Olga R Ilkayeva

List of Publications by Citations

109 papers	13,807 citations	44 h-index	117 g-index
117 ext. papers	17,001 ext. citations	11.6 avg, IF	5.72 L-index

#	Paper	IF	Citations
109	Gut microbiota from twins discordant for obesity modulate metabolism in mice. *Science*, **2013**, 341, 1241214	33.3	2251
108	A branched-chain amino acid-related metabolic signature that differentiates obese and lean humans and contributes to insulin resistance. *Cell Metabolism*, **2009**, 9, 311-26	24.6	2050
107	Mitochondrial overload and incomplete fatty acid oxidation contribute to skeletal muscle insulin resistance. *Cell Metabolism*, **2008**, 7, 45-56	24.6	1378
106	SIRT3 regulates mitochondrial fatty-acid oxidation by reversible enzyme deacetylation. *Nature*, **2010**, 464, 121-5	50.4	1143
105	Lysine glutarylation is a protein posttranslational modification regulated by SIRT5. *Cell Metabolism*, **2014**, 19, 605-17	24.6	496
104	Circadian clock NAD+ cycle drives mitochondrial oxidative metabolism in mice. *Science*, **2013**, 342, 1243417	33.3	419
103	SIRT5 regulates the mitochondrial lysine succinylome and metabolic networks. *Cell Metabolism*, **2013**, 18, 920-33	24.6	399
102	Sialylated Milk Oligosaccharides Promote Microbiota-Dependent Growth in Models of Infant Undernutrition. *Cell*, **2016**, 164, 859-71	56.2	370
101	Muscle-specific deletion of carnitine acetyltransferase compromises glucose tolerance and metabolic flexibility. *Cell Metabolism*, **2012**, 15, 764-77	24.6	250
100	N6-Methyladenosine in Flaviviridae Viral RNA Genomes Regulates Infection. *Cell Host and Microbe*, **2016**, 20, 654-665	23.4	244
99	Carnitine insufficiency caused by aging and overnutrition compromises mitochondrial performance and metabolic control. *Journal of Biological Chemistry*, **2009**, 284, 22840-52	5.4	234
98	Catabolic Defect of Branched-Chain Amino Acids Promotes Heart Failure. *Circulation*, **2016**, 133, 2038-49	16.7	233
97	SIRT4 Is a Lysine Deacylase that Controls Leucine Metabolism and Insulin Secretion. *Cell Metabolism* , **2017**, 25, 838-855.e15	24.6	188
96	BCAA catabolism in brown fat controls energy homeostasis through SLC25A44. *Nature*, **2019**, 572, 614-619	50.4	172
95	Lipids Reprogram Metabolism to Become a Major Carbon Source for Histone Acetylation. *Cell Reports*, **2016**, 17, 1463-1472	10.6	172
94	The Gut Microbiota Modulates Energy Metabolism in the Hibernating Brown Bear Ursus arctos. *Cell Reports*, **2016**, 14, 1655-1661	10.6	169
93	A pyruvate cycling pathway involving cytosolic NADP-dependent isocitrate dehydrogenase regulates glucose-stimulated insulin secretion. *Journal of Biological Chemistry*, **2006**, 281, 30593-602	5.4	169

