## Brian K Kobilka

List of Publications by Year in descending order

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269 papers

55,347 citations

106 h-index 226 g-index

282 all docs 282 docs citations

times ranked

282

32314 citing authors

#	Article	IF	CITATIONS
1	High-Resolution Crystal Structure of an Engineered Human β <sub>2</sub> -Adrenergic G Protein–Coupled Receptor. Science, 2007, 318, 1258-1265.	6.0	3,112
2	Crystal structure of the β2 adrenergic receptor–Gs protein complex. Nature, 2011, 477, 549-555.	13.7	2,712
3	The structure and function of G-protein-coupled receptors. Nature, 2009, 459, 356-363.	13.7	1,982
4	Crystal structure of the human $\hat{l}^2$ 2 adrenergic G-protein-coupled receptor. Nature, 2007, 450, 383-387.	13.7	1,832
5	Structure of a nanobody-stabilized active state of the Î <sup>2</sup> 2 adrenoceptor. Nature, 2011, 469, 175-180.	13.7	1,523
6	GPCR Engineering Yields High-Resolution Structural Insights into $\hat{l}^2$ <sub>2</sub> -Adrenergic Receptor Function. Science, 2007, 318, 1266-1273.	6.0	1,324
7	Cloning of the gene and cDNA for mammalian $\hat{l}^2$ -adrenergic receptor and homology with rhodopsin. Nature, 1986, 321, 75-79.	13.7	1,284
8	Crystal structure of the Âμ-opioid receptor bound to a morphinan antagonist. Nature, 2012, 485, 321-326.	13.7	1,202
9	Functional Selectivity and Classical Concepts of Quantitative Pharmacology. Journal of Pharmacology and Experimental Therapeutics, 2007, 320, 1-13.	1.3	997
10	Activation and allosteric modulation of a muscarinic acetylcholine receptor. Nature, 2013, 504, 101-106.	13.7	779
11	Structure-based discovery of opioid analgesics with reduced side effects. Nature, 2016, 537, 185-190.	13.7	744
12	Structural insights into $\hat{A}\mu$ -opioid receptor activation. Nature, 2015, 524, 315-321.	13.7	743
13	Structure and function of an irreversible agonist-Î <sup>2</sup> 2 adrenoceptor complex. Nature, 2011, 469, 236-240.	13.7	741
14	beta AR Signaling Required for Diet-Induced Thermogenesis and Obesity Resistance. Science, 2002, 297, 843-845.	6.0	738
15	The Molecular Basis of G Protein–Coupled Receptor Activation. Annual Review of Biochemistry, 2018, 87, 897-919.	5.0	734
16	The Dynamic Process of Î <sup>2</sup> 2-Adrenergic Receptor Activation. Cell, 2013, 152, 532-542.	13.5	723
17	Structure and dynamics of the M3 muscarinic acetylcholine receptor. Nature, 2012, 482, 552-556.	13.7	714
18	Behavioural and cardiovascular effects of disrupting the angiotensin II type-2 receptor gene in mice. Nature, 1995, 377, 744-747.	13.7	713

