

# Kyongbum Lee

## List of Publications by Citations

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74  
papers

3,665  
citations

30  
h-index

60  
g-index

81  
ext. papers

4,352  
ext. citations

6.8  
avg, IF

5.37  
L-index

#	Paper	IF	Citations
74	Vascularization strategies for tissue engineering. <i>Tissue Engineering - Part B: Reviews</i> , <b>2009</b> , 15, 353-70	7.9	642
73	Gut Microbiota-Derived Tryptophan Metabolites Modulate Inflammatory Response in Hepatocytes and Macrophages. <i>Cell Reports</i> , <b>2018</b> , 23, 1099-1111	10.6	222
72	Microbiome-derived tryptophan metabolites and their aryl hydrocarbon receptor-dependent agonist and antagonist activities. <i>Molecular Pharmacology</i> , <b>2014</b> , 85, 777-88	4.3	183
71	Adipose tissue engineering for soft tissue regeneration. <i>Tissue Engineering - Part B: Reviews</i> , <b>2010</b> , 16, 413-26	7.9	176
70	An algorithm for modularity analysis of directed and weighted biological networks based on edge-betweenness centrality. <i>Bioinformatics</i> , <b>2006</b> , 22, 3106-8	7.2	163
69	Quantitative metabolic imaging using endogenous fluorescence to detect stem cell differentiation. <i>Scientific Reports</i> , <b>2013</b> , 3, 3432	4.9	156
68	Prediction and quantification of bioactive microbiota metabolites in the mouse gut. <i>Nature Communications</i> , <b>2014</b> , 5, 5492	17.4	145
67	Dynamic model of CHO cell metabolism. <i>Metabolic Engineering</i> , <b>2011</b> , 13, 108-24	9.7	128
66	Relationships between degradability of silk scaffolds and osteogenesis. <i>Biomaterials</i> , <b>2010</b> , 31, 6162-72	15.6	112
65	Pathways and functions of gut microbiota metabolism impacting host physiology. <i>Current Opinion in Biotechnology</i> , <b>2015</b> , 36, 137-45	11.4	110
64	Endogenous two-photon fluorescence imaging elucidates metabolic changes related to enhanced glycolysis and glutamine consumption in precancerous epithelial tissues. <i>Cancer Research</i> , <b>2014</b> , 74, 3067-75	19.1	90
63	An Aryl Hydrocarbon Receptor-Mediated Amplification Loop That Enforces Cell Migration in ER-/PR-/Her2- Human Breast Cancer Cells. <i>Molecular Pharmacology</i> , <b>2016</b> , 90, 674-688	4.3	83
62	Novel in vivo-degradable cellulose-chitin copolymer from metabolically engineered <i>Gluconacetobacter xylinus</i> . <i>Applied and Environmental Microbiology</i> , <b>2010</b> , 76, 6257-65	4.8	79
61	Metabolic flux analysis of postburn hepatic hypermetabolism. <i>Metabolic Engineering</i> , <b>2000</b> , 2, 312-27	9.7	71
60	Metabolic flux analysis of cultured hepatocytes exposed to plasma. <i>Biotechnology and Bioengineering</i> , <b>2003</b> , 81, 33-49	4.9	67
59	Characterization of metabolic changes associated with the functional development of 3D engineered tissues by non-invasive, dynamic measurement of individual cell redox ratios. <i>Biomaterials</i> , <b>2012</b> , 33, 5341-8	15.6	59
58	Profiling of dynamic changes in hypermetabolic livers. <i>Biotechnology and Bioengineering</i> , <b>2003</b> , 83, 400-15	4.9	55