92	Energy metabolic reprogramming in the hypertrophied and early stage failing heart: a multisystems approach. *Circulation: Heart Failure*, **2014**, 7, 1022-31	7.6	165
91	Effects of microbiota-directed foods in gnotobiotic animals and undernourished children. *Science*, **2019**, 365,	33.3	160
90	Genetic networks of liver metabolism revealed by integration of metabolic and transcriptional profiling. *PLoS Genetics*, **2008**, 4, e1000034	6	158
89	Divergent effects of glucose and fructose on hepatic lipogenesis and insulin signaling. *Journal of Clinical Investigation*, **2017**, 127, 4059-4074	15.9	143
88	Branched-chain amino acid restriction in Zucker-fatty rats improves muscle insulin sensitivity by enhancing efficiency of fatty acid oxidation and acyl-glycine export. *Molecular Metabolism*, **2016**, 5, 538-551	8.8	139
87	A Class of Reactive Acyl-CoA Species Reveals the Non-enzymatic Origins of Protein Acylation. *Cell Metabolism*, **2017**, 25, 823-837.e8	24.6	130
86	Neuronal CRTC-1 governs systemic mitochondrial metabolism and lifespan via a catecholamine signal. *Cell*, **2015**, 160, 842-855	56.2	115
85	The BCKDH Kinase and Phosphatase Integrate BCAA and Lipid Metabolism via Regulation of ATP-Citrate Lyase. *Cell Metabolism*, **2018**, 27, 1281-1293.e7	24.6	115
84	Compensatory responses to pyruvate carboxylase suppression in islet beta-cells. Preservation of glucose-stimulated insulin secretion. *Journal of Biological Chemistry*, **2006**, 281, 22342-22351	5.4	112
83	Metabolomic Profiling Identifies Novel Circulating Biomarkers of Mitochondrial Dysfunction Differentially Elevated in Heart Failure With Preserved Versus Reduced Ejection Fraction: Evidence for Shared Metabolic Impairments in Clinical Heart Failure. *Journal of the American Heart Association*, **2016**, 5,	6	101
82	Prior Dietary Practices and Connections to a Human Gut Microbial Metacommunity Alter Responses to Diet Interventions. *Cell Host and Microbe*, **2017**, 21, 84-96	23.4	99
81	Prognostic Implications of Long-Chain Acylcarnitines in Heart Failure and Reversibility With Mechanical Circulatory Support. *Journal of the American College of Cardiology*, **2016**, 67, 291-9	15.1	98
80	Macrophage Metabolism of Apoptotic Cell-Derived Arginine Promotes Continual Efferocytosis and Resolution of Injury. *Cell Metabolism*, **2020**, 31, 518-533.e10	24.6	94
79	Brain insulin lowers circulating BCAA levels by inducing hepatic BCAA catabolism. *Cell Metabolism*, **2014**, 20, 898-909	24.6	90
78	Effect of Roux-en-Y gastric bypass and laparoscopic adjustable gastric banding on branched-chain amino acid metabolism. *Diabetes*, **2013**, 62, 2757-61	0.9	87
77	Metabolic profiling of PPARalpha-/- mice reveals defects in carnitine and amino acid homeostasis that are partially reversed by oral carnitine supplementation. *FASEB Journal*, **2009**, 23, 586-604	0.9	86
76	Impact of combined resistance and aerobic exercise training on branched-chain amino acid turnover, glycine metabolism and insulin sensitivity in overweight humans. *Diabetologia*, **2015**, 58, 2324-35	10.3	82
75	Dietary Sugars Alter Hepatic Fatty Acid Oxidation via Transcriptional and Post-translational Modifications of Mitochondrial Proteins. *Cell Metabolism*, **2019**, 30, 735-753.e4	24.6	66

