Meritxell Canals

List of Publications by Year
in descending order

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103 papers	7,305 citations	61687 45 h-index	66518 82 g-index
108 all docs	108 docs citations	108 times ranked	7844 citing authors

#	Article	IF	Citations
1	Atypical opioid receptors: unconventional biology and therapeutic opportunities. , 2022, 233, 108014.		15
2	Positive allosteric modulation of endogenous delta opioid receptor signaling in the enteric nervous system is a potential treatment for gastrointestinal motility disorders. American Journal of Physiology - Renal Physiology, 2022, 322, G66-G78.	1.6	7
3	The respiratory depressant effects of mitragynine are limited by its conversion to 7â€OH mitragynine. British Journal of Pharmacology, 2022, 179, 3875-3885.	2.7	10
4	Opioid-induced pronociceptive signaling in the gastrointestinal tract is mediated by delta-opioid receptor signaling.. Journal of Neuroscience, 2022, , JN-RM-2098-21.	1.7	3
5	OZITX, a pertussis toxin-like protein for occluding inhibitory G protein signalling including GÎ±z. Communications Biology, 2022, 5, 256.	2.0	7
6	The Life Cycle of the Mu-Opioid Receptor. Trends in Biochemical Sciences, 2021, 46, 315-328.	3.7	27
7	A lipid-anchored neurokinin 1 receptor antagonist prolongs pain relief by a three-pronged mechanism of action targeting the receptor at the plasma membrane and in endosomes. Journal of Biological Chemistry, 2021, 296, 100345.	1.6	17
8	Systematic Assessment of Chemokine Signaling at Chemokine Receptors CCR4, CCR7 and CCR10. International Journal of Molecular Sciences, 2021, 22, 4232.	1.8	8
9	New phosphosite-specific antibodies to unravel the role of GRK phosphorylation in dopamine D2 receptor regulation and signaling. Scientific Reports, 2021, 11, 8288.	1.6	19
10	Glycosylation Regulates N-Terminal Proteolysis and Activity of the Chemokine CCL14. ACS Chemical Biology, 2021, 16, 973-981.	1.6	11
11	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.	2.9	14
12	Experimental considerations for the assessment of in vivo and in vitro opioid pharmacology. , 2021, 230, 107961.		8
13	Anxiety enhances pain in a model of osteoarthritis and is associated with altered endogenous opioid function and reduced opioid analgesia. Pain Reports, 2021, 6, e956.	1.4	6
14	Mu and Delta Opioid Receptors Are Coexpressed and Functionally Interact in the Enteric Nervous System of the Mouse Colon. Cellular and Molecular Gastroenterology and Hepatology, 2020, 9, 465-483.	2.3	23
15	Critical Assessment of G Protein-Biased Agonism at the Î¼-Opioid Receptor. Trends in Pharmacological Sciences, 2020, 41, 947-959.	4.0	91
16	Editorial: Novel Molecular Targets for the Treatment of Pain. Frontiers in Molecular Neuroscience, 2020, 13, 625714.	1.4	0
17	GRKs as Key Modulators of Opioid Receptor Function. Cells, 2020, 9, 2400.	1.8	11
18	Opioid Pharmacology under the Microscope. Molecular Pharmacology, 2020, 98, 425-432.	1.0	14

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19	Endosomal signaling of delta opioid receptors is an endogenous mechanism and therapeutic target for relief from inflammatory pain. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15281-15292.	3.3	72
20	Low intrinsic efficacy for G protein activation can explain the improved side effect profiles of new opioid agonists. Science Signaling, 2020, 13, .	1.6	219
21	Phosphoproteomic characterization of the signaling network resulting from activation of the chemokine receptor CCR2. Journal of Biological Chemistry, 2020, 295, 6518-6531.	1.6	16