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19	Structure of the human M2 muscarinic acetylcholine receptor bound to an antagonist. Nature, 2012, 482, 547-551.	13.7	706
20	Conformational complexity of G-protein-coupled receptors. Trends in Pharmacological Sciences, 2007, 28, 397-406.	4.0	646
21	Structure and dynamics of GPCR signaling complexes. Nature Structural and Molecular Biology, 2018, 25, 4-12.	3.6	638
22	The genomic clone G-21 which resembles a $\hat{l}^2$ -adrenergic receptor sequence encodes the 5-HT1A receptor. Nature, 1988, 335, 358-360.	13.7	611
23	Structure of the Î-opioid receptor bound to naltrindole. Nature, 2012, 485, 400-404.	13.7	607
24	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, 7682-7687.	3.3	593
25	A general protocol for the generation of Nanobodies for structural biology. Nature Protocols, 2014, 9, 674-693.	5.5	571
26	Structural Insights into the Dynamic Process of $\hat{l}^2$ 2 -Adrenergic Receptor Signaling. Cell, 2015, 161, 1101-1111.	13.5	562
27	Structure of the µ-opioid receptor–Gi protein complex. Nature, 2018, 558, 547-552.	13.7	527
28	An intronless gene encoding a potential member of the family of receptors coupled to guanine nucleotide regulatory proteins. Nature, 1987, 329, 75-79.	13.7	513
29	G Protein-coupled Receptors. Journal of Biological Chemistry, 1998, 273, 17979-17982.	1.6	485
30	Two functionally distinct $\hat{l}\pm 2$ -adrenergic receptors regulate sympathetic neurotransmission. Nature, 1999, 402, 181-184.	13.7	479
31	G protein coupled receptor structure and activation. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 794-807.	1.4	473
32	Cryo-EM structure of the activated GLP-1 receptor in complex with a G protein. Nature, 2017, 546, 248-253.	13.7	465
33	Removal of phosphorylation sites from the $\hat{l}^2$ 2-adrenergic receptor delays onset of agonist-promoted desensitization. Nature, 1988, 333, 370-373.	13.7	439
34	Adrenaline-activated structure of $\hat{I}^2$ 2-adrenoceptor stabilized by an engineered nanobody. Nature, 2013, 502, 575-579.	13.7	436
35	Visualization of arrestin recruitment by a G-protein-coupled receptor. Nature, 2014, 512, 218-222.	13.7	433
36	Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor. Nature, 2010, 463, 108-112.	13.7	432

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37	Phase-plate cryo-EM structure of a class B GPCR–G-protein complex. Nature, 2017, 546, 118-123.	13.7	424
38	High-resolution crystal structure of human protease-activated receptor 1. Nature, 2012, 492, 387-392.	13.7	416
39	Maltose–neopentyl glycol (MNG) amphiphiles for solubilization, stabilization and crystallization of membrane proteins. Nature Methods, 2010, 7, 1003-1008.	9.0	397
40	Structure of active $\hat{l}^2$ -arrestin-1 bound to a G-protein-coupled receptor phosphopeptide. Nature, 2013, 497, 137-141.	13.7	393
41	Counting Low-Copy Number Proteins in a Single Cell. Science, 2007, 315, 81-84.	6.0	374
42	Functionally Different Agonists Induce Distinct Conformations in the G Protein Coupling Domain of the Î <sup>2</sup> 2Adrenergic Receptor. Journal of Biological Chemistry, 2001, 276, 24433-24436.	1.6	347
43	Conformational changes in the G protein Gs induced by the $\hat{l}^22$ adrenergic receptor. Nature, 2011, 477, 611-615.	13.7	339
44	Muscarinic acetylcholine receptors: novel opportunities for drug development. Nature Reviews Drug Discovery, 2014, 13, 549-560.	21.5	337
45	Linkage of $\hat{l}^21$ -adrenergic stimulation to apoptotic heart cell death through protein kinase Aâ $\epsilon$ "independent activation of Ca2+/calmodulin kinase II. Journal of Clinical Investigation, 2003, 111, 617-625.	3.9	336
46	Structure of a Signaling Cannabinoid Receptor 1-G Protein Complex. Cell, 2019, 176, 448-458.e12.	13.5	323
47	Coupling ligand structure to specific conformational switches in the $\hat{l}^2$ 2-adrenoceptor. , 2006, 2, 417-422.		318
48	Sequential Binding of Agonists to the $\hat{l}^22$ Adrenoceptor. Journal of Biological Chemistry, 2004, 279, 686-691.	1.6	311
49	Targeted Disruption of the β2 Adrenergic Receptor Gene. Journal of Biological Chemistry, 1999, 274, 16694-16700.	1.6	300
50	ERK Plays a Regulatory Role in Induction of LTP by Theta Frequency Stimulation and Its Modulation by $\hat{l}^2$ -Adrenergic Receptors. Neuron, 1999, 24, 715-726.	3.8	300
51	Gene targeting — homing in on α2-adrenoceptor-subtype function. Trends in Pharmacological Sciences, 1997, 18, 211-219.	4.0	298
52	Abnormal Regulation of the Sympathetic Nervous System in $\hat{l}_{\pm}$ <sub>2A</sub> -Adrenergic Receptor Knockout Mice. Molecular Pharmacology, 1999, 56, 154-161.	1.0	296
53	Structure-based discovery of $\hat{l}^2$ <sub>2</sub> -adrenergic receptor ligands. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6843-6848.	3.3	290
54	Allosteric nanobodies reveal the dynamic range and diverse mechanisms of G-protein-coupled receptor activation. Nature, 2016, 535, 448-452.	13.7	290

