

Olga R Ilkayeva

List of Publications by Year in descending order

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113
papers

19,163
citations

41344

49
h-index

24258

110
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117
all docs

117
docs citations

117
times ranked

27560
citing authors

#	ARTICLE	IF	CITATIONS
1	Gut Microbiota from Twins Discordant for Obesity Modulate Metabolism in Mice. <i>Science</i> , 2013, 341, 1241214.	12.6	3,006
2	A Branched-Chain Amino Acid-Related Metabolic Signature that Differentiates Obese and Lean Humans and Contributes to Insulin Resistance. <i>Cell Metabolism</i> , 2009, 9, 311-326.	16.2	2,597
3	Mitochondrial Overload and Incomplete Fatty Acid Oxidation Contribute to Skeletal Muscle Insulin Resistance. <i>Cell Metabolism</i> , 2008, 7, 45-56.	16.2	1,618
4	SIRT3 regulates mitochondrial fatty-acid oxidation by reversible enzyme deacetylation. <i>Nature</i> , 2010, 464, 121-125.	27.8	1,388
5	Lysine Glutarylation Is a Protein Posttranslational Modification Regulated by SIRT5. <i>Cell Metabolism</i> , 2014, 19, 605-617.	16.2	647
6	SIRT5 Regulates the Mitochondrial Lysine Succinylome and Metabolic Networks. <i>Cell Metabolism</i> , 2013, 18, 920-933.	16.2	549
7	Circadian Clock NAD ⁺ Cycle Drives Mitochondrial Oxidative Metabolism in Mice. <i>Science</i> , 2013, 342, 1243417.	12.6	525
8	Sialylated Milk Oligosaccharides Promote Microbiota-Dependent Growth in Models of Infant Undernutrition. <i>Cell</i> , 2016, 164, 859-871.	28.9	497
9	Catabolic Defect of Branched-Chain Amino Acids Promotes Heart Failure. <i>Circulation</i> , 2016, 133, 2038-2049.	1.6	390
10	N6-Methyladenosine in Flaviviridae Viral RNA Genomes Regulates Infection. <i>Cell Host and Microbe</i> , 2016, 20, 654-665.	11.0	370
11	BCAA catabolism in brown fat controls energy homeostasis through SLC25A44. <i>Nature</i> , 2019, 572, 614-619.	27.8	332
12	Muscle-Specific Deletion of Carnitine Acetyltransferase Compromises Glucose Tolerance and Metabolic Flexibility. <i>Cell Metabolism</i> , 2012, 15, 764-777.	16.2	307
13	Effects of microbiota-directed foods in gnotobiotic animals and undernourished children. <i>Science</i> , 2019, 365, .	12.6	305
14	The Gut Microbiota Modulates Energy Metabolism in the Hibernating Brown Bear <i>Ursus arctos</i> . <i>Cell Reports</i> , 2016, 14, 1655-1661.	6.4	290
15	Carnitine Insufficiency Caused by Aging and Overnutrition Compromises Mitochondrial Performance and Metabolic Control. <i>Journal of Biological Chemistry</i> , 2009, 284, 22840-22852.	3.4	271
16	Lipids Reprogram Metabolism to Become a Major Carbon Source for Histone Acetylation. <i>Cell Reports</i> , 2016, 17, 1463-1472.	6.4	266
17	SIRT4 Is a Lysine Deacylase that Controls Leucine Metabolism and Insulin Secretion. <i>Cell Metabolism</i> , 2017, 25, 838-855.e15.	16.2	259
18	Macrophage Metabolism of Apoptotic Cell-Derived Arginine Promotes Continual Efferocytosis and Resolution of Injury. <i>Cell Metabolism</i> , 2020, 31, 518-533.e10.	16.2	235