22	A tetrapeptide class of biased analgesics from an Australian fungus targets the Âμ-opioid receptor. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22353-22358.	3.3	31
23	Ligand-dependent spatiotemporal signaling profiles of the Î¼-opioid receptor are controlled by distinct protein-interaction networks. Journal of Biological Chemistry, 2019, 294, 16198-16213.	1.6	17
24	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.	1.6	21
25	Clathrin and GRK2/3 inhibitors block Î´-opioid receptor internalization in myenteric neurons and inhibit neuromuscular transmission in the mouse colon. American Journal of Physiology - Renal Physiology, 2019, 317, G79-G89.	1.6	9
26	Influence of Chemokine N-Terminal Modification on Biased Agonism at the Chemokine Receptor CCR1. International Journal of Molecular Sciences, 2019, 20, 2417.	1.8	12
27	Agonist-dependent development of delta opioid receptor tolerance in the colon. Cellular and Molecular Life Sciences, 2019, 76, 3033-3050.	2.4	9
28	GRK Mediates Î¼-Opioid Receptor Plasma Membrane Reorganization. Frontiers in Molecular Neuroscience, 2019, 12, 104.	1.4	15
29	G-Proteinâ€“Coupled Receptors Are Dynamic Regulators of Digestion and Targets for Digestive Diseases. Gastroenterology, 2019, 156, 1600-1616.	0.6	22
30	Therapeutic targeting of HER2â€“CB ₂ R heteromers in HER2-positive breast cancer. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3863-3872.	3.3	40
31	Proteomic Identification of Interferon-Induced Proteins with Tetratricopeptide Repeats as Markers of M1 Macrophage Polarization. Journal of Proteome Research, 2018, 17, 1485-1499.	1.8	35
32	Fluorescently Labeled Morphine Derivatives for Bioimaging Studies. Journal of Medicinal Chemistry, 2018, 61, 1316-1329.	2.9	18
33	Genetically Encoded FRET Biosensors to Illuminate Compartmentalised GPCR Signalling. Trends in Pharmacological Sciences, 2018, 39, 148-157.	4.0	30
34	Pharmacologic Evidence for a Putative Conserved Allosteric Site on Opioid Receptors. Molecular Pharmacology, 2018, 93, 157-167.	1.0	35
35	Preassembled GPCR signaling complexes mediate distinct cellular responses to ultralow ligand concentrations. Science Signaling, 2018, 11, .	1.6	36
36	Protease-activated receptor-2 in endosomes signals persistent pain of irritable bowel syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E7438-E7447.	3.3	128

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37	Multisite phosphorylation is required for sustained interaction with GRKs and arrestins during rapid Î¼-opioid receptor desensitization. Science Signaling, 2018, 11, .	1.6	97
38	Inflammation-associated changes in DOR expression and function in the mouse colon. American Journal of Physiology - Renal Physiology, 2018, 315, G544-G559.	1.6	20
39	Dynamic structure and localization of G protein-coupled receptor (GPCR) complexes determines unique signalling outcomes. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO1-8-9.	0.0	0
40	Key determinants of selective binding and activation by the monocyte chemoattractant proteins at the chemokine receptor CCR2. Science Signaling, 2017, 10, .	1.6	33
41	Neurokinin 1 receptor signaling in endosomes mediates sustained nociception and is a viable therapeutic target for prolonged pain relief. Science Translational Medicine, 2017, 9, .	5.8	158
42	Endosomal signaling of the receptor for calcitonin gene-related peptide mediates pain transmission. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12309-12314.	3.3	136