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55	Cloning, characterization, and expression of two angiotensin receptor (AT-1) isoforms from the mouse genome. Biochemical and Biophysical Research Communications, 1992, 185, 253-259.	1.0	283
56	Crystal structures of the M1 and M4 muscarinic acetylcholine receptors. Nature, 2016, 531, 335-340.	13.7	272
57	Single-molecule analysis of ligand efficacy in β2AR–G-protein activation. Nature, 2017, 547, 68-73.	13.7	265
58	Structure of the neurotensin receptor 1 in complex with $\hat{l}^2$ -arrestin 1. Nature, 2020, 579, 303-308.	13.7	260
59	Structural Instability of a Constitutively Active G Protein-coupled Receptor. Journal of Biological Chemistry, 1997, 272, 2587-2590.	1.6	259
60	Fluorescent Labeling of Purified $\hat{l}^22$ Adrenergic Receptor. Journal of Biological Chemistry, 1995, 270, 28268-28275.	1.6	258
61	Structure-based drug screening for G-protein-coupled receptors. Trends in Pharmacological Sciences, 2012, 33, 268-272.	4.0	258
62	Allosteric regulation of G protein–coupled receptor activity by phospholipids. Nature Chemical Biology, 2016, 12, 35-39.	3.9	251
63	Structural basis for nucleotide exchange in heterotrimeric G proteins. Science, 2015, 348, 1361-1365.	6.0	250
64	Cardiovascular and Metabolic Alterations in Mice Lacking Both $\hat{l}^21$ - and $\hat{l}^22$ -Adrenergic Receptors. Journal of Biological Chemistry, 1999, 274, 16701-16708.	1.6	245
65	Structures of the M1 and M2 muscarinic acetylcholine receptor/G-protein complexes. Science, 2019, 364, 552-557.	6.0	244
66	Probing the $\hat{I}^2$ 2 Adrenoceptor Binding Site with Catechol Reveals Differences in Binding and Activation by Agonists and Partial Agonists. Journal of Biological Chemistry, 2005, 280, 22165-22171.	1.6	242
67	Allosteric coupling from G protein to the agonist-binding pocket in GPCRs. Nature, 2016, 535, 182-186.	13.7	235
68	Structural insights into the activation of metabotropic glutamate receptors. Nature, 2019, 566, 79-84.	13.7	233
69	Energy Landscapes as a Tool to Integrate GPCR Structure, Dynamics, and Function. Physiology, 2010, 25, 293-303.	1.6	227
70	Propagation of conformational changes during $\hat{l}$ 4-opioid receptor activation. Nature, 2015, 524, 375-378.	13.7	227
71	Caveolar Localization Dictates Physiologic Signaling of $\hat{I}^2$ 2-Adrenoceptors in Neonatal Cardiac Myocytes. Journal of Biological Chemistry, 2002, 277, 34280-34286.	1.6	219
72	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, 9501-9506.	3.3	218