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19	Energy Metabolic Reprogramming in the Hypertrophied and Early Stage Failing Heart. <i>Circulation: Heart Failure</i> , 2014, 7, 1022-1031.	3.9	233
20	Divergent effects of glucose and fructose on hepatic lipogenesis and insulin signaling. <i>Journal of Clinical Investigation</i> , 2017, 127, 4059-4074.	8.2	233
21	The BCKDH Kinase and Phosphatase Integrate BCAA and Lipid Metabolism via Regulation of ATP-Citrate Lyase. <i>Cell Metabolism</i> , 2018, 27, 1281-1293.e7.	16.2	222
22	Branched-chain amino acid restriction in Zucker-fatty rats improves muscle insulin sensitivity by enhancing efficiency of fatty acid oxidation and acyl-glycine export. <i>Molecular Metabolism</i> , 2016, 5, 538-551.	6.5	210
23	A Class of Reactive Acyl-CoA Species Reveals the Non-enzymatic Origins of Protein Acylation. <i>Cell Metabolism</i> , 2017, 25, 823-837.e8.	16.2	205
24	A Pyruvate Cycling Pathway Involving Cytosolic NADP-dependent Isocitrate Dehydrogenase Regulates Glucose-stimulated Insulin Secretion. <i>Journal of Biological Chemistry</i> , 2006, 281, 30593-30602.	3.4	204
25	Genetic Networks of Liver Metabolism Revealed by Integration of Metabolic and Transcriptional Profiling. <i>PLoS Genetics</i> , 2008, 4, e1000034.	3.5	188
26	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. <i>Journal of the American Heart Association</i> , 2016, 5, .	3.7	178
27	Neuronal CRTIC-1 Governs Systemic Mitochondrial Metabolism and Lifespan via a Catecholamine Signal. <i>Cell</i> , 2015, 160, 842-855.	28.9	175
28	Prognostic Implications of Long-Chain Acylcarnitines in Heart Failure and Reversibility With Mechanical Circulatory Support. <i>Journal of the American College of Cardiology</i> , 2016, 67, 291-299.	2.8	143
29	Dietary Sugars Alter Hepatic Fatty Acid Oxidation via Transcriptional and Post-translational Modifications of Mitochondrial Proteins. <i>Cell Metabolism</i> , 2019, 30, 735-753.e4.	16.2	136
30	Modification of messenger RNA by 2-O-methylation regulates gene expression in vivo. <i>Nature Communications</i> , 2019, 10, 3401.	12.8	134
31	Prior Dietary Practices and Connections to a Human Gut Microbial Metacommunity Alter Responses to Diet Interventions. <i>Cell Host and Microbe</i> , 2017, 21, 84-96.	11.0	129
32	Compensatory Responses to Pyruvate Carboxylase Suppression in Islet β -Cells. <i>Journal of Biological Chemistry</i> , 2006, 281, 22342-22351.	3.4	124
33	Brain Insulin Lowers Circulating BCAA Levels by Inducing Hepatic BCAA Catabolism. <i>Cell Metabolism</i> , 2014, 20, 898-909.	16.2	124
34	Effect of Roux-en-Y Gastric Bypass and Laparoscopic Adjustable Gastric Banding on Branched-Chain Amino Acid Metabolism. <i>Diabetes</i> , 2013, 62, 2757-2761.	0.6	108
35	Impact of combined resistance and aerobic exercise training on branched-chain amino acid turnover, glycine metabolism and insulin sensitivity in overweight humans. <i>Diabetologia</i> , 2015, 58, 2324-2335.	6.3	103
36	Metabolic profiling of PPAR α mice reveals defects in carnitine and amino acid homeostasis that are partially reversed by oral carnitine supplementation. <i>FASEB Journal</i> , 2009, 23, 586-604.	0.5	101