43	Ticks from diverse genera encode chemokine-inhibitory evasin proteins. Journal of Biological Chemistry, 2017, 292, 15670-15680.	1.6	46
44	Distribution and trafficking of the Î¼-opioid receptor in enteric neurons of the guinea pig. American Journal of Physiology - Renal Physiology, 2016, 311, G252-G266.	1.6	21
45	Protein Kinase D and GÎ²Î³ Subunits Mediate Agonist-evoked Translocation of Protease-activated Receptor-2 from the Golgi Apparatus to the Plasma Membrane. Journal of Biological Chemistry, 2016, 291, 11285-11299.	1.6	19
46	The role of kinetic context in apparent biased agonism at GPCRs. Nature Communications, 2016, 7, 10842.	5.8	270
47	Systematic analysis of factors influencing observations of biased agonism at the mu-opioid receptor. Biochemical Pharmacology, 2016, 113, 70-87.	2.0	48
48	Proposed Mode of Binding and Action of Positive Allosteric Modulators at Opioid Receptors. ACS Chemical Biology, 2016, 11, 1220-1229.	1.6	63
49	Plasma membrane localization of the Î¼-opioid receptor controls spatiotemporal signaling. Science Signaling, 2016, 9, ra16.	1.6	61
50	Synthesis, Biological Evaluation, and Utility of Fluorescent Ligands Targeting the Î¼-Opioid Receptor. Journal of Medicinal Chemistry, 2015, 58, 9754-9767.	2.9	23
51	Binding Pockets and Poses of Allosteric Modulators of Opioid Receptors Identified by Metadynamics. Biophysical Journal, 2015, 108, 415a.	0.2	0
52	Detection and Quantification of Allosteric Modulation of Endogenous M4 Muscarinic Acetylcholine Receptor Using Impedance-Based Label-Free Technology in a Neuronal Cell Line. Journal of Biomolecular Screening, 2015, 20, 646-654.	2.6	8
53	Discovery, Synthesis, and Molecular Pharmacology of Selective Positive Allosteric Modulators of the Î´-Opioid Receptor. Journal of Medicinal Chemistry, 2015, 58, 4220-4229.	2.9	54
54	Biased Agonism of Endogenous Opioid Peptides at theÎ¼-Opioid Receptor. Molecular Pharmacology, 2015, 88, 335-346.	1.0	93

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55	The Complex Roles of Î¼-Opioid Receptor Phosphorylation: A Key Determinant in Receptor Signaling and Regulation. Molecular Pharmacology, 2015, 88, 814-815.	1.0	4
56	Novel <scp>GPCR</scp> paradigms at the Î¼â€opioid receptor. British Journal of Pharmacology, 2015, 172, 287-296.	2.7	53
57	Detection and Quantification of Intracellular Signaling Using FRET-Based Biosensors and High Content Imaging. Methods in Molecular Biology, 2015, 1335, 131-161.	0.4	20
58	Tyrosine sulfation of chemokine receptor CCR2 enhances interactions with both monomeric and dimeric forms of the chemokine monocyte chemoattractant protein-1 (MCP-1).. Journal of Biological Chemistry, 2014, 289, 13362.	1.6	4
59	Identification of Overlapping but Differential Binding Sites for the High-Affinity CXCR3 Antagonists NBI-74330 and VUF11211. Molecular Pharmacology, 2014, 85, 116-126.	1.0	25
60	Biological redundancy of endogenous GPCR ligands in the gut and the potential for endogenous functional selectivity. Frontiers in Pharmacology, 2014, 5, 262.	1.6	27
61	Mechanistic Insights into Allosteric Structure-Function Relationships at the M1 Muscarinic Acetylcholine Receptor. Journal of Biological Chemistry, 2014, 289, 33701-33711.	1.6	49
62	Endothelin-converting Enzyme 1 and Î²-Arrestins Exert Spatiotemporal Control of Substance P-induced Inflammatory Signals. Journal of Biological Chemistry, 2014, 289, 20283-20294.	1.6	21
63	Molecular Determinants of Allosteric Modulation at the M1 Muscarinic Acetylcholine Receptor. Journal of Biological Chemistry, 2014, 289, 6067-6079.	1.6	51
