Creation and analysis of biochemical constraint-based rv.3.0

Nature Protocols 14, 639-702

DOI: 10.1038/s41596-018-0098-2

Citation Report

#	ARTICLE	IF	CITATIONS
1	A systematic assessment of current genome-scale metabolic reconstruction tools. Genome Biology, 2019, 20, 158.	3.8	150
2	Predicting gastrointestinal drug effects using contextualized metabolic models. PLoS Computational Biology, 2019, 15, e1007100.	1.5	16
3	Genome-scale metabolic model of the rat liver predicts effects of diet restriction. Scientific Reports, 2019, 9, 9807.	1.6	10
4	Metabolic Model of the <i>Phytophthora infestans</i> -Tomato Interaction Reveals Metabolic Switches during Host Colonization. MBio, 2019, 10, .	1.8	23
5	Machine and deep learning meet genome-scale metabolic modeling. PLoS Computational Biology, 2019, 15, e1007084.	1.5	194
6	Integration of probabilistic regulatory networks into constraint-based models of metabolism with applications to Alzheimer's disease. BMC Bioinformatics, 2019, 20, 386.	1.2	13
7	Lysine harvesting is an antioxidant strategy and triggers underground polyamine metabolism. Nature, 2019, 572, 249-253.	13.7	99
10	Integrated Analyses of Microbiome and Longitudinal Metabolome Data Reveal Microbial-Host Interactions on Sulfur Metabolism in Parkinson's Disease. Cell Reports, 2019, 29, 1767-1777.e8.	2.9	102
11	Rewiring carbon metabolism in yeast for high level production of aromatic chemicals. Nature Communications, 2019, 10, 4976.	5.8	177
12	Genome-Scale Identification of Essential Metabolic Processes for Targeting the Plasmodium Liver Stage. Cell, 2019, 179, 1112-1128.e26.	13.5	92
13	High-resolution 13C metabolic flux analysis. Nature Protocols, 2019, 14, 2856-2877.	5.5	132
14	Synthetic methylotrophy: Strategies to assimilate methanol for growth and chemicals production. Current Opinion in Biotechnology, 2019, 59, 165-174.	3.3	51
15	The metabolic network model of primed/naive human embryonic stem cells underlines the importance of oxidation-reduction potential and tryptophan metabolism in primed pluripotency. Cell and Bioscience, 2019, 9, 71.	2.1	6
16	Flux sampling is a powerful tool to study metabolism under changing environmental conditions. Npj Systems Biology and Applications, 2019, 5, 32.	1.4	62
17	Arterio-venous metabolomics exploration reveals major changes across liver and intestine in the obese Yucatan minipig. Scientific Reports, 2019, 9, 12527.	1.6	14
18	MOOMIN – Mathematical explOration of 'Omics data on a Metabolic Network. Bioinformatics, 2020, 36, 514-523.	1.8	15
19	Metabolic Modeling of Human Gut Microbiota on a Genome Scale: An Overview. Metabolites, 2019, 9, 22.	1.3	66
20	Integration of Metabolomic and Other Omics Data in Population-Based Study Designs: An Epidemiological Perspective. Metabolites, 2019, 9, 117.	1.3	47

#	Article	IF	CITATIONS
21	Metaâ€Omics―and Metabolic Modelingâ€Assisted Deciphering of Human Microbiota Metabolism. Biotechnology Journal, 2019, 14, 1800445.	1.8	7
22	Human Systems Biology and Metabolic Modelling: A Review—From Disease Metabolism to Precision Medicine. BioMed Research International, 2019, 2019, 1-16.	0.9	56
23	Local convergence of the Levenberg–Marquardt method under Hölder metric subregularity. Advances in Computational Mathematics, 2019, 45, 2771-2806.	0.8	20
24	Systematic assessment of secondary bile acid metabolism in gut microbes reveals distinct metabolic capabilities in inflammatory bowel disease. Microbiome, 2019, 7, 75.	4.9	215
25	Integrated InÂVitro and In Silico Modeling Delineates the Molecular Effects of a Synbiotic Regimen on Colorectal-Cancer-Derived Cells. Cell Reports, 2019, 27, 1621-1632.e9.	2.9	59
26	Acetate Metabolism and the Inhibition of Bacterial Growth by Acetate. Journal of Bacteriology, 2019, 201, .	1.0	137
27	Microbial community design: methods, applications, and opportunities. Current Opinion in Biotechnology, 2019, 58, 117-128.	3.3	59
28	The Virtual Metabolic Human database: integrating human and gut microbiome metabolism with nutrition and disease. Nucleic Acids Research, 2019, 47, D614-D624.	6.5	257
29	Energy metabolism controls phenotypes by protein efficiency and allocation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17592-17597.	3.3	96
30	Time Integrated Flux Analysis: Exploiting the Concentration Measurements Directly for Cost-Effective Metabolic Network Flux Analysis. Microorganisms, 2019, 7, 620.	1.6	1
31	Integrative Computational Framework for Understanding Metabolic Modulation in Leishmania. Frontiers in Bioengineering and Biotechnology, 2019, 7, 336.	2.0	4
32	Developing a Microbial Consortium for Enhanced Metabolite Production from Simulated Food Waste. Fermentation, 2019, 5, 98.	1.4	28
33	Flux balance analysis of cyanobacteria reveals selective use of photosynthetic electron transport components under different spectral lightÂconditions. Photosynthesis Research, 2020, 143, 31-43.	1.6	22
34	The Role of the Microbiome in Drug Response. Annual Review of Pharmacology and Toxicology, 2020, 60, 417-435.	4.2	37
35	Dissecting Mammalian Cell Metabolism through ¹³ C- and ² H-Isotope Tracing: Interpretations at the Molecular and Systems Levels. Industrial & Engineering Chemistry Research, 2020, 59, 2593-2610.	1.8	10
36	On the inconsistent treatment of gene-protein-reaction rules in context-specific metabolic models. Bioinformatics, 2020, 36, 1986-1988.	1.8	5
37	Atomistic simulations on nanoimprinting of copper by aligned carbon nanotube arrays under a high-frequency mechanical vibration. Nanotechnology, 2020, 31, 045303.	1.3	3
38	<scp>Gapsplit</scp> : efficient random sampling for non-convex constraint-based models. Bioinformatics, 2020, 36, 2623-2625.	1.8	11

