J Robert Lane

List of Publications by Year
in descending order

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78 papers	5,704 citations	109321 35 h-index	76900 74 g-index
78 all docs	78 docs citations	78 times ranked	6023 citing authors

#	Article	IF	Citations
1	The 2.6 Angstrom Crystal Structure of a Human A _{2A} Adenosine Receptor Bound to an Antagonist. Science, 2008, 322, 1211-1217.	12.6	1,688
2	Structural basis for modulation of a G-protein-coupled receptor by allosteric drugs. Nature, 2013, 503, 295-299.	27.8	365
3	The role of kinetic context in apparent biased agonism at GPCRs. Nature Communications, 2016, 7, 10842.	12.8	270
4	Structure-Based Discovery of Novel Chemotypes for Adenosine A_{2A} Receptor Antagonists. Journal of Medicinal Chemistry, 2010, 53, 1799-1809.	6.4	231
5	Low intrinsic efficacy for G protein activation can explain the improved side effect profiles of new opioid agonists. Science Signaling, 2020, 13, .	3.6	219
6	Bridging the gap: bitopic ligands of G-protein-coupled receptors. Trends in Pharmacological Sciences, 2013, 34, 59-66.	8.7	150
7	The Best of Both Worlds? Bitopic Orthosteric/Allosteric Ligands of G Proteinâ€“Coupled Receptors. Annual Review of Pharmacology and Toxicology, 2012, 52, 153-178.	9.4	148
8	Extrapyramidal side effects of antipsychotics are linked to their association kinetics at dopamine D2 receptors. Nature Communications, 2017, 8, 763.	12.8	148
9	A kinetic view of GPCR allostery and biased agonism. Nature Chemical Biology, 2017, 13, 929-937.	8.0	126
10	A new mechanism of allostery in a G proteinâ€“coupled receptor dimer. Nature Chemical Biology, 2014, 10, 745-752.	8.0	108
11	A Monod-Wyman-Changeux Mechanism Can Explain G Protein-coupled Receptor (GPCR) Allosteric Modulation. Journal of Biological Chemistry, 2012, 287, 650-659.	3.4	98
12	Biased Agonism of Endogenous Opioid Peptides at theÎ¼-Opioid Receptor. Molecular Pharmacology, 2015, 88, 335-346.	2.3	93
13	Biased Agonism at G Proteinâ€Coupled Receptors: The Promise and the Challengesâ€”A Medicinal Chemistry Perspective. Medicinal Research Reviews, 2014, 34, 1286-1330.	10.5	92
14	Hybrid Ortho/Allosteric Ligands for the Adenosine A₁ Receptor. Journal of Medicinal Chemistry, 2010, 53, 3028-3037.	6.4	84
15	Ligand Binding and Subtype Selectivity of the Human A2A Adenosine Receptor. Journal of Biological Chemistry, 2010, 285, 13032-13044.	3.4	83
16	A Structureâ€“Activity Analysis of Biased Agonism at the Dopamine D2 Receptor. Journal of Medicinal Chemistry, 2013, 56, 9199-9221.	6.4	80
17	Structure-Based Ligand Discovery Targeting Orthosteric and Allosteric Pockets of Dopamine Receptors. Molecular Pharmacology, 2013, 84, 794-807.	2.3	78
18	Î² 2 -Adrenoceptors on tumor cells play a critical role in stress-enhanced metastasis in a mouse model of breast cancer. Brain, Behavior, and Immunity, 2016, 57, 106-115.	4.1	77