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73	New G-protein-coupled receptor crystal structures: insights and limitations. Trends in Pharmacological Sciences, 2008, 29, 79-83.	4.0	217
74	Intracellular Trafficking of Angiotensin II and its AT <sub>1</sub> and AT <sub>2</sub> Receptors: Evidence for Selective Sorting of Receptor and Ligand. Molecular Endocrinology, 1997, 11, 1266-1277.	3.7	210
75	Structural flexibility of the $\hat{G}$ 1±s $\hat{G}$ 1±-helical domain in the $\hat{G}$ 2 <sub>2</sub> -adrenoceptor Gs complex. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16086-16091.	3.3	204
76	The role of protein dynamics in GPCR function: insights from the $\hat{I}^2$ 2AR and rhodopsin. Current Opinion in Cell Biology, 2014, 27, 136-143.	2.6	204
77	Nanobodies to Study G Protein–Coupled Receptor Structure and Function. Annual Review of Pharmacology and Toxicology, 2017, 57, 19-37.	4.2	201
78	Conformational transitions of a neurotensin receptorÂl–GilÂcomplex. Nature, 2019, 572, 80-85.	13.7	199
79	Angiotensin Analogs with Divergent Bias Stabilize Distinct Receptor Conformations. Cell, 2019, 176, 468-478.e11.	13.5	194
80	Myocyte Adrenoceptor Signaling Pathways. Science, 2003, 300, 1530-1532.	6.0	192
81	Mutation of the α <sub>2A</sub> -Adrenoceptor Impairs Working Memory Performance and Annuls Cognitive Enhancement by Guanfacine. Journal of Neuroscience, 2002, 22, 8771-8777.	1.7	191
82	Subtype-Specific Intracellular Trafficking of $\hat{l}_{\pm}$ sub>2-Adrenergic Receptors. Molecular Pharmacology, 1997, 51, 711-720.	1.0	184
83	A new era of GPCR structural and chemical biology. Nature Chemical Biology, 2012, 8, 670-673.	3.9	184
84	Ligand-regulated oligomerization of $\hat{I}^2$ 2-adrenoceptors in a model lipid bilayer. EMBO Journal, 2009, 28, 3315-3328.	3.5	172
85	Adrenergic $\hat{l}_{\pm}$ < sub>2C < /sub>-Receptors Modulate the Acoustic Startle Reflex, Prepulse Inhibition, and Aggression in Mice. Journal of Neuroscience, 1998, 18, 3035-3042.	1.7	166
86	Assembly of a GPCR-G Protein Complex. Cell, 2019, 177, 1232-1242.e11.	13.5	163
87	Structural insights into adrenergic receptor function and pharmacology. Trends in Pharmacological Sciences, 2011, 32, 213-218.	4.0	160
88	Development of an antibody fragment that stabilizes GPCR/G-protein complexes. Nature Communications, 2018, 9, 3712.	5.8	157
89	The Role of Ligands on the Equilibria Between Functional States of a G Protein-Coupled Receptor. Journal of the American Chemical Society, 2013, 135, 9465-9474.	6.6	156
90	Structural insights into binding specificity, efficacy and bias of a $\hat{l}^2$ 2AR partial agonist. Nature Chemical Biology, 2018, 14, 1059-1066.	3.9	155

