

Gary W Cline

List of Publications by Year in descending order

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papers

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citations

47006

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all docs

91
docs citations

91
times ranked

20934
citing authors

#	ARTICLE	IF	CITATIONS
1	Functional polarization of tumour-associated macrophages by tumour-derived lactic acid. <i>Nature</i> , 2014, 513, 559-563.	27.8	2,025
2	Mitochondrial Dysfunction in the Elderly: Possible Role in Insulin Resistance. <i>Science</i> , 2003, 300, 1140-1142.	12.6	1,848
3	Mechanism by Which Fatty Acids Inhibit Insulin Activation of Insulin Receptor Substrate-1 (IRS-1)-associated Phosphatidylinositol 3-Kinase Activity in Muscle. <i>Journal of Biological Chemistry</i> , 2002, 277, 50230-50236.	3.4	1,254
4	Acetate mediates a microbiome-brain-gut-cell axis to promote metabolic syndrome. <i>Nature</i> , 2016, 534, 213-217.	27.8	990
5	Metformin suppresses gluconeogenesis by inhibiting mitochondrial glycerophosphate dehydrogenase. <i>Nature</i> , 2014, 510, 542-546.	27.8	989
6	Impaired Glucose Transport as a Cause of Decreased Insulin-Stimulated Muscle Glycogen Synthesis in Type 2 Diabetes. <i>New England Journal of Medicine</i> , 1999, 341, 240-246.	27.0	562
7	Leptin reverses insulin resistance and hepatic steatosis in patients with severe lipodystrophy. <i>Journal of Clinical Investigation</i> , 2002, 109, 1345-1350.	8.2	552
8	Hepatic Acetyl CoA Links Adipose Tissue Inflammation to Hepatic Insulin Resistance and Type 2 Diabetes. <i>Cell</i> , 2015, 160, 745-758.	28.9	547
9	Leptin reverses insulin resistance and hepatic steatosis in patients with severe lipodystrophy. <i>Journal of Clinical Investigation</i> , 2002, 109, 1345-1350.	8.2	373
10	In vivo ¹³ C NMR measurement of neurotransmitter glutamate cycling, anaplerosis and TCA cycle flux in rat brain during [2- ¹³ C]glucose infusion. <i>Journal of Neurochemistry</i> , 2003, 76, 975-989.	3.9	229
11	A Forward Chemical Genetic Screen Reveals Gut Microbiota Metabolites That Modulate Host Physiology. <i>Cell</i> , 2019, 177, 1217-1231.e18.	28.9	221
12	Effects of a Novel Glycogen Synthase Kinase-3 Inhibitor on Insulin-Stimulated Glucose Metabolism in Zucker Diabetic Fatty (fa/fa) Rats. <i>Diabetes</i> , 2002, 51, 2903-2910.	0.6	214
13	Metformin inhibits gluconeogenesis via a redox-dependent mechanism in vivo. <i>Nature Medicine</i> , 2018, 24, 1384-1394.	30.7	200
14	Reversal of Hypertriglyceridemia, Fatty Liver Disease, and Insulin Resistance by a Liver-Targeted Mitochondrial Uncoupler. <i>Cell Metabolism</i> , 2013, 18, 740-748.	16.2	190
15	Liver-specific Loss of Long Chain Acyl-CoA Synthetase-1 Decreases Triacylglycerol Synthesis and β -Oxidation and Alters Phospholipid Fatty Acid Composition. <i>Journal of Biological Chemistry</i> , 2009, 284, 27816-27826.	3.4	188
16	Leptin reverses diabetes by suppression of the hypothalamic-pituitary-adrenal axis. <i>Nature Medicine</i> , 2014, 20, 759-763.	30.7	178
17	Insulin-independent regulation of hepatic triglyceride synthesis by fatty acids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 1143-1148.	7.1	176
18	Acetyl-CoA Carboxylase Inhibition Reverses NAFLD and Hepatic Insulin Resistance but Promotes Hypertriglyceridemia in Rodents. <i>Hepatology</i> , 2018, 68, 2197-2211.	7.3	172

