Kyu Y Rhee

List of Publications by Citations

99 papers	4,361 citations	38 h-index	65 g-index
107 ext. papers	5,545 ext. citations	11.3 avg, IF	5.64 L-index

#	Paper	IF	Citations
99	Gluconeogenic carbon flow of tricarboxylic acid cycle intermediates is critical for Mycobacterium tuberculosis to establish and maintain infection. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 9819-24	11.5	256
98	Metabolomics of Mycobacterium tuberculosis reveals compartmentalized co-catabolism of carbon substrates. *Chemistry and Biology*, **2010**, 17, 1122-31		255
97	Multifunctional essentiality of succinate metabolism in adaptation to hypoxia in Mycobacterium tuberculosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 6554-9	11.5	196
96	A chemical genetic screen in Mycobacterium tuberculosis identifies carbon-source-dependent growth inhibitors devoid of in vivo efficacy. *Nature Communications*, **2010**, 1, 57	17.4	190
95	Isocitrate lyase mediates broad antibiotic tolerance in Mycobacterium tuberculosis. *Nature Communications*, **2014**, 5, 4306	17.4	172
94	Selective killing of nonreplicating mycobacteria. *Cell Host and Microbe*, **2008**, 3, 137-45	23.4	160
93	S-nitroso proteome of Mycobacterium tuberculosis: Enzymes of intermediary metabolism and antioxidant defense. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 467-72	11.5	147
92	Para-aminosalicylic acid acts as an alternative substrate of folate metabolism in Mycobacterium tuberculosis. *Science*, **2013**, 339, 88-91	33.3	135
91	Central carbon metabolism in Mycobacterium tuberculosis: an unexpected frontier. *Trends in Microbiology*, **2011**, 19, 307-14	12.4	130
90	High-fructose corn syrup enhances intestinal tumor growth in mice. *Science*, **2019**, 363, 1345-1349	33.3	128
89	Depletion of antibiotic targets has widely varying effects on growth. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 4176-81	11.5	121
88	A genetic strategy to identify targets for the development of drugs that prevent bacterial persistence. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 19095-100	11.5	119
87	Methylcitrate cycle defines the bactericidal essentiality of isocitrate lyase for survival of Mycobacterium tuberculosis on fatty acids. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 4976-81	11.5	106
86	Evaluating the sensitivity of Mycobacterium tuberculosis to biotin deprivation using regulated gene expression. *PLoS Pathogens*, **2011**, 7, e1002264	7.6	105
85	Virulence of Mycobacterium tuberculosis depends on lipoamide dehydrogenase, a member of three multienzyme complexes. *Cell Host and Microbe*, **2011**, 9, 21-31	23.4	97
84	Activity-based metabolomic profiling of enzymatic function: identification of Rv1248c as a mycobacterial 2-hydroxy-3-oxoadipate synthase. *Chemistry and Biology*, **2010**, 17, 323-32		96
83	Ergothioneine Maintains Redox and Bioenergetic Homeostasis Essential for Drug Susceptibility and Virulence of Mycobacterium tuberculosis. *Cell Reports*, **2016**, 14, 572-585	10.6	83

