David R Poyner

List of Publications by Year
in descending order

128 papers	5,360 citations	94381 37 h-index	98753 67 g-index
142 all docs	142 docs citations	142 times ranked	3796 citing authors

#	Article	IF	Citations
1	International Union of Pharmacology. XXXII. The Mammalian Calcitonin Gene-Related Peptides, Adrenomedullin, Amylin, and Calcitonin Receptors. Pharmacological Reviews, 2002, 54, 233-246.	7.1	714
2	Update on the pharmacology of calcitonin/CGRP family of peptides: IUPHAR Review 25. British Journal of Pharmacology, 2018, 175, 3-17.	2.7	269
3	GPCR modulation by RAMPs. , 2006, 109, 173-197.		213
4	Pharmacological Discrimination of Calcitonin Receptor: Receptor Activity-Modifying Protein Complexes. Molecular Pharmacology, 2005, 67, 1655-1665.	1.0	196
5	G-protein coupled receptor solubilization and purification for biophysical analysis and functional studies, in the total absence of detergent. Bioscience Reports, 2015, 35, .	1.1	150
6	Ionic Aggregate Structure in Ionomer Melts: Effect of Molecular Architecture on Aggregates and the Ionomer Peak. Journal of the American Chemical Society, 2012, 134, 574-587.	6.6	148
7	The pharmacology of Adrenomedullin 2/Intermedin. British Journal of Pharmacology, 2012, 166, 110-120.	2.7	124
8	Regulation of signal transduction by calcitonin gene-related peptide receptors. Trends in Pharmacological Sciences, 2010, 31, 476-483.	4.0	121
9	CL/RAMP2 and CL/RAMP3 produce pharmacologically distinct adrenomedullin receptors: a comparison of effects of adrenomedullin22-52 , CGRP8-37 and BIBN4096BS. British Journal of Pharmacology, 2003, 140, 477-486.	2.7	120
10	Structural Basis for Receptor Activity-Modifying Protein-Dependent Selective Peptide Recognition by a G Protein-Coupled Receptor. Molecular Cell, 2015, 58, 1040-1052.	4.5	112
11	Surfactant-free purification of membrane proteins with intact native membrane environment. Biochemical Society Transactions, 2011, 39, 813-818.	1.6	96
12	Dynamics of Model Ionomer Melts of Various Architectures. Macromolecules, 2012, 45, 8097-8108.	2.2	92
13	Direct Comparisons of X-ray Scattering and Atomistic Molecular Dynamics Simulations for Precise Acid Copolymers and Ionomers. Macromolecules, 2015, 48, 1210-1220.	2.2	89
14	Effect of Polymer Architecture and Ionic Aggregation on the Scattering Peak in Model Ionomers. Physical Review Letters, 2011, 106, 127801.	2.9	86
15	The Pharmacology of Adrenomedullin Receptors and Their Relationship to CGRP Receptors. Journal of Molecular Neuroscience, 2004, 22, 105-114.	1.1	83
16	Pharmacological characterization of a receptor for calcitonin geneâ€related peptide on rat, L6 myocytes. British Journal of Pharmacology, 1992, 105, 441-447.	2.7	74
17	International Union of Pharmacology. LXIX. Status of the Calcitonin Gene-Related Peptide Subtype 2 Receptor. Pharmacological Reviews, 2008, 60, 143-145.	7.1	72
18	Receptor Activity-modifying Protein-directed G Protein Signaling Specificity for the Calcitonin Gene-related Peptide Family of Receptors. Journal of Biological Chemistry, 2016, 291, 21925-21944.	1.6	72

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19	Receptor activity modifying proteins (<scp>RAMPs</scp>) interact with the <scp>VPAC</scp>₂ receptor and <scp>CRF</scp>₁ receptors and modulate their function. British Journal of Pharmacology, 2013, 168, 822-834.	2.7	71
20	Atomistic Simulations Predict a Surprising Variety of Morphologies in Precise Ionomers. ACS Macro Letters, 2013, 2, 206-210.	2.3	67