3

#	Article	IF	Citations
39	Systems and synthetic biology tools for advanced bioproduction hosts. Current Opinion in Biotechnology, 2020, 64, 101-109.	3.3	38
40	Coupled metabolicâ€hydrodynamic modeling enabling rational scaleâ€up of industrial bioprocesses. Biotechnology and Bioengineering, 2020, 117, 844-867.	1.7	14
41	SAMMI: a semi-automated tool for the visualization of metabolic networks. Bioinformatics, 2020, 36, 2616-2617.	1.8	3
42	Modeling population heterogeneity from microbial communities to immune response in cells. Cellular and Molecular Life Sciences, 2020, 77, 415-432.	2.4	5
43	A workflow for generating multi-strain genome-scale metabolic models of prokaryotes. Nature Protocols, 2020, 15, 1-14.	5 . 5	62
44	Genetic circuit characterization by inferring RNA polymerase movement and ribosome usage. Nature Communications, 2020, 11, 5001.	5 . 8	40
45	HOPS: high-performance library for (non-)uniform sampling of convex-constrained models. Bioinformatics, 2021, 37, 1776-1777.	1.8	9
46	Genome-scale metabolic modelling predicts biomarkers and therapeutic targets for neuropsychiatric disorders. Computers in Biology and Medicine, 2020, 125, 103994.	3.9	14
47	Combining mechanistic and machine learning models for predictive engineering and optimization of tryptophan metabolism. Nature Communications, 2020, 11, 4880.	5. 8	137
48	Curation and Analysis of a Saccharomyces cerevisiae Genome-Scale Metabolic Model for Predicting Production of Sensory Impact Molecules under Enological Conditions. Processes, 2020, 8, 1195.	1.3	13
49	Engineering Saccharomyces cerevisiae for the Overproduction of \hat{l}^2 -lonone and Its Precursor \hat{l}^2 -Carotene. Frontiers in Bioengineering and Biotechnology, 2020, 8, 578793.	2.0	22
50	Reconstruction of Eriocheir sinensis Y-organ Genome-Scale Metabolic Network and Differential Analysis After Eyestalk Ablation. Frontiers in Genetics, 2020, 11, 532492.	1.1	3
51	VFFVA: dynamic load balancing enables large-scale flux variability analysis. BMC Bioinformatics, 2020, 21, 424.	1.2	6
52	A steady-state model of microbial acclimation to substrate limitation. PLoS Computational Biology, 2020, 16, e1008140.	1.5	14
53	Revealing metabolic mechanisms of interaction in the anaerobic digestion microbiome by flux balance analysis. Metabolic Engineering, 2020, 62, 138-149.	3.6	45
54	A mechanism-aware and multiomic machine-learning pipeline characterizes yeast cell growth. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18869-18879.	3.3	62
55	Impact of Facultative Bacteria on the Metabolic Function of an Obligate Insect-Bacterial Symbiosis. MBio, 2020, 11, .	1.8	7
56	Genomeâ€scale modeling for <i>Bacillus coagulans</i> to understand the metabolic characteristics. Biotechnology and Bioengineering, 2020, 117, 3545-3558.	1.7	15

#	Article	IF	Citations
57	Genome-Scale Metabolic Modeling Reveals Metabolic Alterations of Multidrug-Resistant Acinetobacter baumannii in a Murine Bloodstream Infection Model. Microorganisms, 2020, 8, 1793.	1.6	12
58	Longitudinal Multi-omics Analyses Identify Responses of Megakaryocytes, Erythroid Cells, and Plasmablasts as Hallmarks of Severe COVID-19. Immunity, 2020, 53, 1296-1314.e9.	6.6	278
59	Partners for life: building microbial consortia for the future. Current Opinion in Biotechnology, 2020, 66, 292-300.	3.3	14
60	Metabolic Network Analysis Reveals Altered Bile Acid Synthesis and Metabolism in Alzheimer's Disease. Cell Reports Medicine, 2020, 1, 100138.	3.3	102
61	Genome-scale metabolic rewiring improves titers rates and yields of the non-native product indigoidine at scale. Nature Communications, 2020, 11, 5385.	5.8	67
62	The Impacts of Domestication and Agricultural Practices on Legume Nutrient Acquisition Through Symbiosis With Rhizobia and Arbuscular Mycorrhizal Fungi. Frontiers in Genetics, 2020, 11, 583954.	1.1	20
63	Methanol-dependent Escherichia coli strains with a complete ribulose monophosphate cycle. Nature Communications, 2020, 11, 5403.	5.8	31
64	Reconstructing organisms in silico: genome-scale models and their emerging applications. Nature Reviews Microbiology, 2020, 18, 731-743.	13.6	158
65	Defining the nutritional input for genome-scale metabolic models: A roadmap. PLoS ONE, 2020, 15, e0236890.	1.1	26
66	Genome-Scale Metabolic Model of the Human Pathogen Candida albicans: A Promising Platform for Drug Target Prediction. Journal of Fungi (Basel, Switzerland), 2020, 6, 171.	1.5	16
67	Unraveling the molecular heterogeneity in type 2 diabetes: a potential subtype discovery followed by metabolic modeling. BMC Medical Genomics, 2020, 13, 119.	0.7	7
68	Uptake of exogenous serine is important to maintain sphingolipid homeostasis in Saccharomyces cerevisiae. PLoS Genetics, 2020, 16, e1008745.	1.5	18
69	Personalized wholeâ€body models integrate metabolism, physiology, and the gut microbiome. Molecular Systems Biology, 2020, 16, e8982.	3.2	122
70	Genetic buffering and potentiation in metabolism. PLoS Computational Biology, 2020, 16, e1008185.	1.5	5
71	The Expanding Computational Toolbox for Engineering Microbial Phenotypes at the Genome Scale. Microorganisms, 2020, 8, 2050.	1.6	12
72	Mechanistic Modeling of Gene Regulation and Metabolism Identifies Potential Targets for Hepatocellular Carcinoma. Frontiers in Genetics, 2020, 11, 595242.	1.1	4
73	A Hybrid Flux Balance Analysis and Machine Learning Pipeline Elucidates Metabolic Adaptation in Cyanobacteria. IScience, 2020, 23, 101818.	1.9	30
74	Deciphering rice metabolic flux reprograming under salinity stress via in silico metabolic modeling. Computational and Structural Biotechnology Journal, 2020, 18, 3555-3566.	1.9	16

#	Article	IF	CITATIONS
75	Synthetic biology 2020–2030: six commercially-available products that are changing our world. Nature Communications, 2020, 11, 6379.	5.8	137
76	An insight to flux-balance analysis for biochemical networks. Biotechnology and Genetic Engineering Reviews, 2020, 36, 32-55.	2.4	16
77	A Multi-Pronged Computational Pipeline for Prioritizing Drug Target Strategies for Latent Tuberculosis. Frontiers in Chemistry, 2020, 8, 593497.	1.8	9
78	Using optimal control to understand complex metabolic pathways. BMC Bioinformatics, 2020, 21, 472.	1.2	15
79	Effect of plasma-induced oxidative stress on the glycolysis pathway of Escherichia coli. Computers in Biology and Medicine, 2020, 127, 104064.	3.9	4
80	Harnessing Natural Modularity of Metabolism with Goal Attainment Optimization to Design a Modular Chassis Cell for Production of Diverse Chemicals. ACS Synthetic Biology, 2020, 9, 1665-1681.	1.9	14
81	iMM1865: A New Reconstruction of Mouse Genome-Scale Metabolic Model. Scientific Reports, 2020, 10, 6177.	1.6	21
82	MicrobioLink: An Integrated Computational Pipeline to Infer Functional Effects of Microbiome–Host Interactions. Cells, 2020, 9, 1278.	1.8	24
83	Parkinson's disease-associated alterations of the gut microbiome predict disease-relevant changes in metabolic functions. BMC Biology, 2020, 18, 62.	1.7	122
84	Modeling of nitrogen fixation and polymer production in the heterotrophic diazotroph Azotobacter vinelandii DJ. Metabolic Engineering Communications, 2020, 11, e00132.	1.9	17
85	A systematic evaluation of Mycobacterium tuberculosis Genome-Scale Metabolic Networks. PLoS Computational Biology, 2020, 16, e1007533.	1.5	17
86	μBialSim: Constraint-Based Dynamic Simulation of Complex Microbiomes. Frontiers in Bioengineering and Biotechnology, 2020, 8, 574.	2.0	34
87	Information Theory in Computational Biology: Where We Stand Today. Entropy, 2020, 22, 627.	1.1	27
88	Mechanism of the oxidative stressâ€mediated increase in lipid accumulation by the bacterium, <i>R. opacus</i> PD630: Experimental analysis and genomeâ€scale metabolic modeling. Biotechnology and Bioengineering, 2020, 117, 1779-1788.	1.7	11
89	An atlas of human metabolism. Science Signaling, 2020, 13, .	1.6	223
90	Mitochondrial peptide BRAWNIN is essential for vertebrate respiratory complex III assembly. Nature Communications, 2020, 11, 1312.	5.8	87
91	NIHBA: a network interdiction approach for metabolic engineering design. Bioinformatics, 2020, 36, 3482-3492.	1.8	7
92	Fibroblastâ€specific genomeâ€scale modelling predicts an imbalance in amino acid metabolism in Refsum disease. FEBS Journal, 2020, 287, 5096-5113.	2.2	8