57	Metabolic flux analysis of hepatocyte function in hormone- and amino acid-supplemented plasma. <i>Metabolic Engineering</i> , <b>2003</b> , 5, 1-15	9.7	55
56	Intrahepatic amino acid and glucose metabolism in a D-galactosamine-induced rat liver failure model. <i>Hepatology</i> , <b>2001</b> , 34, 360-71	11.2	55
55	Identification of neutrophil gelatinase-associated lipocalin (NGAL) as a discriminatory marker of the hepatocyte-secreted protein response to IL-1beta: a proteomic analysis. <i>Biotechnology and Bioengineering</i> , <b>2005</b> , 91, 502-15	4.9	51
54	Phagocytosis and remodeling of collagen matrices. <i>Experimental Cell Research</i> , <b>2007</b> , 313, 1045-55	4.2	49
53	Interactions between gut microbiota and non-alcoholic liver disease: The role of microbiota-derived metabolites. <i>Pharmacological Research</i> , <b>2019</b> , 141, 521-529	10.2	42
52	Parabacteroides distasonis attenuates toll-like receptor 4 signaling and Akt activation and blocks colon tumor formation in high-fat diet-fed azoxymethane-treated mice. <i>International Journal of Cancer</i> , <b>2018</b> , 143, 1797-1805	7.5	41
51	Rational identification of diet-derived postbiotics for improving intestinal microbiota function. <i>Current Opinion in Biotechnology</i> , <b>2014</b> , 26, 85-90	11.4	41
50	Effects of forced uncoupling protein 1 expression in 3T3-L1 cells on mitochondrial function and lipid metabolism. <i>Journal of Lipid Research</i> , <b>2007</b> , 48, 826-36	6.3	41
49	Identification of distributed metabolic objectives in the hypermetabolic liver by flux and energy balance analysis. <i>Metabolic Engineering</i> , <b>2006</b> , 8, 30-45	9.7	39
48	Metabolic flux analysis: a powerful tool for monitoring tissue function. <i>Tissue Engineering</i> , <b>1999</b> , 5, 347-68		38
47	Adipogenesis of adipose-derived stem cells may be regulated via the cytoskeleton at physiological oxygen levels in vitro. <i>Stem Cell Research and Therapy</i> , <b>2013</b> , 4, 79	8.3	36
46	Monoethylhexyl Phthalate Elicits an Inflammatory Response in Adipocytes Characterized by Alterations in Lipid and Cytokine Pathways. <i>Environmental Health Perspectives</i> , <b>2017</b> , 125, 615-622	8.4	31
45	Hypoxia and amino acid supplementation synergistically promote the osteogenesis of human mesenchymal stem cells on silk protein scaffolds. <i>Tissue Engineering - Part A</i> , <b>2010</b> , 16, 3623-34	3.9	31
44	Systems biology of adipose tissue metabolism: regulation of growth, signaling and inflammation. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , <b>2013</b> , 5, 425-47	6.6	30
43	Enhanced proliferation of human umbilical vein endothelial cells and differentiation of 3T3-L1 adipocytes in coculture. <i>Tissue Engineering - Part A</i> , <b>2009</b> , 15, 1053-61	3.9	30
42	Utilizing elementary mode analysis, pathway thermodynamics, and a genetic algorithm for metabolic flux determination and optimal metabolic network design. <i>BMC Systems Biology</i> , <b>2010</b> , 4, 49	3.5	30
41	Flux profile and modularity analysis of time-dependent metabolic changes of de novo adipocyte formation. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , <b>2007</b> , 292, E1637-46	6	30
40	Probabilistic pathway construction. <i>Metabolic Engineering</i> , <b>2011</b> , 13, 435-44	9.7	29

39	Biologically Consistent Annotation of Metabolomics Data. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 13097-13104	7.8	28
38	Impact of perturbed pyruvate metabolism on adipocyte triglyceride accumulation. <i>Metabolic Engineering</i> , <b>2009</b> , 11, 382-90	9.7	25
37	Metabolic flux analysis of mitochondrial uncoupling in 3T3-L1 adipocytes. <i>PLoS ONE</i> , <b>2009</b> , 4, e7000	3.7	25
36	Dynamic model for CHO cell engineering. <i>Journal of Biotechnology</i> , <b>2012</b> , 158, 24-33	3.7	23
35	N-acetylglucosamine 6-phosphate deacetylase (nagA) is required for N-acetyl glucosamine assimilation in <i>Gluconacetobacter xylinus</i> . <i>PLoS ONE</i> , <b>2011</b> , 6, e18099	3.7	23
34	Adipocyte induction of preadipocyte differentiation in a gradient chamber. <i>Tissue Engineering - Part C: Methods</i> , <b>2012</b> , 18, 958-67	2.9	21
33	PROXIMAL: a method for Prediction of Xenobiotic Metabolism. <i>BMC Systems Biology</i> , <b>2015</b> , 9, 94	3.5	20
32	Environmental Chemical Diethylhexyl Phthalate Alters Intestinal Microbiota Community Structure and Metabolite Profile in Mice. <i>MSystems</i> , <b>2019</b> , 4,	7.6	20
31	Modular decomposition of metabolic reaction networks based on flux analysis and pathway projection. <i>Bioinformatics</i> , <b>2007</b> , 23, 2433-40	7.2	19
30	Isoflavones as Ah Receptor Agonists in Colon-Derived Cell Lines: Structure-Activity Relationships. <i>Chemical Research in Toxicology</i> , <b>2019</b> , 32, 2353-2364	4	16
29	Towards high resolution analysis of metabolic flux in cells and tissues. <i>Current Opinion in Biotechnology</i> , <b>2013</b> , 24, 933-9	11.4	16
28	Identification of biochemical network modules based on shortest retroactive distances. <i>PLoS Computational Biology</i> , <b>2011</b> , 7, e1002262	5	16
27	Computational analysis of phenotypic space in heterologous polyketide biosynthesis--applications to <i>Escherichia coli</i> , <i>Bacillus subtilis</i> , and <i>Saccharomyces cerevisiae</i> . <i>Journal of Theoretical Biology</i> , <b>2010</b> , 262, 197-207	2.3	16
26	Induction of a hypermetabolic state in cultured hepatocytes by glucagon and H <sub>2</sub> O <sub>2</sub> . <i>Metabolic Engineering</i> , <b>2003</b> , 5, 221-9	9.7	16
25	Engineering <i>E. coli</i> for triglyceride accumulation through native and heterologous metabolic reactions. <i>Applied Microbiology and Biotechnology</i> , <b>2013</b> , 97, 2753-9	5.7	15
24	Extracellular matrix remodeling--methods to quantify cell-matrix interactions. <i>Biomaterials</i> , <b>2007</b> , 28, 151-61	15.6	15
23	Identification of optimal classification functions for biological sample and state discrimination from metabolic profiling data. <i>Bioinformatics</i> , <b>2004</b> , 20, 959-69	7.2	12
22	Analysis of transcription factor network underlying 3T3-L1 adipocyte differentiation. <i>PLoS ONE</i> , <b>2014</b> , 9, e100177	3.7	9

