **2020**, 16, 1105-1110	11.7	22
235	Structural insights into differences in G protein activation by family A and family B GPCRs. *Science*, **2020**, 369,	33.3	36
234	Analysis of A-R-G and A-R-G complex formation by NMR spectroscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 23096-23105	11.5	16
233	Asymmetric maltose neopentyl glycol amphiphiles for a membrane protein study: effect of detergent asymmetricity on protein stability. *Chemical Science*, **2019**, 10, 1107-1116	9.4	18
232	Structural insights into the activation of metabotropic glutamate receptors. *Nature*, **2019**, 566, 79-84	50.4	148
231	An improved yeast surface display platform for the screening of nanobody immune libraries. *Scientific Reports*, **2019**, 9, 382	4.9	37
230	Conformational transitions of a neurotensin receptor-1-G-complex. *Nature*, **2019**, 572, 80-85	50.4	110
229	Structural Insights into the Process of GPCR-G Protein Complex Formation. *Cell*, **2019**, 177, 1243-1251.e12	56.2	61
228	Assembly of a GPCR-G Protein Complex. *Cell*, **2019**, 177, 1232-1242.e11	56.2	88
227	Structures of the M1 and M2 muscarinic acetylcholine receptor/G-protein complexes. *Science*, **2019**, 364, 552-557	33.3	130
226	Conformational Complexity and Dynamics in a Muscarinic Receptor Revealed by NMR Spectroscopy. *Molecular Cell*, **2019**, 75, 53-65.e7	17.6	31

225	Selective modulation of the cannabinoid type 1 (CB) receptor as an emerging platform for the treatment of neuropathic pain. *MedChemComm*, **2019**, 10, 647-659	5	11
224	Trehalose-cored amphiphiles for membrane protein stabilization: importance of the detergent micelle size in GPCR stability. *Organic and Biomolecular Chemistry*, **2019**, 17, 3249-3257	3.9	8
223	Self-Assembly Behaviors of a Penta-Phenylene Maltoside and Its Application for Membrane Protein Study. *Chemistry - an Asian Journal*, **2019**, 14, 1926-1931	4.5	5
222	Diverse GPCRs exhibit conserved water networks for stabilization and activation. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 3288-3293	11.5	71
221	Conformational Plasticity of Human Protease-Activated Receptor 1 upon Antagonist- and Agonist-Binding. *Structure*, **2019**, 27, 1517-1526.e3	5.2	6
220	Conformationally Restricted Monosaccharide-Cored Glycoside Amphiphiles: The Effect of Detergent Headgroup Variation on Membrane Protein Stability. *ACS Chemical Biology*, **2019**, 14, 1717-1726	4.9	2
219	Saving the Endangered Physician-Scientist - A Plan for Accelerating Medical Breakthroughs. *New England Journal of Medicine*, **2019**, 381, 399-402	59.2	53
218	Mechanism of [illegible]AR regulation by an intracellular positive allosteric modulator. *Science*, **2019**, 364, 1283-1287	33.3	36
217	Self-Assembly Behavior and Application of Terphenyl-Cored Trimaltosides for Membrane-Protein Studies: Impact of Detergent Hydrophobic Group Geometry on Protein Stability. *Chemistry - A European Journal*, **2019**, 25, 11545-11554	4.8	4
216	Negative Allosteric Modulation of Arrestin Recruitment to the [illegible]-Adrenergic Receptor. *FASEB Journal*, **2019**, 33, 503.15	0.9	0
215	1,3,5-Triazine-Cored Maltoside Amphiphiles for Membrane Protein Extraction and Stabilization. *Journal of the American Chemical Society*, **2019**, 141, 19677-19687	16.4	7
214	Structure of a Signaling Cannabinoid Receptor 1-G Protein Complex. *Cell*, **2019**, 176, 448-458.e12	56.2	196
213	Angiotensin Analogs with Divergent Bias Stabilize Distinct Receptor Conformations. *Cell*, **2019**, 176, 468-478.e11	56.2	104
212	Steroid-Based Amphiphiles for Membrane Protein Study: The Importance of Alkyl Spacers for Protein Stability. *ChemBioChem*, **2018**, 19, 1433-1443	3.8	2
211	Structure-based discovery of selective positive allosteric modulators of antagonists for the M muscarinic acetylcholine receptor. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E2419-E2428	11.5	38
210	Structure and dynamics of GPCR signaling complexes. *Nature Structural and Molecular Biology*, **2018**, 25, 4-12	17.6	370
209	Structural Properties of the Human Protease-Activated Receptor 1 Changing by a Strong Antagonist. *Structure*, **2018**, 26, 829-838.e4	5.2	6
208	Vitamin E-based glycoside amphiphiles for membrane protein structural studies. *Organic and Biomolecular Chemistry*, **2018**, 16, 2489-2498	3.9	4

207	Rationally Engineered Tandem Facial Amphiphiles for Improved Membrane Protein Stabilization Efficacy. *ChemBioChem*, **2018**, 19, 2225-2232	3.8	2