#	ARTICLE	IF	CITATIONS
93	Mechanistic Modeling and Multiscale Applications for Precision Medicine: Theory and Practice. Network and Systems Medicine, 2020, 3, 36-56.	2.7	11
94	Synthesizing Systems Biology Knowledge from Omics Using Genomeâ€6cale Models. Proteomics, 2020, 20, e1900282.	1.3	22
95	Complete genome sequence and genome-scale metabolic modelling of Acinetobacter baumannii type strain ATCC 19606. International Journal of Medical Microbiology, 2020, 310, 151412.	1.5	11
96	FastMM: an efficient toolbox for personalized constraint-based metabolic modeling. BMC Bioinformatics, 2020, 21, 67.	1.2	6
97	MEMOTE for standardized genome-scale metabolic model testing. Nature Biotechnology, 2020, 38, 272-276.	9.4	314
98	Spatial modeling of prostate cancer metabolic gene expression reveals extensive heterogeneity and selective vulnerabilities. Scientific Reports, 2020, 10, 3490.	1.6	43
99	MEMO: A Method for Computing Metabolic Modules for Cell-Free Production Systems. ACS Synthetic Biology, 2020, 9, 556-566.	1.9	8
100	EFMviz: A COBRA Toolbox Extension to Visualize Elementary Flux Modes in Genome-Scale Metabolic Models. Metabolites, 2020, 10, 66.	1.3	7
101	Genome-Scale Metabolic Reconstruction and in Silico Perturbation Analysis of the Polar Diatom Fragilariopsis cylindrus Predicts High Metabolic Robustness. Biology, 2020, 9, 30.	1.3	8
102	Finding zeros of Hölder metrically subregular mappings via globally convergent Levenberg–Marquardt methods. Optimization Methods and Software, 2022, 37, 113-149.	1.6	6
103	A Markov model of glycosylation elucidates isozyme specificity and glycosyltransferase interactions for glycoengineering. Current Research in Biotechnology, 2020, 2, 22-36.	1.9	17
104	Functional and Computational Genomics Reveal Unprecedented Flexibility in Stage-Specific Toxoplasma Metabolism. Cell Host and Microbe, 2020, 27, 290-306.e11.	5.1	81
105	Bacterial biopolymers: from pathogenesis to advanced materials. Nature Reviews Microbiology, 2020, 18, 195-210.	13.6	257
106	Modeling Plant Metabolism: From Network Reconstruction to Mechanistic Models. Annual Review of Plant Biology, 2020, 71, 303-326.	8.6	27
107	Syntrophic splitting of central carbon metabolism in host cells bearing functionally different symbiotic bacteria. ISME Journal, 2020, 14, 1982-1993.	4.4	11
108	Single-Cell RNA Sequencing Maps Endothelial Metabolic Plasticity in Pathological Angiogenesis. Cell Metabolism, 2020, 31, 862-877.e14.	7.2	169
109	Metabolic Exchange with Non-Alkane-Consuming Pseudomonas stutzeri SLG510A3-8 Improves $\langle i \rangle n \langle i \rangle$ -Alkane Biodegradation by the Alkane Degrader $\langle i \rangle$ Dietzia $\langle i \rangle$ sp. Strain DQ12-45-1b. Applied and Environmental Microbiology, 2020, 86, .	1.4	33
110	Metabolic Analyses of Nitrogen Fixation in the Soybean Microsymbiont Sinorhizobium fredii Using Constraint-Based Modeling. MSystems, 2020, 5, .	1.7	20

#	Article	IF	CITATIONS
111	Drought Stress Responses in Context-Specific Genome-Scale Metabolic Models of Arabidopsis thaliana. Metabolites, 2020, 10, 159.	1.3	15
112	Enzyme capacity-based genome scale modelling of CHO cells. Metabolic Engineering, 2020, 60, 138-147.	3.6	51
113	Our natural "makeup―reveals more than it hides: Modeling the skin and its microbiome. WIREs Mechanisms of Disease, 2021, 13, e1497.	1.5	3
114	NetRed, an algorithm to reduce genome-scale metabolic networks and facilitate the analysis of flux predictions. Metabolic Engineering, 2021, 65, 207-222.	3.6	6
115	Rumen metaproteomics: Closer to linking rumen microbial function to animal productivity traits. Methods, 2021, 186, 42-51.	1.9	21
117	Review: Metabolomics as a prediction tool for plants performance under environmental stress. Plant Science, 2021, 303, 110789.	1.7	45
118	Automated engineering of synthetic metabolic pathways for efficient biomanufacturing. Metabolic Engineering, 2021, 63, 61-80.	3.6	38
119	Recent advances in constraint and machine learning-based metabolic modeling by leveraging stoichiometric balances, thermodynamic feasibility and kinetic law formalisms. Metabolic Engineering, 2021, 63, 13-33.	3.6	26
120	Role of type I NADH dehydrogenase in Synechocystis sp. PCC 6803 under phycobilisome excited red light. Plant Science, 2021, 304, 110798.	1.7	6
121	Seeing the forest for the trees: Retrieving plant secondary biochemical pathways from metabolome networks. Computational and Structural Biotechnology Journal, 2021, 19, 72-85.	1.9	10
122	Multi-omics integration in biomedical research – A metabolomics-centric review. Analytica Chimica Acta, 2021, 1141, 144-162.	2.6	125
123	A guide to metabolic flux analysis in metabolic engineering: Methods, tools and applications. Metabolic Engineering, 2021, 63, 2-12.	3.6	67
124	Publishing reproducible dynamic kinetic models. Briefings in Bioinformatics, 2021, 22, .	3.2	3
125	Isolating structural errors in reaction networks in systems biology. Bioinformatics, 2021, 37, 388-395.	1.8	1
127	Systematic investigation of mouse models of Parkinson's disease by transcriptome mapping on a brain-specific genome-scale metabolic network. Molecular Omics, 2021, 17, 492-502.	1.4	4
128	Reconstruction and analysis of a genomeâ€scale metabolic model for <i>Agrobacterium tumefaciens</i> . Molecular Plant Pathology, 2021, 22, 348-360.	2.0	5
129	Integration of constraint-based modeling with fecal metabolomics reveals large deleterious effects of <i>Fusobacterium</i> spp. on community butyrate production. Gut Microbes, 2021, 13, 1-23.	4.3	22
130	A Practical Guide to Metabolomics Software Development. Analytical Chemistry, 2021, 93, 1912-1923.	3.2	30