82	Metabolic principles of persistence and pathogenicity in Mycobacterium tuberculosis. *Nature Reviews Microbiology*, **2018**, 16, 496-507	22.2	82
81	Glucose phosphorylation is required for Mycobacterium tuberculosis persistence in mice. *PLoS Pathogens*, **2013**, 9, e1003116	7.6	78
80	Mitochondrial ClpX Activates a Key Enzyme for Heme Biosynthesis and Erythropoiesis. *Cell*, **2015**, 161, 858-67	56.2	69
79	Hierarchical expression of genes controlled by the Bacillus subtilis global regulatory protein CodY. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 8227-32	11.5	64
78	Essential but Not Vulnerable: Indazole Sulfonamides Targeting Inosine Monophosphate Dehydrogenase as Potential Leads against Mycobacterium tuberculosis. *ACS Infectious Diseases*, **2017**, 3, 18-33	5.5	62
77	N-methylation of a bactericidal compound as a resistance mechanism in Mycobacterium tuberculosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E4523-30	11.5	60
76	Glyoxylate detoxification is an essential function of malate synthase required for carbon assimilation in. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E2225-E2232	11.5	53
75	Verapamil Targets Membrane Energetics in Mycobacterium tuberculosis. *Antimicrobial Agents and Chemotherapy*, **2018**, 62,	5.9	53
74	Metabolic anticipation in Mycobacterium tuberculosis. *Nature Microbiology*, **2017**, 2, 17084	26.6	52
73	Microbial metabolomics: innovation, application, insight. *Current Opinion in Microbiology*, **2014**, 19, 90-96	7.9	51
72	Inactivation of fructose-1,6-bisphosphate aldolase prevents optimal co-catabolism of glycolytic and gluconeogenic carbon substrates in Mycobacterium tuberculosis. *PLoS Pathogens*, **2014**, 10, e1004144	7.6	48
71	Pyrazolo[1,5- a]pyridine Inhibitor of the Respiratory Cytochrome bcc Complex for the Treatment of Drug-Resistant Tuberculosis. *ACS Infectious Diseases*, **2019**, 5, 239-249	5.5	47
70	Validation of CoaBC as a Bactericidal Target in the Coenzyme A Pathway of Mycobacterium tuberculosis. *ACS Infectious Diseases*, **2016**, 2, 958-968	5.5	46
69	Mycobacterium tuberculosis metabolism and host interaction: mysteries and paradoxes. *Current Topics in Microbiology and Immunology*, **2013**, 374, 163-88	3.3	45
68	A spectrum of CodY activities drives metabolic reorganization and virulence gene expression in Staphylococcus aureus. *Molecular Microbiology*, **2016**, 101, 495-514	4.1	45
67	E1 of ketoglutarate dehydrogenase defends Mycobacterium tuberculosis against glutamate anaplerosis and nitroxidative stress. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E5834-43	11.5	44
66	Tuberculosis Drug Development: History and Evolution of the Mechanism-Based Paradigm. *Cold Spring Harbor Perspectives in Medicine*, **2015**, 5, a021147	5.4	42
65	Folate pathway disruption leads to critical disruption of methionine derivatives in Mycobacterium tuberculosis. *Chemistry and Biology*, **2014**, 21, 819-30		41

64	Mycobacterial genes essential for the pathogen's survival in the host. *Immunological Reviews*, **2015**, 264, 319-26	11.3	40
63	Two enzymes with redundant fructose bisphosphatase activity sustain gluconeogenesis and virulence in Mycobacterium tuberculosis. *Nature Communications*, **2015**, 6, 7912	17.4	39
62	Multisystem Analysis of Reveals Kinase-Dependent Remodeling of the Pathogen-Environment Interface. *MBio*, **2018**, 9,	7.8	38
61	Crosstalk between the tricarboxylic acid cycle and peptidoglycan synthesis in Caulobacter crescentus through the homeostatic control of α-ketoglutarate. *PLoS Genetics*, **2017**, 13, e1006978	6	38
60	Opposing reactions in coenzyme A metabolism sensitize to enzyme inhibition. *Science*, **2019**, 363,	33.3	37
59	Triosephosphate isomerase is dispensable in vitro yet essential for Mycobacterium tuberculosis to establish infection. *MBio*, **2014**, 5, e00085	7.8	33
58	Rac-Mediated Macropinocytosis of Extracellular Protein Promotes Glucose Independence in Non-Small Cell Lung Cancer. *Cancers*, **2019**, 11,	6.6	33
57	Targeting Mycobacterium tuberculosis Biotin Protein Ligase (MtBPL) with Nucleoside-Based Bisubstrate Adenylation Inhibitors. *Journal of Medicinal Chemistry*, **2015**, 58, 7349-7369	8.3	32
56	Dietary fructose improves intestinal cell survival and nutrient absorption. *Nature*, **2021**, 597, 263-267	50.4	32
55	2-Mercapto-Quinazolinones as Inhibitors of Type II NADH Dehydrogenase and Mycobacterium tuberculosis: Structure-Activity Relationships, Mechanism of Action and Absorption, Distribution, Metabolism, and Excretion Characterization. *ACS Infectious Diseases*, **2018**, 4, 954-969	5.5	31
54	Central Role of Pyruvate Kinase in Carbon Co-catabolism of Mycobacterium tuberculosis. *Journal of Biological Chemistry*, **2016**, 291, 7060-9	5.4	29
53	Fumarase Deficiency Causes Protein and Metabolite Succination and Intoxicates Mycobacterium tuberculosis. *Cell Chemical Biology*, **2017**, 24, 306-315	8.2	28
52	Metabolomics of Mycobacterium tuberculosis. *Methods in Molecular Biology*, **2015**, 1285, 105-15	1.4	28
51	Risk factors and outcomes of infections caused by extremely drug-resistant gram-negative bacilli in patients hospitalized in intensive care units. *American Journal of Infection Control*, **2014**, 42, 626-31	3.8	27
50	Dissociation of Adaptive Thermogenesis from Glucose Homeostasis in Microbiome-Deficient Mice. *Cell Metabolism*, **2020**, 31, 592-604.e9	24.6	26
49	Mass Spectrometric Identification of Urinary Biomarkers of Pulmonary Tuberculosis. *EBioMedicine*, **2018**, 31, 157-165	8.8	26
48	The membrane protein ANKH is crucial for bone mechanical performance by mediating cellular export of citrate and ATP. *PLoS Genetics*, **2020**, 16, e1008884	6	25
47	Mode-of-action profiling reveals glutamine synthetase as a collateral metabolic vulnerability of to bedaquiline. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 19646-19651	11.5	23