206	Single Proteoliposome High-Content Analysis Reveals Differences in the Homo-Oligomerization of GPCRs. *Biophysical Journal*, **2018**, 115, 300-312	2.9	11
205	An Engineered Lithocholate-Based Facial Amphiphile Stabilizes Membrane Proteins: Assessing the Impact of Detergent Customizability on Protein Stability. *Chemistry - A European Journal*, **2018**, 24, 9860-9868	4.8	9
204	Structure of the δ-opioid receptor-G protein complex. *Nature*, **2018**, 558, 547-552	50.4	321
203	The Molecular Basis of G Protein-Coupled Receptor Activation. *Annual Review of Biochemistry*, **2018**, 87, 897-919	29.1	389
202	A comparative study of branched and linear mannitol-based amphiphiles on membrane protein stability. *Analyst, The*, **2018**, 143, 5702-5710	5	1
201	Structural insights into the subtype-selective antagonist binding to the M muscarinic receptor. *Nature Chemical Biology*, **2018**, 14, 1150-1158	11.7	39
200	Structure-guided development of selective M3 muscarinic acetylcholine receptor antagonists. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 12046-12050	11.5	39
199	Structural insights into binding specificity, efficacy and bias of a δOR partial agonist. *Nature Chemical Biology*, **2018**, 14, 1059-1066	11.7	96
198	Development of an antibody fragment that stabilizes GPCR/G-protein complexes. *Nature Communications*, **2018**, 9, 3712	17.4	68
197	Structural mechanisms of selectivity and gating in anion channelrhodopsins. *Nature*, **2018**, 561, 349-354	50.4	48
196	Crystal structure of the natural anion-conducting channelrhodopsin GtACR1. *Nature*, **2018**, 561, 343-348	50.4	55
195	Conformationally Preorganized Diastereomeric Norbornane-Based Maltosides for Membrane Protein Study: Implications of Detergent Kink for Micellar Properties. *Journal of the American Chemical Society*, **2017**, 139, 3072-3081	16.4	32
194	Crystal structure of the adenosine A receptor bound to an antagonist reveals a potential allosteric pocket. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 2066-2071	11.5	87
193	Structural and Functional Analysis of a β-Adrenergic Receptor Complex with GRK5. *Cell*, **2017**, 169, 407-421.e16	56.2	99
192	Phase-plate cryo-EM structure of a class B GPCR-G-protein complex. *Nature*, **2017**, 546, 118-123	50.4	334
191	Single-molecule analysis of ligand efficacy in βAR-G-protein activation. *Nature*, **2017**, 547, 68-73	50.4	164
190	Cryo-EM structure of the activated GLP-1 receptor in complex with a G protein. *Nature*, **2017**, 546, 248-253	50.4	344

189	Resorcinarene-Based Facial Glycosides: Implication of Detergent Flexibility on Membrane-Protein Stability. *Chemistry - A European Journal*, **2017**, 23, 6724-6729	4.8	17
188	Nanobodies to Study G Protein-Coupled Receptor Structure and Function. *Annual Review of Pharmacology and Toxicology*, **2017**, 57, 19-37	17.9	138
187	Dendronic trimaltoside amphiphiles (DTMs) for membrane protein study. *Chemical Science*, **2017**, 8, 8315-8324	9.4	15
186	New penta-saccharide-bearing tripod amphiphiles for membrane protein structure studies. *Analyst, The*, **2017**, 142, 3889-3898	5	7
185	The cubicon method for concentrating membrane proteins in the cubic mesophase. *Nature Protocols*, **2017**, 12, 1745-1762	18.8	23
184	Mechanism of intracellular allosteric β2AR antagonist revealed by X-ray crystal structure. *Nature*, **2017**, 548, 480-484	50.4	100
183	Tandem malonate-based glucosides (TMGs) for membrane protein structural studies. *Scientific Reports*, **2017**, 7, 3963	4.9	8
182	Butane-1,2,3,4-tetraol-based amphiphilic stereoisomers for membrane protein study: importance of chirality in the linker region. *Chemical Science*, **2017**, 8, 1169-1177	9.4	8
181	Structure-based discovery of opioid analgesics with reduced side effects. *Nature*, **2016**, 537, 185-190	50.4	547
180	Isomeric Detergent Comparison for Membrane Protein Stability: Importance of Inter-Alkyl-Chain Distance and Alkyl Chain Length. *ChemBioChem*, **2016**, 17, 2334-2339	3.8	12
179	Allosteric nanobodies reveal the dynamic range and diverse mechanisms of G-protein-coupled receptor activation. *Nature*, **2016**, 535, 448-52	50.4	205
178	Mesitylene-Cored Glucoside Amphiphiles (MGAs) for Membrane Protein Studies: Importance of Alkyl Chain Density in Detergent Efficacy. *Chemistry - A European Journal*, **2016**, 22, 18833-18839	4.8	11
177	High-density grids for efficient data collection from multiple crystals. *Acta Crystallographica Section D: Structural Biology*, **2016**, 72, 2-11	5.5	52
