Richard D Dimarchi

List of Publications by Year
in descending order

106 papers	6,961 citations	101543 36 h-index	60623 81 g-index
109 all docs	109 docs citations	109 times ranked	6166 citing authors

#	Article	IF	Citations
1	A new glucagon and GLP-1 co-agonist eliminates obesity in rodents. Nature Chemical Biology, 2009, 5, 749-757.	8.0	512
2	A rationally designed monomeric peptide triagonist corrects obesity and diabetes in rodents. Nature Medicine, 2015, 21, 27-36.	30.7	481
3	Unimolecular Dual Incretins Maximize Metabolic Benefits in Rodents, Monkeys, and Humans. Science Translational Medicine, 2013, 5, 209ra151.	12.4	461
4	Anti-obesity drug discovery: advances and challenges. Nature Reviews Drug Discovery, 2022, 21, 201-223.	46.4	357
5	The metabolic actions of glucagon revisited. Nature Reviews Endocrinology, 2010, 6, 689-697.	9.6	292
6	Leptin: Structure, Function and Biology. Vitamins and Hormones, 2005, 71, 345-372.	1.7	259
7	Targeted estrogen delivery reverses the metabolic syndrome. Nature Medicine, 2012, 18, 1847-1856.	30.7	241
8	The Sustained Effects of a Dual GIP/GLP-1 Receptor Agonist, NNC0090-2746, in Patients with Type 2 Diabetes. Cell Metabolism, 2017, 26, 343-352.e2.	16.2	238
9	Pursuit of a perfect insulin. Nature Reviews Drug Discovery, 2016, 15, 425-439.	46.4	205
10	Unimolecular Polypharmacy for Treatment of Diabetes and Obesity. Cell Metabolism, 2016, 24, 51-62.	16.2	198
11	Fibroblast Growth Factor 21 Mediates Specific Glucagon Actions. Diabetes, 2013, 62, 1453-1463.	0.6	191
12	Insulin structure and function. Biopolymers, 2007, 88, 687-713.	2.4	169
13	Chemical Hybridization of Glucagon and Thyroid Hormone Optimizes Therapeutic Impact for Metabolic Disease. Cell, 2016, 167, 843-857.e14.	28.9	153
14	FGF21 Analogs of Sustained Action Enabled by Orthogonal Biosynthesis Demonstrate Enhanced Antidiabetic Pharmacology in Rodents. Diabetes, 2012, 61, 505-512.	0.6	148
15	Restoration of leptin responsiveness in dietâ€induced obese mice using an optimized leptin analog in combination with exendinâ€4 or FGF21. Journal of Peptide Science, 2012, 18, 383-393.	1.4	133
16	Optimized GIP analogs promote body weight lowering in mice through GIPR agonism not antagonism. Molecular Metabolism, 2019, 20, 51-62.	6.5	130
17	Reappraisal of GIP Pharmacology for Metabolic Diseases. Trends in Molecular Medicine, 2016, 22, 359-376.	6.7	128
18	The glucose-dependent insulinotropic polypeptide (GIP) regulates body weight and food intake via CNS-GIPR signaling. Cell Metabolism, 2021, 33, 833-844.e5.	16.2	128

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19	GLP-1/glucagon receptor co-agonism for treatment of obesity. Diabetologia, 2017, 60, 1851-1861.	6.3	126
20	GLP-1/Glucagon Coagonism Restores Leptin Responsiveness in Obese Mice Chronically Maintained on an Obesogenic Diet. Diabetes, 2014, 63, 1422-1427.	0.6	116
21	Targeting the Incretin/Glucagon System With Triagonists to Treat Diabetes. Endocrine Reviews, 2018, 39, 719-738.	20.1	113
22	Optimization of coâ€agonism at GLPâ€1 and glucagon receptors to safely maximize weight reduction in DIOâ€rodents. Biopolymers, 2012, 98, 443-450.	2.4	110