#	Article	IF	Citations
131	Linking Gut Microbiome and Lipid Metabolism: Moving beyond Associations. Metabolites, 2021, 11, 55.	1.3	54
132	Conserved Virulence-Linked Metabolic Reprogramming in <i>Clostridioides Difficile</i> Identified Through Genome-Scale Metabolic Network Analysis. SSRN Electronic Journal, 0, , .	0.4	1
133	Sustainable metabolic engineering for sustainability optimisation of industrial biotechnology. Computational and Structural Biotechnology Journal, 2021, 19, 4770-4776.	1.9	13
134	Guided extraction of genome-scale metabolic models for the integration and analysis of omics data. Computational and Structural Biotechnology Journal, 2021, 19, 3521-3530.	1.9	11
135	The contribution of gut bacterial metabolites in the human immune signaling pathway of non-communicable diseases. Gut Microbes, 2021, 13, 1-22.	4.3	99
136	The ethylmalonyl-CoA pathway for methane-based biorefineries: a case study of using <i>Methylosinus trichosporium</i> OB3b, an alpha-proteobacterial methanotroph, for producing 2-hydroxyisobutyric acid and 1,3-butanediol from methane. Green Chemistry, 2021, 23, 7712-7723.	4.6	10
137	Systems Pharmacology: Enabling Multidimensional Therapeutics. , 2022, , 725-769.		1
139	Metals and methylotrophy: Via global gene expression studies. Methods in Enzymology, 2021, 650, 185-213.	0.4	1
140	Evaluating accessibility, usability and interoperability of genome-scale metabolic models for diverse yeasts species. FEMS Yeast Research, 2021, 21, .	1.1	6
141	Polyrun: A Java library for sampling from the bounded convex polytopes. SoftwareX, 2021, 13, 100659.	1.2	13
142	MASSpy: Building, simulating, and visualizing dynamic biological models in Python using mass action kinetics. PLoS Computational Biology, 2021, 17, e1008208.	1.5	20
144	Integrating Pan-Omics Data in a Systems Approach for Crop Improvement: Opportunities and Challenges., 2021,, 215-246.		2
145	Opportunities at the Interface of Network Science and Metabolic Modeling. Frontiers in Bioengineering and Biotechnology, 2020, 8, 591049.	2.0	15
146	Enabling rational gut microbiome manipulations by understanding gut ecology through experimentally-evidenced in silico models. Gut Microbes, 2021, 13, 1965698.	4.3	2
147	DEXOM: Diversity-based enumeration of optimal context-specific metabolic networks. PLoS Computational Biology, 2021, 17, e1008730.	1.5	7
149	Ecology-guided prediction of cross-feeding interactions in the human gut microbiome. Nature Communications, 2021, 12, 1335.	5.8	37
151	Rare genetic variants affecting urine metabolite levels link population variation to inborn errors of metabolism. Nature Communications, 2021, 12, 964.	5.8	20
152	Applications of Machine Learning in Human Microbiome Studies: A Review on Feature Selection, Biomarker Identification, Disease Prediction and Treatment. Frontiers in Microbiology, 2021, 12, 634511.	1.5	157

#	ARTICLE	IF	Citations
153	Dynamic Allocation of Carbon Storage and Nutrient-Dependent Exudation in a Revised Genome-Scale Model of Prochlorococcus. Frontiers in Genetics, 2021, 12, 586293.	1.1	15
154	Automatic reconstruction of metabolic pathways from identified biosynthetic gene clusters. BMC Bioinformatics, 2021, 22, 81.	1.2	9
155	Addressing uncertainty in genome-scale metabolic model reconstruction and analysis. Genome Biology, 2021, 22, 64.	3.8	73
156	GEM-Based Metabolic Profiling for Human Bone Osteosarcoma under Different Glucose and Glutamine Availability. International Journal of Molecular Sciences, 2021, 22, 1470.	1.8	5
158	Genetic and metabolic engineering challenges of C1-gas fermenting acetogenic chassis organisms. FEMS Microbiology Reviews, 2021, 45, .	3.9	32
160	Experimentally Validated Reconstruction and Analysis of a Genome-Scale Metabolic Model of an Anaerobic Neocallimastigomycota Fungus. MSystems, 2021, 6, .	1.7	33
163	Probabilistic thermodynamic analysis of metabolic networks. Bioinformatics, 2021, 37, 2938-2945.	1.8	16
165	Optimization of glycerol consumption in wildâ€ŧype Escherichia coli using central carbon modeling as an alternative approach. Biofuels, Bioproducts and Biorefining, 2021, 15, 825-839.	1.9	2
166	Identifying functional metabolic shifts in heart failure with the integration of omics data and a heart-specific, genome-scale model. Cell Reports, 2021, 34, 108836.	2.9	15
167	Machine learning applied for metabolic fluxâ€based control of microâ€aerated fermentations in bioreactors. Biotechnology and Bioengineering, 2021, 118, 2076-2091.	1.7	8
169	Highâ€quality genomeâ€scale metabolic model of <i>Aurantiochytrium</i> sp. T66. Biotechnology and Bioengineering, 2021, 118, 2105-2117.	1.7	9
170	A Genome-Scale Metabolic Model of Anabaena 33047 to Guide Genetic Modifications to Overproduce Nylon Monomers. Metabolites, 2021, 11, 168.	1.3	4
171	Simultaneous Integration of Gene Expression and Nutrient Availability for Studying the Metabolism of Hepatocellular Carcinoma Cell Lines. Biomolecules, 2021, 11, 490.	1.8	11
172	Prospecting Biochemical Pathways to Implement Microbe-Based Production of the New-to-Nature Platform Chemical Levulinic Acid. ACS Synthetic Biology, 2021, 10, 724-736.	1.9	13
173	Physiologically Based Modeling of Food Digestion and Intestinal Microbiota: State of the Art and Future Challenges. An INFOGEST Review. Annual Review of Food Science and Technology, 2021, 12, 149-167.	5.1	21
174	PhenoMapping: A protocol to map cellular phenotypes to metabolic bottlenecks, identify conditional essentiality, and curate metabolic models. STAR Protocols, 2021, 2, 100280.	0.5	1
177	In silico Design for Systems-Based Metabolic Engineering for the Bioconversion of Valuable Compounds From Industrial By-Products. Frontiers in Genetics, 2021, 12, 633073.	1.1	3
178	Yeast optimizes metal utilization based on metabolic network and enzyme kinetics. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	22

#	Article	IF	CITATIONS
179	Revealing the Metabolic Alterations during Biofilm Development of Burkholderia cenocepacia Based on Genome-Scale Metabolic Modeling. Metabolites, 2021, 11, 221.	1.3	5
180	Succinate dehydrogenase inhibitors: in silico flux analysis and in vivo metabolomics investigations show no severe metabolic consequences for rats and humans. Food and Chemical Toxicology, 2021, 150, 112085.	1.8	8
181	Metabolic Network Modeling for Rational Drug Design against <i>Candida albicans</i> li>. Infectious Diseases, 0, , .	4.0	0
182	Global coordination of metabolic pathways in <i>Escherichia coli</i> by active and passive regulation. Molecular Systems Biology, 2021, 17, e10064.	3.2	33
184	Dynamic response of Aspergillus niger to periodical glucose pulse stimuli in chemostat cultures. Biotechnology and Bioengineering, 2021, 118, 2265-2282.	1.7	7
185	Genome Scale-Differential Flux Analysis reveals deregulation of lung cell metabolism on SARS-CoV-2 infection. PLoS Computational Biology, 2021, 17, e1008860.	1.5	24
186	Proteome Regulation Patterns Determine Escherichia coli Wild-Type and Mutant Phenotypes. MSystems, 2021, 6, .	1.7	6
190	Proteome constraints reveal targets for improving microbial fitness in nutrientâ€rich environments. Molecular Systems Biology, 2021, 17, e10093.	3.2	46
192	Metabolic modelling reveals broad changes in gut microbial metabolism in inflammatory bowel disease patients with dysbiosis. Npj Systems Biology and Applications, 2021, 7, 19.	1.4	43
193	Genome-scale metabolic modelling when changes in environmental conditions affect biomass composition. PLoS Computational Biology, 2021, 17, e1008528.	1.5	17
194	Reconstruction of a Genome-Scale Metabolic Model of Streptomyces albus J1074: Improved Engineering Strategies in Natural Product Synthesis. Metabolites, 2021, 11, 304.	1.3	12
195	Genome-scale metabolic modeling of P. thermoglucosidasius NCIMB 11955 reveals metabolic bottlenecks in anaerobic metabolism. Metabolic Engineering, 2021, 65, 123-134.	3.6	14
197	Dynamic flux balance analysis of whole-body metabolism for type 1 diabetes. Nature Computational Science, 2021, 1, 348-361.	3.8	11
198	Computational Biology and Machine Learning Approaches to Understand Mechanistic Microbiome-Host Interactions. Frontiers in Microbiology, 2021, 12, 618856.	1.5	19
200	L1 Norm Minimal Mode-Based Methods for Listing Reaction Network Designs for Metabolite Production. IEICE Transactions on Information and Systems, 2021, E104.D, 679-687.	0.4	1
201	Reconstruction of Litopenaeus vannamei Genome-Scale Metabolic Network Model and Nutritional Requirements Analysis of Different Shrimp Commercial Varieties. Frontiers in Genetics, 2021, 12, 658109.	1.1	5
204	Building patientâ€specific models for receptor tyrosine kinase signaling networks. FEBS Journal, 2021, , .	2.2	4
205	Alternative glycosylation controls endoplasmic reticulum dynamics and tubular extension in mammalian cells. Science Advances, 2021, 7, .	4.7	8