176	Allosteric coupling from G protein to the agonist-binding pocket in GPCRs. *Nature*, **2016**, 535, 182-6	50.4	155
175	Allosteric regulation of G protein-coupled receptor activity by phospholipids. *Nature Chemical Biology*, **2016**, 12, 35-9	11.7	183
174	In meso in situ serial X-ray crystallography of soluble and membrane proteins at cryogenic temperatures. *Acta Crystallographica Section D: Structural Biology*, **2016**, 72, 93-112	5.5	80
173	Crystal structures of the M1 and M4 muscarinic acetylcholine receptors. *Nature*, **2016**, 531, 335-40	50.4	211
172	Highly Branched Pentasaccharide-Bearing Amphiphiles for Membrane Protein Studies. *Journal of the American Chemical Society*, **2016**, 138, 3789-96	16.4	46

171	Accessible Mannitol-Based Amphiphiles (MNAs) for Membrane Protein Solubilisation and Stabilisation. *Chemistry - A European Journal*, **2016**, 22, 7068-73	4.8	26
170	Propagation of conformational changes during μ-opioid receptor activation. *Nature*, **2015**, 524, 375-8	50.4	173
169	Structural insights into μ-opioid receptor activation. *Nature*, **2015**, 524, 315-21	50.4	558
168	Imaging G protein-coupled receptors while quantifying their ligand-binding free-energy landscape. *Nature Methods*, **2015**, 12, 845-851	21.6	84
167	SIGNAL TRANSDUCTION. Structural basis for nucleotide exchange in heterotrimeric G proteins. *Science*, **2015**, 348, 1361-5	33.3	174
166	Effective application of bicelles for conformational analysis of G protein-coupled receptors by hydrogen/deuterium exchange mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **2015**, 26, 808-817	3.5	45
165	Structural Insights into the Dynamic Process of β2-Adrenergic Receptor Signaling. *Cell*, **2015**, 161, 1101-1111	31.2	409
164	Novel Xylene-Linked Maltoside Amphiphiles (XMAs) for Membrane Protein Stabilisation. *Chemistry - A European Journal*, **2015**, 21, 10008-13	4.8	14
163	Identifying and quantifying two ligand-binding sites while imaging native human membrane receptors by AFM. *Nature Communications*, **2015**, 6, 8857	17.4	53
162	Muscarinic acetylcholine receptor X-ray structures: potential implications for drug development. *Current Opinion in Pharmacology*, **2014**, 16, 24-30	5.1	30
161	A general protocol for the generation of Nanobodies for structural biology. *Nature Protocols*, **2014**, 9, 674-93	18.8	380
160	Modified T4 Lysozyme Fusion Proteins Facilitate G Protein-Coupled Receptor Crystallogenesis. *Structure*, **2014**, 22, 1657-64	5.2	89
159	Goniometer-based femtosecond crystallography with X-ray free electron lasers. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 17122-7	11.5	105
158	Nanoscale high-content analysis using compositional heterogeneities of single proteoliposomes. *Nature Methods*, **2014**, 11, 931-4	21.6	50
157	Visualization of arrestin recruitment by a G-protein-coupled receptor. *Nature*, **2014**, 512, 218-222	50.4	349
156	Novel insights into M3 muscarinic acetylcholine receptor physiology and structure. *Journal of Molecular Neuroscience*, **2014**, 53, 316-23	3.3	16
155	Regulation of β2-adrenergic receptor function by conformationally selective single-domain intrabodies. *Molecular Pharmacology*, **2014**, 85, 472-81	4.3	97
154	The role of protein dynamics in GPCR function: insights from the β2AR and rhodopsin. *Current Opinion in Cell Biology*, **2014**, 27, 136-43	9	172

153	Muscarinic acetylcholine receptors: novel opportunities for drug development. *Nature Reviews Drug Discovery*, **2014**, 13, 549-60	64.1	245
152	Development and characterization of pepducins as Gs-biased allosteric agonists. *Journal of Biological Chemistry*, **2014**, 289, 35668-84	5.4	56
151	Covalent agonists for studying G protein-coupled receptor activation. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 10744-8	11.5	69
150	Activation and allosteric modulation of a muscarinic acetylcholine receptor. *Nature*, **2013**, 504, 101-6	50.4	639
149	Adrenaline-activated structure of 2-adrenoceptor stabilized by an engineered nanobody. *Nature*, **2013**, 502, 575-579	50.4	337
148	The dynamic process of (2)-adrenergic receptor activation. *Cell*, **2013**, 152, 532-42	56.2	589
147	Novel tripod amphiphiles for membrane protein analysis. *Chemistry - A European Journal*, **2013**, 19, 15645-51	4.8	35
146	Glucose-neopentyl glycol (GNG) amphiphiles for membrane protein study. *Chemical Communications*, **2013**, 49, 2287-9	5.8	67
145	Structure of active arrestin-1 bound to a G-protein-coupled receptor phosphopeptide. *Nature*, **2013**, 497, 137-41	50.4	310