23	FGF21 Revolutions: Recent Advances Illuminating FGF21 Biology and Medicinal Properties. Trends in Endocrinology and Metabolism, 2015, 26, 608-617.	7.1	98
24	Emerging hormonal-based combination pharmacotherapies for the treatment of metabolic diseases. Nature Reviews Endocrinology, 2019, 15, 90-104.	9.6	92
25	Monomeric GLP-1/GIP/glucagon triagonism corrects obesity, hepatosteatosis, and dyslipidemia in female mice. Molecular Metabolism, 2017, 6, 440-446.	6.5	87
26	Peptide lipidation stabilizes structure to enhance biological function. Molecular Metabolism, 2013, 2, 468-479.	6.5	83
27	A new quorumâ€sensing system (<scp>TprA</scp>/<scp>PhrA</scp>) for <scp>S</scp>treptococcus pneumoniaeâ€…<scp>D</scp>39 that regulates a lantibiotic biosynthesis gene cluster. Molecular Microbiology, 2015, 97, 229-243.	2.5	78
28	Peptide Conjugates with Small Molecules Designed to Enhance Efficacy and Safety. Molecules, 2019, 24, 1855.	3.8	68
29	Molecular Integration of Incretin and Glucocorticoid Action Reverses Immunometabolic Dysfunction and Obesity. Cell Metabolism, 2017, 26, 620-632.e6.	16.2	66
30	Pharmacodynamics, pharmacokinetics and safety of multiple ascending doses of the novel dual glucoseâ€dependent insulinotropic polypeptide/glucagonâ€like peptideâ€1 agonist <scp>RG</scp>7697 in people with type 2 diabetes mellitus. Diabetes, Obesity and Metabolism, 2017, 19, 1436-1445.	4.4	63
31	Viral insulin-like peptides activate human insulin and IGF-1 receptor signaling: A paradigm shift for hostâ€“microbe interactions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2461-2466.	7.1	63
32	GLP-1 and estrogen conjugate acts in the supramammillary nucleus to reduce food-reward and body weight. Neuropharmacology, 2016, 110, 396-406.	4.1	60
33	Fibroblast activation protein (FAP) as a novel metabolic target. Molecular Metabolism, 2016, 5, 1015-1024.	6.5	56
34	Optimization of the Native Glucagon Sequence for Medicinal Purposes. Journal of Diabetes Science and Technology, 2010, 4, 1322-1331.	2.2	53
35	Hepatic Glucagon Receptor Signaling Enhances Insulin-Stimulated Glucose Disposal in Rodents. Diabetes, 2018, 67, 2157-2166.	0.6	44
36	Next generation GLP-1/GIP/glucagon triple agonists normalize body weight in obese mice. Molecular Metabolism, 2022, 63, 101533.	6.5	43

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37	Recent Advances in Incretin-Based Pharmacotherapies for the Treatment of Obesity and Diabetes. Frontiers in Endocrinology, 2022, 13, 838410.	3.5	42
38	Chemical synthesis of peptides within the insulin superfamily. Journal of Peptide Science, 2016, 22, 260-270.	1.4	41
39	Metabolic syndrome and extensive adipose tissue inflammation in morbidly obese GÃ¶ttingen minipigs. Molecular Metabolism, 2018, 16, 180-190.	6.5	41
40	Spatiotemporal GLP-1 and GIP receptor signaling and trafficking/recycling dynamics induced by selected receptor mono- and dual-agonists. Molecular Metabolism, 2021, 49, 101181.	6.5	39
41	Pharmacodynamics, pharmacokinetics, safety and tolerability of the novel dual glucoseâ€dependent insulinotropic polypeptide/glucagonâ€like peptideâ€1 agonist <scp>RG</scp>7697 after single subcutaneous administration in healthy subjects. Diabetes, Obesity and Metabolism, 2017, 19, 1446-1453.	4.4	39