74	Obesity and lipid stress inhibit carnitine acetyltransferase activity. *Journal of Lipid Research*, **2014**, 55, 635-44	6.3	65
73	-methyladenosine is required for the hypoxic stabilization of specific mRNAs. *Rna*, **2017**, 23, 1444-1455	5.8	61
72	BMI, RQ, diabetes, and sex affect the relationships between amino acids and clamp measures of insulin action in humans. *Diabetes*, **2014**, 63, 791-800	0.9	58
71	Carnitine Acetyltransferase Mitigates Metabolic Inertia and Muscle Fatigue during Exercise. *Cell Metabolism*, **2015**, 22, 65-76	24.6	56
70	The Acetyl Group Buffering Action of Carnitine Acetyltransferase Offsets Macronutrient-Induced Lysine Acetylation of Mitochondrial Proteins. *Cell Reports*, **2016**, 14, 243-54	10.6	55
69	Modification of messenger RNA by 2′O-methylation regulates gene expression in vivo. *Nature Communications*, **2019**, 10, 3401	17.4	50
68	Maternal BMI and Glycemia Impact the Fetal Metabolome. *Diabetes Care*, **2017**, 40, 902-910	14.6	49
67	Associations of maternal BMI and insulin resistance with the maternal metabolome and newborn outcomes. *Diabetologia*, **2017**, 60, 518-530	10.3	48
66	Acyl-CoA thioesterase-2 facilitates mitochondrial fatty acid oxidation in the liver. *Journal of Lipid Research*, **2014**, 55, 2458-70	6.3	46
65	Cardiomyocyte glucagon receptor signaling modulates outcomes in mice with experimental myocardial infarction. *Molecular Metabolism*, **2015**, 4, 132-43	8.8	43
64	Metabolic Networks and Metabolites Underlie Associations Between Maternal Glucose During Pregnancy and Newborn Size at Birth. *Diabetes*, **2016**, 65, 2039-50	0.9	39
63	Metabolomic analysis reveals altered skeletal muscle amino acid and fatty acid handling in obese humans. *Obesity*, **2015**, 23, 981-988	8	37
62	SIRT6 Promotes Hepatic Beta-Oxidation via Activation of PPAR *Cell Reports*, **2019**, 29, 4127-4143.e8	10.6	35
61	HIF-1 Alpha Regulates the Response of Primary Sarcomas to Radiation Therapy through a Cell Autonomous Mechanism. *Radiation Research*, **2015**, 183, 594-609	3.1	33
60	Long-chain Acylcarnitines Reduce Lung Function by Inhibiting Pulmonary Surfactant. *Journal of Biological Chemistry*, **2015**, 290, 23897-904	5.4	32
59	Metabolomic profiling reveals a role for caspase-2 in lipoapoptosis. *Journal of Biological Chemistry*, **2013**, 288, 14463-14475	5.4	32
58	Effects of a gut pathobiont in a gnotobiotic mouse model of childhood undernutrition. *Science Translational Medicine*, **2016**, 8, 366ra164	17.5	31
57	ACLY and ACC1 Regulate Hypoxia-Induced Apoptosis by Modulating ETV4 via ketoglutarate. *PLoS Genetics*, **2015**, 11, e1005599	6	29

56	Nutritional modulation of heart failure in mitochondrial pyruvate carrier-deficient mice. *Nature Metabolism*, **2020**, 2, 1232-1247	14.6	29
55	Respiratory Phenomics across Multiple Models of Protein Hyperacylation in Cardiac Mitochondria Reveals a Marginal Impact on Bioenergetics. *Cell Reports*, **2019**, 26, 1557-1572.e8	10.6	28
54	Targeted Metabolomics Demonstrates Distinct and Overlapping Maternal Metabolites Associated With BMI, Glucose, and Insulin Sensitivity During Pregnancy Across Four Ancestry Groups. *Diabetes Care*, **2017**, 40, 911-919	14.6	27
53	Metabolic profiling in Prader-Willi syndrome and nonsyndromic obesity: sex differences and the role of growth hormone. *Clinical Endocrinology*, **2015**, 83, 797-805	3.4	27
52	Mixture model normalization for non-targeted gas chromatography/mass spectrometry metabolomics data. *BMC Bioinformatics*, **2017**, 18, 84	3.6	26
51	Temporal dynamics of liver mitochondrial protein acetylation and succinylation and metabolites due to high fat diet and/or excess glucose or fructose. *PLoS ONE*, **2018**, 13, e0208973	3.7	26
50	Metabolomic analysis of insulin resistance across different mouse strains and diets. *Journal of Biological Chemistry*, **2017**, 292, 19135-19145	5.4	25
49	Hepatic mTORC1 Opposes Impaired Insulin Action to Control Mitochondrial Metabolism in Obesity. *Cell Reports*, **2016**, 16, 508-519	10.6	24
48	Maternal metabolites during pregnancy are associated with newborn outcomes and hyperinsulinaemia across ancestries. *Diabetologia*, **2019**, 62, 473-484	10.3	23
47	N-methyladenosine contributes to cellular phenotype in a genetically-defined model of breast cancer progression. *Oncotarget*, **2018**, 9, 31231-31243	3.3	23
46	Phosphoproteomic profiling of human myocardial tissues distinguishes ischemic from non-ischemic end stage heart failure. *PLoS ONE*, **2014**, 9, e104157	3.7	20
45	Muscle-Liver Trafficking of BCAA-Derived Nitrogen Underlies Obesity-Related Glycine Depletion. *Cell Reports*, **2020**, 33, 108375	10.6	20
44	Branched-chain ketoacids are preferentially reaminated and activate protein synthesis in the heart. *Nature Communications*, **2021**, 12, 1680	17.4	20
43	Research Resource: Roles for Calcium/Calmodulin-Dependent Protein Kinase Kinase 2 (CaMKK2) in Systems Metabolism. *Molecular Endocrinology*, **2016**, 30, 557-72		20
42	Sildenafil Treatment in Heart Failure With Preserved Ejection Fraction: Targeted Metabolomic Profiling in the RELAX Trial. *JAMA Cardiology*, **2017**, 2, 896-901	16.2	19
41	Remodeling of the Acetylproteome by SIRT3 Manipulation Fails to Affect Insulin Secretion or Cell Metabolism in the Absence of Overnutrition. *Cell Reports*, **2018**, 24, 209-223.e6	10.6	19
40	Dietary Patterns among Asian Indians Living in the United States Have Distinct Metabolomic Profiles That Are Associated with Cardiometabolic Risk. *Journal of Nutrition*, **2018**, 148, 1150-1159	4.1	18
39	Dietary branched-chain amino acid restriction alters fuel selection and reduces triglyceride stores in hearts of Zucker fatty rats. *American Journal of Physiology - Endocrinology and Metabolism*, **2020**, 318, E216-E223	6	17