144	Identification of GPCR-interacting cytosolic proteins using HDL particles and mass spectrometry-based proteomic approach. *PLoS ONE*, **2013**, 8, e54942	3.7	21
143	The role of ligands on the equilibria between functional states of a G protein-coupled receptor. *Journal of the American Chemical Society*, **2013**, 135, 9465-74	16.4	128
142	The structural basis of G-protein-coupled receptor signaling (Nobel Lecture). *Angewandte Chemie - International Edition*, **2013**, 52, 6380-8	16.4	130
141	Muscarinic receptors as model targets and antitargets for structure-based ligand discovery. *Molecular Pharmacology*, **2013**, 84, 528-40	4.3	49
140	Applications of molecular replacement to G protein-coupled receptors. *Acta Crystallographica Section D: Biological Crystallography*, **2013**, 69, 2287-92		3
139	Brian Kobilka: chipping away at the 2-adrenergic receptor. Interview by Ruth Williams. *Circulation Research*, **2013**, 112, 1538-41	15.7	1
138	Die strukturelle Grundlage der Signaltransduktion mit G-Protein-gekoppelten Rezeptoren (Nobel-Aufsatz). *Angewandte Chemie*, **2013**, 125, 6508-6517	3.6	12
137	Crystal structure of active Beta-arrestin1 bound to phosphorylated carboxy-terminus of a G protein-coupled receptor. *FASEB Journal*, **2013**, 27, lb549	0.9	
136	Structural insights into the dynamic process of G-protein-coupled receptor activation. *FASEB Journal*, **2013**, 27, 323.1	0.9	1

135	High-resolution crystal structure of human protease-activated receptor 1. *Nature*, **2012**, 492, 387-92	50.4	353
134	Structure of the human M2 muscarinic acetylcholine receptor bound to an antagonist. *Nature*, **2012**, 482, 547-51	50.4	625
133	Ligand-specific interactions modulate kinetic, energetic, and mechanical properties of the human β2 adrenergic receptor. *Structure*, **2012**, 20, 1391-402	5.2	79
132	Role of detergents in conformational exchange of a G protein-coupled receptor. *Journal of Biological Chemistry*, **2012**, 287, 36305-11	5.4	75
131	Structure-based drug screening for G-protein-coupled receptors. *Trends in Pharmacological Sciences*, **2012**, 33, 268-72	13.2	229
130	N-terminal T4 lysozyme fusion facilitates crystallization of a G protein coupled receptor. *PLoS ONE*, **2012**, 7, e46039	3.7	99
129	Structure of the δ-opioid receptor bound to naltrindole. *Nature*, **2012**, 485, 400-4	50.4	538
128	Crystal structure of the κ-opioid receptor bound to a morphinan antagonist. *Nature*, **2012**, 485, 321-6	50.4	1003
127	Structure and dynamics of the M3 muscarinic acetylcholine receptor. *Nature*, **2012**, 482, 552-6	50.4	613
126	A new era of GPCR structural and chemical biology. *Nature Chemical Biology*, **2012**, 8, 670-3	11.7	160
125	A new class of amphiphiles bearing rigid hydrophobic groups for solubilization and stabilization of membrane proteins. *Chemistry - A European Journal*, **2012**, 18, 9485-90	4.8	87
124	Inside Cover: A New Class of Amphiphiles Bearing Rigid Hydrophobic Groups for Solubilization and Stabilization of Membrane Proteins (Chem. Eur. J. 31/2012). *Chemistry - A European Journal*, **2012**, 18, 9434-9434	4.8	
123	Cholesterol increases kinetic, energetic, and mechanical stability of the human β2-adrenergic receptor. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E3463-72	11.5	121
122	Crystal structure of the β2 adrenergic receptor-Gs protein complex. *Nature*, **2011**, 477, 549-55	50.4	2228
121	Structural insights into adrenergic receptor function and pharmacology. *Trends in Pharmacological Sciences*, **2011**, 32, 213-8	13.2	139
120	Structure of a nanobody-stabilized active state of the β(2) adrenoceptor. *Nature*, **2011**, 469, 175-80	50.4	1299
119	Structure and function of an irreversible agonist-β(2) adrenoceptor complex. *Nature*, **2011**, 469, 236-40	50.4	664
118	Conformational dynamics of single G protein-coupled receptors in solution. *Journal of Physical Chemistry B*, **2011**, 115, 13328-38	3.4	81

117	Conformational changes in the G protein Gs induced by the 2 adrenergic receptor. *Nature*, **2011**, 477, 611-5	50.4	295
116	Structural flexibility of the G alpha s alpha-helical domain in the beta2-adrenoceptor Gs complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 16086-91	11.5	180
115	Regulation of G-protein coupled receptor traffic by an evolutionary conserved hydrophobic signal. *Traffic*, **2010**, 11, 560-78	5.7	32
114	Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor. *Nature*, **2010**, 463, 108-12	50.4	393
