

# Laura M Bohn

## List of Publications by Citations

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112  
papers

9,179  
citations

45  
h-index

95  
g-index

124  
ext. papers

10,402  
ext. citations

9.5  
avg, IF

6.07  
L-index

#	Paper	IF	Citations
112	Enhanced morphine analgesia in mice lacking beta-arrestin 2. <i>Science</i> , <b>1999</b> , 286, 2495-8	33.3	815
111	Mu-opioid receptor desensitization by beta-arrestin-2 determines morphine tolerance but not dependence. <i>Nature</i> , <b>2000</b> , 408, 720-3	50.4	709
110	Desensitization of G protein-coupled receptors and neuronal functions. <i>Annual Review of Neuroscience</i> , <b>2004</b> , 27, 107-44	17	677
109	Morphine side effects in beta-arrestin 2 knockout mice. <i>Journal of Pharmacology and Experimental Therapeutics</i> , <b>2005</b> , 314, 1195-201	4.7	427
108	Mice lacking the norepinephrine transporter are supersensitive to psychostimulants. <i>Nature Neuroscience</i> , <b>2000</b> , 3, 465-71	25.5	383
107	Crystal Structure of the Human Cannabinoid Receptor CB. <i>Cell</i> , <b>2016</b> , 167, 750-762.e14	56.2	323
106	Bias Factor and Therapeutic Window Correlate to Predict Safer Opioid Analgesics. <i>Cell</i> , <b>2017</b> , 171, 1165-1175.e13	56.2	319
105	Crystal structures of agonist-bound human cannabinoid receptor CB. <i>Nature</i> , <b>2017</b> , 547, 468-471	50.4	270
104	Differential mechanisms of morphine antinociceptive tolerance revealed in (beta)arrestin-2 knock-out mice. <i>Journal of Neuroscience</i> , <b>2002</b> , 22, 10494-500	6.6	218
103	Functional selectivity at the Epioid receptor: implications for understanding opioid analgesia and tolerance. <i>Pharmacological Reviews</i> , <b>2011</b> , 63, 1001-19	22.5	194
102	Dopaminergic supersensitivity in G protein-coupled receptor kinase 6-deficient mice. <i>Neuron</i> , <b>2003</b> , 38, 291-303	13.9	194
101	An opioid agonist that does not induce mu-opioid receptor--arrestin interactions or receptor internalization. <i>Molecular Pharmacology</i> , <b>2007</b> , 71, 549-57	4.3	187
100	Crystal Structure of the Human Cannabinoid Receptor CB2. <i>Cell</i> , <b>2019</b> , 176, 459-467.e13	56.2	175
99	Muscarinic supersensitivity and impaired receptor desensitization in G protein-coupled receptor kinase 5-deficient mice. <i>Neuron</i> , <b>1999</b> , 24, 1029-36	13.9	168
98	Biased agonism: An emerging paradigm in GPCR drug discovery. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2016</b> , 26, 241-250	2.9	167
97	Enhanced rewarding properties of morphine, but not cocaine, in beta(arrestin)-2 knock-out mice. <i>Journal of Neuroscience</i> , <b>2003</b> , 23, 10265-73	6.6	167
96	Agonist-directed signaling of the serotonin 2A receptor depends on beta-arrestin-2 interactions in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 1079-84	11.5	161