21	Comparison of the expression of calcitonin receptor-like receptor (CRLR) and receptor activity modifying proteins (RAMPs) with CGRP and adrenomedullin binding in cell lines. British Journal of Pharmacology, 2002, 136, 784-792.	2.7	66
22	Calcitonin and calcitonin receptorâ€like receptors: common themes with family B GPCRs?. British Journal of Pharmacology, 2012, 166, 51-65.	2.7	63
23	Modulation of Glucagon Receptor Pharmacology by Receptor Activity-modifying Protein-2 (RAMP2). Journal of Biological Chemistry, 2015, 290, 23009-23022.	1.6	61
24	A Key Role for Transmembrane Prolines in Calcitonin Receptor-Like Receptor Agonist Binding and Signalling: Implications for Family B G-Protein-Coupled Receptors. Molecular Pharmacology, 2005, 67, 20-31.	1.0	59
25	Altering the ribosomal subunit ratio in yeast maximizes recombinant protein yield. Microbial Cell Factories, 2009, 8, 10.	1.9	57
26	Microbial expression systems for membrane proteins. Methods, 2018, 147, 3-39.	1.9	57
27	Structure and Dynamics of Coarse-Grained Ionomer Melts in an External Electric Field. Macromolecules, 2015, 48, 809-818.	2.2	56
28	Modulating receptor function through RAMPs: can they represent drug targets in themselves?. Drug Discovery Today, 2009, 14, 413-419.	3.2	55
29	Adrenomedullin and calcitonin gene-related peptide receptors in endocrine-related cancers: opportunities and challenges. Endocrine-Related Cancer, 2010, 18, C1-C14.	1.6	54
30	A comparison of SMA (styrene maleic acid) and DIBMA (di-isobutylene maleic acid) for membrane protein purification. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183281.	1.4	52
31	Structureâ€"activity relationships for Î±â€calcitonin geneâ€related peptide. British Journal of Pharmacology, 2013, 170, 1308-1322.	2.7	51
32	A comparison of the actions of BIBN4096BS and CGRP8-37 on CGRP and adrenomedullin receptors expressed on SK-N-MC, L6, Col 29 and Rat 2 cells. British Journal of Pharmacology, 2002, 137, 80-86.	2.7	47
33	Characterization of receptors for calcitonin gene-related peptide and adrenomedullin on the guinea-pig vas deferens. British Journal of Pharmacology, 1999, 126, 1276-1282.	2.7	44
34	Investigating <scp>G</scp> protein signalling bias at the glucagonâ€like peptideâ€1 receptor in yeast. British Journal of Pharmacology, 2014, 171, 3651-3665.	2.7	44
35	An allosteric role for receptor activity-modifying proteins in defining GPCR pharmacology. Cell Discovery, 2016, 2, 16012.	3.1	44
36	Similarity between class A and class B G-protein-coupled receptors exemplified through calcitonin gene-related peptide receptor modelling and mutagenesis studies. Journal of the Royal Society Interface, 2013, 10, 20120846.	1.5	43

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37	Functional and Biophysical Analysis of the C-Terminus of the CGRP-Receptor; a Family B GPCR. Biochemistry, 2008, 47, 8434-8444.	1.2	40
38	GPCRâ€“styrene maleic acid lipid particles (GPCRâ€“SMALPs): their nature and potential. Biochemical Society Transactions, 2016, 44, 619-623.	1.6	40
39	Non-peptidic antagonists of the CGRP receptor, BIBN4096BS and MK-0974, interact with the calcitonin receptor-like receptor via methionine-42 and RAMP1 via tryptophan-74. Biochemical and Biophysical Research Communications, 2010, 391, 437-442.	1.0	39
40	Expression and purification of recombinant G protein-coupled receptors: A review. Protein Expression and Purification, 2020, 167, 105524.	0.6	38
