Laurence J Miller

List of Publications by Year
in descending order

90 papers	5,421 citations	117625 34 h-index	91884 69 g-index
91 all docs	91 docs citations	91 times ranked	5714 citing authors

#	Article	IF	Citations
1	Seven Transmembrane Receptors as Shapeshifting Proteins: The Impact of Allosteric Modulation and Functional Selectivity on New Drug Discovery. Pharmacological Reviews, 2010, 62, 265-304.	16.0	543
2	THE CONCISE GUIDE TO PHARMACOLOGY 2019/20: G proteinâ€coupled receptors. British Journal of Pharmacology, 2019, 176, S21-S141.	5.4	519
3	Phase-plate cryo-EM structure of a class B GPCRâ€“G-protein complex. Nature, 2017, 546, 118-123.	27.8	424
4	THE CONCISE GUIDE TO PHARMACOLOGY 2021/22: G proteinâ€coupled receptors. British Journal of Pharmacology, 2021, 178, S27-S156.	5.4	337
5	Phase-plate cryo-EM structure of a biased agonist-bound human GLP-1 receptorâ€“Gs complex. Nature, 2018, 555, 121-125.	27.8	263
6	Glucagon-Like Peptide-1 and Its Class B G Proteinâ€“Coupled Receptors: A Long March to Therapeutic Successes. Pharmacological Reviews, 2016, 68, 954-1013.	16.0	252
7	Cryo-EM structure of the active, Gs-protein complexed, human CGRP receptor. Nature, 2018, 561, 492-497.	27.8	210
8	Polar transmembrane interactions drive formation of ligand-specific and signal pathway-biased family B G protein-coupled receptor conformations. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5211-5216.	7.1	203
9	Allosteric Ligands of the Glucagon-Like Peptide 1 Receptor (GLP-1R) Differentially Modulate Endogenous and Exogenous Peptide Responses in a Pathway-Selective Manner: Implications for Drug Screening. Molecular Pharmacology, 2010, 78, 456-465.	2.3	195
10	The Extracellular Surface of the GLP-1 Receptor Is a Molecular Trigger for Biased Agonism. Cell, 2016, 165, 1632-1643.	28.9	126
11	Differential GLP-1R Binding and Activation by Peptide and Non-peptide Agonists. Molecular Cell, 2020, 80, 485-500.e7.	9.7	111
12	Single-molecule FRET imaging of GPCR dimers in living cells. Nature Methods, 2021, 18, 397-405.	19.0	104
13	Relationship Between Native and Recombinant Cholecystokinin Receptors. Pancreas, 1996, 13, 130-139.	1.1	99
14	Use of N,Oâ€bisâ€Fmocâ€<scp>d</scp>â€Tyrâ€ONSu for introduction of an oxidative iodination site into cholecystokinin family peptides. International Journal of Peptide and Protein Research, 1988, 31, 429-434.	0.1	95
15	Transmembrane Segment IV Contributes a Functionally Important Interface for Oligomerization of the Class II G Protein-coupled Secretin Receptor. Journal of Biological Chemistry, 2007, 282, 30363-30372.	3.4	92
16	Allostery and Biased Agonism at Class B G Protein-Coupled Receptors. Chemical Reviews, 2017, 117, 111-138.	47.7	91
17	Multiple Extracellular Loop Domains Contribute Critical Determinants for Agonist Binding and Activation of the Secretin Receptor. Journal of Biological Chemistry, 1996, 271, 14944-14949.	3.4	90
18	Crystal structure of the Frizzled 4 receptor in a ligand-free state. Nature, 2018, 560, 666-670.	27.8	77