38	Enhanced GLUT4-Dependent Glucose Transport Relieves Nutrient Stress in Obese Mice Through Changes in Lipid and Amino Acid Metabolism. *Diabetes*, **2016**, 65, 3585-3597	0.9	17
37	Cellular energetics and mitochondrial uncoupling in canine aging. *GeroScience*, **2019**, 41, 229-242	8.9	16
36	FIT2 is an acyl-coenzyme A diphosphatase crucial for endoplasmic reticulum homeostasis. *Journal of Cell Biology*, **2020**, 219,	7.3	15
35	Cord Blood Metabolomics: Association With Newborn Anthropometrics and C-Peptide Across Ancestries. *Journal of Clinical Endocrinology and Metabolism*, **2019**, 104, 4459-4472	5.6	13
34	Age-Related Adverse Inflammatory and Metabolic Changes Begin Early in Adulthood. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2019**, 74, 283-289	6.4	12
33	Cord Blood Metabolites Associated with Newborn Adiposity and Hyperinsulinemia. *Journal of Pediatrics*, **2018**, 203, 144-149.e1	3.6	12
32	Improvement in insulin resistance after gastric bypass surgery is correlated with a decline in plasma 2-hydroxybutyric acid. *Surgery for Obesity and Related Diseases*, **2018**, 14, 1126-1132	3	11
31	Dynamic Metabolite Profiling in an Archaeon Connects Transcriptional Regulation to Metabolic Consequences. *PLoS ONE*, **2015**, 10, e0135693	3.7	9
30	Biomarkers Associated with Physical Resilience After Hip Fracture. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2020**, 75, e166-e172	6.4	8
29	Type-2-Diabetes Alters CSF but Not Plasma Metabolomic and AD Risk Profiles in Vervet Monkeys. *Frontiers in Neuroscience*, **2019**, 13, 843	5.1	7
28	Metabolomic and genetic associations with insulin resistance in pregnancy. *Diabetologia*, **2020**, 63, 1783-1795	10.3	7
27	Kruppel-like factor 15 is required for the cardiac adaptive response to fasting. *PLoS ONE*, **2018**, 13, e0192376	3.7	7
26	BCAA Supplementation in Mice with Diet-induced Obesity Alters the Metabolome Without Impairing Glucose Homeostasis. *Endocrinology*, **2021**, 162,	4.8	7
25	Feeding diversified protein sources exacerbates hepatic insulin resistance via increased gut microbial branched-chain fatty acids and mTORC1 signaling in obese mice. *Nature Communications*, **2021**, 12, 3377	17.4	7
24	Muscle Krüppel-like factor 15 regulates lipid flux and systemic metabolic homeostasis. *Journal of Clinical Investigation*, **2021**, 131,	15.9	7
23	A Mitochondrial Progesterone Receptor Increases Cardiac Beta-Oxidation and Remodeling. *Journal of the Endocrine Society*, **2019**, 3, 446-467	0.4	6
22	Plasma MicroRNAs in Established Rheumatoid Arthritis Relate to Adiposity and Altered Plasma and Skeletal Muscle Cytokine and Metabolic Profiles. *Frontiers in Immunology*, **2019**, 10, 1475	8.4	6
21	Physiological mechanisms of sustained fumagillin-induced weight loss. *JCI Insight*, **2018**, 3,	9.9	6