42	Zn-regulated GTPase metalloprotein activator 1 modulates vertebrate zinc homeostasis. Cell, 2022, 185, 2148-2163.e27.	28.9	39
43	Chemical Synthesis of Insulin Analogs through a Novel Precursor. ACS Chemical Biology, 2014, 9, 683-691.	3.4	38
44	Molecular elements in FGF19 and FGF21 defining KLB/FGFR activity and specificity. Molecular Metabolism, 2018, 13, 45-55.	6.5	36
45	Novel GLP-1R/GIPR co-agonist â€œtwincretinâ€•is neuroprotective in cell and rodent models of mild traumatic brain injury. Experimental Neurology, 2017, 288, 176-186.	4.1	34
46	A glucagon analog chemically stabilized for immediate treatment of life-threatening hypoglycemia. Molecular Metabolism, 2014, 3, 293-300.	6.5	33
47	GÎ±s regulates Glucagon-Like Peptide 1 Receptor-mediated cyclic AMP generation atÂRab5 endosomal compartment. Molecular Metabolism, 2017, 6, 1173-1185.	6.5	33
48	Long-Acting Neurotensin Synergizes With Liraglutide to Reverse Obesity Through a Melanocortin-Dependent Pathway. Diabetes, 2019, 68, 1329-1340.	0.6	33
49	Effect of targeted estrogen delivery using glucagon-like peptide-1 on insulin secretion, insulin sensitivity and glucose homeostasis. Scientific Reports, 2015, 5, 10211.	3.3	32
50	Selection and progression of unimolecular agonists at the GIP, GLP-1, and glucagon receptors as drug candidates. Peptides, 2020, 125, 170225.	2.4	30
51	Synthesis of Four-Disulfide Insulin Analogs via Sequential Disulfide Bond Formation. Journal of Organic Chemistry, 2017, 82, 3506-3512.	3.2	29
52	Neuroprotective Effects and Treatment Potential of Incretin Mimetics in a Murine Model of Mild Traumatic Brain Injury. Frontiers in Cell and Developmental Biology, 2019, 7, 356.	3.7	29
53	Single-Molecule Combinatorial Therapeutics for Treating Obesity and Diabetes. Diabetes, 2017, 66, 1766-1769.	0.6	25
54	CNS-targeting pharmacological interventions for the metabolic syndrome. Journal of Clinical Investigation, 2019, 129, 4058-4071.	8.2	24

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55	Insights into incretin-based therapies for treatment of diabetic dyslipidemia. Advanced Drug Delivery Reviews, 2020, 159, 34-53.	13.7	21
56	In Vitro and in Vivo Evaluation of Native Glucagon and Glucagon Analog (MAR-D28) during Aging: Lack of Cytotoxicity and Preservation of Hyperglycemic Effect. Journal of Diabetes Science and Technology, 2010, 4, 1311-1321.	2.2	20
57	Current and Emerging Treatment Options in Diabetes Care. Handbook of Experimental Pharmacology, 2015, 233, 437-459.	1.8	20
58	Biomimetic Synthesis of Insulin Enabled by Oxime Ligation and Traceless â€œC-Peptideâ€•Chemical Excision. Organic Letters, 2017, 19, 706-709.	4.6	20
59	A Brain-Melanocortin-Vagus Axis Mediates Adipose Tissue Expansion Independently of Energy Intake. Cell Reports, 2019, 27, 2399-2410.e6.	6.4	20
60	Optimization of peptide-based polyagonists for treatment of diabetes and obesity. Bioorganic and Medicinal Chemistry, 2018, 26, 2873-2881.	3.0	18
61	Deletion of the glucagon receptor gene before and after experimental diabetes reveals differential protection from hyperglycemia. Molecular Metabolism, 2018, 17, 28-38.	6.5	17
62	Synthetic Route to Human Relaxin-2 via Iodine-Free Sequential Disulfide Bond Formation. Organic Letters, 2016, 18, 5516-5519.	4.6	16