#	Article	IF	Citations
206	Comparative metabolic modeling of multiple sulfateâ€reducing prokaryotes reveals versatile energy conservation mechanisms. Biotechnology and Bioengineering, 2021, 118, 2676-2693.	1.7	2
207	Multimodal regularized linear models with flux balance analysis for mechanistic integration of omics data. Bioinformatics, 2021, 37, 3546-3552.	1.8	15
208	Analyzing Metabolic States of Adipogenic and Osteogenic Differentiation in Human Mesenchymal Stem Cells via Genome Scale Metabolic Model Reconstruction. Frontiers in Cell and Developmental Biology, 2021, 9, 642681.	1.8	5
209	Synthetic biology for future food: Research progress and future directions. Future Foods, 2021, 3, 100025.	2.4	31
210	Interrogation of the perturbed gut microbiota in gouty arthritis patients through in silico metabolic modeling. Engineering in Life Sciences, 2021, 21, 489-501.	2.0	12
211	Recent advances in genome-scale modeling of proteome allocation. Current Opinion in Systems Biology, 2021, 26, 39-45.	1.3	2
215	Engineering yeast metabolism for the discovery and production of polyamines and polyamine analogues. Nature Catalysis, 2021, 4, 498-509.	16.1	26
218	Predicted Metabolic Function of the Gut Microbiota of Drosophila melanogaster. MSystems, 2021, 6, .	1.7	8
220	Abnormal brain cholesterol homeostasis in Alzheimer's diseaseâ€"a targeted metabolomic and transcriptomic study. Npj Aging and Mechanisms of Disease, 2021, 7, 11.	4.5	59
222	NetFlow: A tool for isolating carbon flows in genome-scale metabolic networks. Metabolic Engineering Communications, 2021, 12, e00154.	1.9	2
223	Integration of enzyme constraints in a genome-scale metabolic model of Aspergillus niger improves phenotype predictions. Microbial Cell Factories, 2021, 20, 125.	1.9	17
224	Analysis of the cyanobacterial amino acid metabolism with a precise genome-scale metabolic reconstruction of Anabaena sp. UTEX 2576. Biochemical Engineering Journal, 2021, 171, 108008.	1.8	8
225	A Metabolic Model of Intestinal Secretions: The Link between Human Microbiota and Colorectal Cancer Progression. Metabolites, 2021, 11, 456.	1.3	11
226	Tolerance to NADH/NAD+ imbalance anticipates aging and anti-aging interventions. IScience, 2021, 24, 102697.	1.9	6
227	Towards bio-upcycling of polyethylene terephthalate. Metabolic Engineering, 2021, 66, 167-178.	3.6	151
228	PolyRound: polytope rounding for random sampling in metabolic networks. Bioinformatics, 2022, 38, 566-567.	1.8	8
230	Model-based assessment of mammalian cell metabolic functionalities using omics data. Cell Reports Methods, 2021, 1, 100040.	1.4	25
231	Modelling hCDKL5 Heterologous Expression in Bacteria. Metabolites, 2021, 11, 491.	1.3	5

#	Article	IF	CITATIONS
233	Engineering Pseudomonas putida for efficient aromatic conversion to bioproduct using high throughput screening in a bioreactor. Metabolic Engineering, 2021, 66, 229-238.	3.6	27
234	Systematic evaluation of parameters for genome-scale metabolic models of cultured mammalian cells. Metabolic Engineering, 2021, 66, 21-30.	3.6	16
236	The view of microbes as energy converters illustrates the trade-off between growth rate and yield. Biochemical Society Transactions, 2021, 49, 1663-1674.	1.6	5
237	TCA Cycle and Its Relationship with Clavulanic Acid Production: A Further Interpretation by Using a Reduced Genome-Scale Metabolic Model of Streptomyces clavuligerus. Bioengineering, 2021, 8, 103.	1.6	3
238	Stoichiometric Modeling of Artificial String Chemistries Reveals Constraints on Metabolic Network Structure. Journal of Molecular Evolution, 2021, 89, 472-483.	0.8	2
239	Optimization of a modeling platform to predict oncogenes from genomeâ€scale metabolic networks of nonâ€smallâ€cell lung cancers. FEBS Open Bio, 2021, 11, 2078-2094.	1.0	12
242	Metabolic control of nitrogen fixation in rhizobium-legume symbioses. Science Advances, 2021, 7, .	4.7	44
244	Advances in Genome-Scale Metabolic Modeling toward Microbial Community Analysis of the Human Microbiome. ACS Synthetic Biology, 2021, 10, 2121-2137.	1.9	7
246	IMFLer: A Web Application for Interactive Metabolic Flux Analysis and Visualization. Journal of Computational Biology, 2021, 28, 1021-1032.	0.8	6
247	Metabolic modeling of single Th17 cells reveals regulators of autoimmunity. Cell, 2021, 184, 4168-4185.e21.	13.5	203
250	Two internal bottlenecks cause the overflow metabolism leading to poly(3-hydroxybutyrate) production in Azohydromonas lata DSM1123. Journal of Environmental Chemical Engineering, 2021, 9, 105665.	3.3	6
251	DEMETER: efficient simultaneous curation of genome-scale reconstructions guided by experimental data and refined gene annotations. Bioinformatics, 2021, 37, 3974-3975.	1.8	13
252	Synergisms of machine learning and constraintâ€based modeling of metabolism for analysis and optimization of fermentation parameters. Biotechnology Journal, 2021, 16, e2100212.	1.8	18
253	Programmatic modeling for biological systems. Current Opinion in Systems Biology, 2021, 27, 100343.	1.3	3
255	Bacteria-driven phthalic acid ester biodegradation: Current status and emerging opportunities. Environment International, 2021, 154, 106560.	4.8	66
256	Argininosuccinate lyase is a metabolic vulnerability in breast development and cancer. Npj Systems Biology and Applications, 2021, 7, 36.	1.4	3
257	Advances in constraint-based modelling of microbial communities. Current Opinion in Systems Biology, 2021, 27, 100346.	1.3	28
258	OrtSuite: from genomes to prediction of microbial interactions within targeted ecosystem processes. Life Science Alliance, 2021, 4, e202101167.	1.3	4