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37	<i>N</i> ⁶ -methyladenosine is required for the hypoxic stabilization of specific mRNAs. <i>Rna</i> , 2017, 23, 1444-1455.	3.5	92
38	Obesity and lipid stress inhibit carnitine acetyltransferase activity. <i>Journal of Lipid Research</i> , 2014, 55, 635-644.	4.2	80
39	Carnitine Acetyltransferase Mitigates Metabolic Inertia and Muscle Fatigue during Exercise. <i>Cell Metabolism</i> , 2015, 22, 65-76.	16.2	78
40	The Acetyl Group Buffering Action of Carnitine Acetyltransferase Offsets Macronutrient-Induced Lysine Acetylation of Mitochondrial Proteins. <i>Cell Reports</i> , 2016, 14, 243-254.	6.4	77
41	BMI, RQ, Diabetes, and Sex Affect the Relationships Between Amino Acids and Clamp Measures of Insulin Action in Humans. <i>Diabetes</i> , 2014, 63, 791-800.	0.6	76
42	Maternal BMI and Glycemia Impact the Fetal Metabolome. <i>Diabetes Care</i> , 2017, 40, 902-910.	8.6	74
43	Nutritional modulation of heart failure in mitochondrial pyruvate carrier-deficient mice. <i>Nature Metabolism</i> , 2020, 2, 1232-1247.	11.9	74
44	Associations of maternal BMI and insulin resistance with the maternal metabolome and newborn outcomes. <i>Diabetologia</i> , 2017, 60, 518-530.	6.3	71
45	SIRT6 Promotes Hepatic Beta-Oxidation via Activation of PPAR α . <i>Cell Reports</i> , 2019, 29, 4127-4143.e8.	6.4	68
46	Acyl-CoA thioesterase-2 facilitates mitochondrial fatty acid oxidation in the liver. <i>Journal of Lipid Research</i> , 2014, 55, 2458-2470.	4.2	64
47	Cardiomyocyte glucagon receptor signaling modulates outcomes in mice with experimental myocardial infarction. <i>Molecular Metabolism</i> , 2015, 4, 132-143.	6.5	54
48	Effects of a gut pathobiont in a gnotobiotic mouse model of childhood undernutrition. <i>Science Translational Medicine</i> , 2016, 8, 366ra164.	12.4	54
49	Metabolomic analysis reveals altered skeletal muscle amino acid and fatty acid handling in obese humans. <i>Obesity</i> , 2015, 23, 981-988.	3.0	53
50	Metabolic Networks and Metabolites Underlie Associations Between Maternal Glucose During Pregnancy and Newborn Size at Birth. <i>Diabetes</i> , 2016, 65, 2039-2050.	0.6	49
51	Muscle-Liver Trafficking of BCAA-Derived Nitrogen Underlies Obesity-Related Glycine Depletion. <i>Cell Reports</i> , 2020, 33, 108375.	6.4	49
52	Long-chain Acylcarnitines Reduce Lung Function by Inhibiting Pulmonary Surfactant. <i>Journal of Biological Chemistry</i> , 2015, 290, 23897-23904.	3.4	46
53	Branched-chain α -ketoacids are preferentially reaminated and activate protein synthesis in the heart. <i>Nature Communications</i> , 2021, 12, 1680.	12.8	45
54	Maternal metabolites during pregnancy are associated with newborn outcomes and hyperinsulinaemia across ancestries. <i>Diabetologia</i> , 2019, 62, 473-484.	6.3	43

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55	Dietary branched-chain amino acid restriction alters fuel selection and reduces triglyceride stores in hearts of Zucker fatty rats. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2020, 318, E216-E223.	3.5	43
56	Feeding diversified protein sources exacerbates hepatic insulin resistance via increased gut microbial branched-chain fatty acids and mTORC1 signaling in obese mice. <i>Nature Communications</i> , 2021, 12, 3377.	12.8	42
57	Metabolomic Profiling Reveals a Role for Caspase-2 in Lipoapoptosis. <i>Journal of Biological Chemistry</i> , 2013, 288, 14463-14475.	3.4	41
58	HIF-1 Alpha Regulates the Response of Primary Sarcomas to Radiation Therapy through a Cell Autonomous Mechanism. <i>Radiation Research</i> , 2015, 183, 594.	1.5	41
59	Phosphoproteomic Profiling of Human Myocardial Tissues Distinguishes Ischemic from Non-Ischemic End Stage Heart Failure. <i>PLoS ONE</i> , 2014, 9, e104157.	2.5	39
60	Respiratory Phenomics across Multiple Models of Protein Hyperacylation in Cardiac Mitochondria Reveals a Marginal Impact on Bioenergetics. <i>Cell Reports</i> , 2019, 26, 1557-1572.e8.	6.4	39
61	Targeted Metabolomics Demonstrates Distinct and Overlapping Maternal Metabolites Associated With BMI, Glucose, and Insulin Sensitivity During Pregnancy Across Four Ancestry Groups. <i>Diabetes Care</i> , 2017, 40, 911-919.	8.6	38
62	Temporal dynamics of liver mitochondrial protein acetylation and succinylation and metabolites due to high fat diet and/or excess glucose or fructose. <i>PLoS ONE</i> , 2018, 13, e0208973.	2.5	38
63	Mixture model normalization for non-targeted gas chromatography/mass spectrometry metabolomics data. <i>BMC Bioinformatics</i> , 2017, 18, 84.	2.6	37
64	FIT2 is an acyl-coenzyme A diphosphatase crucial for endoplasmic reticulum homeostasis. <i>Journal of Cell Biology</i> , 2020, 219, .	5.2	37
65	ACLY and ACC1 Regulate Hypoxia-Induced Apoptosis by Modulating ETV4 via α -ketoglutarate. <i>PLoS Genetics</i> , 2015, 11, e1005599.	3.5	36
66	Metabolomic analysis of insulin resistance across different mouse strains and diets. <i>Journal of Biological Chemistry</i> , 2017, 292, 19135-19145.	3.4	36
67	Hepatic mTORC1 Opposes Impaired Insulin Action to Control Mitochondrial Metabolism in Obesity. <i>Cell Reports</i> , 2016, 16, 508-519.	6.4	34
68	Metabolic profiling in Prader-Willi syndrome and nonsyndromic obesity: sex differences and the role of growth hormone. <i>Clinical Endocrinology</i> , 2015, 83, 797-805.	2.4	33
69	Metabolomic Profiling of the Effects of Dapagliflozin in Heart Failure With Reduced Ejection Fraction: DEFINE-HF. <i>Circulation</i> , 2022, 146, 808-818.	1.6	33
70	Sildenafil Treatment in Heart Failure With Preserved Ejection Fraction. <i>JAMA Cardiology</i> , 2017, 2, 896.	6.1	31
71	Cord Blood Metabolomics: Association With Newborn Anthropometrics and C-Peptide Across Ancestries. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2019, 104, 4459-4472.	3.6	30
72	Research Resource: Roles for Calcium/Calmodulin-Dependent Protein Kinase Kinase 2 (CaMKK2) in Systems Metabolism. <i>Molecular Endocrinology</i> , 2016, 30, 557-572.	3.7	29