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19	Intrinsic photoaffinity labeling of native and recombinant rat pancreatic secretin receptors. Gastroenterology, 1993, 105, 1534-1543.	1.3	71
20	Structure and Dynamics of Adrenomedullin Receptors AM₁ and AM₂ Reveal Key Mechanisms in the Control of Receptor Phenotype by Receptor Activity-Modifying Proteins. ACS Pharmacology and Translational Science, 2020, 3, 263-284.	4.9	71
21	Differential Effects of Modification of Membrane Cholesterol and Sphingolipids on the Conformation, Function, and Trafficking of the G Protein-coupled Cholecystokinin Receptor. Journal of Biological Chemistry, 2005, 280, 2176-2185.	3.4	70
22	Structural basis of cholecystokinin receptor binding and regulation. , 2008, 119, 83-95.		64
23	A Hydrogen-Bonded Polar Network in the Core of the Glucagon-Like Peptide-1 Receptor Is a Fulcrum for Biased Agonism: Lessons from Class B Crystal Structures. Molecular Pharmacology, 2016, 89, 335-347.	2.3	56
24	Spirohexene-Tetrazine Ligation Enables Bioorthogonal Labeling of Class B G Protein-Coupled Receptors in Live Cells. Journal of the American Chemical Society, 2017, 139, 13376-13386.	13.7	55
25	Differential sensitivity of types 1 and 2 cholecystokinin receptors to membrane cholesterol. Journal of Lipid Research, 2012, 53, 137-148.	4.2	50
26	Wnt5a promotes Frizzled-4 signalosome assembly by stabilizing cysteine-rich domain dimerization. Genes and Development, 2017, 31, 916-926.	5.9	50
27	Refinement of Glucagon-like Peptide 1 Docking to Its Intact Receptor Using Mid-region Photolabile Probes and Molecular Modeling. Journal of Biological Chemistry, 2011, 286, 15895-15907.	3.4	49
28	Identification of Two Pairs of Spatially Approximated Residues within the Carboxyl Terminus of Secretin and Its Receptor. Journal of Biological Chemistry, 2000, 275, 26032-26039.	3.4	46
29	Structure and dynamics of the active Gs-coupled human secretin receptor. Nature Communications, 2020, 11, 4137.	12.8	46
30	Molecular Basis of Association of Receptor Activity-Modifying Protein 3 with the Family B G Protein-Coupled Secretin Receptor. Biochemistry, 2009, 48, 11773-11785.	2.5	45
31	Transmembrane peptides as unique tools to demonstrate the in vivo action of a crossâ€class GPCR heterocomplex. FASEB Journal, 2014, 28, 2632-2644.	0.5	44
32	Changes in the plasma membrane in metabolic disease: impact of the membrane environment on G proteinâ€coupled receptor structure and function. British Journal of Pharmacology, 2018, 175, 4009-4025.	5.4	43
33	Structure of an AMPK complex in an inactive, ATP-bound state. Science, 2021, 373, 413-419.	12.6	42
34	Key interactions by conserved polar amino acids located at the transmembrane helical boundaries in Class B GPCRs modulate activation, effector specificity and biased signalling in the glucagon-like peptide-1 receptor. Biochemical Pharmacology, 2016, 118, 68-87.	4.4	41
35	Structures of the human cholecystokinin 1 (CCK1) receptor bound to Gs and Gq mimetic proteins provide insight into mechanisms of G protein selectivity. PLoS Biology, 2021, 19, e3001295.	5.6	41
36	The Molecular Control of Calcitonin Receptor Signaling. ACS Pharmacology and Translational Science, 2019, 2, 31-51.	4.9	38

