

Gerald I Shulman

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

520
papers

90,404
citations

151
h-index

289
g-index

534
ext. papers

100,724
ext. citations

13.4
avg, IF

8.25
L-index

#	Paper	IF	Citations
520	Cellular mechanisms of insulin resistance. <i>Journal of Clinical Investigation</i> , 2000 , 106, 171-6	15.9	1890
519	Impaired mitochondrial activity in the insulin-resistant offspring of patients with type 2 diabetes. <i>New England Journal of Medicine</i> , 2004 , 350, 664-71	59.2	1751
518	Inflammasome-mediated dysbiosis regulates progression of NAFLD and obesity. <i>Nature</i> , 2012 , 482, 179-85	35.4	1651
517	Mitochondrial dysfunction in the elderly: possible role in insulin resistance. <i>Science</i> , 2003 , 300, 1140-2	33.3	1623
516	Mitochondrial dysfunction and type 2 diabetes. <i>Science</i> , 2005 , 307, 384-7	33.3	1587
515	Insulin resistance and a diabetes mellitus-like syndrome in mice lacking the protein kinase Akt2 (PKB beta). <i>Science</i> , 2001 , 292, 1728-31	33.3	1513
514	Disruption of IRS-2 causes type 2 diabetes in mice. <i>Nature</i> , 1998 , 391, 900-4	50.4	1482
513	Mechanisms for insulin resistance: common threads and missing links. <i>Cell</i> , 2012 , 148, 852-71	56.2	1389
512	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, 50230-6	5.4	1114
511	Increased energy expenditure, decreased adiposity, and tissue-specific insulin sensitivity in protein-tyrosine phosphatase 1B-deficient mice. <i>Molecular and Cellular Biology</i> , 2000 , 20, 5479-89	4.8	1073
510	Quantitation of muscle glycogen synthesis in normal subjects and subjects with non-insulin-dependent diabetes by ¹³ C nuclear magnetic resonance spectroscopy. <i>New England Journal of Medicine</i> , 1990 , 322, 223-8	59.2	1052
509	Mechanism of free fatty acid-induced insulin resistance in humans. <i>Journal of Clinical Investigation</i> , 1996 , 97, 2859-65	15.9	1029
508	Intramyocellular lipid concentrations are correlated with insulin sensitivity in humans: a ¹ H NMR spectroscopy study. <i>Diabetologia</i> , 1999 , 42, 113-6	10.3	1027
507	Free fatty acid-induced insulin resistance is associated with activation of protein kinase C theta and alterations in the insulin signaling cascade. <i>Diabetes</i> , 1999 , 48, 1270-4	0.9	966
506	Defects in adaptive energy metabolism with CNS-linked hyperactivity in PGC-1alpha null mice. <i>Cell</i> , 2004 , 119, 121-35	56.2	957
505	Loss of Insulin Signaling in Hepatocytes Leads to Severe Insulin Resistance and Progressive Hepatic Dysfunction. <i>Molecular Cell</i> , 2000 , 6, 87-97	17.6	951
504	Obesity-associated improvements in metabolic profile through expansion of adipose tissue. <i>Journal of Clinical Investigation</i> , 2007 , 117, 2621-37	15.9	938