113	Maltose-neopentyl glycol (MNG) amphiphiles for solubilization, stabilization and crystallization of membrane proteins. *Nature Methods*, **2010**, 7, 1003-8	21.6	316
112	Tandem facial amphiphiles for membrane protein stabilization. *Journal of the American Chemical Society*, **2010**, 132, 16750-2	16.4	77
111	Energy landscapes as a tool to integrate GPCR structure, dynamics, and function. *Physiology*, **2010**, 25, 293-303	9.8	194
110	A device for separated and reversible co-culture of cardiomyocytes. *Biotechnology Progress*, **2010**, 26, 1164-71	2.8	3
109	The effect of ligand efficacy on the formation and stability of a GPCR-G protein complex. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 9501-6	11.5	186
108	Structure-based discovery of beta2-adrenergic receptor ligands. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 6843-8	11.5	265
107	Ligand-regulated oligomerization of beta(2)-adrenoceptors in a model lipid bilayer. *EMBO Journal*, **2009**, 28, 3315-28	13	157
106	The structure and function of G-protein-coupled receptors. *Nature*, **2009**, 459, 356-63	50.4	1583
105	A Microsecond Time Scale Molecular Dynamics Simulation of B2AR in a Membrane. *Biophysical Journal*, **2009**, 96, 340a	2.9	2
104	Signaling from beta1- and beta2-adrenergic receptors is defined by differential interactions with PDE4. *EMBO Journal*, **2008**, 27, 384-93	13	134
103	New G-protein-coupled receptor crystal structures: insights and limitations. *Trends in Pharmacological Sciences*, **2008**, 29, 79-83	13.2	203
102	Structure and Dynamics of the Human beta 2 Adrenoceptor. *FASEB Journal*, **2008**, 22, 539.1	0.9	
101	Evolutionarily conserved trafficking signal within the alpha2c adrenergic receptor restricts plasma membrane expression. *FASEB Journal*, **2008**, 22, 727.1	0.9	
100	A monoclonal antibody for G protein-coupled receptor crystallography. *Nature Methods*, **2007**, 4, 927-9	21.6	111

99	Dosage-dependent switch from G protein-coupled to G protein-independent signaling by a GPCR. *EMBO Journal*, **2007**, 26, 53-64	13	91
98	Crystal structure of the human beta2 adrenergic G-protein-coupled receptor. *Nature*, **2007**, 450, 383-7	50.4	1650
97	High-resolution crystal structure of an engineered human beta2-adrenergic G protein-coupled receptor. *Science*, **2007**, 318, 1258-65	33.3	2776
96	A monomeric G protein-coupled receptor isolated in a high-density lipoprotein particle efficiently activates its G protein. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 7682-7	11.5	540
95	Structure and conformational changes in the C-terminal domain of the beta2-adrenoceptor: insights from fluorescence resonance energy transfer studies. *Journal of Biological Chemistry*, **2007**, 282, 13895-905	5.4	133
94	N-ethylmaleimide-sensitive factor regulates beta2 adrenoceptor trafficking and signaling in cardiomyocytes. *Molecular Pharmacology*, **2007**, 72, 429-39	4.3	17
93	Conformational complexity of G-protein-coupled receptors. *Trends in Pharmacological Sciences*, **2007**, 28, 397-406	13.2	578
92	Functional selectivity and classical concepts of quantitative pharmacology. *Journal of Pharmacology and Experimental Therapeutics*, **2007**, 320, 1-13	4.7	870
91	G protein coupled receptor structure and activation. *Biochimica Et Biophysica Acta - Biomembranes*, **2007**, 1768, 794-807	3.8	395
90	Organization of beta-adrenoceptor signaling compartments by sympathetic innervation of cardiac myocytes. *Journal of Cell Biology*, **2007**, 176, 521-33	7.3	83
89	Counting low-copy number proteins in a single cell. *Science*, **2007**, 315, 81-4	33.3	328
88	Activation of G protein-coupled receptors. *Advances in Protein Chemistry*, **2007**, 74, 137-66		61
87	GPCR engineering yields high-resolution structural insights into beta2-adrenergic receptor function. *Science*, **2007**, 318, 1266-73	33.3	1173
86	Phospholipid biotinylation of polydimethylsiloxane (PDMS) for protein immobilization. *Lab on A Chip*, **2006**, 6, 369-73	7.2	33
85	Differential targeting and function of alpha2A and alpha2C adrenergic receptor subtypes in cultured sympathetic neurons. *Neuropharmacology*, **2006**, 51, 397-413	5.5	26
84	PDZ-domain arrays for identifying components of GPCR signaling complexes. *Trends in Pharmacological Sciences*, **2006**, 27, 509-11	13.2	5
83	Coupling ligand structure to specific conformational switches in the beta2-adrenoceptor **2006**, 2, 417-22		280