64	Structural Basis of Receptor Sulfotyrosine Recognition by a CC Chemokine: The N-Terminal Region of CCR3 Bound to CCL11/Eotaxin-1. Structure, 2014, 22, 1571-1581.	1.6	70
65	Allosteric Modulation of M1 Muscarinic Acetylcholine Receptor Internalization and Subcellular Trafficking. Journal of Biological Chemistry, 2014, 289, 15856-15866.	1.6	31
66	Structural basis for modulation of a G-protein-coupled receptor by allosteric drugs. Nature, 2013, 503, 295-299.	13.7	365
67	Structure-Based Ligand Discovery Targeting Orthosteric and Allosteric Pockets of Dopamine Receptors. Molecular Pharmacology, 2013, 84, 794-807.	1.0	78
68	Allosteric Modulation of a Chemogenetically Modified G Protein-Coupled Receptor. Molecular Pharmacology, 2013, 83, 521-530.	1.0	24
69	The Bile Acid Receptor TGR5 Does Not Interact with Î²-Arrestins or Traffic to Endosomes but Transmits Sustained Signals from Plasma Membrane Rafts. Journal of Biological Chemistry, 2013, 288, 22942-22960.	1.6	78
70	Regulation of G Protein-Coupled Receptors by Allosteric Ligands. ACS Chemical Neuroscience, 2013, 4, 527-534.	1.7	47
71	Tyrosine Sulfation of Chemokine Receptor CCR2 Enhances Interactions with Both Monomeric and Dimeric Forms of the Chemokine Monocyte Chemoattractant Protein-1 (MCP-1). Journal of Biological Chemistry, 2013, 288, 10024-10034.	1.6	90
72	Agonist-biased Trafficking of Somatostatin Receptor 2A in Enteric Neurons. Journal of Biological Chemistry, 2013, 288, 25689-25700.	1.6	35

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73	Chemical Subtleties in Small-Molecule Modulation of Peptide Receptor Function: The Case of CXCR3 Biaryl-Type Ligands. Journal of Medicinal Chemistry, 2012, 55, 10572-10583.	2.9	29
74	Sequential Conformational Rearrangements Dictate the Dynamics of Class C GPCR Activation. Science Signaling, 2012, 5, pe51.	1.6	4
75	Pharmacological characterization of a smallâ€molecule agonist for the chemokine receptor CXCR3. British Journal of Pharmacology, 2012, 166, 898-911.	2.7	44
76	Design and Receptor Interactions of Obligate Dimeric Mutant of Chemokine Monocyte Chemoattractant Protein-1 (MCP-1). Journal of Biological Chemistry, 2012, 287, 14692-14702.	1.6	43
77	A Monod-Wyman-Changeux Mechanism Can Explain G Protein-coupled Receptor (GPCR) Allosteric Modulation. Journal of Biological Chemistry, 2012, 287, 650-659.	1.6	98
78	Synthesis, modeling and functional activity of substituted styrene-amides as small-molecule CXCR7 agonists. European Journal of Medicinal Chemistry, 2012, 51, 184-192.	2.6	54
79	Pharmacological modulation of chemokine receptor function. British Journal of Pharmacology, 2012, 165, 1617-1643.	2.7	217
80	Ubiquitination of CXCR7 Controls Receptor Trafficking. PLoS ONE, 2012, 7, e34192.	1.1	86
81	Agonist activation of the G proteinâ€coupled receptor GPR35 involves transmembrane domain III and is transduced via GÎ±₁₃ and Î²â€arrestinâ€2. British Journal of Pharmacology, 2011, 162, 733-748.	2.7	59
82	Allostery in GPCRs: â€˜MWCâ€™ revisited. Trends in Biochemical Sciences, 2011, 36, 663-672.	3.7	64
83	Cannabinoid Receptor Type 1 Protects against Age- Related Osteoporosis by Regulating Osteoblast and Adipocyte Differentiation in Marrow Stromal Cells. Cell Metabolism, 2009, 10, 139-147.	7.2	151
84	Cell surface delivery and structural re-organization by pharmacological chaperones of an oligomerization-defective Î±1b-adrenoceptor mutant demonstrates membrane targeting of GPCR oligomers. Biochemical Journal, 2009, 417, 161-172.	1.7	36