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37	Mapping spatial approximations between the amino terminus of secretin and each of the extracellular loops of its receptor using cysteine trapping. FASEB Journal, 2012, 26, 5092-5105.	0.5	35
38	Metabolic Actions of the Type 1 Cholecystokinin Receptor: Its Potential as a Therapeutic Target. Trends in Endocrinology and Metabolism, 2016, 27, 609-619.	7.1	35
39	Molecular Basis of Secretin Docking to Its Intact Receptor Using Multiple Photolabile Probes Distributed throughout the Pharmacophore. Journal of Biological Chemistry, 2011, 286, 23888-23899.	3.4	31
40	Spatial intensity distribution analysis quantifies the extent and regulation of homodimerization of the secretin receptor. Biochemical Journal, 2017, 474, 1879-1895.	3.7	31
41	Dimerization of the transmembrane domain of amyloid precursor protein is determined by residues around the Î³-secretase cleavage sites. Journal of Biological Chemistry, 2017, 292, 15826-15837.	3.4	26
42	Structural Basis for Allosteric Modulation of Class B G Proteinâ€“Coupled Receptors. Annual Review of Pharmacology and Toxicology, 2020, 60, 89-107.	9.4	26
43	Elucidation of the Molecular Basis of Cholecystokinin Peptide Docking to Its Receptor Using Site-Specific Intrinsic Photoaffinity Labeling and Molecular Modeling. Biochemistry, 2009, 48, 5303-5312.	2.5	24
44	Importance of Each Residue within Secretin for Receptor Binding and Biological Activity. Biochemistry, 2011, 50, 2983-2993.	2.5	24
45	Ligand binding and activation of the secretin receptor, a prototypic family B G proteinâ€coupled receptor. British Journal of Pharmacology, 2012, 166, 18-26.	5.4	23
46	Membrane Cholesterol Affects Stimulusâ€Activity Coupling in Type 1, but not Type 2, CCK Receptors: Use of Cell Lines with Elevated Cholesterol. Lipids, 2013, 48, 231-244.	1.7	23
47	Secretin Occupies a Single Protomer of the Homodimeric Secretin Receptor Complex. Journal of Biological Chemistry, 2010, 285, 9919-9931.	3.4	21
48	Lactam Constraints Provide Insights into the Receptor-Bound Conformation of Secretin and Stabilize a Receptor Antagonist. Biochemistry, 2011, 50, 8181-8192.	2.5	21
49	Differential determinants for coupling of distinct G proteins with the class B secretin receptor. American Journal of Physiology - Cell Physiology, 2012, 302, C1202-C1212.	4.6	21
50	A Type 1 Cholecystokinin Receptor Mutant That Mimics the Dysfunction Observed for Wild Type Receptor in a High Cholesterol Environment. Journal of Biological Chemistry, 2014, 289, 18314-18326.	3.4	20
51	Beneficial effects of Î²-sitosterol on type 1 cholecystokinin receptor dysfunction induced by elevated membrane cholesterol. Clinical Nutrition, 2016, 35, 1374-1379.	5.0	20
52	Sensitivity of cholecystokinin receptors to membrane cholesterol content. Frontiers in Endocrinology, 2012, 3, 123.	3.5	19
53	Molecular Basis for Benzodiazepine Agonist Action at the Type 1 Cholecystokinin Receptor. Journal of Biological Chemistry, 2013, 288, 21082-21095.	3.4	19
54	Juxtamembranous Region of the Amino Terminus of the Family B G Protein-coupled Calcitonin Receptor Plays a Critical Role in Small-molecule Agonist Action. Journal of Biological Chemistry, 2009, 284, 21839-21847.	3.4	18

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55	Differential Impact of Amino Acid Substitutions on Critical Residues of the Human Glucagon-Like Peptide-1 Receptor Involved in Peptide Activity and Small-Molecule Allostery. Journal of Pharmacology and Experimental Therapeutics, 2015, 353, 52-63.	2.5	18
56	Characterization of farnesyl diphosphate farnesyl transferase 1 (FDFT1) expression in cancer. Personalized Medicine, 2019, 16, 51-65.	1.5	17
57	Cholecystokinin responsiveness varies across the population dependent on metabolic phenotype. American Journal of Clinical Nutrition, 2017, 106, 447-456.	4.7	16
58	Molecular Mechanism of Action of Triazolobenzodiazepinone Agonists of the Type 1 Cholecystokinin Receptor. Possible Cooperativity across the Receptor Homodimeric Complex. Journal of Medicinal Chemistry, 2015, 58, 9562-9577.	6.4	15
59	Molecular Basis of Agonist Binding to the Type A Cholecystokinin Receptor. Basic and Clinical Pharmacology and Toxicology, 2002, 91, 282-285.	0.0	13
60	Development of a Highly Selective Allosteric Antagonist Radioligand for the Type 1 Cholecystokinin Receptor and Elucidation of Its Molecular Basis of Binding. Molecular Pharmacology, 2015, 87, 130-140.	2.3	10
61	Roles of Cholecystokinin in the Nutritional Continuum. Physiology and Potential Therapeutics. Frontiers in Endocrinology, 2021, 12, 684656.	3.5	10
62	The orthosteric agonist-binding pocket in the prototypic class B G-protein-coupled secretin receptor. Biochemical Society Transactions, 2013, 41, 154-158.	3.4	9
63	Elimination of a cholecystokinin receptor agonist â€˜triggerâ€™ in an effort to develop positive allosteric modulators without intrinsic agonist activity. Bioorganic and Medicinal Chemistry Letters, 2015, 25, 1849-1855.	2.2	9
64	Impact of ursodeoxycholic acid on a CCK1R cholesterol-binding site may contribute to its positive effects in digestive function. American Journal of Physiology - Renal Physiology, 2015, 309, G377-G386.	3.4	9
65	Use of Cysteine Trapping to Map Spatial Approximations between Residues Contributing to the Helix N-capping Motif of Secretin and Distinct Residues within Each of the Extracellular Loops of Its Receptor. Journal of Biological Chemistry, 2016, 291, 5172-5184.	3.4	9
66	Evidence that specific interactions play a role in the cholesterol sensitivity of G protein-coupled receptors. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183557.	2.6	9
67	Structure and Function of Cross-class Complexes of G Protein-coupled Secretin and Angiotensin 1a Receptors. Journal of Biological Chemistry, 2016, 291, 17332-17344.	3.4	8
68	Biochemical and Cell Biological Mechanisms of Cholecystokinin Receptor Regulation. Current Topics in Medicinal Chemistry, 2007, 7, 1166-1172.	2.1	7
69	Rational development of a high-affinity secretin receptor antagonist. Biochemical Pharmacology, 2020, 177, 113929.	4.4	7
70	Development of a Testing Funnel for Identification of Small-Molecule Modulators Targeting Secretin Receptors. SLAS Discovery, 2021, 26, 1-16.	2.7	7
71	Discovery of small molecule positive allosteric modulators of the secretin receptor. Biochemical Pharmacology, 2021, 185, 114451.	4.4	7
72	G Proteinâ€“Coupled Receptor Structures, Molecular Associations, and Modes of Regulation. Annals of the New York Academy of Sciences, 2008, 1144, 1-5.	3.8	6