46	Suitability of silica hydride stationary phase, aqueous normal phase chromatography for untargeted metabolomic profiling of Enterococcus faecium and Staphylococcus aureus. *Journal of Separation Science*, **2009**, 32, 2262-5	3.4	23
45	Evolution of a thienopyrimidine antitubercular relying on medicinal chemistry and metabolomics insights. *Tetrahedron Letters*, **2015**, 56, 3246-3250	2	19
44	Metabolomics of Central Carbon Metabolism in Mycobacterium tuberculosis. *Microbiology Spectrum* , **2014**, 2,	8.9	19
43	Prevalence, persistence, and microbiology of Staphylococcus aureus nasal carriage among hemodialysis outpatients at a major New York Hospital. *Diagnostic Microbiology and Infectious Disease*, **2011**, 70, 37-44	2.9	19
42	Synergistic Lethality of a Binary Inhibitor of Mycobacterium tuberculosis KasA. *MBio*, **2018**, 9,	7.8	19
41	Emerging Approaches to Tuberculosis Drug Development: At Home in the Metabolome. *Trends in Pharmacological Sciences*, **2017**, 38, 393-405	13.2	18
40	Targeting protein biotinylation enhances tuberculosis chemotherapy. *Science Translational Medicine*, **2018**, 10,	17.5	17
39	Aspartate aminotransferase Rv3722c governs aspartate-dependent nitrogen metabolism in Mycobacterium tuberculosis. *Nature Communications*, **2020**, 11, 1960	17.4	16
38	Endemic Acinetobacter baumannii in a New York hospital. *PLoS ONE*, **2011**, 6, e28566	3.7	15
37	Depletion of the DarG antitoxin in Mycobacterium tuberculosis triggers the DNA-damage response and leads to cell death. *Molecular Microbiology*, **2020**, 114, 641-652	4.1	14
36	Minding the gaps: metabolomics mends functional genomics. *EMBO Reports*, **2013**, 14, 949-50	6.5	14
35	Impact of CodY protein on metabolism, sporulation and virulence in Clostridioides difficile ribotype 027. *PLoS ONE*, **2019**, 14, e0206896	3.7	13
34	Intermediate-type vancomycin resistance (VISA) in genetically-distinct Staphylococcus aureus isolates is linked to specific, reversible metabolic alterations. *PLoS ONE*, **2014**, 9, e97137	3.7	13
33	Identification of a Mycothiol-Dependent Nitroreductase from Mycobacterium tuberculosis. *ACS Infectious Diseases*, **2018**, 4, 771-787	5.5	12
32	Metabolism and the Evolution of Social Behavior. *Molecular Biology and Evolution*, **2017**, 34, 2367-2379	8.3	11
31	Two for the price of one: Attacking the energetic-metabolic hub of mycobacteria to produce new chemotherapeutic agents. *Progress in Biophysics and Molecular Biology*, **2020**, 152, 35-44	4.7	11
30	Growth of at acidic pH depends on lipid assimilation and is accompanied by reduced GAPDH activity. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	8
29	Metabolic Perspectives on Persistence. *Microbiology Spectrum*, **2017**, 5,	8.9	7