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73	Dietary Patterns among Asian Indians Living in the United States Have Distinct Metabolomic Profiles That Are Associated with Cardiometabolic Risk. <i>Journal of Nutrition</i> , 2018, 148, 1150-1159.	2.9	29
74	N6-methyladenosine contributes to cellular phenotype in a genetically-defined model of breast cancer progression. <i>Oncotarget</i> , 2018, 9, 31231-31243.	1.8	28
75	BCAA Supplementation in Mice with Diet-induced Obesity Alters the Metabolome Without Impairing Glucose Homeostasis. <i>Endocrinology</i> , 2021, 162, .	2.8	28
76	Cellular energetics and mitochondrial uncoupling in canine aging. <i>GeroScience</i> , 2019, 41, 229-242.	4.6	27
77	Cord Blood Metabolites Associated with Newborn Adiposity and Hyperinsulinemia. <i>Journal of Pediatrics</i> , 2018, 203, 144-149.e1.	1.8	26
78	Remodeling of the Acetylproteome by SIRT3 Manipulation Fails to Affect Insulin Secretion or β Cell Metabolism in the Absence of Overnutrition. <i>Cell Reports</i> , 2018, 24, 209-223.e6.	6.4	26
79	NADH inhibition of SIRT1 links energy state to transcription during time-restricted feeding. <i>Nature Metabolism</i> , 2021, 3, 1621-1632.	11.9	26
80	Enhanced GLUT4-Dependent Glucose Transport Relieves Nutrient Stress in Obese Mice Through Changes in Lipid and Amino Acid Metabolism. <i>Diabetes</i> , 2016, 65, 3585-3597.	0.6	24
81	Metabolomic and genetic associations with insulin resistance in pregnancy. <i>Diabetologia</i> , 2020, 63, 1783-1795.	6.3	21
82	The Pediatric Obesity Microbiome and Metabolism Study (POMMS): Methods, Baseline Data, and Early Insights. <i>Obesity</i> , 2021, 29, 569-578.	3.0	19
83	Biomarkers Associated with Physical Resilience After Hip Fracture. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2020, 75, e166-e172.	3.6	19
84	Gut microbiome contributions to altered metabolism in a pig model of undernutrition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	18
85	Improvement in insulin resistance after gastric bypass surgery is correlated with a decline in plasma 2-hydroxybutyric acid. <i>Surgery for Obesity and Related Diseases</i> , 2018, 14, 1126-1132.	1.2	17
86	Type-2-Diabetes Alters CSF but Not Plasma Metabolomic and AD Risk Profiles in Vervet Monkeys. <i>Frontiers in Neuroscience</i> , 2019, 13, 843.	2.8	17
87	Altered branched-chain α -keto acid metabolism is a feature of NAFLD in individuals with severe obesity. <i>JCI Insight</i> , 2022, 7, .	5.0	16
88	Age-Related Adverse Inflammatory and Metabolic Changes Begin Early in Adulthood. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2019, 74, 283-289.	3.6	15
89	A Mitochondrial Progesterone Receptor Increases Cardiac Beta-Oxidation and Remodeling. <i>Journal of the Endocrine Society</i> , 2019, 3, 446-467.	0.2	15
90	Maternal Metabolites Associated With Gestational Diabetes Mellitus and a Postpartum Disorder of Glucose Metabolism. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2021, 106, 3283-3294.	3.6	15