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91	The Structural Basis of Gâ€Proteinâ€Coupled Receptor Signaling (Nobel Lecture). Angewandte Chemie - International Edition, 2013, 52, 6380-6388.	7.2	152
92	Genetic Alteration of $\hat{l}\pm$ (sub>2C (/sub>-Adrenoceptor Expression in Mice: Influence on Locomotor, Hypothermic, and Neurochemical Effects of Dexmedetomidine, a Subtype-Nonselective $\hat{l}\pm$ (sub>2-Adrenoceptor Agonist. Molecular Pharmacology, 1997, 51, 36-46.	1.0	149
93	Signaling from $\hat{l}^21$ - and $\hat{l}^22$ -adrenergic receptors is defined by differential interactions with PDE4. EMBO Journal, 2008, 27, 384-393.	3.5	148
94	Mechanism of intracellular allosteric $\hat{I}^22AR$ antagonist revealed by X-ray crystal structure. Nature, 2017, 548, 480-484.	13.7	148
95	Cholesterol increases kinetic, energetic, and mechanical stability of the human $\hat{l}^2$ <sub>2</sub> -adrenergic receptor. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E3463-72.	3.3	142
96	Structure and Conformational Changes in the C-terminal Domain of the $\hat{l}^2$ 2-Adrenoceptor. Journal of Biological Chemistry, 2007, 282, 13895-13905.	1.6	141
97	Skeletal muscle hypertrophy and anti-atrophy effects of clenbuterol are mediated by the ?2-adrenergic receptor. Muscle and Nerve, 2002, 25, 729-734.	1.0	136
98	Structural and Functional Analysis of a $\hat{I}^2$ 2-Adrenergic Receptor Complex with GRK5. Cell, 2017, 169, 407-421.e16.	13.5	132
99	Antinociceptive Action of Nitrous Oxide Is Mediated by Stimulation of Noradrenergic Neurons in the Brainstem and Activation of α <sub>2B</sub> Adrenoceptors. Journal of Neuroscience, 2000, 20, 9242-9251.	1.7	130
100	GPCR–Gα fusion proteins: molecular analysis of receptor–G-protein coupling. Trends in Pharmacological Sciences, 1999, 20, 383-389.	4.0	127
101	A monoclonal antibody for G protein–coupled receptor crystallography. Nature Methods, 2007, 4, 927-929.	9.0	125
102	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, 17122-17127.	3.3	122
103	Regulation of $\langle i \rangle \hat{l}^2 \langle j \rangle \langle sub \rangle 2 \langle j \rangle \langle sub \rangle$ . Adrenergic Receptor Function by Conformationally Selective Single-Domain Intrabodies. Molecular Pharmacology, 2014, 85, 472-481.	1.0	121
104	Structural Insights into the Process of GPCR-G Protein Complex Formation. Cell, 2019, 177, 1243-1251.e12.	13.5	121
105	A New Class of Amphiphiles Bearing Rigid Hydrophobic Groups for Solubilization and Stabilization of Membrane Proteins. Chemistry - A European Journal, 2012, 18, 9485-9490.	1.7	120
106	Phosphodiesterase 4D is required for $\hat{A}2$ adrenoceptor subtype-specific signaling in cardiac myocytes. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 909-914.	3.3	116
107	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.	3.3	116
108	Crystal structure of the adenosine A <sub>2A</sub> 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.	3.3	114

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109	$\hat{l}^2$ 2-Adrenergic Receptor-induced p38 MAPK Activation Is Mediated by Protein Kinase A Rather than by Gi or $\hat{Gl^2}\hat{l}^3$ in Adult Mouse Cardiomyocytes. Journal of Biological Chemistry, 2000, 275, 40635-40640.	1.6	113
110	N-Terminal T4 Lysozyme Fusion Facilitates Crystallization of a G Protein Coupled Receptor. PLoS ONE, 2012, 7, e46039.	1.1	112
111	Modified T4 Lysozyme Fusion Proteins Facilitate G Protein-Coupled Receptor Crystallogenesis. Structure, 2014, 22, 1657-1664.	1.6	112
112	Antithetic regulation by $\hat{l}^2$ -adrenergic receptors of Gq receptor signaling via phospholipase C underlies the airway $\hat{l}^2$ -agonist paradox. Journal of Clinical Investigation, 2003, 112, 619-626.	3.9	112
113	A fluorescent probe designed for studying protein conformational change. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 965-970.	3.3	110
114	Effects of Guanine, Inosine, and Xanthine Nucleotides on $\hat{l}^2$ <sub>2</sub> -Adrenergic Receptor/G <sub>s</sub> Interactions: Evidence for Multiple Receptor Conformations. Molecular Pharmacology, 1999, 56, 348-358.	1.0	108
115	The Effect of pH on Î <sup>2</sup> 2 Adrenoceptor Function. Journal of Biological Chemistry, 2000, 275, 3121-3127.	1.6	107
116	Imaging G protein–coupled receptors while quantifying their ligand-binding free-energy landscape. Nature Methods, 2015, 12, 845-851.	9.0	106
117	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, 22470-22478.	1.6	105
118	Role of the $\hat{l}\pm 2B$ -Adrenergic Receptor in the Development of Salt-Induced Hypertension. Hypertension, 1999, 33, 14-17.	1.3	105
119	G Protein-Coupled Receptors: Functional and Mechanistic Insights Through Altered Gene Expression. Physiological Reviews, 1998, 78, 35-52.	13.1	104
120	Saving the Endangered Physician-Scientist â€" A Plan for Accelerating Medical Breakthroughs. New England Journal of Medicine, 2019, 381, 399-402.	13.9	104
121	Allosteric Modulation of Î <sup>2</sup> 2-Adrenergic Receptor by Zn2+. Molecular Pharmacology, 2002, 61, 65-72.	1.0	103
122	Dosage-dependent switch from G protein-coupled to G protein-independent signaling by a GPCR. EMBO Journal, 2007, 26, 53-64.	3.5	103
123	Structural insights into differences in G protein activation by family A and family B GPCRs. Science, 2020, 369, .	6.0	103
124	How GPCR Phosphorylation Patterns Orchestrate Arrestin-Mediated Signaling. Cell, 2020, 183, 1813-1825.e18.	13.5	100
125	The PDZ Binding Motif of the $\hat{l}^21$ Adrenergic Receptor Modulates Receptor Trafficking and Signaling in Cardiac Myocytes. Journal of Biological Chemistry, 2002, 277, 33783-33790.	1.6	99
126	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, 30264-30271.	1.6	96