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19	Mitochondrial GTP Regulates Glucose-Stimulated Insulin Secretion. <i>Cell Metabolism</i> , 2007, 5, 253-264.	16.2	143
20	CGI-58 knockdown sequesters diacylglycerols in lipid droplets/ER-preventing diacylglycerol-mediated hepatic insulin resistance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 1869-1874.	7.1	137
21	Effect of a ketogenic diet on hepatic steatosis and hepatic mitochondrial metabolism in nonalcoholic fatty liver disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 7347-7354.	7.1	137
22	Phosphoenolpyruvate Cycling via Mitochondrial Phosphoenolpyruvate Carboxykinase Links Anaplerosis and Mitochondrial GTP with Insulin Secretion. <i>Journal of Biological Chemistry</i> , 2009, 284, 26578-26590.	3.4	126
23	Leptin Mediates a Glucose-Fatty Acid Cycle to Maintain Glucose Homeostasis in Starvation. <i>Cell</i> , 2018, 172, 234-248.e17.	28.9	125
24	In Vivo Effects of Uncoupling Protein-3 Gene Disruption on Mitochondrial Energy Metabolism. <i>Journal of Biological Chemistry</i> , 2001, 276, 20240-20244.	3.4	124
25	Role of Gut Microbiota and Short Chain Fatty Acids in Modulating Energy Harvest and Fat Partitioning in Youth. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2016, 101, 4367-4376.	3.6	124
26	Cytosolic and Mitochondrial Malic Enzyme Isoforms Differentially Control Insulin Secretion. <i>Journal of Biological Chemistry</i> , 2007, 282, 200-207.	3.4	123
27	¹³ C NMR Isotopomer Analysis of Anaplerotic Pathways in INS-1 Cells. <i>Journal of Biological Chemistry</i> , 2004, 279, 44370-44375.	3.4	113
28	Glucagon stimulates gluconeogenesis by INSP3R1-mediated hepatic lipolysis. <i>Nature</i> , 2020, 579, 279-283.	27.8	110
29	In Vivo Imaging of Endogenous Pancreatic β -Cell Mass in Healthy and Type 1 Diabetic Subjects Using ¹⁸ F-Fluoropropyl-Dihydrotetrabenazine and PET. <i>Journal of Nuclear Medicine</i> , 2012, 53, 908-916.	5.0	108
30	Integrated, Step-Wise, Mass-Isotopomeric Flux Analysis of the TCA Cycle. <i>Cell Metabolism</i> , 2015, 22, 936-947.	16.2	106
31	Paraoxonase 2 Facilitates Pancreatic Cancer Growth and Metastasis by Stimulating GLUT1-Mediated Glucose Transport. <i>Molecular Cell</i> , 2017, 67, 685-701.e6.	9.7	105
32	A Membrane-Bound Diacylglycerol Species Induces PKC μ -Mediated Hepatic Insulin Resistance. <i>Cell Metabolism</i> , 2020, 32, 654-664.e5.	16.2	83
33	Direct assessment of hepatic mitochondrial oxidative and anaplerotic fluxes in humans using dynamic ¹³ C magnetic resonance spectroscopy. <i>Nature Medicine</i> , 2014, 20, 98-102.	30.7	80
34	Lanosterol Modulates TLR4-Mediated Innate Immune Responses in Macrophages. <i>Cell Reports</i> , 2017, 19, 2743-2755.	6.4	79
35	Effect of aging on muscle mitochondrial substrate utilization in humans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 11330-11334.	7.1	72
36	¹³ C and ³¹ P NMR Studies on the Effects of Increased Plasma Free Fatty Acids on Intramuscular Glucose Metabolism in the Awake Rat. <i>Journal of Biological Chemistry</i> , 1997, 272, 10464-10473.	3.4	71