503	Mechanism of hepatic insulin resistance in non-alcoholic fatty liver disease. <i>Journal of Biological Chemistry</i> , 2004 , 279, 32345-53	5.4	937
502	Adipose-selective targeting of the GLUT4 gene impairs insulin action in muscle and liver. <i>Nature</i> , 2001 , 409, 729-33	50.4	923
501	Effects of free fatty acids on glucose transport and IRS-1-associated phosphatidylinositol 3-kinase activity. <i>Journal of Clinical Investigation</i> , 1999 , 103, 253-9	15.9	887
500	AMP kinase is required for mitochondrial biogenesis in skeletal muscle in response to chronic energy deprivation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 15983-7	11.5	810
499	Uncoupling protein-2 negatively regulates insulin secretion and is a major link between obesity, beta cell dysfunction, and type 2 diabetes. <i>Cell</i> , 2001 , 105, 745-55	56.2	794
498	Lipid-induced insulin resistance: unravelling the mechanism. <i>Lancet, The</i> , 2010 , 375, 2267-77	40	784
497	Metformin suppresses gluconeogenesis by inhibiting mitochondrial glycerophosphate dehydrogenase. <i>Nature</i> , 2014 , 510, 542-6	50.4	778
496	Mechanism by which metformin reduces glucose production in type 2 diabetes. <i>Diabetes</i> , 2000 , 49, 2063-9	39	773
495	Disordered lipid metabolism and the pathogenesis of insulin resistance. <i>Physiological Reviews</i> , 2007 , 87, 507-20	47.9	741
494	Mechanisms of Insulin Action and Insulin Resistance. <i>Physiological Reviews</i> , 2018 , 98, 2133-2223	47.9	718
493	The role of hepatic lipids in hepatic insulin resistance and type 2 diabetes. <i>Nature</i> , 2014 , 510, 84-91	50.4	701
492	Acetate mediates a microbiome-brain-cell axis to promote metabolic syndrome. <i>Nature</i> , 2016 , 534, 213-7	50.4	677
491	Reversal of nonalcoholic hepatic steatosis, hepatic insulin resistance, and hyperglycemia by moderate weight reduction in patients with type 2 diabetes. <i>Diabetes</i> , 2005 , 54, 603-8	0.9	662
490	Type 2 diabetes mellitus. <i>Nature Reviews Disease Primers</i> , 2015 , 1, 15019	51.1	651
489	Efficacy and metabolic effects of metformin and troglitazone in type II diabetes mellitus. <i>New England Journal of Medicine</i> , 1998 , 338, 867-72	59.2	646
488	Molecular mechanisms of insulin resistance in humans and their potential links with mitochondrial dysfunction. <i>Diabetes</i> , 2006 , 55 Suppl 2, S9-S15	0.9	630
487	The pathogenesis of insulin resistance: integrating signaling pathways and substrate flux. <i>Journal of Clinical Investigation</i> , 2016 , 126, 12-22	15.9	626
486	Correction of hyperglycemia with phlorizin normalizes tissue sensitivity to insulin in diabetic rats. <i>Journal of Clinical Investigation</i> , 1987 , 79, 1510-5	15.9	606

485	Reduced mitochondrial density and increased IRS-1 serine phosphorylation in muscle of insulin-resistant offspring of type 2 diabetic parents. <i>Journal of Clinical Investigation</i> , 2005 , 115, 3587-93	15.9	600
484	Tissue-specific overexpression of lipoprotein lipase causes tissue-specific insulin resistance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001 , 98, 7522-7	11.5	576
483	Ablation of PRDM16 and beige adipose causes metabolic dysfunction and a subcutaneous to visceral fat switch. <i>Cell</i> , 2014 , 156, 304-16	56.2	569
482	Ectopic fat in insulin resistance, dyslipidemia, and cardiometabolic disease. <i>New England Journal of Medicine</i> , 2014 , 371, 1131-41	59.2	564
481	Etiology of insulin resistance. <i>American Journal of Medicine</i> , 2006 , 119, S10-6	2.4	562
480	UCP2 mediates ghrelin action on NPY/AgRP neurons by lowering free radicals. <i>Nature</i> , 2008 , 454, 846-51	56.4	553
479	The effects of rosiglitazone on insulin sensitivity, lipolysis, and hepatic and skeletal muscle triglyceride content in patients with type 2 diabetes. <i>Diabetes</i> , 2002 , 51, 797-802	0.9	549
478	Increased rate of gluconeogenesis in type II diabetes mellitus. A ¹³ C nuclear magnetic resonance study. <i>Journal of Clinical Investigation</i> , 1992 , 90, 1323-7	15.9	533
477	Increased glucose transport-phosphorylation and muscle glycogen synthesis after exercise training in insulin-resistant subjects. <i>New England Journal of Medicine</i> , 1996 , 335, 1357-62	59.2	522
476	Regulation of mitochondrial biogenesis. <i>Essays in Biochemistry</i> , 2010 , 47, 69-84	7.6	519
475	Prevention of fat-induced insulin resistance by salicylate. <i>Journal of Clinical Investigation</i> , 2001 , 108, 437-46	46.9	519
474	A guide to analysis of mouse energy metabolism. <i>Nature Methods</i> , 2011 , 9, 57-63	21.6	516
473	Leptin reverses insulin resistance and hepatic steatosis in patients with severe lipodystrophy. <i>Journal of Clinical Investigation</i> , 2002 , 109, 1345-1350	15.9	494
472	The role of skeletal muscle insulin resistance in the pathogenesis of the metabolic syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 12587-94	11.5	490
471	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, 240-6	59.2	489
470	Standard operating procedures for describing and performing metabolic tests of glucose homeostasis in mice. <i>DMM Disease Models and Mechanisms</i> , 2010 , 3, 525-34	4.1	474
469	Surgical implantation of adipose tissue reverses diabetes in lipoatrophic mice. <i>Journal of Clinical Investigation</i> , 2000 , 105, 271-8	15.9	473
468	Insulin/IGF-1 and TNF-alpha stimulate phosphorylation of IRS-1 at inhibitory Ser307 via distinct pathways. <i>Journal of Clinical Investigation</i> , 2001 , 107, 181-9	15.9	439

