Roger K Sunahara

List of Publications by Year
in descending order

91 papers	19,309 citations	50566 48 h-index	53065 89 g-index
94 all docs	94 docs citations	94 times ranked	15264 citing authors

#	Article	IF	Citations
1	Integrative RNA-omics Discovers <i>GNAS</i> Alternative Splicing as a Phenotypic Driver of Splicing Factorâ€“Mutant Neoplasms. Cancer Discovery, 2022, 12, 836-855.	7.7	19
2	Binding pathway determines norepinephrine selectivity for the human Î²1AR over Î²2AR. Cell Research, 2021, 31, 569-579.	5.7	65
3	Delineating the conformational landscape of the adenosine A2A receptor during G protein coupling. Cell, 2021, 184, 1884-1894.e14.	13.5	97
4	Molecular Mechanism of GPCRâ€mediated ERK Pathway in Cancer. FASEB Journal, 2021, 35, .	0.2	1
5	A photoswitchable GPCR-based opsin for presynaptic inhibition. Neuron, 2021, 109, 1791-1809.e11.	3.8	62
6	Leveraging nonstructural data to predict structures and affinities of proteinâ€“ligand complexes. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	17
7	An allosteric modulator binds to a conformational hub in the Î²2 adrenergic receptor. Nature Chemical Biology, 2020, 16, 749-755.	3.9	51
8	Structure of a D2 dopamine receptorâ€“G-protein complex in a lipid membrane. Nature, 2020, 584, 125-129.	13.7	128
9	Structure and selectivity engineering of the M ₁ muscarinic receptor toxin complex. Science, 2020, 369, 161-167.	6.0	35
10	Structure of an endosomal signaling GPCRâ€“G proteinâ€“Î²-arrestin megacomplex. Nature Structural and Molecular Biology, 2019, 26, 1123-1131.	3.6	139
11	Mechanistic insights into allosteric regulation of the A2A adenosine G protein-coupled receptor by physiological cations. Nature Communications, 2018, 9, 1372.	5.8	126
12	Structure-based discovery of selective positive allosteric modulators of antagonists for the M ₂ muscarinic acetylcholine receptor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2419-E2428.	3.3	57
13	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
14	Structural insights into binding specificity, efficacy and bias of a Î²2AR partial agonist. Nature Chemical Biology, 2018, 14, 1059-1066.	3.9	155
15	Rules of Engagement: GPCRs and G Proteins. ACS Pharmacology and Translational Science, 2018, 1, 73-83.	2.5	93
16	Functional dissection of the N-terminal extracellular domains of Frizzled 6 reveals their roles for receptor localization and Dishevelled recruitment. Journal of Biological Chemistry, 2018, 293, 17875-17887.	1.6	18
17	Measuring ligand efficacy at the mu-opioid receptor using a conformational biosensor. ELife, 2018, 7, .	2.8	40
18	Inhibition of cocaine selfâ€administration by a novel mutant cocaine esterase (ET CocE) in rats. FASEB Journal, 2018, 32, 550.10.	0.2	0