41	Single molecule binding of a ligand to a G-protein-coupled receptor in real time using fluorescence correlation spectroscopy, rendered possible by nano-encapsulation in styrene maleic acid lipid particles. Nanoscale, 2020, 12, 11518-11525.	2.8	37
42	Extracellular loops 1 and 3 and their associated transmembrane regions of the calcitonin receptor-like receptor are needed for CGRP receptor function. Biochimica Et Biophysica Acta - Molecular Cell Research, 2011, 1813, 1906-1916.	1.9	36
43	Receptor Activity-modifying Proteins 2 and 3 Generate Adrenomedullin Receptor Subtypes with Distinct Molecular Properties. Journal of Biological Chemistry, 2016, 291, 11657-11675.	1.6	36
44	Receptor activity-modifying proteins; multifunctional G protein-coupled receptor accessory proteins. Biochemical Society Transactions, 2016, 44, 568-573.	1.6	36
45	Structural determinants for binding to CGRP receptors expressed by human SK-N-MC and Col 29 cells: studies with chimeric and other peptides. British Journal of Pharmacology, 1998, 124, 1659-1666.	2.7	34
46	Novel Peptide Antagonists of Adrenomedullin and Calcitonin Gene-Related Peptide Receptors: Identification, Pharmacological Characterization, and Interactions with Position 74 in Receptor Activity-Modifying Protein 1/3. Journal of Pharmacology and Experimental Therapeutics, 2009, 331, 513-521.	1.3	34
47	Synthesis and iron binding studies of myo-inositol 1,2,3-trisphosphate and (Â±)-myo-inositol 1,2-bisphosphate, and iron binding studies of all myo-inositol tetrakisphosphates. Carbohydrate Research, 1996, 282, 81-99.	1.1	33
48	Diverse Functional Motifs within the Three Intracellular Loops of the CGRP1Receptorâ€. Biochemistry, 2006, 45, 12976-12985.	1.2	32
49	Receptor activityâ€modifying proteinâ€dependent effects of mutations in the calcitonin receptorâ€like receptor: implications for adrenomedullin and calcitonin geneâ€related peptide pharmacology. British Journal of Pharmacology, 2014, 171, 772-788.	2.7	32
50	Multiple receptors for calcitonin geneâ€related peptide and amylin on guineaâ€pig ileum and vas deferens. British Journal of Pharmacology, 1996, 117, 1362-1368.	2.7	31
51	Structureâ€“activity relationships of the <scp>N</scp>â€terminus of calcitonin geneâ€related peptide: key roles of alanineâ€5 and threonineâ€6 in receptor activation. British Journal of Pharmacology, 2014, 171, 415-426.	2.7	31
52	Calcitonin Receptor N-Glycosylation Enhances Peptide Hormone Affinity by Controlling Receptor Dynamics. Journal of Molecular Biology, 2020, 432, 1996-2014.	2.0	31
53	Receptor activity-modifying protein dependent and independent activation mechanisms in the coupling of calcitonin gene-related peptide and adrenomedullin receptors to Gs. Biochemical Pharmacology, 2017, 142, 96-110.	2.0	30
54	Desensitisation of adrenomedullin and CGRP receptors. Regulatory Peptides, 2003, 112, 139-145.	1.9	29

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55	The pharmacology of CGRP-responsive receptors in cultured and transfected cells. Peptides, 2004, 25, 2019-2026.	1.2	29
56	Evidence that Interaction between Conserved Residues in Transmembrane Helices 2, 3, and 7 Are Crucial for Human VPAC₁ Receptor Activation. Molecular Pharmacology, 2010, 78, 394-401.	1.0	29
57	A key role for transmembrane prolines in calcitonin receptor-like receptor agonist binding and signalling: implications for family B G-protein-coupled receptors. Molecular Pharmacology, 2005, 67, 20-31.	1.0	29
58	Ligand binding and activation of the CGRP receptor. Biochemical Society Transactions, 2007, 35, 729-732.	1.6	28