467	Mechanism by which high-dose aspirin improves glucose metabolism in type 2 diabetes. <i>Journal of Clinical Investigation</i> , 2002 , 109, 1321-1326	15.9	436
466	Nonalcoholic fatty liver disease, hepatic insulin resistance, and type 2 diabetes. <i>Hepatology</i> , 2014 , 59, 713-23	11.2	427
465	Quantitation of hepatic glycogenolysis and gluconeogenesis in fasting humans with ¹³ C NMR. <i>Science</i> , 1991 , 254, 573-6	33.3	427
464	Regulation of hepatic glucose metabolism in health and disease. <i>Nature Reviews Endocrinology</i> , 2017 , 13, 572-587	15.2	421
463	FGF19 as a postprandial, insulin-independent activator of hepatic protein and glycogen synthesis. <i>Science</i> , 2011 , 331, 1621-4	33.3	421
462	Hepatic acetyl CoA links adipose tissue inflammation to hepatic insulin resistance and type 2 diabetes. <i>Cell</i> , 2015 , 160, 745-758	56.2	419
461	Antidiabetic actions of a non-agonist PPAR α ligand blocking Cdk5-mediated phosphorylation. <i>Nature</i> , 2011 , 477, 477-81	50.4	404
460	Cellular mechanism of insulin resistance in nonalcoholic fatty liver disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 16381-5	11.5	404
459	Determination of the rate of the glutamate/glutamine cycle in the human brain by in vivo ¹³ C NMR. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999 , 96, 8235-40	11.5	394
458	Aging-associated reductions in AMP-activated protein kinase activity and mitochondrial biogenesis. <i>Cell Metabolism</i> , 2007 , 5, 151-6	24.6	391
457	Chronic activation of AMP kinase results in NRF-1 activation and mitochondrial biogenesis. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2001 , 281, E1340-6	6	385
456	Prediabetes in obese youth: a syndrome of impaired glucose tolerance, severe insulin resistance, and altered myocellular and abdominal fat partitioning. <i>Lancet, The</i> , 2003 , 362, 951-7	40	383
455	Assessment of skeletal muscle triglyceride content by (1)H nuclear magnetic resonance spectroscopy in lean and obese adolescents: relationships to insulin sensitivity, total body fat, and central adiposity. <i>Diabetes</i> , 2002 , 51, 1022-7	0.9	383
454	Hepatic expression of malonyl-CoA decarboxylase reverses muscle, liver and whole-animal insulin resistance. <i>Nature Medicine</i> , 2004 , 10, 268-74	50.5	379
453	Inhibition of protein kinase Cepsilon prevents hepatic insulin resistance in nonalcoholic fatty liver disease. <i>Journal of Clinical Investigation</i> , 2007 , 117, 739-45	15.9	369
452	Desnutrin/ATGL is regulated by AMPK and is required for a brown adipose phenotype. <i>Cell Metabolism</i> , 2011 , 13, 739-48	24.6	351
451	PKC- δ knockout mice are protected from fat-induced insulin resistance. <i>Journal of Clinical Investigation</i> , 2004 , 114, 823-827	15.9	351
450	Impaired mitochondrial substrate oxidation in muscle of insulin-resistant offspring of type 2 diabetic patients. <i>Diabetes</i> , 2007 , 56, 1376-81	0.9	349