82	A fluorescent probe designed for studying protein conformational change. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 965-70	11.5	95

81	Phosphodiesterase 4D is required for beta2 adrenoceptor subtype-specific signaling in cardiac myocytes. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 909-14	11.5	100
80	Probing the beta2 adrenoceptor binding site with catechol reveals differences in binding and activation by agonists and partial agonists. *Journal of Biological Chemistry*, **2005**, 280, 22165-71	5.4	216
79	Sequential binding of agonists to the beta2 adrenoceptor. Kinetic evidence for intermediate conformational states. *Journal of Biological Chemistry*, **2004**, 279, 686-91	5.4	285
78	Agonist binding: a multistep process. *Molecular Pharmacology*, **2004**, 65, 1060-2	4.3	49
77	Myocyte adrenoceptor signaling pathways. *Science*, **2003**, 300, 1530-2	33.3	173
76	Identification of an allosteric binding site for Zn2+ on the beta2 adrenergic receptor. *Journal of Biological Chemistry*, **2003**, 278, 352-6	5.4	71
75	The PDZ-binding motif of the beta2-adrenoceptor is essential for physiologic signaling and trafficking in cardiac myocytes. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 10776-81	11.5	77
74	The third intracellular loop and the carboxyl terminus of beta2-adrenergic receptor confer spontaneous activity of the receptor. *Molecular Pharmacology*, **2003**, 64, 1048-58	4.3	28
73	Antithetic regulation by beta-adrenergic receptors of Gq receptor signaling via phospholipase C underlies the airway beta-agonist paradox. *Journal of Clinical Investigation*, **2003**, 112, 619-26	15.9	94
72	Linkage of β1-adrenergic stimulation to apoptotic heart cell death through protein kinase A independent activation of Ca2+/calmodulin kinase II. *Journal of Clinical Investigation*, **2003**, 111, 617-625	15.9	310
71	Mutation of the alpha2A-adrenoceptor impairs working memory performance and annuls cognitive enhancement by guanfacine. *Journal of Neuroscience*, **2002**, 22, 8771-7	6.6	167
70	Functional immobilization of a ligand-activated G-protein-coupled receptor. *ChemBioChem*, **2002**, 3, 993-8	3.8	57
69	Skeletal muscle hypertrophy and anti-atrophy effects of clenbuterol are mediated by the beta2-adrenergic receptor. *Muscle and Nerve*, **2002**, 25, 729-734	3.4	121
68	The ectodomain of the luteinizing hormone receptor interacts with exoloop 2 to constrain the transmembrane region: studies using chimeric human and fly receptors. *Journal of Biological Chemistry*, **2002**, 277, 3958-64	5.4	53
67	The PDZ binding motif of the beta 1 adrenergic receptor modulates receptor trafficking and signaling in cardiac myocytes. *Journal of Biological Chemistry*, **2002**, 277, 33783-90	5.4	80
66	Use of fluorescence spectroscopy to study conformational changes in the beta 2-adrenoceptor. *Methods in Enzymology*, **2002**, 343, 170-82	1.7	22
65	Heterozygous alpha 2A-adrenergic receptor mice unveil unique therapeutic benefits of partial agonists. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 12471-6	11.5	55
64	Allosteric modulation of beta2-adrenergic receptor by Zn(2+). *Molecular Pharmacology*, **2002**, 61, 65-72	4.3	89

63	Analysis of biomolecular interactions using a miniaturized surface plasmon resonance sensor. *Analytical Chemistry*, **2002**, 74, 4570-6	7.8	48
62	betaAR signaling required for diet-induced thermogenesis and obesity resistance. *Science*, **2002**, 297, 843-5	33.3	633
61	Efficient adenylyl cyclase activation by a beta2-adrenoceptor-G(i)alpha2 fusion protein. *Biochemical and Biophysical Research Communications*, **2002**, 298, 824-8	3.4	11
60	Caveolar localization dictates physiologic signaling of beta 2-adrenoceptors in neonatal cardiac myocytes. *Journal of Biological Chemistry*, **2002**, 277, 34280-6	5.4	187
59	Differential distribution of beta-adrenergic receptor subtypes in blood vessels of knockout mice lacking beta(1)- or beta(2)-adrenergic receptors. *Molecular Pharmacology*, **2001**, 60, 955-62	4.3	85
58	A genetically engineered cell-based biosensor for functional classification of agents. *Biosensors and Bioelectronics*, **2001**, 16, 571-7	11.8	49
57	Functionally different agonists induce distinct conformations in the G protein coupling domain of the beta 2 adrenergic receptor. *Journal of Biological Chemistry*, **2001**, 276, 24433-6	5.4	319
56	Antinociceptive action of nitrous oxide is mediated by stimulation of noradrenergic neurons in the brainstem and activation of [alpha]2B adrenoceptors. *Journal of Neuroscience*, **2000**, 20, 9242-51	6.6	121