95	Fulfilling the Promise of "Biased" G Protein-Coupled Receptor Agonism. <i>Molecular Pharmacology</i> , <b>2015</b> , 88, 579-88	4.3	153
94	Relative opioid efficacy is determined by the complements of the G protein-coupled receptor desensitization machinery. <i>Molecular Pharmacology</i> , <b>2004</b> , 66, 106-12	4.3	138
93	Glutamatergic modulation of hyperactivity in mice lacking the dopamine transporter. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2001</b> , 98, 11047-54	11.5	135
92	The role of beta-arrestin2 in the severity of antinociceptive tolerance and physical dependence induced by different opioid pain therapeutics. <i>Neuropharmacology</i> , <b>2011</b> , 60, 58-65	5.5	134
91	Opioid receptor homo- and heterodimerization in living cells by quantitative bioluminescence resonance energy transfer. <i>Molecular Pharmacology</i> , <b>2005</b> , 67, 2173-84	4.3	131
90	Biased agonists of the kappa opioid receptor suppress pain and itch without causing sedation or dysphoria. <i>Science Signaling</i> , <b>2016</b> , 9, ra117	8.8	128
89	Sustained elevation of extracellular dopamine causes motor dysfunction and selective degeneration of striatal GABAergic neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 11035-40	11.5	119
88	Requirement of receptor internalization for opioid stimulation of mitogen-activated protein kinase: biochemical and immunofluorescence confocal microscopic evidence. <i>Journal of Neuroscience</i> , <b>1999</b> , 19, 56-63	6.6	119
87	Serotonin, but not N-methyltryptamines, activates the serotonin 2A receptor via a beta-arrestin2/Src/Akt signaling complex in vivo. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 13513-24	6.6	112
86	Development of functionally selective, small molecule agonists at kappa opioid receptors. <i>Journal of Biological Chemistry</i> , <b>2013</b> , 288, 36703-16	5.4	109
85	Identification of Drosophila neuropeptide receptors by G protein-coupled receptors-beta-arrestin2 interactions. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 52172-8	5.4	103
84	Agonist-directed interactions with specific beta-arrestins determine mu-opioid receptor trafficking, ubiquitination, and dephosphorylation. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 31731-41	5.4	98
83	Potentiated opioid analgesia in norepinephrine transporter knock-out mice. <i>Journal of Neuroscience</i> , <b>2000</b> , 20, 9040-5	6.6	97
82	Activation and Signaling Mechanism Revealed by Cannabinoid Receptor-G Complex Structures. <i>Cell</i> , <b>2020</b> , 180, 655-665.e18	56.2	88
81	Drosophila CG8422 encodes a functional diuretic hormone receptor. <i>Journal of Experimental Biology</i> , <b>2004</b> , 207, 743-8	3	78
80	Beta-arrestin2 regulates cannabinoid CB1 receptor signaling and adaptation in a central nervous system region-dependent manner. <i>Biological Psychiatry</i> , <b>2012</b> , 71, 714-24	7.9	76
79	Physiological and pharmacological implications of beta-arrestin regulation <b>2009</b> , 121, 285-93		76
78	Mitogenic signaling via endogenous kappa-opioid receptors in C6 glioma cells: evidence for the involvement of protein kinase C and the mitogen-activated protein kinase signaling cascade. <i>Journal of Neurochemistry</i> , <b>2000</b> , 74, 564-73	6	75

77	Kappa opioids promote the proliferation of astrocytes via Gbetagamma and beta-arrestin 2-dependent MAPK-mediated pathways. <i>Journal of Neurochemistry</i> , <b>2008</b> , 107, 1753-65	6	72
76	Apparent loss-of-function mutant GPCRs revealed as constitutively desensitized receptors. <i>Biochemistry</i> , <b>2002</b> , 41, 11981-9	3.2	72
75	Mu opioid receptor regulation and opiate responsiveness. <i>AAPS Journal</i> , <b>2005</b> , 7, E587-91	3.7	66
74	Functional selectivity of 6Sguanidinonaltrindole (6SGNTI) at $\mu$ opioid receptors in striatal neurons. <i>Journal of Biological Chemistry</i> , <b>2013</b> , 288, 22387-98	5.4	65
73	A novel method for analyzing extremely biased agonism at G protein-coupled receptors. <i>Molecular Pharmacology</i> , <b>2015</b> , 87, 866-77	4.3	56
72	$\beta$ arrestins: regulatory role and therapeutic potential in opioid and cannabinoid receptor-mediated analgesia. <i>Handbook of Experimental Pharmacology</i> , <b>2014</b> , 219, 427-43	3.2	54
71	Herkinorin analogues with differential beta-arrestin-2 interactions. <i>Journal of Medicinal Chemistry</i> , <b>2008</b> , 51, 2421-31	8.3	52
70	A comparison of noninternalizing (herkinorin) and internalizing (DAMGO) mu-opioid agonists on cellular markers related to opioid tolerance and dependence. <i>Synapse</i> , <b>2007</b> , 61, 166-75	2.4	51
69	Functional selectivity of GPCR signaling in animals. <i>Current Opinion in Cell Biology</i> , <b>2014</b> , 27, 102-8	9	48
68	Antinociceptive effects of herkinorin, a MOP receptor agonist derived from salvinorin A in the formalin test in rats: new concepts in mu opioid receptor pharmacology: from a symposium on new concepts in mu-opioid pharmacology. <i>Drug and Alcohol Dependence</i> , <b>2012</b> , 121, 181-8	4.9	48
67	Recruitment of $\beta$ Arrestin into Neuronal Cilia Modulates Somatostatin Receptor Subtype 3 Ciliary Localization. <i>Molecular and Cellular Biology</i> , <b>2016</b> , 36, 223-35	4.8	45
66	Toward Directing Opioid Receptor Signaling to Refine Opioid Therapeutics. <i>Biological Psychiatry</i> , <b>2020</b> , 87, 15-21	7.9	44
65	Structure-activity relationship studies of functionally selective kappa opioid receptor agonists that modulate ERK 1/2 phosphorylation while preserving G protein over $\beta$ arrestin2 signaling bias. <i>ACS Chemical Neuroscience</i> , <b>2015</b> , 6, 1411-9	5.7	43
64	Synthesis of conolidine, a potent non-opioid analgesic for tonic and persistent pain. <i>Nature Chemistry</i> , <b>2011</b> , 3, 449-53	17.6	41
63	Mu-opioid agonist inhibition of kappa-opioid receptor-stimulated extracellular signal-regulated kinase phosphorylation is dynamin-dependent in C6 glioma cells. <i>Journal of Neurochemistry</i> , <b>2000</b> , 74, 574-81	6	40
62	Lubiprostone reverses the inhibitory action of morphine on intestinal secretion in guinea pig and mouse. <i>Journal of Pharmacology and Experimental Therapeutics</i> , <b>2010</b> , 334, 333-40	4.7	39
61	Optimization of a Series of Mu Opioid Receptor (MOR) Agonists with High G Protein Signaling Bias. <i>Journal of Medicinal Chemistry</i> , <b>2018</b> , 61, 8895-8907	8.3	38
60	Clozapine acts as an agonist at serotonin 2A receptors to counter MK-801-induced behaviors through a $\beta$ arrestin2-independent activation of Akt. <i>Neuropsychopharmacology</i> , <b>2014</b> , 39, 1902-13	8.7	37