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73	Coexpressed Class B G Proteinâ€“Coupled Secretin and GLP-1 Receptors Self- and Cross-Associate: Impact on Pancreatic Islets. Endocrinology, 2017, 158, 1685-1700.	2.8	6
74	Differential Spatial Approximation between Secretin and Its Receptor Residues in Active and Inactive Conformations Demonstrated by Photoaffinity Labeling. Molecular Endocrinology, 2006, 20, 1688-1698.	3.7	5
75	Predicting the effects of amino acid replacements in peptide hormones on their binding affinities for class B GPCRs and application to the design of secretin receptor antagonists. Journal of Computer-Aided Molecular Design, 2012, 26, 835-845.	2.9	5
76	Molecular Basis of Action of a Small-Molecule Positive Allosteric Modulator Agonist at the Type 1 Cholecystokinin Holoreceptor. Molecular Pharmacology, 2019, 95, 245-259.	2.3	5
77	Kinetics of Gallbladder Emptying During Cholecystokinin Cholescintigraphy as an Indicator of In Vivo Hormonal Sensitivity. Journal of Nuclear Medicine Technology, 2020, 48, 40-45.	0.8	5
78	Bioluminescence Resonance Energy Transfer assay (BRET assay). Bio-protocol, 2017, 7, .	0.4	4
79	Discovery of a Positive Allosteric Modulator of Cholecystokinin Action at CCK1R in Normal and Elevated Cholesterol. Frontiers in Endocrinology, 2021, 12, 789957.	3.5	3
80	Informed Development of Drugs Acting at Family B G Proteinâ€“Coupled Receptors. Annals of the New York Academy of Sciences, 2008, 1144, 203-209.	3.8	2
81	Gastrointestinal Hormones and Receptors. , 0, , 56-85.		2
82	Cell-based assays for C99 interactions-Tango assays. Bio-protocol, 2017, 7, .	0.4	2
83	Cholecystokinin receptors (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database. IUPHAR/BPS Guide To Pharmacology CITE, 2019, 2019, .	0.2	2
84	Molecular basis of peptide activation of the GLP-1 receptor. Molecular Metabolism, 2013, 2, 60-61.	6.5	1
85	Streptavidin bead pulldown assay to determine homooligomerization. Bio-protocol, 2017, 7, .	0.4	1
86	Signaling Modification by GPCR Heteromer and Its Implication on X-Linked Nephrogenic Diabetes Insipidus. PLoS ONE, 2016, 11, e0163086.	2.5	0
87	Glucagon receptor family in GtoPdb v.2021.3. IUPHAR/BPS Guide To Pharmacology CITE, 2021, 2021, .	0.2	0
88	Î³-secretase epsilon-cleavage assay. Bio-protocol, 2017, 7, .	0.4	0
89	Glucagon receptor family (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database. IUPHAR/BPS Guide To Pharmacology CITE, 2019, 2019, .	0.2	0
90	Secretin amino-terminal structure-activity relationships and complementary mutagenesis at the site of docking to the secretin receptor. Molecular Pharmacology, 2022, , MOLPHARM-AR-2022-000502.	2.3	0