63	Neurotrophic and neuroprotective effects of a monomeric GLP-1/GIP/Gcg receptor triagonist in cellular and rodent models of mild traumatic brain injury. Experimental Neurology, 2020, 324, 113113.	4.1	16
64	Synthetic Advances in Insulin-like Peptides Enable Novel Bioactivity. Accounts of Chemical Research, 2017, 50, 1855-1865.	15.6	15
65	GLP-1/dexamethasone inhibits food reward without inducing mood and memory deficits in mice. Neuropharmacology, 2019, 151, 55-63.	4.1	15
66	Design, synthesis and crystallization of a novel glucagon analog as a therapeutic agent. Acta Crystallographica Section F: Structural Biology Communications, 2007, 63, 599-601.	0.7	13
67	Chemical Synthesis of Human Insulinâ€Like Peptideâ€6. Chemistry - A European Journal, 2016, 22, 9777-9783.	3.3	13
68	Synthesis of relaxinâ€2 and insulinâ€like peptide 5 enabled by novel tethering and traceless chemical excision. Journal of Peptide Science, 2017, 23, 455-465.	1.4	13
69	An incretin-based tri-agonist promotes superior insulin secretion from murine pancreatic islets via PLC activation. Cellular Signalling, 2018, 51, 13-22.	3.6	13
70	Structural Refinement of Glucagon for Therapeutic Use. Journal of Medicinal Chemistry, 2020, 63, 3447-3460.	6.4	12
71	Plasma proteome profiles treatment efficacy of incretin dual agonism in dietâ€induced obese female and male mice. Diabetes, Obesity and Metabolism, 2021, 23, 195-207.	4.4	12
72	Identification of a second Klotho interaction site in the C terminus of FGF23. Cell Reports, 2021, 34, 108665.	6.4	12

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73	Optimization of Truncated Glucagon Peptides to Achieve Selective, High Potency, Full Antagonists. Journal of Medicinal Chemistry, 2021, 64, 4697-4708.	6.4	12
74	Pyridyl-alanine as a Hydrophilic, Aromatic Element in Peptide Structural Optimization. Journal of Medicinal Chemistry, 2016, 59, 8061-8067.	6.4	11
75	Stereochemical inversion as a route to improved biophysical properties of therapeutic peptides exemplified by glucagon. Communications Chemistry, 2019, 2, .	4.5	11
76	The islet-expressed Lhx1 transcription factor interacts with Islet-1 and contributes to glucose homeostasis. American Journal of Physiology - Endocrinology and Metabolism, 2019, 316, E397-E409.	3.5	11
77	Addition of Sialic Acid to Insulin Confers Superior Physical Properties and Bioequivalence. Journal of Medicinal Chemistry, 2020, 63, 6134-6143.	6.4	11
78	Myoglobin semisynthesis: removal of the amino-terminal valine of sperm whale myoglobin and its subsequent reincorporation. Biochemistry, 1979, 18, 3101-3109.	2.5	10
79	Synthesis of disulfide-rich heterodimeric peptides through an auxiliary N, N-crosslink. Communications Chemistry, 2018, 1, .	4.5	10
80	A Disulfide Scan of Insulin by [3 + 1] Methodology Exhibits Site-Specific Influence on Bioactivity. ACS Chemical Biology, 2019, 14, 1829-1835.	3.4	10
81	MS-275, a class 1 histone deacetylase inhibitor augments glucagon-like peptide-1 receptor agonism to improve glycemic control and reduce obesity in diet-induced obese mice. ELife, 2020, 9, .	6.0	10
82	Insulin-like peptide 5 fails to improve metabolism or body weight in obese mice. Peptides, 2019, 120, 170116.	2.4	9