449	Anorectic estrogen mimics leptin's effect on the rewiring of melanocortin cells and Stat3 signaling in obese animals. <i>Nature Medicine</i> , 2007 , 13, 89-94	50.5	333
448	Apolipoprotein C3 gene variants in nonalcoholic fatty liver disease. <i>New England Journal of Medicine</i> , 2010 , 362, 1082-9	59.2	327
447	Mechanism of insulin resistance in A-ZIP/F-1 fatless mice. <i>Journal of Biological Chemistry</i> , 2000 , 275, 8456-60	5.4	327
446	Reversal of diet-induced hepatic steatosis and hepatic insulin resistance by antisense oligonucleotide inhibitors of acetyl-CoA carboxylases 1 and 2. <i>Journal of Clinical Investigation</i> , 2006 , 116, 817-24	15.9	324
445	Diacylglycerol-mediated insulin resistance. <i>Nature Medicine</i> , 2010 , 16, 400-2	50.5	311
444	Disruption of neural signal transducer and activator of transcription 3 causes obesity, diabetes, infertility, and thermal dysregulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 4661-6	11.5	310
443	Translocation of myocardial GLUT-4 and increased glucose uptake through activation of AMPK by AICAR. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 1999 , 277, H643-9	5.2	305
442	Astroglial contribution to brain energy metabolism in humans revealed by ¹³ C nuclear magnetic resonance spectroscopy: elucidation of the dominant pathway for neurotransmitter glutamate repletion and measurement of astrocytic oxidative metabolism. <i>Journal of Neuroscience</i> , 2002 , 22, 1523-31	6.6	304
441	Nonalcoholic Fatty Liver Disease as a Nexus of Metabolic and Hepatic Diseases. <i>Cell Metabolism</i> , 2018 , 27, 22-41	24.6	298
440	Synaptic glutamate release by ventromedial hypothalamic neurons is part of the neurocircuitry that prevents hypoglycemia. <i>Cell Metabolism</i> , 2007 , 5, 383-93	24.6	286
439	Increased prevalence of insulin resistance and nonalcoholic fatty liver disease in Asian-Indian men. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 18273-7	11.5	284
438	A cluster of metabolic defects caused by mutation in a mitochondrial tRNA. <i>Science</i> , 2004 , 306, 1190-4	33.3	282
437	Local ventromedial hypothalamus glucose perfusion blocks counterregulation during systemic hypoglycemia in awake rats. <i>Journal of Clinical Investigation</i> , 1997 , 99, 361-5	15.9	279
436	Suppression of diacylglycerol acyltransferase-2 (DGAT2), but not DGAT1, with antisense oligonucleotides reverses diet-induced hepatic steatosis and insulin resistance. <i>Journal of Biological Chemistry</i> , 2007 , 282, 22678-88	5.4	275
435	The role of AMP-activated protein kinase in mitochondrial biogenesis. <i>Journal of Physiology</i> , 2006 , 574, 33-9	3.9	272
434	Decreased muscle glucose transport/phosphorylation is an early defect in the pathogenesis of non-insulin-dependent diabetes mellitus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995 , 92, 983-7	11.5	272
433	Functional inactivation of the IGF-I and insulin receptors in skeletal muscle causes type 2 diabetes. <i>Genes and Development</i> , 2001 , 15, 1926-34	12.6	271
432	Leptin reverses insulin resistance and hepatic steatosis in patients with severe lipodystrophy. <i>Journal of Clinical Investigation</i> , 2002 , 109, 1345-50	15.9	268