20	HIV-1 Envelope Mimicry of Host Enzyme Kynureninase Does Not Disrupt Tryptophan Metabolism. *Journal of Immunology*, **2016**, 197, 4663-4673	5.3	5
19	Adverse Effects of Fenofibrate in Mice Deficient in the Protein Quality Control Regulator, CHIP. *Journal of Cardiovascular Development and Disease*, **2018**, 5,	4.2	5
18	Maternal Metabolites Associated With Gestational Diabetes Mellitus and a Postpartum Disorder of Glucose Metabolism. *Journal of Clinical Endocrinology and Metabolism*, **2021**, 106, 3283-3294	5.6	4
17	The Pediatric Obesity Microbiome and Metabolism Study (POMMS): Methods, Baseline Data, and Early Insights. *Obesity*, **2021**, 29, 569-578	8	4
16	TASK-1 and TASK-3 channels modulate pressure overload-induced cardiac remodeling and dysfunction. *American Journal of Physiology - Heart and Circulatory Physiology*, **2020**, 318, H566-H580	5.2	3
15	Gut microbiome contributions to altered metabolism in a pig model of undernutrition. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
14	Early-life mitochondrial DNA damage results in lifelong deficits in energy production mediated by redox signaling in Caenorhabditis elegans. *Redox Biology*, **2021**, 43, 102000	11.3	3
13	Effect of Bicarbonate on Net Acid Excretion, Blood Pressure, and Metabolism in Patients With and Without CKD: The Acid Base Compensation in CKD Study. *American Journal of Kidney Diseases*, **2021**, 78, 38-47	7.4	3
12	Nicotinamide riboside supplementation confers marginal metabolic benefits in obese mice without remodeling the muscle acetyl-proteome.. *IScience*, **2022**, 25, 103635	6.1	2
11	Urine and Plasma Metabolome of Healthy Adults Consuming the DASH (Dietary Approaches to Stop Hypertension) Diet: A Randomized Pilot Feeding Study. *Nutrients*, **2021**, 13,	6.7	2
10	NADH inhibition of SIRT1 links energy state to transcription during time-restricted feeding.. *Nature Metabolism*, **2021**, 3, 1621-1632	14.6	2
9	Preliminary evidence of effects of potassium chloride on a metabolomic path to diabetes and cardiovascular disease. *Metabolomics*, **2020**, 16, 75	4.7	1
8	Multi-Omic Profiling Reveals the Opposing Forces of Excess Dietary Sugar and Fat on Liver Mitochondria Protein Acetylation and Succinylation		1
7	A phase 2 trial of the somatostatin analog pasireotide to prevent GI toxicity and acute GVHD in allogeneic hematopoietic stem cell transplant. *PLoS ONE*, **2021**, 16, e0252995	3.7	1
6	Circulating long chain acylcarnitines and outcomes in diabetic heart failure: an HF-ACTION clinical trial substudy. *Cardiovascular Diabetology*, **2021**, 20, 161	8.7	1
5	Urine tricarboxylic acid cycle signatures of early-stage diabetic kidney disease.. *Metabolomics*, **2021**, 18, 5	4.7	1
4	Deglutarylation of glutaryl-CoA dehydrogenase by deacylating enzyme SIRT5 promotes lysine oxidation in mice.. *Journal of Biological Chemistry*, **2022**, 101723	5.4	0
3	Branched-Chain Amino Acid Catabolism and Cardiopulmonary Function Following Acute Maximal Exercise Testing in Adolescents. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 721354	5.4	0

2	Statin therapy inhibits fatty acid synthase via dynamic protein modifications.. *Nature Communications*, **2022**, 13, 2542	17.4	0
1	Impact of parenteral lipid emulsions on the metabolomic phenotype in preterm TPN-fed piglets. *FASEB Journal*, **2013**, 27, 1073.11	0.9	