Brian K Kobilka

List of Publications by Citations

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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	High-resolution crystal structure of an engineered human beta2-adrenergic G protein-coupled receptor. *Science*, **2007**, 318, 1258-65	33.3	2776
259	Crystal structure of the □ adrenergic receptor-Gs protein complex. *Nature*, **2011**, 477, 549-55	50.4	2228
258	Crystal structure of the human beta2 adrenergic G-protein-coupled receptor. *Nature*, **2007**, 450, 383-7	50.4	1650
257	The structure and function of G-protein-coupled receptors. *Nature*, **2009**, 459, 356-63	50.4	1583
256	Structure of a nanobody-stabilized active state of the (□) adrenoceptor. *Nature*, **2011**, 469, 175-80	50.4	1299
255	Cloning of the gene and cDNA for mammalian beta-adrenergic receptor and homology with rhodopsin. *Nature*, **1986**, 321, 75-9	50.4	1175
254	GPCR engineering yields high-resolution structural insights into beta2-adrenergic receptor function. *Science*, **2007**, 318, 1266-73	33.3	1173
253	Crystal structure of the □-opioid receptor bound to a morphinan antagonist. *Nature*, **2012**, 485, 321-6	50.4	1003
252	Functional selectivity and classical concepts of quantitative pharmacology. *Journal of Pharmacology and Experimental Therapeutics*, **2007**, 320, 1-13	4.7	870
251	Behavioural and cardiovascular effects of disrupting the angiotensin II type-2 receptor in mice. *Nature*, **1995**, 377, 744-7	50.4	668
250	Structure and function of an irreversible agonist-(□) adrenoceptor complex. *Nature*, **2011**, 469, 236-40	50.4	664
249	Activation and allosteric modulation of a muscarinic acetylcholine receptor. *Nature*, **2013**, 504, 101-6	50.4	639
248	betaAR signaling required for diet-induced thermogenesis and obesity resistance. *Science*, **2002**, 297, 843-5	33.3	633
247	Structure of the human M2 muscarinic acetylcholine receptor bound to an antagonist. *Nature*, **2012**, 482, 547-51	50.4	625
246	Structure and dynamics of the M3 muscarinic acetylcholine receptor. *Nature*, **2012**, 482, 552-6	50.4	613
245	The dynamic process of (□)-adrenergic receptor activation. *Cell*, **2013**, 152, 532-42	56.2	589
244	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

243	Conformational complexity of G-protein-coupled receptors. *Trends in Pharmacological Sciences*, **2007**, 28, 397-406	13.2	578
242	Structural insights into μ-opioid receptor activation. *Nature*, **2015**, 524, 315-21	50.4	558
241	Structure-based discovery of opioid analgesics with reduced side effects. *Nature*, **2016**, 537, 185-190	50.4	547
240	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
239	Structure of the δ-opioid receptor bound to naltrindole. *Nature*, **2012**, 485, 400-4	50.4	538
238	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
237	G protein-coupled receptors. II. Mechanism of agonist activation. *Journal of Biological Chemistry*, **1998**, 273, 17979-82	5.4	446
236	Two functionally distinct alpha2-adrenergic receptors regulate sympathetic neurotransmission. *Nature*, **1999**, 402, 181-4	50.4	426
235	Removal of phosphorylation sites from the beta 2-adrenergic receptor delays onset of agonist-promoted desensitization. *Nature*, **1988**, 333, 370-3	50.4	413
234	Structural Insights into the Dynamic Process of β2-Adrenergic Receptor Signaling. *Cell*, **2015**, 161, 1101-1111	56.2	409
233	G protein coupled receptor structure and activation. *Biochimica Et Biophysica Acta - Biomembranes*, **2007**, 1768, 794-807	3.8	395
232	Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor. *Nature*, **2010**, 463, 108-12	50.4	393
231	The Molecular Basis of G Protein-Coupled Receptor Activation. *Annual Review of Biochemistry*, **2018**, 87, 897-919	29.1	389
230	A general protocol for the generation of Nanobodies for structural biology. *Nature Protocols*, **2014**, 9, 674-93	18.8	380
229	Structure and dynamics of GPCR signaling complexes. *Nature Structural and Molecular Biology*, **2018**, 25, 4-12	17.6	370
228	High-resolution crystal structure of human protease-activated receptor 1. *Nature*, **2012**, 492, 387-92	50.4	353
227	Visualization of arrestin recruitment by a G-protein-coupled receptor. *Nature*, **2014**, 512, 218-222	50.4	349
226	Cryo-EM structure of the activated GLP-1 receptor in complex with a G protein. *Nature*, **2017**, 546, 248-253	50.4	344