83	A viral insulin-like peptide is a natural competitive antagonist of the human IGF-1 receptor. Molecular Metabolism, 2021, 53, 101316.	6.5	9
84	Native Design of Soluble, Aggregation-Resistant Bioactive Peptides: Chemical Evolution of Human Glucagon. ACS Chemical Biology, 2016, 11, 3412-3420.	3.4	8
85	â€œLet's Stay Togetherâ€ GIP and GLP-1 dual agonism in the treatment of metabolic disease. Molecular Metabolism, 2018, 18, 1-2.	6.5	8
86	High-Yield Synthesis of Human Insulin-Like Peptide 5 Employing a Nonconventional Strategy. Organic Letters, 2018, 20, 3695-3699.	4.6	8
87	Smarter Modeling to Enable a Smarter Insulin. Diabetes, 2020, 69, 1608-1610.	0.6	8
88	Glucagon-receptor signaling regulates weight loss via central KLB receptor complexes. JCI Insight, 2021, 6, .	5.0	8
89	Investigation of the Feasibily of an Amide-based Prodrug Under Physiological Conditions. International Journal of Peptide Research and Therapeutics, 2008, 14, 255-262.	1.9	7
90	Emerging Polyâ€Agonists for Obesity and Type 2 Diabetes. Obesity, 2017, 25, 1647-1649.	3.0	7

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91	Controlled intramolecular antagonism as a regulator of insulin receptor maximal activity. Peptides, 2018, 100, 18-23.	2.4	6
92	Efficacy of glucagon-like peptide-1 and estrogen dual agonist in pancreatic islets protection and pre-clinical models of insulin-deficient diabetes. Cell Reports Medicine, 2022, 3, 100598.	6.5	6
93	Optimization of Peptide Inhibitors of Î²-Klotho as Antagonists of Fibroblast Growth Factors 19 and 21. ACS Pharmacology and Translational Science, 2020, 3, 978-986.	4.9	5
94	Synthesis and Characterization of the R27S Genetic Variant of Insulinâ€like Peptide 5. ChemMedChem, 2018, 13, 852-859.	3.2	4
95	Gut Peptide Agonism in the Treatment of Obesity and Diabetes. , 2019, 10, 99-124.		4
96	Icodec Advances the Prospect of Once-Weekly Insulin Injection. Journal of Medicinal Chemistry, 2021, 64, 8939-8941.	6.4	4
97	Break on Through to the Other 1. Cell Metabolism, 2014, 20, 554-555.	16.2	3
98	Once Blind, Now We See GLP-1 Molecular Action. Cell Metabolism, 2017, 26, 289-291.	16.2	3
99	Recent advances in the chemical synthesis of insulin and related peptides. Future Medicinal Chemistry, 2020, 12, 649-654.	2.3	3
100	Peptide Model of the Mutant Proinsulin Syndrome. I. Design and Clinical Correlation. Frontiers in Endocrinology, 2022, 13, 821069.	3.5	3
101	Peptide Model of the Mutant Proinsulin Syndrome. II. Nascent Structure and Biological Implications. Frontiers in Endocrinology, 2022, 13, 821091.	3.5	2
102	Max Bergmann award lecture:Macromolecular medicinal chemistry as applied to metabolic diseases. Journal of Peptide Science, 2018, 24, e3056.	1.4	1
103	Advances in the treatment of metabolic diseases. Molecular Metabolism, 2021, 46, 101208.	6.5	1
104	A Facile Procedure for One-Pot Stable Conjugation of Two Proglucagon Cysteine-Containing Peptide Analogs. Frontiers in Endocrinology, 2021, 12, 693958.	3.5	1
105	Structurally Constrained Insulin Analogs by Directed Stepwise Crosslinking. Protein and Peptide Letters, 2019, 25, 1149-1154.	0.9	0
106	OR28-5 Bile Acid Sequestration Accelerates Glucagon Receptor-Mediated Body Weight Loss in Obese Mice. Journal of the Endocrine Society, 2019, 3, .	0.2	0