85	Constitutive Activity of the Cannabinoid CB1 Receptor Regulates the Function of Co-expressed Mu Opioid Receptors. Journal of Biological Chemistry, 2008, 283, 11424-11434.	1.6	78
86	The Î±1b-Adrenoceptor Exists as a Higher-Order Oligomer: Effective Oligomerization Is Required for Receptor Maturation, Surface Delivery, and Function. Molecular Pharmacology, 2007, 71, 1015-1029.	1.0	154
87	Working memory deficits in transgenic rats overexpressing human adenosine A2A receptors in the brain. Neurobiology of Learning and Memory, 2007, 87, 42-56.	1.0	115
88	Intramembrane receptorâ€“receptor interactions: a novel principle in molecular medicine. Journal of Neural Transmission, 2007, 114, 49-75.	1.4	113
89	Oligomeric structure of the Î±1b-adrenoceptor: Comparisons with rhodopsin. Vision Research, 2006, 46, 4434-4441.	0.7	9
90	Presynaptic Control of Striatal Glutamatergic Neurotransmission by Adenosine A1-A2A Receptor Heteromers. Journal of Neuroscience, 2006, 26, 2080-2087.	1.7	553

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91	Orexin-1 Receptor-Cannabinoid CB1 Receptor Heterodimerization Results in Both Ligand-dependent and -independent Coordinated Alterations of Receptor Localization and Function. Journal of Biological Chemistry, 2006, 281, 38812-38824.	1.6	197
92	Up-regulation of the Angiotensin II Type 1 Receptor by the MAS Proto-oncogene Is Due to Constitutive Activation of Gq/G11 by MAS. Journal of Biological Chemistry, 2006, 281, 16757-16767.	1.6	77
93	Adenosine A_{2A} and Dopamine D₂ Heteromeric Receptor Complexes and Their Function. Journal of Molecular Neuroscience, 2005, 26, 209-220.	1.1	207
94	Molecular mechanisms involved in the adenosine A1 and A2A receptor-induced neuronal differentiation in neuroblastoma cells and striatal primary cultures. Journal of Neurochemistry, 2005, 92, 337-348.	2.1	56
95	Adenosine A2A Receptor and Dopamine D3 Receptor Interactions: Evidence of Functional A2A/D3 Heteromeric Complexes. Molecular Pharmacology, 2005, 67, 400-407.	1.0	119
96	Combining Mass Spectrometry and Pull-Down Techniques for the Study of Receptor Heteromerization. Direct Epitopeâ^'Epitope Electrostatic Interactions between Adenosine A2Aand Dopamine D2Receptors. Analytical Chemistry, 2004, 76, 5354-5363.	3.2	195
97	Adenosine A2A-dopamine D2 receptorâ€"receptor heteromers. Targets for neuro-psychiatric disorders. Parkinsonism and Related Disorders, 2004, 10, 265-271.	1.1	132
98	Regulation of heptaspanning-membrane-receptor function by dimerization and clustering. Trends in Biochemical Sciences, 2003, 28, 238-243.	3.7	74
99	Homodimerization of adenosine A2A receptors: qualitative and quantitative assessment by fluorescence and bioluminescence energy transfer. Journal of Neurochemistry, 2003, 88, 726-734.	2.1	139
100	Adenosine A2A-Dopamine D2 Receptor-Receptor Heteromerization. Journal of Biological Chemistry, 2003, 278, 46741-46749.	1.6	401
101	Glutamate mGlu5-Adenosine A2A-Dopamine D2 Receptor Interactions in the Striatum. Implications for Drug Therapy in Neuro-psychiatric Disorders and Drug Abuse. Current Medicinal Chemistry - Central Nervous System Agents, 2003, 3, 1-26.	0.6	18
102	Coaggregation, Cointernalization, and Codesensitization of Adenosine A2A Receptors and Dopamine D2Receptors. Journal of Biological Chemistry, 2002, 277, 18091-18097.	1.6	450
103	Interactions among adenosine deaminase, adenosine A1 receptors and dopamine D1 receptors in stably cotransfected fibroblast cells and neurons. Neuroscience, 2002, 113, 709-719.	1.1	55