225	Adrenaline-activated structure of β-adrenoceptor stabilized by an engineered nanobody. *Nature*, **2013**, 502, 575-579	50.4	337
224	Phase-plate cryo-EM structure of a class B GPCR-G-protein complex. *Nature*, **2017**, 546, 118-123	50.4	334
223	Counting low-copy number proteins in a single cell. *Science*, **2007**, 315, 81-4	33.3	328
222	Structure of the μ-opioid receptor-G protein complex. *Nature*, **2018**, 558, 547-552	50.4	321
221	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
220	Maltose-neopentyl glycol (MNG) amphiphiles for solubilization, stabilization and crystallization of membrane proteins. *Nature Methods*, **2010**, 7, 1003-8	21.6	316
219	Structure of active β-arrestin-1 bound to a G-protein-coupled receptor phosphopeptide. *Nature*, **2013**, 497, 137-41	50.4	310
218	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
217	Conformational changes in the G protein Gs induced by the β adrenergic receptor. *Nature*, **2011**, 477, 611-5	50.4	295
216	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
215	Coupling ligand structure to specific conformational switches in the beta2-adrenoceptor **2006**, 2, 417-22		280
214	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
213	Gene targeting—homing in on α2-adrenoceptor-subtype function. *Trends in Pharmacological Sciences*, **1997**, 18, 211-219	13.2	278
212	Abnormal regulation of the sympathetic nervous system in alpha2A-adrenergic receptor knockout mice. *Molecular Pharmacology*, **1999**, 56, 154-61	4.3	271
211	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
210	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
209	Targeted disruption of the beta2 adrenergic receptor gene. *Journal of Biological Chemistry*, **1999**, 274, 16694-700	5.4	255
208	Muscarinic acetylcholine receptors: novel opportunities for drug development. *Nature Reviews Drug Discovery*, **2014**, 13, 549-60	64.1	245

207	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
206	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
205	Structure-based drug screening for G-protein-coupled receptors. *Trends in Pharmacological Sciences* , **2012**, 33, 268-72	13.2	229
204	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
203	Crystal structures of the M1 and M4 muscarinic acetylcholine receptors. *Nature*, **2016**, 531, 335-40	50.4	211
202	Cardiovascular and metabolic alterations in mice lacking both beta1- and beta2-adrenergic receptors. *Journal of Biological Chemistry*, **1999**, 274, 16701-8	5.4	208
201	Allosteric nanobodies reveal the dynamic range and diverse mechanisms of G-protein-coupled receptor activation. *Nature*, **2016**, 535, 448-52	50.4	205
200	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
199	New G-protein-coupled receptor crystal structures: insights and limitations. *Trends in Pharmacological Sciences*, **2008**, 29, 79-83	13.2	203
198	Structure of a Signaling Cannabinoid Receptor 1-G Protein Complex. *Cell*, **2019**, 176, 448-458.e12	56.2	196
197	Energy landscapes as a tool to integrate GPCR structure, dynamics, and function. *Physiology*, **2010**, 25, 293-303	9.8	194
196	Caveolar localization dictates physiologic signaling of beta 2-adrenoceptors in neonatal cardiac myocytes. *Journal of Biological Chemistry*, **2002**, 277, 34280-6	5.4	187
195	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
194	Allosteric regulation of G protein-coupled receptor activity by phospholipids. *Nature Chemical Biology*, **2016**, 12, 35-9	11.7	183
193	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
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191	Propagation of conformational changes during [illegible]opioid receptor activation. *Nature*, **2015**, 524, 375-8	50.4	173
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183	Allosteric coupling from G protein to the agonist-binding pocket in GPCRs. *Nature*, **2016**, 535, 182-6	50.4	155
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181	Structural insights into the activation of metabotropic glutamate receptors. *Nature*, **2019**, 566, 79-84	50.4	148
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176	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
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174	The structural basis of G-protein-coupled receptor signaling (Nobel Lecture). *Angewandte Chemie - International Edition*, **2013**, 52, 6380-8	16.4	130
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172	Structure of the neurotensin receptor 1 in complex with βarrestin 1. *Nature*, **2020**, 579, 303-308	50.4	124

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170	Cholesterol increases kinetic, energetic, and mechanical stability of the human □2-adrenergic receptor. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E3463-72	11.5	121
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159	Structural and Functional Analysis of a □Adrenergic Receptor Complex with GRK5. *Cell*, **2017**, 169, 407-421.e16	56.2	99
158	N-terminal T4 lysozyme fusion facilitates crystallization of a G protein coupled receptor. *PLoS ONE*, **2012**, 7, e46039	3.7	99
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151	Dosage-dependent switch from G protein-coupled to G protein-independent signaling by a GPCR. *EMBO Journal*, **2007**, 26, 53-64	13	91
150	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
149	Modified T4 Lysozyme Fusion Proteins Facilitate G Protein-Coupled Receptor Crystallogenesis. *Structure*, **2014**, 22, 1657-64	5.2	89
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143	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
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141	Organization of beta-adrenoceptor signaling compartments by sympathetic innervation of cardiac myocytes. *Journal of Cell Biology*, **2007**, 176, 521-33	7.3	83
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127	Insights from in vivo modification of adrenergic receptor gene expression. *Annual Review of Pharmacology and Toxicology*, **1998**, 38, 351-73	17.9	69
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