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19	Structureâ€“Activity Relationships of Privileged Structures Lead to the Discovery of Novel Biased Ligands at the Dopamine D₂ Receptor. Journal of Medicinal Chemistry, 2014, 57, 4924-4939.	6.4	67
20	Î²2-adrenoceptor signaling regulates invadopodia formation to enhance tumor cell invasion. Breast Cancer Research, 2015, 17, 145.	5.0	64
21	Protean Agonism at the Dopamine D2 Receptor: (S)-3-(3-Hydroxyphenyl)-N-propylpiperidine Is an Agonist for Activation of Go1 but an Antagonist/Inverse Agonist for Gi1,Gi2, and Gi3. Molecular Pharmacology, 2007, 71, 1349-1359.	2.3	63
22	The Î² ₂ ^{â€adrenoceptor} activates a positive cAMPâ€calcium feedforward loop to drive breast cancer cell invasion. FASEB Journal, 2016, 30, 1144-1154.	0.5	60
23	G Protein Coupling and Ligand Selectivity of the D_{2L}and D₃Dopamine Receptors. Journal of Pharmacology and Experimental Therapeutics, 2008, 325, 319-330.	2.5	57
24	Molecular Mechanisms of Bitopic Ligand Engagement with the M1 Muscarinic Acetylcholine Receptor. Journal of Biological Chemistry, 2014, 289, 23817-23837.	3.4	55
25	Arrestin recruitment to dopamine D2 receptor mediates locomotion but not incentive motivation. Molecular Psychiatry, 2020, 25, 2086-2100.	7.9	55
26	Molecular Determinants of Allosteric Modulation at the M1 Muscarinic Acetylcholine Receptor. Journal of Biological Chemistry, 2014, 289, 6067-6079.	3.4	51
27	Mechanistic Insights into Allosteric Structure-Function Relationships at the M1 Muscarinic Acetylcholine Receptor. Journal of Biological Chemistry, 2014, 289, 33701-33711.	3.4	49
28	Systematic analysis of factors influencing observations of biased agonism at the mu-opioid receptor. Biochemical Pharmacology, 2016, 113, 70-87.	4.4	48
29	Regulation of G Protein-Coupled Receptors by Allosteric Ligands. ACS Chemical Neuroscience, 2013, 4, 527-534.	3.5	47
30	Discovery of a Novel Class of Negative Allosteric Modulator of the Dopamine D₂ Receptor Through Fragmentation of a Bitopic Ligand. Journal of Medicinal Chemistry, 2015, 58, 6819-6843.	6.4	47
31	The endocannabinoid 2-arachidonylglycerol is a negative allosteric modulator of the human A3 adenosine receptor. Biochemical Pharmacology, 2010, 79, 48-56.	4.4	44
32	Synthesis and Pharmacological Characterization of Novel trans-Cyclopropylmethyl-Linked Bivalent Ligands That Exhibit Selectivity and Allosteric Pharmacology at the Dopamine D₃ Receptor (D₃R). Journal of Medicinal Chemistry, 2017, 60, 1478-1494.	6.4	44
33	Structureâ€“Activity Study of N-((trans)-4-(2-(7-Cyano-3,4-dihydroisoquinolin-2(1H)-yl)ethyl)cyclohexyl)-1H-indole-2-carboxamide (SB269652), a Bitopic Ligand That Acts as a Negative Allosteric Modulator of the Dopamine D₂ Receptor. Journal of Medicinal Chemistry, 2015, 58, 5287-5307.	6.4	40
34	A Novel Nonribose Agonist, LUF5834, Engages Residues That Are Distinct from Those of Adenosine-Like Ligands to Activate the Adenosine A_{2a} Receptor. Molecular Pharmacology, 2012, 81, 475-487.	2.3	39
35	Homobivalent Ligands of the Atypical Antipsychotic Clozapine: Design, Synthesis, and Pharmacological Evaluation. Journal of Medicinal Chemistry, 2012, 55, 1622-1634.	6.4	39
36	4-Phenylpyridin-2-one Derivatives: A Novel Class of Positive Allosteric Modulator of the M₁ Muscarinic Acetylcholine Receptor. Journal of Medicinal Chemistry, 2016, 59, 388-409.	6.4	35