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127	Differential Distribution of $\hat{l}^2$ -Adrenergic Receptor Subtypes in Blood Vessels of Knockout Mice Lacking $\hat{l}^2$ 1- or $\hat{l}^2$ 2-Adrenergic Receptors. Molecular Pharmacology, 2001, 60, 955-962.	1.0	95
128	Role of Detergents in Conformational Exchange of a G Protein-coupled Receptor. Journal of Biological Chemistry, 2012, 287, 36305-36311.	1.6	94
129	Organization of $\hat{I}^2$ -adrenoceptor signaling compartments by sympathetic innervation of cardiac myocytes. Journal of Cell Biology, 2007, 176, 521-533.	2.3	93
130	Conformational Dynamics of Single G Protein-Coupled Receptors in Solution. Journal of Physical Chemistry B, 2011, 115, 13328-13338.	1.2	93
131	Crystal structure of the natural anion-conducting channelrhodopsin GtACR1. Nature, 2018, 561, 343-348.	13.7	93
132	Reconstitution of beta2-adrenoceptor-GTP-binding-protein interaction in Sf9 cells . High coupling efficiency in a beta2-adrenoceptor-Gsalpha fusion protein. FEBS Journal, 1998, 255, 369-382.	0.2	91
133	<i>In meso in situ</i> serial X-ray crystallography of soluble and membrane proteins at cryogenic temperatures. Acta Crystallographica Section D: Structural Biology, 2016, 72, 93-112.	1.1	91
134	The PDZ-binding motif of the $\hat{A}2$ -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, 10776-10781.	3.3	88
135	Ligand-Specific Interactions Modulate Kinetic, Energetic, and Mechanical Properties of the Human $\hat{l}^2$ 2 Adrenergic Receptor. Structure, 2012, 20, 1391-1402.	1.6	87
136	Tandem Facial Amphiphiles for Membrane Protein Stabilization. Journal of the American Chemical Society, 2010, 132, 16750-16752.	6.6	85
137	Identification of an Allosteric Binding Site for Zn2+on the $\hat{I}^2$ 2 Adrenergic Receptor. Journal of Biological Chemistry, 2003, 278, 352-356.	1.6	84
138	Covalent agonists for studying G protein-coupled receptor activation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10744-10748.	3.3	82
139	Mechanism of $\hat{l}^2$ <sub>2</sub> AR regulation by an intracellular positive allosteric modulator. Science, 2019, 364, 1283-1287.	6.0	82
140	Co-expression of Defective Luteinizing Hormone Receptor Fragments Partially Reconstitutes Ligand-induced Signal Generation. Journal of Biological Chemistry, 1997, 272, 25006-25012.	1.6	79
141	Activation of G Protein–Coupled Receptors. Advances in Protein Chemistry, 2007, 74, 137-166.	4.4	79
142	Glucose-Neopentyl Glycol (GNG) amphiphiles for membrane protein study. Chemical Communications, 2013, 49, 2287-2289.	2.2	79
143	INSIGHTS FROM IN VIVO MODIFICATION OF ADRENERGIC RECEPTOR GENE EXPRESSION. Annual Review of Pharmacology and Toxicology, 1998, 38, 351-373.	4.2	77
144	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.	3.3	74