#	Article	IF	CITATIONS
259	Nitrogenous Compound Utilization and Production of Volatile Organic Compounds among Commercial Wine Yeasts Highlight Strain-Specific Metabolic Diversity. Microbiology Spectrum, 2021, 9, e0048521.	1.2	11
260	Genomeâ€scale metabolic modelling of SARS oVâ€2 in cancer cells reveals an increased shift to glycolytic energy production. FEBS Letters, 2021, 595, 2350-2365.	1.3	14
262	Path to improving the life cycle and quality of genome-scale models of metabolism. Cell Systems, 2021, 12, 842-859.	2.9	16
263	Genome Scale Modeling to Study the Metabolic Competition between Cells in the Tumor Microenvironment. Cancers, 2021, 13, 4609.	1.7	15
264	Integrating genome-scale metabolic modelling and transfer learning for human gene regulatory network reconstruction. Bioinformatics, 2022, 38, 487-493.	1.8	26
265	Integrated analysis of plasma and single immune cells uncovers metabolic changes in individuals with COVID-19. Nature Biotechnology, 2022, 40, 110-120.	9.4	81
266	Importance of the biomass formulation for cancer metabolic modeling and drug prediction. IScience, 2021, 24, 103110.	1.9	8
267	Systems modeling of metabolic dysregulation in neurodegenerative diseases. Current Opinion in Pharmacology, 2021, 60, 59-65.	1.7	5
268	Protocol for hybrid flux balance, statistical, and machine learning analysis of multi-omic data from the cyanobacterium Synechococcus sp. PCC 7002. STAR Protocols, 2021, 2, 100837.	0.5	5
269	Genome-scale metabolic modeling underscores the potential of Cutaneotrichosporon oleaginosus ATCC 20509 as a cell factory for biofuel production. Biotechnology for Biofuels, 2021, 14, 2.	6.2	18
270	Exploring gene knockout strategies to identify potential drug targets using genome-scale metabolic models. Scientific Reports, 2021, 11, 213.	1.6	15
271	Comparative genomics and metabolomics analysis of Riemerella anatipestifer strain CH-1 and CH-2. Scientific Reports, 2021, 11, 616.	1.6	3
272	Propionate as the preferred carbon source to produce 3-indoleacetic acid in <i>B. subtilis</i> comparative flux analysis using five carbon sources. Molecular Omics, 2021, 17, 554-564.	1.4	6
273	Comparative Metabolic Network Flux Analysis to Identify Differences in Cellular Metabolism. Methods in Molecular Biology, 2020, 2088, 223-269.	0.4	4
274	Metabolic Network Reconstructions to Predict Drug Targets and Off-Target Effects. Methods in Molecular Biology, 2020, 2088, 315-330.	0.4	4
275	Genome-Scale Metabolic Modeling of Escherichia coli and Its Chassis Design for Synthetic Biology Applications. Methods in Molecular Biology, 2021, 2189, 217-229.	0.4	9
276	Nitrogen limitation reveals large reserves in metabolic and translational capacities of yeast. Nature Communications, 2020, 11, 1881.	5.8	51
277	Dynamic resource allocation drives growth under nitrogen starvation in eukaryotes. Npj Systems Biology and Applications, 2020, 6, 14.	1.4	18

#	Article	IF	CITATIONS
278	Genome scale metabolic models and analysis for evaluating probiotic potentials. Biochemical Society Transactions, 2020, 48, 1309-1321.	1.6	5
279	A review of methods for the reconstruction and analysis of integrated genome-scale models of metabolism and regulation. Biochemical Society Transactions, 2020, 48, 1889-1903.	1.6	14
280	Towards the routine use of <i>in silico</i> screenings for drug discovery using metabolic modelling. Biochemical Society Transactions, 2020, 48, 955-969.	1.6	13
281	A Siamese neural network model for the prioritization of metabolic disorders by integrating real and simulated data. Bioinformatics, 2020, 36, i787-i794.	1.8	4
282	MetaNetX/MNXref: unified namespace for metabolites and biochemical reactions in the context of metabolic models. Nucleic Acids Research, 2021, 49, D570-D574.	6.5	91
306	Metabolic Modeling of Streptococcus mutans Reveals Complex Nutrient Requirements of an Oral Pathogen. MSystems, 2019, 4, .	1.7	20
307	Computational modeling of the gut microbiota reveals putative metabolic mechanisms of recurrent Clostridioides difficile infection. PLoS Computational Biology, 2021, 17, e1008782.	1.5	7
308	Genome-scale reconstructions to assess metabolic phylogeny and organism clustering. PLoS ONE, 2020, 15, e0240953.	1.1	7
309	The first 10 years of the international coordination network for standards in systems and synthetic biology (COMBINE). Journal of Integrative Bioinformatics, 2020, 17, .	1.0	18
310	<scp>SBML</scp> Level 3: an extensible format for the exchange and reuse of biological models. Molecular Systems Biology, 2020, 16, e9110.	3.2	178
311	Community standards to facilitate development and address challenges in metabolic modeling. Molecular Systems Biology, 2020, 16, e9235.	3.2	37
312	Modeling tissueâ€relevant <i>Caenorhabditis elegans</i> metabolism at network, pathway, reaction, and metabolite levels. Molecular Systems Biology, 2020, 16, e9649.	3.2	32
313	Metabolic Network Analysis Reveals Altered Bile Acid Synthesis and Cholesterol Metabolism in Alzheimer's Disease. SSRN Electronic Journal, 0, , .	0.4	6
314	Identifying Personalized Metabolic Signatures in Breast Cancer. Metabolites, 2021, 11, 20.	1.3	7
315	Plant Biosystems Design Research Roadmap 1.0. Biodesign Research, 2020, 2020, .	0.8	16
316	Metabolic network percolation quantifies biosynthetic capabilities across the human oral microbiome. ELife, 2019, 8, .	2.8	24
317	Metabolic traits specific for lipid-overproducing strain of Mucor circinelloides WJ11 identified by genome-scale modeling approach. PeerJ, 2019, 7, e7015.	0.9	4
318	Intelligent host engineering for metabolic flux optimisation in biotechnology. Biochemical Journal, 2021, 478, 3685-3721.	1.7	8