55	Spontaneous activation of beta(2)- but not beta(1)-adrenoceptors expressed in cardiac myocytes from beta(1)beta(2) double knockout mice. *Molecular Pharmacology*, **2000**, 58, 887-94	4.3	51
54	Activation of the luteinizing hormone receptor following substitution of Ser-277 with selective hydrophobic residues in the ectodomain hinge region. *Journal of Biological Chemistry*, **2000**, 275, 30264-71	5.4	82
53	The effect of pH on beta(2) adrenoceptor function. Evidence for protonation-dependent activation. *Journal of Biological Chemistry*, **2000**, 275, 3121-7	5.4	81
52	beta 2-adrenergic receptor-induced p38 MAPK activation is mediated by protein kinase A rather than by Gi or gbeta gamma in adult mouse cardiomyocytes. *Journal of Biological Chemistry*, **2000**, 275, 40635-40	5.4	97
51	Cell-type specific targeting of the alpha 2c-adrenoceptor. Evidence for the organization of receptor microdomains during neuronal differentiation of PC12 cells. *Journal of Biological Chemistry*, **2000**, 275, 35424-31	5.4	47
50	Reply. *Trends in Pharmacological Sciences*, **2000**, 21, 83-4	13.2	2
49	Abnormal regulation of the sympathetic nervous system in alpha2A-adrenergic receptor knockout mice. *Molecular Pharmacology*, **1999**, 56, 154-61	4.3	271
48	Role of the alpha2B-adrenergic receptor in the development of salt-induced hypertension. *Hypertension*, **1999**, 33, 14-7	8.5	99
47	Targeted disruption of the beta2 adrenergic receptor gene. *Journal of Biological Chemistry*, **1999**, 274, 16694-700	5.4	255
46	Cardiovascular and metabolic alterations in mice lacking both beta1- and beta2-adrenergic receptors. *Journal of Biological Chemistry*, **1999**, 274, 16701-8	5.4	208

45	Two functionally distinct alpha2-adrenergic receptors regulate sympathetic neurotransmission. *Nature*, **1999**, 402, 181-4	50.4	426
44	Examining the efficiency of receptor/G-protein coupling with a cleavable beta2-adrenoceptor-gsalpha fusion protein. *FEBS Journal*, **1999**, 260, 661-6		28
43	Restricting the mobility of Gs alpha: impact on receptor and effector coupling. *Biochemistry*, **1999**, 38, 13801-9	3.2	18
42	ERK plays a regulatory role in induction of LTP by theta frequency stimulation and its modulation by beta-adrenergic receptors. *Neuron*, **1999**, 24, 715-26	13.9	279
41	GPCR-Galpha fusion proteins: molecular analysis of receptor-G-protein coupling. *Trends in Pharmacological Sciences*, **1999**, 20, 383-9	13.2	123
40	Effects of guanine, inosine, and xanthine nucleotides on beta(2)-adrenergic receptor/G(s) interactions: evidence for multiple receptor conformations. *Molecular Pharmacology*, **1999**, 56, 348-58	4.3	105
39	Reconstitution of beta2-adrenoceptor-GTP-binding-protein interaction in Sf9 cells--high coupling efficiency in a beta2-adrenoceptor-G(s alpha) fusion protein. *FEBS Journal*, **1998**, 255, 369-82		89
38	Neuropeptide Y receptor 1 (NPY-Y1) expression in human heart failure and heart transplantation. *Journal of the Autonomic Nervous System*, **1998**, 70, 84-91		11
37	Examination of ligand-induced conformational changes in the beta2 adrenergic receptor. *Life Sciences*, **1998**, 62, 1509-12	6.8	6
36	G protein-coupled receptors. II. Mechanism of agonist activation. *Journal of Biological Chemistry*, **1998**, 273, 17979-82	5.4	446
35	Insights from in vivo modification of adrenergic receptor gene expression. *Annual Review of Pharmacology and Toxicology*, **1998**, 38, 351-73	17.9	69
34	G protein-coupled receptors: functional and mechanistic insights through altered gene expression. *Physiological Reviews*, **1998**, 78, 35-52	47.9	101
33	Alpha2C-adrenoceptor-overexpressing mice are impaired in executing nonspatial and spatial escape strategies. *Molecular Pharmacology*, **1998**, 54, 569-76	4.3	42
32	Adrenergic alpha2C-receptors modulate the acoustic startle reflex, prepulse inhibition, and aggression in mice. *Journal of Neuroscience*, **1998**, 18, 3035-42	6.6	154
31	Alterations in dynamic heart rate control in the beta 1-adrenergic receptor knockout mouse. *American Journal of Physiology - Heart and Circulatory Physiology*, **1998**, 274, H1184-93	5.2	39
30	Different Effects of Gs Splice Variants on -Adrenoreceptor-mediated Signaling. *Journal of Biological Chemistry*, **1998**, 273, 5109a-5116	5.4	1
29	Derivation of functional antagonists using N-terminal extracellular domain of gonadotropin and thyrotropin receptors. *Molecular Endocrinology*, **1997**, 11, 1659-68		53