59	Serotonin receptor signaling and regulation via $\beta$ arrestins. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>2010</b> , 45, 555-66	8.7	37
58	Discovery of Small Molecule Kappa Opioid Receptor Agonist and Antagonist Chemotypes through a HTS and Hit Refinement Strategy. <i>ACS Chemical Neuroscience</i> , <b>2012</b> , 3, 221-236	5.7	36
57	A G protein signaling-biased agonist at the $\beta$ pioid receptor reverses morphine tolerance while preventing morphine withdrawal. <i>Neuropsychopharmacology</i> , <b>2020</b> , 45, 416-425	8.7	36
56	Opioid receptor signaling: relevance for gastrointestinal therapy. <i>Current Opinion in Pharmacology</i> , <b>2006</b> , 6, 559-63	5.1	35
55	GIRK channel modulation by assembly with allosterically regulated RGS proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 19977-82	11.5	32
54	Arrestin recruitment to dopamine D2 receptor mediates locomotion but not incentive motivation. <i>Molecular Psychiatry</i> , <b>2020</b> , 25, 2086-2100	15.1	32
53	Morphine-induced physiological and behavioral responses in mice lacking G protein-coupled receptor kinase 6. <i>Drug and Alcohol Dependence</i> , <b>2009</b> , 104, 187-96	4.9	31
52	5-HT1A Autoreceptors in the Dorsal Raphe Nucleus Convey Vulnerability to Compulsive Cocaine Seeking. <i>Neuropsychopharmacology</i> , <b>2016</b> , 41, 1210-22	8.7	30
51	G protein-coupled receptor kinase/beta-arrestin systems and drugs of abuse: psychostimulant and opiate studies in knockout mice. <i>NeuroMolecular Medicine</i> , <b>2004</b> , 5, 41-50	4.6	30
50	Characterization of conditioned place preference to cocaine in congenic dopamine transporter knockout female mice. <i>Psychopharmacology</i> , <b>2005</b> , 180, 408-13	4.7	29
49	Investigation of the role of $\beta$ arrestin2 in kappa opioid receptor modulation in a mouse model of pruritus. <i>Neuropharmacology</i> , <b>2015</b> , 99, 600-9	5.5	28
48	Lubiprostone reverses the inhibitory action of morphine on mucosal secretion in human small intestine. <i>Digestive Diseases and Sciences</i> , <b>2011</b> , 56, 330-8	4	26
47	Stimulation of mucosal secretion by lubiprostone (SPI-0211) in guinea pig small intestine and colon. <i>American Journal of Physiology - Renal Physiology</i> , <b>2009</b> , 296, G823-32	5.1	26
46	RasGRP1 promotes amphetamine-induced motor behavior through a Rhes interaction network ("Rhesactome") in the striatum. <i>Science Signaling</i> , <b>2016</b> , 9, ra111	8.8	25
45	G protein signaling-biased agonism at the $\beta$ pioid receptor is maintained in striatal neurons. <i>Science Signaling</i> , <b>2018</b> , 11,	8.8	25
44	Brain opioid receptor adaptation and expression after prenatal exposure to buprenorphine. <i>Developmental Brain Research</i> , <b>1998</b> , 111, 35-42		24
43	Dynamic Strategic Bond Analysis Yields a Ten-Step Synthesis of 20-nor-Salvinorin A, a Potent $\beta$ OR Agonist. <i>ACS Central Science</i> , <b>2017</b> , 3, 1329-1336	16.8	23
42	Seeking (and Finding) Biased Ligands of the Kappa Opioid Receptor. <i>ACS Medicinal Chemistry Letters</i> , <b>2017</b> , 8, 694-700	4.3	23