#	Article	IF	CITATIONS
320	Al delivers Michaelis constants as fuel for genome-scale metabolic models. PLoS Biology, 2021, 19, e3001415.	2.6	3
321	Metabolic flux sampling predicts strain-dependent differences related to aroma production among commercial wine yeasts. Microbial Cell Factories, 2021, 20, 204.	1.9	14
322	Metabolic engineering design to enhance (R,R)-2,3-butanediol production from glycerol in Bacillus subtilis based on flux balance analysis. Microbial Cell Factories, 2021, 20, 196.	1.9	8
323	Yeast metabolic innovations emerged via expanded metabolic network and gene positive selection. Molecular Systems Biology, 2021, 17, e10427.	3.2	17
325	Predictive regulatory and metabolic network models for systems analysis of Clostridioides difficile. Cell Host and Microbe, 2021, 29, 1709-1723.e5.	5.1	12
326	A metabolic modeling platform for the computation of microbial ecosystems in time and space (COMETS). Nature Protocols, 2021, 16, 5030-5082.	5.5	70
327	Designing the bioproduction of Martian rocket propellant via a biotechnology-enabled in situ resource utilization strategy. Nature Communications, 2021, 12, 6166.	5.8	22
329	DCcov: Repositioning of drugs and drug combinations for SARS-CoV-2 infected lung through constraint-based modeling. IScience, 2021, 24, 103331.	1.9	16
330	Constraint-based modeling of yeast mitochondria reveals the dynamics of protein import and iron-sulfur cluster biogenesis. IScience, 2021, 24, 103294.	1.9	7
331	Network Biology Approaches to Achieve Precision Medicine in Inflammatory Bowel Disease. Frontiers in Genetics, 2021, 12, 760501.	1.1	10
332	Transcriptomic Response Analysis of Escherichia coli to Palladium Stress. Frontiers in Microbiology, 2021, 12, 741836.	1.5	6
333	Novel Drivers of Virulence in Clostridioides difficile Identified via Context-Specific Metabolic Network Analysis. MSystems, 2021, 6, e0091921.	1.7	13
334	TRIMER: Transcription Regulation Integrated with Metabolic Regulation. IScience, 2021, 24, 103218.	1.9	7
335	Data Management in Computational Systems Biology: Exploring Standards, Tools, Databases, and Packaging Best Practices. Methods in Molecular Biology, 2019, 2049, 285-314.	0.4	3
337	ACHR.cu: GPU-accelerated sampling of metabolic networks. Journal of Open Source Software, 2019, 4, 1363.	2.0	0
349	Using automated reasoning to explore the metabolism of unconventional organisms: a first step to explore host–microbial interactions. Biochemical Society Transactions, 2020, 48, 901-913.	1.6	3
356	Computer-Aided Design for Identifying Anticancer Targets in Genome-Scale Metabolic Models of Colon Cancer. Biology, 2021, 10, 1115.	1.3	9
357	Application of the Metabolic Modeling Pipeline in KBase to Categorize Reactions, Predict Essential Genes, and Predict Pathways in an Isolate Genome. Methods in Molecular Biology, 2022, 2349, 291-320.	0.4	4

#	Article	IF	CITATIONS
358	A Beginner's Guide to the COBRA Toolbox. Methods in Molecular Biology, 2022, 2349, 339-365.	0.4	2
359	Metabolic Modeling with MetaFlux. Methods in Molecular Biology, 2022, 2349, 259-289.	0.4	3
360	Parameter estimation for models of chemical reaction networks from experimental data of reaction rates. International Journal of Control, 2023, 96, 392-407.	1.2	1
361	A gap-filling algorithm for prediction of metabolic interactions in microbial communities. PLoS Computational Biology, 2021, 17, e1009060.	1.5	4
362	Yeast synthetic biology advances biofuel production. Current Opinion in Microbiology, 2022, 65, 33-39.	2.3	21
363	Modelling Oxidative Stress Pathways. Computational Biology, 2020, , 277-300.	0.1	0
366	Redox metabolism for improving whole-cell P450-catalysed terpenoid biosynthesis. Critical Reviews in Biotechnology, 2022, 42, 1213-1237.	5.1	16
367	The Role of Tumor-Derived Exosomes (TEX) in Shaping Anti-Tumor Immune Competence. Cells, 2021, 10, 3054.	1.8	12
368	Comparison of metabolic states using genome-scale metabolic models. PLoS Computational Biology, 2021, 17, e1009522.	1.5	4
369	Improved production of the non-native cofactor F420 in Escherichia coli. Scientific Reports, 2021, 11, 21774.	1.6	12
373	Integrated Metabolic Modeling, Culturing, and Transcriptomics Explain Enhanced Virulence of Vibrio cholerae during Coinfection with Enterotoxigenic Escherichia coli. MSystems, 2020, 5, .	1.7	8
379	Genome-Scale Reconstruction of Microbial Dynamic Phenotype: Successes and Challenges. Microorganisms, 2021, 9, 2352.	1.6	8
380	Photoautotrophic organic acid production: Glycolic acid production by microalgal cultivation. Chemical Engineering Journal, 2022, 433, 133636.	6.6	12
381	COBREXA.jl: constraint-based reconstruction and exascale analysis. Bioinformatics, 2022, 38, 1171-1172.	1.8	2
382	Stable Isotopes for Tracing Cardiac Metabolism in Diseases. Frontiers in Cardiovascular Medicine, 2021, 8, 734364.	1.1	5
383	ΔFBA—Predicting metabolic flux alterations using genome-scale metabolic models and differential transcriptomic data. PLoS Computational Biology, 2021, 17, e1009589.	1.5	18
385	Development of an integrating systems metabolic engineering and bioprocess modeling approach for rational strain improvement. Biochemical Engineering Journal, 2022, 178, 108268.	1.8	1
386	Elucidating tumor-stromal metabolic crosstalk in colorectal cancer through integration of constraint-based models and LC-MS metabolomics. Metabolic Engineering, 2022, 69, 175-187.	3.6	10

#	Article	IF	CITATIONS
387	Metagenome-Scale Metabolic Network Suggests Folate Produced by Bifidobacterium longum Might Contribute to High-Fiber-Diet-Induced Weight Loss in a Prader–Willi Syndrome Child. Microorganisms, 2021, 9, 2493.	1.6	1
389	Multiomics Personalized Network Analyses Highlight Progressive Immune Disruption of Central Metabolism Associated with COVID-19 Severity. SSRN Electronic Journal, 0, , .	0.4	3
390	Two-species community design of lactic acid bacteria for optimal production of lactate. Computational and Structural Biotechnology Journal, 2021, 19, 6039-6049.	1.9	6
391	A Computational Framework to Identify Metabolic Engineering Strategies for the Co-Production of Metabolites. Frontiers in Bioengineering and Biotechnology, 2021, 9, 779405.	2.0	3
392	Heterologous Production of Glycine Betaine Using Synechocystis sp. PCC 6803-Based Chassis Lacking Native Compatible Solutes. Frontiers in Bioengineering and Biotechnology, 2021, 9, 821075.	2.0	3
393	Genome-Scale Metabolic Modelling of Lifestyle Changes in Rhizobium leguminosarum. MSystems, 2022, 7, e0097521.	1.7	4
394	Resource-allocation constraint governs structure and function of microbial communities in metabolic modeling. Metabolic Engineering, 2022, 70, 12-22.	3.6	7
395	Conceptos b $ ilde{A}_i$ sicos de an $ ilde{A}_i$ lisis de fluxes metab $ ilde{A}^3$ licos. Ingenieria Y Competitividad, 2020, 23, .	0.1	0
398	Constraint-Based Modeling to Understand ROS-Mediated Effects in Cancer. , 2022, , 2209-2229.		0
399	Modeling approaches for probing cross-feeding interactions in the human gut microbiome. Computational and Structural Biotechnology Journal, 2022, 20, 79-89.	1.9	19
400	Bruceine D Identified as a Drug Candidate against Breast Cancer by a Novel Drug Selection Pipeline and Cell Viability Assay. Pharmaceuticals, 2022, 15, 179.	1.7	3
401	Metabolic adjustments of blood-stage Plasmodium falciparum in response to sublethal pyrazoleamide exposure. Scientific Reports, 2022, 12, 1167.	1.6	8
403	Inspecting the Solution Space of Genome-Scale Metabolic Models. Metabolites, 2022, 12, 43.	1.3	6
404	Basin-scale biogeography of marine phytoplankton reflects cellular-scale optimization of metabolism and physiology. Science Advances, 2022, 8, eabl4930.	4.7	16
405	Metabolic modeling of host–microbe interactions for therapeutics in colorectal cancer. Npj Systems Biology and Applications, 2022, 8, 1.	1.4	18
406	Valine feeding reduces ammonia production through rearrangement of metabolic fluxes in central carbon metabolism of CHO cells. Applied Microbiology and Biotechnology, 2022, 106, 1113-1126.	1.7	4
407	Experimental determination of Escherichia coli biomass composition for constraint-based metabolic modeling. PLoS ONE, 2022, 17, e0262450.	1.1	8
408	Project-based learning course on metabolic network modelling in computational systems biology. PLoS Computational Biology, 2022, 18, e1009711.	1.5	3