431	The integrative biology of type 2 diabetes. <i>Nature</i> , 2019 , 576, 51-60	50.4	266
430	Effect of chronic hyperglycemia on in vivo insulin secretion in partially pancreatectomized rats. <i>Journal of Clinical Investigation</i> , 1987 , 80, 1037-44	15.9	264
429	STAT3 inhibition of gluconeogenesis is downregulated by SirT1. <i>Nature Cell Biology</i> , 2009 , 11, 492-500	23.4	263
428	Role of diacylglycerol activation of PKC β in lipid-induced muscle insulin resistance in humans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 9597-602	11.5	262
427	Abnormal glucose homeostasis in skeletal muscle-specific PGC-1alpha knockout mice reveals skeletal muscle-pancreatic beta cell crosstalk. <i>Journal of Clinical Investigation</i> , 2007 , 117, 3463-74	15.9	262
426	Dual role of proapoptotic BAD in insulin secretion and beta cell survival. <i>Nature Medicine</i> , 2008 , 14, 144-53	53.5	256
425	Continuous fat oxidation in acetyl-CoA carboxylase 2 knockout mice increases total energy expenditure, reduces fat mass, and improves insulin sensitivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 16480-5	11.5	253
424	Regulation of myocardial glucose uptake and transport during ischemia and energetic stress. <i>American Journal of Cardiology</i> , 1999 , 83, 25H-30H	3	252
423	Pathogenesis of skeletal muscle insulin resistance in type 2 diabetes mellitus. <i>American Journal of Cardiology</i> , 2002 , 90, 11G-18G	3	250
422	Decreased insulin-stimulated ATP synthesis and phosphate transport in muscle of insulin-resistant offspring of type 2 diabetic parents. <i>PLoS Medicine</i> , 2005 , 2, e233	11.6	249
421	Effect of 5-aminoimidazole-4-carboxamide-1-beta-D-ribofuranoside infusion on in vivo glucose and lipid metabolism in lean and obese Zucker rats. <i>Diabetes</i> , 2001 , 50, 1076-82	0.9	248
420	Skeletal muscle lipid metabolism with obesity. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2003 , 284, E741-7	6	246
419	Targeted expression of catalase to mitochondria prevents age-associated reductions in mitochondrial function and insulin resistance. <i>Cell Metabolism</i> , 2010 , 12, 668-74	24.6	245
418	³¹ P nuclear magnetic resonance measurements of muscle glucose-6-phosphate. Evidence for reduced insulin-dependent muscle glucose transport or phosphorylation activity in non-insulin-dependent diabetes mellitus. <i>Journal of Clinical Investigation</i> , 1992 , 89, 1069-75	15.9	243
417	Redistribution of substrates to adipose tissue promotes obesity in mice with selective insulin resistance in muscle. <i>Journal of Clinical Investigation</i> , 2000 , 105, 1791-7	15.9	243
416	Hepatic Hdac3 promotes gluconeogenesis by repressing lipid synthesis and sequestration. <i>Nature Medicine</i> , 2012 , 18, 934-42	50.5	240
415	Fish oil regulates adiponectin secretion by a peroxisome proliferator-activated receptor-gamma-dependent mechanism in mice. <i>Diabetes</i> , 2006 , 55, 924-8	0.9	237
414	The contribution of blood lactate to brain energy metabolism in humans measured by dynamic ¹³ C nuclear magnetic resonance spectroscopy. <i>Journal of Neuroscience</i> , 2010 , 30, 13983-91	6.6	231

413	Sirt1 regulates adipose tissue inflammation. <i>Diabetes</i> , 2011 , 60, 3235-45	0.9	230
412	Paradoxical effects of increased expression of PGC-1 α on muscle mitochondrial function and insulin-stimulated muscle glucose metabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 19926-31	11.5	228
411	Development of insulin resistance in mice lacking PGC-1 α in adipose tissues. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 9635-40	11.5	221
410	Mechanism by which high-dose aspirin improves glucose metabolism in type 2 diabetes. <i>Journal of Clinical Investigation</i> , 2002 , 109, 1321-6	15.9	220
409	Akt2 is required for hepatic lipid accumulation in models of insulin resistance. <i>Cell Metabolism</i> , 2009 , 10, 405-18	24.6	216
408	Alterations in postprandial hepatic glycogen metabolism in type 2 diabetes. <i>Diabetes</i> , 2004 , 53, 3048-56	0.9	216
407	Metabolic effects of troglitazone monotherapy in type 2 diabetes mellitus. A randomized, double-blind, placebo-controlled trial. <i>Annals of Internal Medicine</i> , 1998 , 128, 176-85	8	216
406	Contrasting effects of IRS-1 versus IRS-2 gene disruption on carbohydrate and lipid metabolism in vivo. <i>Journal of Biological Chemistry</i> , 2000 , 275, 38990-4	5.4	215
405	Prevention of hepatic steatosis and hepatic insulin resistance in mitochondrial acyl-CoA:glycerol-sn-3-phosphate acyltransferase 1 knockout mice. <i>Cell Metabolism</i> , 2005 , 2, 55-65	24.6	214
404	Effects of free fatty acid elevation on postabsorptive endogenous glucose production and gluconeogenesis in humans. <i>Diabetes</i> , 2000 , 49, 701-7	0.9	213
403	Diacylglycerol activation of protein kinase C β and hepatic insulin resistance. <i>Cell Metabolism</i> , 2012 , 15, 574-84	24.6	207
402	Ventromedial hypothalamic lesions in rats suppress counterregulatory responses to hypoglycemia. <i>Journal of Clinical Investigation</i> , 1994 , 93, 1677-82	15.9	205
401	Phosphoinositide profiling in complex lipid mixtures using electrospray ionization mass spectrometry. <i>Nature Biotechnology</i> , 2003 , 21, 813-7	44.5	204
400	The deacetylase Sirt6 activates the acetyltransferase GCN5 and suppresses hepatic gluconeogenesis. <i>Molecular Cell</i> , 2012 , 48, 900-13	17.6	202
399	Localized ¹³ C NMR spectroscopy in the human brain of amino acid labeling from D-[1- ¹³ C]glucose. <i>Journal of Neurochemistry</i> , 1994 , 63, 1377-85	6	202
398	Mechanisms of insulin resistance in humans and possible links with inflammation. <i>Hypertension</i> , 2005 , 45, 828-33	8.5	198
397	AdPLA ablation increases lipolysis and prevents obesity induced by high-fat feeding or leptin deficiency. <i>Nature Medicine</i> , 2009 , 15, 159-68	50.5	197
396	Mitochondrial dysfunction due to long-chain Acyl-CoA dehydrogenase deficiency causes hepatic steatosis and hepatic insulin resistance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 17075-80	11.5	197