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19	In Situ Reconstitution of the Adenosine A2A Receptor in Spontaneously Formed Synthetic Liposomes. Journal of the American Chemical Society, 2017, 139, 3607-3610.	6.6	34
20	Structure-Based Design and Discovery of New M₂ Receptor Agonists. Journal of Medicinal Chemistry, 2017, 60, 9239-9250.	2.9	19
21	ER/K linked GPCR-G protein fusions systematically modulate second messenger response in cells. Scientific Reports, 2017, 7, 7749.	1.6	22
22	Genetic evidence that Î²-arrestins are dispensable for the initiation of Î² ₂ -adrenergic receptor signaling to ERK. Science Signaling, 2017, 10, .	1.6	155
23	Purification of family B G protein-coupled receptors using nanodiscs: Application to human glucagon-like peptide-1 receptor. PLoS ONE, 2017, 12, e0179568.	1.1	23
24	The Molecular Pharmacology of G Protein Signaling Then and Now: A Tribute to Alfred G. Gilman. Molecular Pharmacology, 2016, 89, 585-592.	1.0	11
25	GPCR-G Protein-Î²-Arrestin Super-Complex Mediates Sustained G Protein Signaling. Cell, 2016, 166, 907-919.	13.5	443
26	Mechanistic insights into GPCRâ€"G protein interactions. Current Opinion in Structural Biology, 2016, 41, 247-254.	2.6	112
27	Allosteric coupling from G protein to the agonist-binding pocket in GPCRs. Nature, 2016, 535, 182-186.	13.7	235
28	Structural basis for nucleotide exchange in heterotrimeric G proteins. Science, 2015, 348, 1361-1365.	6.0	250
29	Pharmacological chaperone for Î±-crystallin partially restores transparency in cataract models. Science, 2015, 350, 674-677.	6.0	195
30	Structural Basis for Allosteric Enhancement of Agonist Affinity by G Proteins. FASEB Journal, 2015, 29, 935.5.	0.2	0
31	Calcium-Dependent Ligand Binding and G-protein Signaling of Family B GPCR Parathyroid Hormone 1 Receptor Purified in Nanodiscs. ACS Chemical Biology, 2013, 8, 617-625.	1.6	38
32	Conformational biosensors reveal GPCR signalling from endosomes. Nature, 2013, 495, 534-538.	13.7	713
33	Identification of GPCR-Interacting Cytosolic Proteins Using HDL Particles and Mass Spectrometry-Based Proteomic Approach. PLoS ONE, 2013, 8, e54942.	1.1	23
34	Detection of G Protein-selective G Protein-coupled Receptor (GPCR) Conformations in Live Cells. Journal of Biological Chemistry, 2013, 288, 17167-17178.	1.6	60
35	Long-Lasting Effects of a PEGylated Mutant Cocaine Esterase (CocE) on the Reinforcing and Discriminative Stimulus Effects of Cocaine in Rats. Neuropsychopharmacology, 2012, 37, 1092-1103.	2.8	21
36	Repeated Administration of a Mutant Cocaine Esterase: Effects on Plasma Cocaine Levels, Cocaine-Induced Cardiovascular Activity, and Immune Responses in Rhesus Monkeys. Journal of Pharmacology and Experimental Therapeutics, 2012, 342, 205-213.	1.3	14

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37	Bacterial cocaine esterase: a protein-based therapy for cocaine overdose and addiction. Future Medicinal Chemistry, 2012, 4, 137-150.	1.1	19
38	Crystal structure of the Âµ-opioid receptor bound to a morphinan antagonist. Nature, 2012, 485, 321-326.	13.7	1,202
39	Crystal structure of the Î²2 adrenergic receptorâ€“Gs protein complex. Nature, 2011, 477, 549-555.	13.7	2,712
40	Structure of a nanobody-stabilized active state of the Î²2 adrenoceptor. Nature, 2011, 469, 175-180.	13.7	1,523
41	Structure and function of an irreversible agonist-Î²2 adrenoceptor complex. Nature, 2011, 469, 236-240.	13.7	741
42	Conformational changes in the G protein Gs induced by the Î²2 adrenergic receptor. Nature, 2011, 477, 611-615.	13.7	339
43	The Ability of Bacterial Cocaine Esterase to Hydrolyze Cocaine Metabolites and Their Simultaneous Quantification Using High-Performance Liquid Chromatography-Tandem Mass Spectrometry. Molecular Pharmacology, 2011, 80, 1119-1127.	1.0	14
44	Structural flexibility of the GÎ±s Î±-helical domain in the Î² ₂ -adrenoceptor Gs complex. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16086-16091.	3.3	204
45	Amelioration of the Cardiovascular Effects of Cocaine in Rhesus Monkeys by a Long-Acting Mutant Form of Cocaine Esterase. Neuropsychopharmacology, 2011, 36, 1047-1059.	2.8	17
46	Subunit Stabilization and Polyethylene Glycolation of Cocaine Esterase Improves In Vivo Residence Time. Molecular Pharmacology, 2011, 80, 1056-1065.	1.0	19
47	PEGylation of bacterial cocaine esterase for protection against protease digestion and immunogenicity. Journal of Controlled Release, 2010, 142, 174-179.	4.8	32
48	A Thermally Stable Form of Bacterial Cocaine Esterase: A Potential Therapeutic Agent for Treatment of Cocaine Abuse. Molecular Pharmacology, 2010, 77, 593-600.	1.0	31
49	Prevention and reversal by cocaine esterase of cocaine-induced cardiovascular effects in rats. Drug and Alcohol Dependence, 2010, 106, 219-229.	1.6	23
50	A thermostable mutant of a bacterial cocaine esterase reverses acute cocaine toxicity in the rabbit isolated heart. FASEB Journal, 2010, 24, 764.2.	0.2	0
51	Proerectile Effects of Dopamine D₂-Like Agonists Are Mediated by the D₃ Receptor in Rats and Mice. Journal of Pharmacology and Experimental Therapeutics, 2009, 329, 210-217.	1.3	41
52	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
53	Cocaine Esterase Prevents Cocaine-Induced Toxicity and the Ongoing Intravenous Self-Administration of Cocaine in Rats. Journal of Pharmacology and Experimental Therapeutics, 2009, 331, 445-455.	1.3	41
54	Thermostable Variants of Cocaine Esterase for Long-Time Protection against Cocaine Toxicity. Molecular Pharmacology, 2009, 75, 318-323.	1.0	81