59	The role of ECL2 in CGRP receptor activation: a combined modelling and experimental approach. Journal of the Royal Society Interface, 2013, 10, 20130589.	1.5	27
60	Percolated Ionic Aggregate Morphologies and Decoupled Ion Transport in Precise Sulfonated Polymers Synthesized by Ring-Opening Metathesis Polymerization. Macromolecules, 2020, 53, 8960-8973.	2.2	27
61	A Polymorphism in the Growth Hormone (GH)-Releasing Hormone (GHRH) Receptor Gene Is Associated with Elevated Response to GHRH by Human Pituitary Somatotrophinomas in Vitro. Biochemical and Biophysical Research Communications, 2000, 275, 33-36.	1.0	25
62	The role of the 8-18 helix of CGRP8-37 in mediating high affinity binding to CGRP receptors; coulombic and steric interactions. British Journal of Pharmacology, 2003, 138, 325-332.	2.7	25
63	The Second Intracellular Loop of the Calcitonin Gene-related Peptide Receptor Provides Molecular Determinants for Signal Transduction and Cell Surface Expression. Journal of Biological Chemistry, 2006, 281, 1644-1651.	1.6	25
64	h<i>CALCRL</i> mutation causes autosomal recessive nonimmune hydrops fetalis with lymphatic dysplasia. Journal of Experimental Medicine, 2018, 215, 2339-2353.	4.2	25
65	The first synthesis and iron binding studies of the natural product, myo-inositol 1,2,3-trisphosphate. Tetrahedron Letters, 1995, 36, 2125-2128.	0.7	24
66	Structureâ^'Function Analysis of RAMP1 by Alanine Mutagenesis. Biochemistry, 2009, 48, 198-205.	1.2	24
67	Ligand-induced conformational changes in a SMALP-encapsulated GPCR.. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183235.	1.4	24
68	Chain and Ion Dynamics in Precise Polyethylene Ionomers. Macromolecules, 2019, 52, 7939-7950.	2.2	23
69	Structureâ€“function analysis of amino acid 74 of human RAMP1 and RAMP3 and its role in peptide interactions with adrenomedullin and calcitonin gene-related peptide receptors. Peptides, 2011, 32, 1060-1067.	1.2	22
70	The selectivity and structural determinants of peptide antagonists at the CGRP receptor of rat, L6 myocytes. British Journal of Pharmacology, 1997, 121, 1000-1004.	2.7	21
71	Calcitonin gene-related peptide, adrenomedullin and flushing. Maturitas, 2009, 64, 104-108.	1.0	21
72	Characterization and effects on cAMP accumulation of adrenomedullin and calcitonin gene-related peptide (CGRP) receptors in dissociated rat spinal cord cell culture. British Journal of Pharmacology, 2006, 148, 459-468.	2.7	20

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73	Mapping interaction sites within the N-terminus of the calcitonin gene-related peptide receptor; the role of residues 23â€"60 of the calcitonin receptor-like receptor. Peptides, 2010, 31, 170-176.	1.2	20
74	Photoaffinity Cross-Linking and Unnatural Amino Acid Mutagenesis Reveal Insights into Calcitonin Gene-Related Peptide Binding to the Calcitonin Receptor-like Receptor/Receptor Activity-Modifying Protein 1 (CLR/RAMP1) Complex. Biochemistry, 2018, 57, 4915-4922.	1.2	20
75	Quantifying Single-Ion Transport in Percolated Ionic Aggregates of Polymer Melts. ACS Macro Letters, 2020, 9, 583-587.	2.3	20
76	RAMPs and CGRP Receptors. Advances in Experimental Medicine and Biology, 2012, 744, 13-24.	0.8	19
77	G-Protein-Coupled Receptors: from Structural Insights to Functional Mechanisms. Biochemical Society Transactions, 2013, 41, 135-136.	1.6	19
78	Functional recombinant protein is present in the pre-induction phases of Pichia pastoris cultures when grown in bioreactors, but not shake-flasks. Microbial Cell Factories, 2014, 13, 127.	1.9	19