28	Structural instability of a constitutively active G protein-coupled receptor. Agonist-independent activation due to conformational flexibility. *Journal of Biological Chemistry*, **1997**, 272, 2587-90	5.4	238

27	A novel interaction between adrenergic receptors and the alpha-subunit of eukaryotic initiation factor 2B. *Journal of Biological Chemistry*, **1997**, 272, 19099-102	5.4	61
26	Subtype-specific intracellular trafficking of alpha2-adrenergic receptors. *Molecular Pharmacology*, **1997**, 51, 711-20	4.3	170
25	Co-expression of defective luteinizing hormone receptor fragments partially reconstitutes ligand-induced signal generation. *Journal of Biological Chemistry*, **1997**, 272, 25006-12	5.4	71
24	Genetic alteration of alpha 2C-adrenoceptor expression in mice: influence on locomotor, hypothermic, and neurochemical effects of dexmedetomidine, a subtype-nonselective alpha 2-adrenoceptor agonist. *Molecular Pharmacology*, **1997**, 51, 36-46	4.3	140
23	Intracellular trafficking of angiotensin II and its AT1 and AT2 receptors: evidence for selective sorting of receptor and ligand. *Molecular Endocrinology*, **1997**, 11, 1266-77		203
22	Gene targeting homing in on 2-adrenoceptor-subtype function. *Trends in Pharmacological Sciences*, **1997**, 18, 211-219	13.2	278
21	Site-specific fluorescence labeling of the beta2 adrenergic receptor amino terminus. *Analytical Biochemistry*, **1997**, 254, 88-95	3.1	10
20	Ligand stabilization of the beta 2 adrenergic receptor: effect of DTT on receptor conformation monitored by circular dichroism and fluorescence spectroscopy. *Biochemistry*, **1996**, 35, 14445-51	3.2	26
19	Transmembrane regions V and VI of the human luteinizing hormone receptor are required for constitutive activation by a mutation in the third intracellular loop. *Journal of Biological Chemistry*, **1996**, 271, 22470-8	5.4	91
18	Arrangement of transmembrane domains in adrenergic receptors. Similarity to bacteriorhodopsin. *Journal of Biological Chemistry*, **1996**, 271, 2387-9	5.4	66
17	Behavioural and cardiovascular effects of disrupting the angiotensin II type-2 receptor in mice. *Nature*, **1995**, 377, 744-7	50.4	668
16	Fluorescent labeling of purified beta 2 adrenergic receptor. Evidence for ligand-specific conformational changes. *Journal of Biological Chemistry*, **1995**, 270, 28268-75	5.4	239
15	[15] Receptor chimers. *Methods in Neurosciences*, **1995**, 25, 278-301		1
14	Genetic models of human vascular disease. *Circulation*, **1995**, 91, 521-31	16.7	18
13	Linkage mapping of alpha-2 adrenergic receptor genes to mouse chromosomes 2 and 5. *Mammalian Genome*, **1993**, 4, 650-5	3.2	
12	Cloning, characterization, and expression of two angiotensin receptor (AT-1) isoforms from the mouse genome. *Biochemical and Biophysical Research Communications*, **1992**, 185, 253-9	3.4	259
11	Cloning and expression of the mouse homolog of the human alpha 2-C2 adrenergic receptor. *Biochemical and Biophysical Research Communications*, **1992**, 186, 1280-7	3.4	26
10	Molecular and cellular biology of adrenergic receptors. *Trends in Cardiovascular Medicine*, **1991**, 1, 189-94	6.9	5

9	The new biology of drug receptors. *Biochemical Pharmacology*, **1989**, 38, 2941-8	6	31
8	Removal of phosphorylation sites from the beta 2-adrenergic receptor delays onset of agonist-promoted desensitization. *Nature*, **1988**, 333, 370-3	50.4	413
7	The genomic clone G-21 which resembles a beta-adrenergic receptor sequence encodes the 5-HT1A receptor. *Nature*, **1988**, 335, 358-60	50.4	583
6	Cloning of the cDNA and genes for the hamster and human beta 2-adrenergic receptors. *Journal of Receptors and Signal Transduction*, **1988**, 8, 7-21		13
5	Human beta 1- and beta 2-adrenergic receptors: structurally and functionally related receptors derived from distinct genes. *Trends in Neurosciences*, **1988**, 11, 321-4	13.3	34
4	An intronless gene encoding a potential member of the family of receptors coupled to guanine nucleotide regulatory proteins. *Nature*, **1987**, 329, 75-9	50.4	489
3	Cloning of the gene and cDNA for mammalian beta-adrenergic receptor and homology with rhodopsin. *Nature*, **1986**, 321, 75-9	50.4	1175
2	Adrenergic receptors and rhodopsin: shedding new light on an old subject. *Trends in Pharmacological Sciences*, **1986**, 7, 444-448	13.2	28
1	Structures of active melanocortin-4 receptor–Gs-protein complexes with NDP-MSH and setmelanotide		4