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55	Purification and Functional Reconstitution of Monomeric Î¼-Opioid Receptors. Journal of Biological Chemistry, 2009, 284, 26732-26741.	1.6	159
56	Ligand-regulated oligomerization of Î²2-adrenoceptors in a model lipid bilayer. EMBO Journal, 2009, 28, 3315-3328.	3.5	172
57	A Bacterial Cocaine Esterase Protects Against Cocaine-Induced Epileptogenic Activity and Lethality. Annals of Emergency Medicine, 2009, 54, 409-420.	0.3	23
58	Effects of cocaine esterase following its repeated administration with cocaine in mice. Drug and Alcohol Dependence, 2009, 101, 202-209.	1.6	19
59	Efficient Coupling of Transducin to Monomeric Rhodopsin in a Phospholipid Bilayer. Journal of Biological Chemistry, 2008, 283, 4387-4394.	1.6	233
60	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
61	N-Terminal Residues Control Proteasomal Degradation of RGS2, RGS4, and RGS5 in Human Embryonic Kidney 293 Cells. Molecular Pharmacology, 2007, 71, 1040-1050.	1.0	84
62	SUMO modification regulates inactivation of the voltage-gated potassium channel Kv1.5. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1805-1810.	3.3	131
63	Cocaine Esterase: Interactions with Cocaine and Immune Responses in Mice. Journal of Pharmacology and Experimental Therapeutics, 2007, 320, 926-933.	1.3	41
64	Identification of Small-Molecule Inhibitors of RGS4 Using a High-Throughput Flow Cytometry Protein Interaction Assay. Molecular Pharmacology, 2007, 71, 169-175.	1.0	123
65	Mechanism of Action and Structural Requirements of Constrained Peptide Inhibitors of RGS Proteins. Chemical Biology and Drug Design, 2006, 67, 266-274.	1.5	27
66	ARF6 activation by GÎ±q signaling: GÎ±q forms molecular complexes with ARNO and ARF6. Cellular Signalling, 2006, 18, 1988-1994.	1.7	27
67	Rapid and Robust Protection against Cocaine-Induced Lethality in Rats by the Bacterial Cocaine Esterase. Molecular Pharmacology, 2006, 70, 1885-1891.	1.0	49
68	Nitric Oxide-dependent Allosteric Inhibitory Role of a Second Nucleotide Binding Site in Soluble Guanylyl Cyclase. Journal of Biological Chemistry, 2005, 280, 11513-11519.	1.6	47
69	Human paraoxonases (PON1, PON2, and PON3) are lactonases with overlapping and distinct substrate specificities. Journal of Lipid Research, 2005, 46, 1239-1247.	2.0	607
70	Real-time Detection of Basal and Stimulated G Protein GTPase Activity Using Fluorescent GTP Analogues. Journal of Biological Chemistry, 2005, 280, 7712-7719.	1.6	41
71	Differentially Regulated Expression of Endogenous RGS4 and RGS7. Journal of Biological Chemistry, 2004, 279, 2593-2599.	1.6	65
72	Zinc inhibition of adenylyl cyclase correlates with conformational changes in the enzyme. Cellular Signalling, 2004, 16, 1177-1185.	1.7	33