79	The evolution of acidic and ionic aggregates in ionomers during microsecond simulations. Journal of Chemical Physics, 2019, 150, 064901.	1.2	19
80	Characterization of the Structure of RAMP1 by Mutagenesis and Molecular Modeling. Biophysical Journal, 2006, 91, 662-669.	0.2	18
81	Secretin family (Class B) G proteinâ€coupled receptors â€" from molecular to clinical perspectives. British Journal of Pharmacology, 2012, 166, 1-3.	2.7	18
82	Interactions between RAMP2 and CRF receptors: The effect of receptor subtypes, splice variants and cell context. Biochimica Et Biophysica Acta - Biomembranes, 2019, 1861, 997-1003.	1.4	16
83	CGRP, adrenomedullin and adrenomedullin 2 display endogenous GPCR agonist bias in primary human cardiovascular cells. Communications Biology, 2021, 4, 776.	2.0	15
84	The role of the extracellular loops of the CGRP receptor, a family B GPCR. Biochemical Society Transactions, 2012, 40, 433-437.	1.6	14
85	The activation of the CGRP receptor. Biochemical Society Transactions, 2013, 41, 180-184.	1.6	14
86	The effects of RAMPs upon cell signalling. Molecular and Cellular Endocrinology, 2017, 449, 12-20.	1.6	14
87	Synthesis and evaluation of N1-substituted-3-propyl-1,4-benzodiazepine-2-ones as cholecystokinin (CCK2) receptor ligands. Journal of Pharmacy and Pharmacology, 2010, 54, 827-834.	1.2	13
88	Functional characterization of two human receptor activity-modifying protein 3 variants. Peptides, 2010, 31, 579-584.	1.2	11
89	RAMPs as Drug Targets. Advances in Experimental Medicine and Biology, 2012, 744, 61-74.	0.8	10
90	Receptor component protein, an endogenous allosteric modulator of family B G protein coupled receptors. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183174.	1.4	10

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91	Differences in SMA-like polymer architecture dictate the conformational changes exhibited by the membrane protein rhodopsin encapsulated in lipid nano-particles. Nanoscale, 2021, 13, 13519-13528.	2.8	10
92	Functional solubilization of the Î²2-adrenoceptor using diisobutylene maleic acid. IScience, 2021, 24, 103362.	1.9	8
93	Structureâˆ’Function Analysis of RAMP1âˆ’RAMP3 Chimeras. Biochemistry, 2010, 49, 522-531.	1.2	7
94	Antifoams: the overlooked additive?. Pharmaceutical Bioprocessing, 2014, 2, 103-106.	0.8	7
95	Understanding the molecular functions of the second extracellular loop (ECL2) of the calcitonin gene-related peptide (CGRP) receptor using a comprehensive mutagenesis approach. Molecular and Cellular Endocrinology, 2017, 454, 39-49.	1.6	7
96	Functional characterisation of G protein-coupled receptors. Methods, 2018, 147, 213-220.	1.9	7
97	The Preclinical Pharmacology of BIBN4096BS, a CGRP Antagonist. Cardiovascular Drug Reviews, 2005, 23, 31-42.	4.4	6
98	A potent fluorescent calcitonin geneâ€related peptide analogue enables visualization of receptor internalization. Peptide Science, 2019, 111, e24126.	1.0	6
99	Calcitonin receptors (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database. IUPHAR/BPS Guide To Pharmacology CITE, 2019, 2019, .	0.2	6
100	[13] Inositol phospholipids and phosphates for investigation of intact cell phospholipase C substrates and products. Methods in Enzymology, 1991, 197, 149-158.	0.4	5
101	A polymorphism in the growth hormone-releasing hormone receptor gene: Clinical significance?. Regulatory Peptides, 2002, 108, 125-128.	1.9	5