41	Differential signaling properties at the kappa opioid receptor of 12-epi-salvinorin A and its analogues. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2012</b> , 22, 1023-6	2.9	22
40	Molecular-interaction and signaling profiles of AM3677, a novel covalent agonist selective for the cannabinoid 1 receptor. <i>ACS Chemical Neuroscience</i> , <b>2015</b> , 6, 1400-10	5.7	19
39	Post-activation-mediated changes in opioid receptors detected by N-terminal antibodies. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 10735-44	5.4	19
38	Evidence for kappa- and mu-opioid receptor expression in C6 glioma cells. <i>Journal of Neurochemistry</i> , <b>1998</b> , 70, 1819-25	6	17
37	Characterization of kappa opioid receptor mediated, dynorphin-stimulated [35S]GTP $\gamma$ S binding in mouse striatum for the evaluation of selective KOR ligands in an endogenous setting. <i>Neuropharmacology</i> , <b>2015</b> , 99, 131-41	5.5	16
36	Seeking Ligand Bias: Assessing GPCR Coupling to Beta-Arrestins for Drug Discovery. <i>Drug Discovery Today: Technologies</i> , <b>2010</b> , 7, e37-e42	7.1	14
35	Pharmacological characterization of a selective agonist for bombesin receptor subtype-3. <i>Biochemical and Biophysical Research Communications</i> , <b>2009</b> , 387, 283-8	3.4	13
34	Stolonidiol: Synthesis, Target Identification, and Mechanism for Choline Acetyltransferase Activation. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 5865-5869	16.4	12
33	Constitutive trafficking--more than just running in circles?. <i>Molecular Pharmacology</i> , <b>2007</b> , 71, 957-8	4.3	10
32	Community Guidelines for GPCR Ligand Bias: IUPHAR Review XX.. <i>British Journal of Pharmacology</i> , <b>2022</b> ,	8.6	10
31	Approaches to Assess Functional Selectivity in GPCRs: Evaluating G Protein Signaling in an Endogenous Environment. <i>Methods in Molecular Biology</i> , <b>2015</b> , 1335, 177-89	1.4	9
30	O6C-20-nor-salvinorin A is a stable and potent KOR agonist. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2018</b> , 28, 2770-2772	2.9	8
29	The effect of quinine in two bottle choice procedures in C57BL6 mice: Opioid preference, somatic withdrawal, and pharmacokinetic outcomes. <i>Drug and Alcohol Dependence</i> , <b>2018</b> , 191, 195-202	4.9	8
28	Repurposing of a Nucleoside Scaffold from Adenosine Receptor Agonists to Opioid Receptor Antagonists. <i>ACS Omega</i> , <b>2018</b> , 3, 12658-12678	3.9	8
27	Low Intrinsic Efficacy Alone Cannot Explain the Improved Side Effect Profiles of New Opioid Agonists. <i>Biochemistry</i> , <b>2021</b> ,	3.2	8
26	Comparison of morphine, oxycodone and the biased MOR agonist SR-17018 for tolerance and efficacy in mouse models of pain. <i>Neuropharmacology</i> , <b>2021</b> , 185, 108439	5.5	7
25	Potency enhancement of the $\mu$ opioid receptor antagonist probe ML140 through sulfonamide constraint utilizing a tetrahydroisoquinoline motif. <i>Bioorganic and Medicinal Chemistry</i> , <b>2015</b> , 23, 3948-50	3.4	6
24	Kappa-opioid receptor binding varies inversely with tumor grade in human gliomas. <i>Cancer</i> , <b>1998</b> , 83, 2561-6	6.4	6