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91	Early-life mitochondrial DNA damage results in lifelong deficits in energy production mediated by redox signaling in <i>Caenorhabditis elegans</i> . <i>Redox Biology</i> , 2021, 43, 102000.	9.0	15
92	Dynamic Metabolite Profiling in an Archaeon Connects Transcriptional Regulation to Metabolic Consequences. <i>PLoS ONE</i> , 2015, 10, e0135693.	2.5	14
93	Muscle Krüppel-like factor 15 regulates lipid flux and systemic metabolic homeostasis. <i>Journal of Clinical Investigation</i> , 2021, 131, .	8.2	14
94	Plasma MicroRNAs in Established Rheumatoid Arthritis Relate to Adiposity and Altered Plasma and Skeletal Muscle Cytokine and Metabolic Profiles. <i>Frontiers in Immunology</i> , 2019, 10, 1475.	4.8	13
95	Effect of Bicarbonate on Net Acid Excretion, Blood Pressure, and Metabolism in Patients With and Without CKD: The Acid Base Compensation in CKD Study. <i>American Journal of Kidney Diseases</i> , 2021, 78, 38-47.	1.9	13
96	Nicotinamide riboside supplementation confers marginal metabolic benefits in obese mice without remodeling the muscle acetyl-proteome. <i>IScience</i> , 2022, 25, 103635.	4.1	11
97	Kruppel-like factor 15 is required for the cardiac adaptive response to fasting. <i>PLoS ONE</i> , 2018, 13, e0192376.	2.5	10
98	Circulating long chain acylcarnitines and outcomes in diabetic heart failure: an HF-ACTION clinical trial substudy. <i>Cardiovascular Diabetology</i> , 2021, 20, 161.	6.8	8
99	Physiological mechanisms of sustained fumagillin-induced weight loss. <i>JCI Insight</i> , 2018, 3, .	5.0	8
100	Urine tricarboxylic acid cycle signatures of early-stage diabetic kidney disease. <i>Metabolomics</i> , 2022, 18, 5.	3.0	8
101	Adverse Effects of Fenofibrate in Mice Deficient in the Protein Quality Control Regulator, CHIP. <i>Journal of Cardiovascular Development and Disease</i> , 2018, 5, 43.	1.6	7
102	TASK-1 and TASK-3 channels modulate pressure overload-induced cardiac remodeling and dysfunction. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2020, 318, H566-H580.	3.2	7
103	Statin therapy inhibits fatty acid synthase via dynamic protein modifications. <i>Nature Communications</i> , 2022, 13, 2542.	12.8	7
104	HIV-1 Envelope Mimicry of Host Enzyme Kynureninase Does Not Disrupt Tryptophan Metabolism. <i>Journal of Immunology</i> , 2016, 197, 4663-4673.	0.8	6
105	Urine and Plasma Metabolome of Healthy Adults Consuming the DASH (Dietary Approaches to Stop Hypertension) Diet. <i>Journal of Nutrition</i> , 2017, 147, 1075-1085.	0.784314	5
106	Deglutarylation of glutaryl-CoA dehydrogenase by deacylating enzyme SIRT5 promotes lysine oxidation in mice. <i>Journal of Biological Chemistry</i> , 2022, 298, 101723.	3.4	5
107	Metabolomics analysis identifies a lipidomic profile in treatment-naïve juvenile dermatomyositis patients vs healthy control subjects. <i>Rheumatology</i> , 2022, 61, 1699-1708.	1.9	4
108	Branched-Chain Amino Acid Catabolism and Cardiopulmonary Function Following Acute Maximal Exercise Testing in Adolescents. <i>Frontiers in Cardiovascular Medicine</i> , 2021, 8, 721354.	2.4	4

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109	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.	2.5	3
110	Preliminary evidence of effects of potassium chloride on a metabolomic path to diabetes and cardiovascular disease. Metabolomics, 2020, 16, 75.	3.0	2
111	A precision medicine approach to stress testing using metabolomics and microribonucleic acids. Personalized Medicine, 2022, 19, 287-297.	1.5	1
112	Impact of parenteral lipid emulsions on the metabolomic phenotype in preterm TPN-fed piglets. FASEB Journal, 2013, 27, 1073.11.	0.5	0
113	Evaluating immune response and metabolic related biomarkers pre-allogeneic hematopoietic stem cell transplant in acute myeloid leukemia. PLoS ONE, 2022, 17, e0268963.	2.5	0