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37	Identification of Positive Allosteric Modulators of the D₁ Dopamine Receptor That Act at Diverse Binding Sites. Molecular Pharmacology, 2018, 94, 1197-1209.	2.3	35
38	Key determinants of selective binding and activation by the monocyte chemoattractant proteins at the chemokine receptor CCR2. Science Signaling, 2017, 10, .	3.6	33
39	Reverse Engineering of the Selective Agonist TBPB Unveils Both Orthosteric and Allosteric Modes of Action at the M1 Muscarinic Acetylcholine Receptor. Molecular Pharmacology, 2013, 84, 425-437.	2.3	31
40	Allosteric Modulation of M1 Muscarinic Acetylcholine Receptor Internalization and Subcellular Trafficking. Journal of Biological Chemistry, 2014, 289, 15856-15866.	3.4	31
41	Distinct inactive conformations of the dopamine D2 and D3 receptors correspond to different extents of inverse agonism. ELife, 2020, 9, .	6.0	31
42	A Prospective Cross-Screening Study on G-Protein-Coupled Receptors: Lessons Learned in Virtual Compound Library Design. Journal of Medicinal Chemistry, 2012, 55, 5311-5325.	6.4	28
43	The structural determinants of the bitopic binding mode of a negative allosteric modulator of the dopamine D 2 receptor. Biochemical Pharmacology, 2018, 148, 315-328.	4.4	26
44	Allosteric Modulation of a Chemogenetically Modified G Protein-Coupled Receptor. Molecular Pharmacology, 2013, 83, 521-530.	2.3	24
45	Novel pharmacological applications of G-protein-coupled receptorâ€“G protein fusions. Current Opinion in Pharmacology, 2007, 7, 521-526.	3.5	23
46	Positive Allosteric Modulation of the Muscarinic M₁Receptor Improves Efficacy of Antipsychotics in Mouse Glutamatergic Deficit Models of Behavior. Journal of Pharmacology and Experimental Therapeutics, 2016, 359, 354-365.	2.5	21
47	Evaluation and extension of the two-site, two-step model for binding and activation of the chemokine receptor CCR1. Journal of Biological Chemistry, 2019, 294, 3464-3475.	3.4	21
48	Antibodies that identify only the active conformation of G_ifamily G protein Î± subunits. FASEB Journal, 2008, 22, 1924-1932.	0.5	20
49	A Thieno[2,3-d]pyrimidine Scaffold Is a Novel Negative Allosteric Modulator of the Dopamine D₂ Receptor. Journal of Medicinal Chemistry, 2019, 62, 174-206.	6.4	20
50	Molecular Determinants of the Intrinsic Efficacy of the Antipsychotic Aripiprazole. ACS Chemical Biology, 2019, 14, 1780-1792.	3.4	19
51	New phosphosite-specific antibodies to unravel the role of GRK phosphorylation in dopamine D2 receptor regulation and signaling. Scientific Reports, 2021, 11, 8288.	3.3	19
52	The E2.65A mutation disrupts dynamic binding poses of SB269652 at the dopamine D2 and D3 receptors. PLoS Computational Biology, 2018, 14, e1005948.	3.2	19
53	The differential actions of clozapine and other antipsychotic drugs on the translocation of dopamine D2 receptors to the cell surface. Journal of Biological Chemistry, 2019, 294, 5604-5615.	3.4	18
54	Subtle Modifications to the Indole-2-carboxamide Motif of the Negative Allosteric Modulator N-((trans)-4-(2-(7-Cyano-3,4-dihydroisoquinolin-2(1H)-yl)ethyl)cyclohexyl)-1H-indole-2-carboxamide (SB269652) Yield Dramatic Changes in Pharmacological Activity at the Dopamine D₂ Receptor. Journal of Medicinal Chemistry, 2019, 62, 371-377.	6.4	17