21	Effect of uncoupling protein-1 expression on 3T3-L1 adipocyte gene expression. <i>FEBS Letters</i> , <b>2007</b> , 581, 5865-71	3.8	8
20	Ridinilazole, a narrow spectrum antibiotic for treatment of infection, enhances preservation of microbiota-dependent bile acids. <i>American Journal of Physiology - Renal Physiology</i> , <b>2020</b> , 319, G227-G237	5.1	7
19	Effect of diet and intestinal AhR expression on fecal microbiome and metabolomic profiles. <i>Microbial Cell Factories</i> , <b>2020</b> , 19, 219	6.4	6
18	Biological Filtering and Substrate Promiscuity Prediction for Annotating Untargeted Metabolomics. <i>Metabolites</i> , <b>2020</b> , 10,	5.6	6
17	Discovery of substrate cycles in large scale metabolic networks using hierarchical modularity. <i>BMC Systems Biology</i> , <b>2015</b> , 9, 5	3.5	5
16	Automated Image Processing for Spatially Resolved Analysis of Lipid Droplets in Cultured 3T3-L1 Adipocytes. <i>Tissue Engineering - Part C: Methods</i> , <b>2015</b> , 21, 605-13	2.9	5
15	Using Metabolomics to Identify Cell Line-Independent Indicators of Growth Inhibition for Chinese Hamster Ovary Cell-based Bioprocesses. <i>Metabolites</i> , <b>2020</b> , 10,	5.6	5
14	Probabilistic strain optimization under constraint uncertainty. <i>BMC Systems Biology</i> , <b>2013</b> , 7, 29	3.5	5
13	Dietary spinach reshapes the gut microbiome in an Apc-mutant genetic background: mechanistic insights from integrated multi-omics. <i>Gut Microbes</i> , <b>2021</b> , 13, 1972756	8.8	5
12	Sequential Parameter Estimation for Mammalian Cell Model Based on In Silico Design of Experiments. <i>Processes</i> , <b>2018</b> , 6, 100	2.9	5
11	Biological engineering. <i>Current Opinion in Chemical Engineering</i> , <b>2013</b> , 2, 1-2	5.4	4
10	PreProPath: An Uncertainty-Aware Algorithm for Identifying Predictable Profitable Pathways in Biochemical Networks. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , <b>2015</b> , 12, 1405-15	3	4
9	Metabolic flux-based modularity using shortest retroactive distances. <i>BMC Systems Biology</i> , <b>2012</b> , 6, 155	3.5	4
8	Engineering Selectively Targeting Antimicrobial Peptides. <i>Annual Review of Biomedical Engineering</i> , <b>2021</b> , 23, 339-357	12	4
7	Interactions between gut microbiota and non-alcoholic liver disease: The role of microbiota-derived metabolites. <i>Pharmacological Research</i> , <b>2019</b> , 142, 314	10.2	3
6	Extracellular Matrix Remodeling and Mechanical Stresses as Modulators of Adipose Tissue Metabolism and Inflammation. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , <b>2013</b> , 105-122	0.5	2
5	A Metabolomics Approach to Increasing Chinese Hamster Ovary (CHO) Cell Productivity.. <i>Metabolites</i> , <b>2021</b> , 11,	5.6	1
4	Effect of Norepinephrine on Gut Bacterial Community Structure and Function. <i>FASEB Journal</i> , <b>2019</b> , 33, 724.4	0.9	1

- 3 Emerging computational tools and models for studying gut microbiota composition and function. *Current Opinion in Biotechnology*, **2020**, 66, 301-311 11.4 1
- 2 Bioengineered models of Parkinson's disease using patient-derived dopaminergic neurons exhibit distinct biological profiles in a 3D microenvironment.. *Cellular and Molecular Life Sciences*, **2022**, 79, 78 10.3 0
- 1 Untargeted proteomics reveals upregulation of stress response pathways during CHO-based monoclonal antibody manufacturing process leading to disulfide bond reduction. *MAbs*, **2021**, 13, 1963094 6.6 0