102	Stimulation of chloride secretion and adenylate cyclase secretion in human colonic derived cell lines by calcitonin gene-related peptide. Biochemical Society Transactions, 1993, 21, 434S-434S.	1.6	4
103	Family Resemblances? Ligand Binding and Activation of Family A and B G-Protein-Coupled Receptors. Biochemical Society Transactions, 2007, 35, 707-708.	1.6	4
104	CGRP receptor antagonists: design and screening. Expert Opinion on Drug Discovery, 2009, 4, 1253-1265.	2.5	4
105	Relative Antagonism of Mutants of the CGRP Receptor Extracellular Loop 2 Domain (ECL2) Using a Truncated Competitive Antagonist (CGRP_{8â€“37}): Evidence for the Dual Involvement of ECL2 in the Two-Domain Binding Model. Biochemistry, 2017, 56, 3877-3880.	1.2	4
106	The Structure of the CGRP and Related Receptors. Handbook of Experimental Pharmacology, 2018, 255, 23-36.	0.9	4
107	The Use of Site-Directed Mutagenesis to Study GPCRs. Methods in Molecular Biology, 2011, 746, 85-98.	0.4	4
108	Determining the Effects of Differential Expression of GRKs and Î²-arrestins on CLR-RAMP Agonist Bias. Frontiers in Physiology, 2022, 13, 840763.	1.3	4

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109	Use of the [35S]GTPÎ³S Binding Assay to Determine Ligand Efficacy at G Protein-Coupled Receptors. , 0, , 53-68.		3
110	The Role of ICL1 and H8 in Class B1 GPCRs; Implications for Receptor Activation. Frontiers in Endocrinology, 2021, 12, 792912.	1.5	3
111	Stimulation of phosphatidylinositol-3-kinase by insulin-like growth factor 1 and other agonists. Biochemical Society Transactions, 1992, 20, 140S-140S.	1.6	2
112	Metabolism of myo-inositol pentakisphosphates in mammalian brain. Biochemical Society Transactions, 1992, 20, 149S-149S.	1.6	2
113	Use of Fluorescence Correlation Spectroscopy to Study the Diffusion of G Protein-coupled Receptors. , 0, , 169-195.		2
114	The perils of using the human genome sequence: lessons from CALCRL. Trends in Pharmacological Sciences, 2001, 22, 272.	4.0	1
115	Functional Solubilisation of the Î²2-Adrenoceptor (Î² ₂AR) Using Diisobutylene Maleic Acid (DIBMA). SSRN Electronic Journal, 0, , .	0.4	1
116	Calcitonin Receptor Nâ€Glycosylation Enhances Peptide Hormone Affinity by Controlling Receptor Dynamics. FASEB Journal, 2020, 34, 1-1.	0.2	1
117	Combinatorial solid phase synthesis of multiply substituted 1,4-benzodiazepines and affinity studies on the CCK2 receptor (part 1). Drug Design and Discovery, 2002, 18, 9-21.	0.3	1
118	Regulation of membrane potential by G-protein-coupled receptors in L6 skeletal myocytes: the role of second messengers. Biochemical Society Transactions, 1993, 21, 433S-433S.	1.6	0
119	Molecular modelling of the human formyl peptide receptor. Biochemical Society Transactions, 1995, 23, 96S-96S.	1.6	0
120	Ramp. , 2018, , 4433-4438.		0
121	Calcium | Calcitonin Gene-Related Peptide and Adrenomedullin Receptors. , 2021, , 562-570.		0
122	Ramp. , 2016, , 1-5.		0
123	Appendix: Site-Directed Mutagenesis and Chimeras. , 0, , 275-288.		0
124	Homology Modelling of G Protein-Coupled Receptors. , 0, , 251-273.		0
125	Second Messenger Assays for G Protein-Coupled Receptors: cAMP, Ca2+, Inositol Phosphates, ERK1/2. , 0, , 31-52.		0
126	Quantitative Imaging of Receptor Trafficking. , 0, , 69-83.		0

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127	Production of Recombinant G Protein-Coupled Receptor in Yeast for Structural and Functional Analysis. , 0, , 85-110.		0
128	Using Intramolecular Fluorescence Resonance Energy Transfer to Study Receptor Conformation. , 0, , 133-146.		0