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145	G-protein activation by a metabotropic glutamate receptor. Nature, 2021, 595, 450-454.	13.7	73
146	Development and Characterization of Pepducins as Gs-biased Allosteric Agonists*. Journal of Biological Chemistry, 2014, 289, 35668-35684.	1.6	71
147	Arrangement of Transmembrane Domains in Adrenergic Receptors. Journal of Biological Chemistry, 1996, 271, 2387-2389.	1.6	70
148	A Novel Interaction between Adrenergic Receptors and the $\hat{l}_{\pm}$ -Subunit of Eukaryotic Initiation Factor 2B. Journal of Biological Chemistry, 1997, 272, 19099-19102.	1.6	70
149	Structural mechanisms of selectivity and gating in anion channelrhodopsins. Nature, 2018, 561, 349-354.	13.7	67
150	An improved yeast surface display platform for the screening of nanobody immune libraries. Scientific Reports, 2019, 9, 382.	1.6	66
151	The Ectodomain of the Luteinizing Hormone Receptor Interacts with Exoloop 2 to Constrain the Transmembrane Region. Journal of Biological Chemistry, 2002, 277, 3958-3964.	1.6	65
152	Binding pathway determines norepinephrine selectivity for the human $\hat{l}^21AR$ over $\hat{l}^22AR$ . Cell Research, 2021, 31, 569-579.	5.7	65
153	Heterozygous Â2A-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, 12471-12476.	3.3	64
154	Nanoscale high-content analysis using compositional heterogeneities of single proteoliposomes. Nature Methods, 2014, 11, 931-934.	9.0	64
155	Identifying and quantifying two ligand-binding sites while imaging native human membrane receptors by AFM. Nature Communications, 2015, 6, 8857.	5.8	64
156	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.	3.3	64
157	High-density grids for efficient data collection from multiple crystals. Acta Crystallographica Section D: Structural Biology, 2016, 72, 2-11.	1.1	62
158	Functional Immobilization of a Ligand-Activated G-Protein-Coupled Receptor. ChemBioChem, 2002, 3, 993-998.	1.3	60
159	A genetically engineered cell-based biosensor for functional classification of agents. Biosensors and Bioelectronics, 2001, 16, 571-577.	5.3	59
160	Structural insights into the subtype-selective antagonist binding to the M2 muscarinic receptor. Nature Chemical Biology, 2018, $14$ , $1150-1158$ .	3.9	59
161	Conformational Complexity and Dynamics in a Muscarinic Receptor Revealed by NMR Spectroscopy. Molecular Cell, 2019, 75, 53-65.e7.	4.5	59
162	Structural insights into probe-dependent positive allosterism of the GLP-1 receptor. Nature Chemical Biology, 2020, 16, 1105-1110.	3.9	58

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163	Derivation of Functional Antagonists Using N-Terminal Extracellular Domain of Gonadotropin and Thyrotropin Receptors. Molecular Endocrinology, 1997, 11, 1659-1668.	3.7	57
164	Spontaneous Activation of $\hat{l}^2$ (sub>2- but Not $\hat{l}^2$ (sub>1-Adrenoceptors Expressed in Cardiac Myocytes from $\hat{l}^2$ (sub>1 $\hat{l}^2$ (sub>2 Double Knockout Mice. Molecular Pharmacology, 2000, 58, 887-894.	1.0	57
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