395	An ERK/Cdk5 axis controls the diabetogenic actions of PPAR γ . <i>Nature</i> , 2015 , 517, 391-5	50.4	196
394	Controlled-release mitochondrial protonophore reverses diabetes and steatohepatitis in rats. <i>Science</i> , 2015 , 347, 1253-6	33.3	190
393	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, 2903-10	0.9	190
392	Direct assessment of liver glycogen storage by ¹³ C nuclear magnetic resonance spectroscopy and regulation of glucose homeostasis after a mixed meal in normal subjects. <i>Journal of Clinical Investigation</i> , 1996 , 97, 126-32	15.9	182
391	Inactivation of fatty acid transport protein 1 prevents fat-induced insulin resistance in skeletal muscle. <i>Journal of Clinical Investigation</i> , 2004 , 113, 756-763	15.9	182
390	PKC-theta knockout mice are protected from fat-induced insulin resistance. <i>Journal of Clinical Investigation</i> , 2004 , 114, 823-7	15.9	181
389	Mice lacking MAP kinase phosphatase-1 have enhanced MAP kinase activity and resistance to diet-induced obesity. <i>Cell Metabolism</i> , 2006 , 4, 61-73	24.6	178
388	Direct measurement of brain glucose concentrations in humans by ¹³ C NMR spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1992 , 89, 1109-12	11.5	178
387	Genetic modulation of PPAR γ phosphorylation regulates insulin sensitivity. <i>Developmental Cell</i> , 2003 , 5, 657-63	10.2	176
386	Altered brain mitochondrial metabolism in healthy aging as assessed by in vivo magnetic resonance spectroscopy. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2010 , 30, 211-21	7.3	175
385	The H19/let-7 double-negative feedback loop contributes to glucose metabolism in muscle cells. <i>Nucleic Acids Research</i> , 2014 , 42, 13799-811	20.1	174
384	Roles of Diacylglycerols and Ceramides in Hepatic Insulin Resistance. <i>Trends in Pharmacological Sciences</i> , 2017 , 38, 649-665	13.2	172
383	n-3 Fatty acids preserve insulin sensitivity in vivo in a peroxisome proliferator-activated receptor-alpha-dependent manner. <i>Diabetes</i> , 2007 , 56, 1034-41	0.9	171
382	Glucose plus insulin regulate fat oxidation by controlling the rate of fatty acid entry into the mitochondria. <i>Journal of Clinical Investigation</i> , 1996 , 98, 2244-50	15.9	167
381	SGLT2 deletion improves glucose homeostasis and preserves pancreatic beta-cell function. <i>Diabetes</i> , 2011 , 60, 890-8	0.9	166
380	Niclosamide ethanolamine-induced mild mitochondrial uncoupling improves diabetic symptoms in mice. <i>Nature Medicine</i> , 2014 , 20, 1263-9	50.5	165
379	Comparative MR study of hepatic fat quantification using single-voxel proton spectroscopy, two-point dixon and three-point IDEAL. <i>Magnetic Resonance in Medicine</i> , 2008 , 59, 521-7	4.4	165
378	Effect of AMPK activation on muscle glucose metabolism in conscious rats. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 1999 , 276, E938-44	6	165