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73	Detection of G Proteins by Affinity Probe Capillary Electrophoresis Using a Fluorescently Labeled GTP Analogue. Analytical Chemistry, 2003, 75, 4297-4304.	3.2	36
74	The Hsp90 Cochaperone p23 Is the Limiting Component of the Multiprotein Hsp90/Hsp70-based Chaperone System in Vivo Where It Acts to Stabilize the Client ProteinÂ·Hsp90 Complex. Journal of Biological Chemistry, 2003, 278, 48754-48763.	1.6	86
75	Zinc Inhibition of cAMP Signaling. Journal of Biological Chemistry, 2002, 277, 11859-11865.	1.6	62
76	Isoforms of Mammalian Adenylyl Cyclase: Multiplicities of Signaling. Molecular Interventions: Pharmacological Perspectives From Biology, Chemistry and Genomics, 2002, 2, 168-184.	3.4	361
77	Dopamine D5 receptor immunolocalization in rat and monkey brain. Synapse, 2000, 37, 125-145.	0.6	197
78	Isolation and Characterization of Constitutively Active Mutants of Mammalian Adenylyl Cyclase. Journal of Biological Chemistry, 2000, 275, 38626-38632.	1.6	16
79	Molecular Basis for P-Site Inhibition of Adenylyl Cyclase,. Biochemistry, 2000, 39, 14464-14471.	1.2	112
80	Two-Metal-Ion Catalysis in Adenylyl Cyclase. Science, 1999, 285, 756-760.	6.0	306
81	Exchange of Substrate and Inhibitor Specificities between Adenylyl and Guanylyl Cyclases. Journal of Biological Chemistry, 1998, 273, 16332-16338.	1.6	211
82	Interaction of GsÎ± with the Cytosolic Domains of Mammalian Adenylyl Cyclase. Journal of Biological Chemistry, 1997, 272, 22265-22271.	1.6	161
83	Crystal Structure of the Catalytic Domains of Adenylyl Cyclase in a Complex with GsÂ·GTPS. Science, 1997, 278, 1907-1916.	6.0	736
84	Receptor-receptor link in membranes revealed by ligand competition: Example for dopamine D1 and D2 receptors. Synapse, 1994, 17, 62-64.	0.6	26
85	Schizophrenia: Dopamine D1 Receptor Sequence Is Normal, But Has DNA Polymorphisms. Neuropsychopharmacology, 1993, 8, 131-135.	2.8	34
86	Dopamine Receptors and Antipsychotic Drug Response. British Journal of Psychiatry, 1993, 163, 31-38.	1.7	52
87	The cloned dopamine D2 receptor reveals different densities for dopamine receptor antagonist ligands. Implications for human brain positron emission tomography. European Journal of Pharmacology, 1992, 227, 139-146.	2.7	66
88	Transcription of a human dopamine D5 pseudogene. Biochemical and Biophysical Research Communications, 1991, 181, 16-21.	1.0	39
89	Cloning of the gene for a human dopamine D4 receptor with high affinity for the antipsychotic clozapine. Nature, 1991, 350, 610-614.	13.7	1,967
90	Cloning of the gene for a human dopamine D5 receptor with higher affinity for dopamine than D1. Nature, 1991, 350, 614-619.	13.7	1,103

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91	Human dopamine D1 receptor encoded by an intronless gene on chromosome 5. Nature, 1990, 347, 80-83.	13.7	470