23	Selectivity for G Protein or Arrestin-Mediated Signaling <b>2009</b> , 71-85		6
22	Synthesis of Kappa Opioid Antagonists Based On Pyrrolo[1,2- <del>f</del> quinoxalinones Using an N-Arylation/Condensation/Oxidation Reaction Sequence. <i>Journal of Organic Chemistry</i> , <b>2016</b> , 81, 10538-10550	4.2	6
21	Synthetic Ligands of Cannabinoid Receptors Affect Dauer Formation in the Nematode <i>Caenorhabditis elegans</i> . <i>G3: Genes, Genomes, Genetics</i> , <b>2016</b> , 6, 1695-705	3.2	5
20	A Genetically Encoded F-19 NMR Probe Reveals the Allosteric Modulation Mechanism of Cannabinoid Receptor 1. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 16320-16325	16.4	5
19	Approaches to Assess Biased Signaling at the CB1R Receptor. <i>Methods in Enzymology</i> , <b>2017</b> , 593, 259-279	2.7	4
18	Probing the CB Cannabinoid Receptor Binding Pocket with AM6538, a High-Affinity Irreversible Antagonist. <i>Molecular Pharmacology</i> , <b>2019</b> , 96, 619-628	4.3	3
17	Novel Functionalized Cannabinoid Receptor Probes: Development of Exceptionally Potent Agonists. <i>Journal of Medicinal Chemistry</i> , <b>2021</b> , 64, 3870-3884	8.3	3
16	Quantitating Ligand Bias Using the Competitive Model of Ligand Activity. <i>Methods in Molecular Biology</i> , <b>2019</b> , 1957, 235-247	1.4	2
15	Exploring the Biology of G Protein-Coupled Receptors from In Vitro to In Vivo. <i>Molecular Pharmacology</i> , <b>2015</b> , 88, 534-5	4.3	2
14	Low intrinsic efficacy alone cannot explain the improved side effect profiles of new opioid agonists		2
13	Arrestins: Ligand-Directed Regulators of 5-HT2A Receptor Trafficking and Signaling Events <b>2018</b> , 31-55		1
12	G protein signaling-biased mu opioid receptor agonists that produce sustained G protein activation are noncompetitive agonists. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	1
11	Beta-arrestin2 Contributes to the Development of Opioid- Induced Constipation. <i>FASEB Journal</i> , <b>2012</b> , 26, 1123.6	0.9	1
10	Some effects of putative G-protein biased mu-opioid receptor agonists in male rhesus monkeys. <i>Behavioural Pharmacology</i> , <b>2021</b> , 32, 453-458	2.4	0
9	Improved cyclobutyl nabilone analogs as potent CB1 receptor agonists.. <i>European Journal of Medicinal Chemistry</i> , <b>2021</b> , 230, 114027	6.8	
8	How specific are "target-specific" drugs? Celecoxib as a case in point. <i>Molecular Interventions: Pharmacological Perspectives From Biology, Chemistry and Genomics</i> , <b>2006</b> , 6, 196-8		
7	Mu Opioid Receptor Regulation and Opiate Responsiveness <b>2008</b> , 617-624		
6	Biased agonism and opioid receptor-mediated analgesia. <i>Proceedings for Annual Meeting of the Japanese Pharmacological Society</i> , <b>2018</b> , WCP2018, SY85-4	0	

- 5 Expression of different adenylyl cyclase isoforms impacts ligand bias downstream of the kappa opioid receptor. *FASEB Journal*, **2019**, 33, 503-11 0.9
- 4 Detecting the Role of Arrestins in G Protein-Coupled Receptor Regulation. *Neuromethods*, **2011**, 347-358.4
- 3 The role of beta-arrestin2 in clozapine's actions at the serotonin 2A receptor. *FASEB Journal*, **2012**, 26, lb573 0.9
- 2 Decaf or regular? Energizing the caffeine receptor. *Cell*, **2021**, 184, 1659-1660 56.2
- 1 Structure-Activity relationship investigation of triazole-based kappa opioid receptor agonists. *Medicinal Chemistry Research*, **2021**, 30, 1386-1396 2.2