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37	Mechanisms by which a Very-Low-Calorie Diet Reverses Hyperglycemia in a Rat Model of Type 2 Diabetes. <i>Cell Metabolism</i> , 2018, 27, 210-217.e3.	16.2	71
38	Hypophosphatemia promotes lower rates of muscle ATP synthesis. <i>FASEB Journal</i> , 2016, 30, 3378-3387.	0.5	70
39	Altered Brain Response to Drinking Glucose and Fructose in Obese Adolescents. <i>Diabetes</i> , 2016, 65, 1929-1939.	0.6	69
40	Regulation of Hepatic Energy Metabolism and Gluconeogenesis by BAD. <i>Cell Metabolism</i> , 2014, 19, 272-284.	16.2	67
41	Matrix alkalization: a novel mitochondrial signal for sustained pancreatic β -cell activation. <i>EMBO Journal</i> , 2009, 28, 417-428.	7.8	66
42	Intense exercise stimulates albumin synthesis in the upright posture. <i>Journal of Applied Physiology</i> , 2000, 88, 41-46.	2.5	59
43	Neuregulin-activated ERBB4 induces the SREBP-2 cholesterol biosynthetic pathway and increases low-density lipoprotein uptake. <i>Science Signaling</i> , 2015, 8, ra111.	3.6	59
44	Propionate Increases Hepatic Pyruvate Cycling and Anaplerosis and Alters Mitochondrial Metabolism. <i>Journal of Biological Chemistry</i> , 2016, 291, 12161-12170.	3.4	58
45	Differences in glucose-stimulated insulin secretion <i>in vitro</i> of islets from human, nonhuman primate, and porcine origin. <i>Xenotransplantation</i> , 2013, 20, 75-81.	2.8	56
46	Pancreatic Beta Cell Mass PET Imaging and Quantification with [11C]DTBZ and [18F]FP-(+)-DTBZ in Rodent Models of Diabetes. <i>Molecular Imaging and Biology</i> , 2011, 13, 973-984.	2.6	54
47	Metabolic control analysis of hepatic glycogen synthesis <i>in vivo</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 8166-8176.	7.1	51
48	Synthesis and evaluation of [18F]exendin (9â€“39) as a potential biomarker to measure pancreatic β -cell mass. <i>Nuclear Medicine and Biology</i> , 2012, 39, 167-176.	0.6	49
49	Anti-inflammatory effects of oestrogen mediate the sexual dimorphic response to lipid-induced insulin resistance. <i>Journal of Physiology</i> , 2019, 597, 3885-3903.	2.9	48
50	Argininosuccinate synthetase regulates hepatic AMPK linking protein catabolism and ureagenesis to hepatic lipid metabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E3423-30.	7.1	45
51	Non-invasive assessment of hepatic mitochondrial metabolism by positional isotopomer NMR tracer analysis (PINTA). <i>Nature Communications</i> , 2017, 8, 798.	12.8	45
52	Regulation of hepatic mitochondrial oxidation by glucose-alanine cycling during starvation in humans. <i>Journal of Clinical Investigation</i> , 2019, 129, 4671-4675.	8.2	45
53	Controlled-release mitochondrial protonophore (CRMP) reverses dyslipidemia and hepatic steatosis in dysmetabolic nonhuman primates. <i>Science Translational Medicine</i> , 2019, 11, .	12.4	44
54	Hepatic Insulin Resistance Is Not Pathway Selective in Humans With Nonalcoholic Fatty Liver Disease. <i>Diabetes Care</i> , 2021, 44, 489-498.	8.6	42

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55	Metformin, phenformin, and galegine inhibit complex IV activity and reduce glycerol-derived gluconeogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2122287119.	7.1	37
56	NMR Spectroscopy in β^2 Cell Engineering and Islet Transplantation. Annals of the New York Academy of Sciences, 2001, 944, 96-119.	3.8	35
57	Inter-relations between 3-hydroxypropionate and propionate metabolism in rat liver: relevance to disorders of propionyl-CoA metabolism. American Journal of Physiology - Endocrinology and Metabolism, 2017, 313, E413-E428.	3.5	33
58	β^2 -Cell-specific pyruvate dehydrogenase deficiency impairs glucose-stimulated insulin secretion. American Journal of Physiology - Endocrinology and Metabolism, 2010, 299, E910-E917.	3.5	31
59	A Non-invasive Method to Assess Hepatic Acetyl-CoA In Vivo. Cell Metabolism, 2017, 25, 749-756.	16.2	30
60	A role for foregut tyrosine metabolism in glucose tolerance. Molecular Metabolism, 2019, 23, 37-50.	6.5	29
61	Re-patterning of Skeletal Muscle Energy Metabolism by Fat Storage-inducing Transmembrane Protein 2. Journal of Biological Chemistry, 2011, 286, 42188-42199.	3.4	28
62	Mitochondrial Dysfunction Contributes to Impaired Insulin Secretion in INS-1 Cells with Dominant-negative Mutations of HNF-1 β and in HNF-1 β -deficient Islets. Journal of Biological Chemistry, 2009, 284, 16808-16821.	3.4	27
63	Dissociation of Muscle Insulin Resistance from Alterations in Mitochondrial Substrate Preference. Cell Metabolism, 2020, 32, 726-735.e5.	16.2	27
64	Evaluation of Pancreatic VMAT2 Binding with Active and Inactive Enantiomers of [18F]FP-DTBZ in Healthy Subjects and Patients with Type 1 Diabetes. Molecular Imaging and Biology, 2018, 20, 835-845.	2.6	24
65	Islet-selectivity of G-protein coupled receptor ligands evaluated for PET imaging of pancreatic β^2 -cell mass. Biochemical and Biophysical Research Communications, 2011, 412, 413-418.	2.1	22
66	Evaluation of PET Brain Radioligands for Imaging Pancreatic β^2 -Cell Mass: Potential Utility of ¹¹ C-(+)-PHNO. Journal of Nuclear Medicine, 2018, 59, 1249-1254.	5.0	22
67	Fructose Levels Are Markedly Elevated in Cerebrospinal Fluid Compared to Plasma in Pregnant Women. PLoS ONE, 2015, 10, e0128582.	2.5	22
68	Evaluation of pancreatic VMAT2 binding with active and inactive enantiomers of 18 F-FP-DTBZ in baboons. Nuclear Medicine and Biology, 2016, 43, 743-751.	0.6	20
69	PET Imaging of Pancreatic Dopamine D ₂ and D ₃ Receptor Density with ¹¹ C-(+)-PHNO in Type 1 Diabetes. Journal of Nuclear Medicine, 2020, 61, 570-576.	5.0	19
70	CT-PET weighted image fusion for separately scanned whole body rat. Medical Physics, 2012, 39, 533-542.	3.0	18
71	Decreased VMAT2 in the pancreas of humans with type 2 diabetes mellitus measured in vivo by PET imaging. Diabetologia, 2018, 61, 2598-2607.	6.3	18
72	Rates of insulin secretion in INS-1 cells are enhanced by coupling to anaplerosis and Krebs cycle flux independent of ATP synthesis. Biochemical and Biophysical Research Communications, 2011, 415, 30-35.	2.1	17