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55	The action of a negative allosteric modulator at the dopamine D2 receptor is dependent upon sodium ions. Scientific Reports, 2018, 8, 1208.	3.3	16
56	Proof of Concept Study for Designed Multiple Ligands Targeting the Dopamine D₂, Serotonin 5-HT_{2A}, and Muscarinic M₁ Acetylcholine Receptors. Journal of Medicinal Chemistry, 2015, 58, 1550-1555.	6.4	14
57	Novel Fused Arylpyrimidinone Based Allosteric Modulators of the M₁ Muscarinic Acetylcholine Receptor. ACS Chemical Neuroscience, 2016, 7, 647-661.	3.5	14
58	Novel Dual-Target Î¼-Opioid Receptor and Dopamine D₃ Receptor Ligands as Potential Nonaddictive Pharmacotherapeutics for Pain Management. Journal of Medicinal Chemistry, 2021, 64, 7778-7808.	6.4	14
59	Pharmacological Characterization of the Imipridone Anticancer Drug ONC201 Reveals a Negative Allosteric Mechanism of Action at the D₂Dopamine Receptor. Molecular Pharmacology, 2021, 100, 372-387.	2.3	14
60	Novel 3,6,7-Substituted Pyrazolopyrimidines as Positive Allosteric Modulators for the Hydroxycarboxylic Acid Receptor 2 (GPR109A). Journal of Medicinal Chemistry, 2012, 55, 3563-3567.	6.4	13
61	Evidence for a Stereoselective Mechanism for Bitopic Activity by Extended-Length Antagonists of the D₃ Dopamine Receptor. ACS Chemical Neuroscience, 2020, 11, 3309-3320.	3.5	13
62	Characterization of [3H]LUF5834: A novel non-ribose high-affinity agonist radioligand for the adenosine A1 receptor. Biochemical Pharmacology, 2010, 80, 1180-1189.	4.4	12
63	Structureâ€“Kinetic Profiling of Haloperidol Analogues at the Human Dopamine D₂ Receptor. Journal of Medicinal Chemistry, 2019, 62, 9488-9520.	6.4	12
64	Influence of Chemokine N-Terminal Modification on Biased Agonism at the Chemokine Receptor CCR1. International Journal of Molecular Sciences, 2019, 20, 2417.	4.1	12
65	GRKs as Key Modulators of Opioid Receptor Function. Cells, 2020, 9, 2400.	4.1	11
66	The respiratory depressant effects of mitragynine are limited by its conversion to 7â€OH mitragynine. British Journal of Pharmacology, 2022, 179, 3875-3885.	5.4	10
67	The Structure of the Adenosine Receptors. Advances in Pharmacology, 2011, 61, 1-40.	2.0	9
68	Synthesis, functional and binding profile of (R)-apomorphine based homobivalent ligands targeting the dopamine D2 receptor. MedChemComm, 2013, 4, 1290.	3.4	9
69	Allosteric approaches to GPCR drug discovery. Drug Discovery Today: Technologies, 2013, 10, e219-e221.	4.0	9
70	Multivalent approaches and beyond: novel tools for the investigation of dopamine D₂ receptor pharmacology. Future Medicinal Chemistry, 2016, 8, 1349-1372.	2.3	8
71	Systematic Assessment of Chemokine Signaling at Chemokine Receptors CCR4, CCR7 and CCR10. International Journal of Molecular Sciences, 2021, 22, 4232.	4.1	8
72	A structureâ€“activity relationship study of the positive allosteric modulator LY2033298 at the M₄ muscarinic acetylcholine receptor. MedChemComm, 2015, 6, 1998-2003.	3.4	7

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73	OZITX, a pertussis toxin-like protein for occluding inhibitory G protein signalling including GÎ±z. Communications Biology, 2022, 5, 256.	4.4	7
74	Subtle modifications to a thieno[2,3-d]pyrimidine scaffold yield negative allosteric modulators and agonists of the dopamine D2 receptor. European Journal of Medicinal Chemistry, 2019, 168, 474-490.	5.5	6
75	Sequential Conformational Rearrangements Dictate the Dynamics of Class C GPCR Activation. Science Signaling, 2012, 5, pe51.	3.6	4
76	Reply to â€˜Antipsychotics with similar association kinetics at dopamine D2 receptors differ in extrapyramidal side-effectsâ€™. Nature Communications, 2018, 9, 3568.	12.8	2
77	Enantioenriched Positive Allosteric Modulators Display Distinct Pharmacology at the Dopamine D1 Receptor. Molecules, 2021, 26, 3799.	3.8	2
78	Kinetic investigations into G protein activation and biased agonism at the dopamine D2 receptor. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO1-1-118.	0.0	0