377	Mechanism by which glucose and insulin inhibit net hepatic glycogenolysis in humans. <i>Journal of Clinical Investigation</i> , 1998 , 101, 1203-9	15.9	165
376	A common variant in the patatin-like phospholipase 3 gene (PNPLA3) is associated with fatty liver disease in obese children and adolescents. <i>Hepatology</i> , 2010 , 52, 1281-90	11.2	160
375	Cyclin D1-Cdk4 controls glucose metabolism independently of cell cycle progression. <i>Nature</i> , 2014 , 510, 547-51	50.4	158
374	The role of peroxisome proliferator-activated receptor gamma coactivator-1 beta in the pathogenesis of fructose-induced insulin resistance. <i>Cell Metabolism</i> , 2009 , 9, 252-64	24.6	157
373	Impaired hepatic glycogen synthesis in glucokinase-deficient (MODY-2) subjects. <i>Journal of Clinical Investigation</i> , 1996 , 98, 1755-61	15.9	157
372	Reversal of hypertriglyceridemia, fatty liver disease, and insulin resistance by a liver-targeted mitochondrial uncoupler. <i>Cell Metabolism</i> , 2013 , 18, 740-8	24.6	155
371	Low adiponectin levels in adolescent obesity: a marker of increased intramyocellular lipid accumulation. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2003 , 88, 2014-8	5.6	154
370	Sirt1 knockdown in liver decreases basal hepatic glucose production and increases hepatic insulin responsiveness in diabetic rats. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 11288-93	11.5	152
369	Hypomorphic mutation of PGC-1beta causes mitochondrial dysfunction and liver insulin resistance. <i>Cell Metabolism</i> , 2006 , 4, 453-64	24.6	149
368	Effect of a sustained reduction in plasma free fatty acid concentration on intramuscular long-chain fatty Acyl-CoAs and insulin action in type 2 diabetic patients. <i>Diabetes</i> , 2005 , 54, 3148-53	0.9	146
367	Low-flow ischemia leads to translocation of canine heart GLUT-4 and GLUT-1 glucose transporters to the sarcolemma in vivo. <i>Circulation</i> , 1997 , 95, 415-22	16.7	146
366	Cellular mechanisms by which FGF21 improves insulin sensitivity in male mice. <i>Endocrinology</i> , 2013 , 154, 3099-109	4.8	145
365	Deletion of the mammalian INDY homolog mimics aspects of dietary restriction and protects against adiposity and insulin resistance in mice. <i>Cell Metabolism</i> , 2011 , 14, 184-95	24.6	145
364	Targeting foxo1 in mice using antisense oligonucleotide improves hepatic and peripheral insulin action. <i>Diabetes</i> , 2006 , 55, 2042-50	0.9	145
363	Overexpression of uncoupling protein 3 in skeletal muscle protects against fat-induced insulin resistance. <i>Journal of Clinical Investigation</i> , 2007 , 117, 1995-2003	15.9	143
362	Leptin reverses diabetes by suppression of the hypothalamic-pituitary-adrenal axis. <i>Nature Medicine</i> , 2014 , 20, 759-63	50.5	142
361	Liver-specific loss of long chain acyl-CoA synthetase-1 decreases triacylglycerol synthesis and beta-oxidation and alters phospholipid fatty acid composition. <i>Journal of Biological Chemistry</i> , 2009 , 284, 27816-27826	5.4	141
360	Glucose toxicity and the development of diabetes in mice with muscle-specific inactivation of GLUT4. <i>Journal of Clinical Investigation</i> , 2001 , 108, 153-60	15.9	141

359	Overexpression of Glut4 protein in muscle increases basal and insulin-stimulated whole body glucose disposal in conscious mice. <i>Journal of Clinical Investigation</i> , 1995 , 95, 429-32	15.9	141
358	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, 1143-8	11.5	139
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