28	The Tuberculosis Drug Accelerator at year 10: what have we learned?. *Nature Medicine*, **2021**, 27, 1333-1337	36.5	7
27	Control of biotin biosynthesis in mycobacteria by a pyruvate carboxylase dependent metabolic signal. *Molecular Microbiology*, **2017**, 106, 1018-1031	4.1	6
26	Allostery and compartmentalization: old but not forgotten. *Current Opinion in Microbiology*, **2014**, 18, 23-9	7.9	4
25	Microbial Metabolomics: Fifty Shades of Metabolism. *ACS Infectious Diseases*, **2015**, 1, 73-5	5.5	4
24	Multiform antimicrobial resistance from a metabolic mutation. *Science Advances*, **2021**, 7,	14.3	4
23	Inhibiting Mycobacterium tuberculosis CoaBC by targeting an allosteric site. *Nature Communications*, **2021**, 12, 143	17.4	4
22	Bacillus subtilis PgcA moonlights as a phosphoglucosamine mutase in support of peptidoglycan synthesis. *PLoS Genetics*, **2019**, 15, e1008434	6	3
21	Transcriptional regulator-induced phenotype screen reveals drug potentiators in Mycobacterium tuberculosis. *Nature Microbiology*, **2021**, 6, 44-50	26.6	3
20	Comparison of transposon and deletion mutants in Mycobacterium tuberculosis: The case of rv1248c, encoding 2-hydroxy-3-oxoadipate synthase. *Tuberculosis*, **2015**, 95, 689-694	2.6	2
19	Metabolomics of Mycobacterium tuberculosis. *Methods in Molecular Biology*, **2021**, 2314, 579-593	1.4	2
18	Chemical-genetic interaction mapping links carbon metabolism and cell wall structure to tuberculosis drug efficacy.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2201632119	11.5	2
17	CinA mediates multidrug tolerance in Mycobacterium tuberculosis.. *Nature Communications*, **2022**, 13, 2203	17.4	2
16	Two interacting ATPases protect from glycerol and nitric oxide toxicity. *Journal of Bacteriology*, **2020**,	3.5	1
15	Urinary biomarkers of mycobacterial load and treatment response in pulmonary tuberculosis. *JCI Insight*, **2020**, 5,	9.9	1
14	GLUT5 (SLC2A5) enables fructose-mediated proliferation independent of ketohexokinase. *Cancer & Metabolism*, **2021**, 9, 12	5.4	1
13	Innovations in MD-only physician-scientist training: experiences from the Burroughs Wellcome Fund physician-scientist institutional award initiative. *Journal of Clinical Investigation*, **2021**, 131,	15.9	1
12	Metabolic bifunctionality of Rv0812 couples folate and peptidoglycan biosynthesis in Mycobacterium tuberculosis. *Journal of Experimental Medicine*, **2021**, 218,	16.6	1
11	Metabolic Perspectives on Persistence **2017**, 653-669		0

10	Multiple acyl-CoA dehydrogenase deficiency kills Mycobacterium tuberculosis in vitro and during infection. *Nature Communications*, **2021**, 12, 6593	17.4	0
9	Targeting CoaBC through Chemical Inhibition of 4'-Phosphopantothenoyl-l-cysteine Synthetase (CoaB) Activity. *ACS Infectious Diseases*, **2021**, 7, 1666-1679	5.5	0
8	1886. N1,N12-Diacetylspermine as Potential Urinary Biomarker to Monitor Treatment Response and Bacterial Load in Pulmonary Tuberculosis. *Open Forum Infectious Diseases*, **2019**, 6, S53-S53	1	0
7	An amiloride derivative is active against the FF-ATP synthase and cytochrome bd oxidase of Mycobacterium tuberculosis.. *Communications Biology*, **2022**, 5, 166	6.7	0
6	Deciphering functional redundancy and energetics of malate oxidation in mycobacteria.. *Journal of Biological Chemistry*, **2022**, 101859	5.4	0
5	Metabolomics of Central Carbon Metabolism inMycobacterium tuberculosis323-339		
4	The membrane protein ANKH is crucial for bone mechanical performance by mediating cellular export of citrate and ATP **2020**, 16, e1008884		
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