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73	Membrane-bound sn-1,2-diacylglycerols explain the dissociation of hepatic insulin resistance from hepatic steatosis in MTP knockout mice. <i>Journal of Lipid Research</i> , 2020, 61, 1565-1576.	4.2	15
74	The effects of increased acetate turnover on glucose-induced insulin secretion in lean and obese humans. <i>Journal of Clinical and Translational Science</i> , 2019, 3, 18-20.	0.6	13
75	Adaptive Protein Translation by the Integrated Stress Response Maintains the Proliferative and Migratory Capacity of Lung Adenocarcinoma Cells. <i>Molecular Cancer Research</i> , 2019, 17, 2343-2355.	3.4	13
76	Reduced intestinal lipid absorption and body weight-independent improvements in insulin sensitivity in high-fat diet-fed <i>Park2</i> knockout mice. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2016, 311, E105-E116.	3.5	12
77	Adipose glucocorticoid action influences whole-body metabolism via modulation of hepatic insulin action. <i>FASEB Journal</i> , 2019, 33, 8174-8185.	0.5	12
78	Chapter 24 Investigating the Roles of Mitochondrial and Cytosolic Malic Enzyme in Insulin Secretion. <i>Methods in Enzymology</i> , 2009, 457, 425-450.	1.0	11
79	Mitochondrial phosphate transport during nutrient stimulation of INS-1E insulinoma cells. <i>Molecular and Cellular Endocrinology</i> , 2013, 381, 198-209.	3.2	11
80	Sex- and strain-specific effects of mitochondrial uncoupling on age-related metabolic diseases in high-fat diet-fed mice. <i>Aging Cell</i> , 2022, 21, e13539.	6.7	11
81	MMAB promotes negative feedback control of cholesterol homeostasis. <i>Nature Communications</i> , 2021, 12, 6448.	12.8	10
82	Fuel-Stimulated Insulin Secretion Depends upon Mitochondria Activation and the Integration of Mitochondrial and Cytosolic Substrate Cycles. <i>Diabetes and Metabolism Journal</i> , 2011, 35, 458.	4.7	9
83	<i>In vivo</i> studies on the mechanism of methylene cyclopropyl acetic acid and methylene cyclopropyl glycine-induced hypoglycemia. <i>Biochemical Journal</i> , 2018, 475, 1063-1074.	3.7	8
84	Validation of a Gas Chromatography-Mass Spectrometry Method for the Measurement of the Redox State Metabolic Ratios Lactate/Pyruvate and β -Hydroxybutyrate/Acetoacetate in Biological Samples. <i>International Journal of Molecular Sciences</i> , 2021, 22, 4752.	4.1	7
85	Clinical and scientific value in the pursuit of quantification of beta cells in the pancreas by PET imaging. <i>Diabetologia</i> , 2018, 61, 2671-2673.	6.3	6
86	PEPCK1 Antisense Oligonucleotide Prevents Adiposity and Impairs Hepatic Glycogen Synthesis in High-Fat Male Fed Rats. <i>Endocrinology</i> , 2019, 160, 205-219.	2.8	6
87	Colonic Fermentation and Acetate Production in Youth with and without Obesity. <i>Journal of Nutrition</i> , 2021, 151, 3292-3298.	2.9	4
88	Paramagnetic microparticles do not elicit islet cytotoxicity with <i>in vitro</i> culture or host immune reactivity after implantation. <i>Xenotransplantation</i> , 2011, 18, 239-244.	2.8	3
89	Imaging of pancreatic β -cell mass by PET. <i>Diabetes Management</i> , 2012, 2, 111-118.	0.5	0