#	Article	IF	CITATIONS
409	Genome-Scale Modeling Specifies the Metabolic Capabilities of <i>Rhizophagus irregularis</i> MSystems, 2022, 7, e0121621.	1.7	7
410	Flux balance analysis of the ammonia-oxidizing bacterium Nitrosomonas europaea ATCC19718 unravels specific metabolic activities while degrading toxic compounds. PLoS Computational Biology, 2022, 18, e1009828.	1.5	4
411	Kinetic and Stoichiometric Modeling-Based Analysis of Docosahexaenoic Acid (DHA) Production Potential by Crypthecodinium cohnii from Glycerol, Glucose and Ethanol. Marine Drugs, 2022, 20, 115.	2.2	6
412	Model-based dynamic engineering of Escherichia coli for N-acetylglucosamine overproduction. Biotechnology Notes, 2022, 3, 15-24.	0.7	7
413	Microbiome Modelling Toolbox 2.0: efficient, tractable modelling of microbiome communities. Bioinformatics, 2022, 38, 2367-2368.	1.8	18
414	Engineered yeast for efficient de novo synthesis of 7â€dehydrocholesterol. Biotechnology and Bioengineering, 2022, 119, 1278-1289.	1.7	14
415	Exploring the roles of microbes in facilitating plant adaptation to climate change. Biochemical Journal, 2022, 479, 327-335.	1.7	7
416	A Genome-Scale Metabolic Model for the Human Pathogen Candida Parapsilosis and Early Identification of Putative Novel Antifungal Drug Targets. Genes, 2022, 13, 303.	1.0	3
417	Cell culture metabolomics and lipidomics. , 2022, , 415-456.		0
418	Systems Biology on Acetogenic Bacteria for Utilizing C1 Feedstocks. Advances in Biochemical Engineering/Biotechnology, 2022, , 1.	0.6	0
419	Elucidation of Triacylglycerol Overproduction in the C4 Bioenergy Crop Sorghum bicolor by Constraint-Based Analysis. Frontiers in Plant Science, 2022, 13, 787265.	1.7	3
420	Pervasive RNA Regulation of Metabolism Enhances the Root Colonization Ability of Nitrogen-Fixing Symbiotic α-Rhizobia. MBio, 2022, 13, e0357621.	1.8	7
421	Integrated analysis of microbe-host interactions in Crohn's disease reveals potential mechanisms of microbial proteins on host gene expression. IScience, 2022, 25, 103963.	1.9	7
422	CobraMod: a pathway-centric curation tool for constraint-based metabolic models. Bioinformatics, 2022, 38, 2654-2656.	1.8	4
424	Systemâ€level metabolic modeling facilitates unveiling metabolic signature in exceptional longevity. Aging Cell, 2022, 21, e13595.	3.0	13
425	High-throughput plant phenotyping: a role for metabolomics?. Trends in Plant Science, 2022, 27, 549-563.	4.3	44
426	Protocol for condition-dependent metabolite yield prediction using the TRIMER pipeline. STAR Protocols, 2022, 3, 101184.	0.5	2
427	Integrative Genome-Scale Metabolic Modeling Reveals Versatile Metabolic Strategies for Methane Utilization in Methylomicrobium album BG8. MSystems, 2022, 7, e0007322.	1.7	2

#	Article	IF	CITATIONS
428	A network-based approach to integrate nutrient microenvironment in the prediction of synthetic lethality in cancer metabolism. PLoS Computational Biology, 2022, 18, e1009395.	1.5	5
429	COMMIT: Consideration of metabolite leakage and community composition improves microbial community reconstructions. PLoS Computational Biology, 2022, 18, e1009906.	1.5	2
430	Limited Mechanistic Link Between the Monod Equation and Methanogen Growth: a Perspective from Metabolic Modeling. Microbiology Spectrum, 2022, 10, e0225921.	1.2	2
431	Metabolic Engineering Interventions for Sustainable 2,3-Butanediol Production in Gas-Fermenting <i>Clostridium autoethanogenum NSystems, 2022, 7, e0111121.</i>	1.7	4
432	Genomeâ€Scale Metabolic Model's multiâ€objective solving algorithm based on the inflexion point of Pareto front including maximum energy utilization and its application in ⟨i>Aspergillus niger⟨i>DS03043. Biotechnology and Bioengineering, 2022, 119, 1539-1555.	1.7	1
433	Metabolic adaptation of ovarian tumors in patients treated with an IDO1 inhibitor constrains antitumor immune responses. Science Translational Medicine, 2022, 14, eabg8402.	5.8	28
434	Reconstruction and analysis of genomeâ€scale metabolic model for thermophilic fungus <i>Myceliophthora thermophila</i> . Biotechnology and Bioengineering, 2022, 119, 1926-1937.	1.7	6
435	Systems Biology of Gut Microbiota-Human Receptor Interactions: Toward Anti-inflammatory Probiotics. Frontiers in Microbiology, 2022, 13, 846555.	1.5	3
436	Microbial communities form rich extracellular metabolomes that foster metabolic interactions and promote drug tolerance. Nature Microbiology, 2022, 7, 542-555.	5.9	58
437	A Computational Framework for Studying Gut-Brain Axis in Autism Spectrum Disorder. Frontiers in Physiology, 2022, 13, 760753.	1.3	7
440	Mathematical models to study the biology of pathogens and the infectious diseases they cause. IScience, 2022, 25, 104079.	1.9	8
441	Human/SARS-CoV-2 genome-scale metabolic modeling to discover potential antiviral targets for COVID-19. Journal of the Taiwan Institute of Chemical Engineers, 2022, 133, 104273.	2.7	9
442	OptDesign: Identifying Optimum Design Strategies in Strain Engineering for Biochemical Production. ACS Synthetic Biology, 2022, 11, 1531-1541.	1.9	6
443	Contribution of genomeâ€scale metabolic modelling to niche theory. Ecology Letters, 2022, 25, 1352-1364.	3.0	11
444	Integrative metabolic flux analysis reveals an indispensable dimension of phenotypes. Current Opinion in Biotechnology, 2022, 75, 102701.	3.3	7
445	Integration of omics data to generate and analyse COVID-19 specific genome-scale metabolic models. Computers in Biology and Medicine, 2022, 145, 105428.	3.9	5
446	Genome-Scale Metabolic Modeling Enables In-Depth Understanding of Big Data. Metabolites, 2022, 12, 14.	1.3	37
448	Quantitative prediction of conditional vulnerabilities in regulatory and metabolic networks using PRIME. Npj Systems Biology and Applications, 2021, 7, 43.	1.4	3

#	Article	IF	CITATIONS
450	CNApy: a CellNetAnalyzer GUI in Python for analyzing and designing metabolic networks. Bioinformatics, 2022, 38, 1467-1469.	1.8	8
451	Virtual Populations for Quantitative Systems Pharmacology Models. Methods in Molecular Biology, 2022, 2486, 129-179.	0.4	13
454	Integrative Gene Expression and Metabolic Analysis Tool IgemRNA. Biomolecules, 2022, 12, 586.	1.8	2
455	The gut microbial metabolite formate exacerbates colorectal cancer progression. Nature Metabolism, 2022, 4, 458-475.	5.1	97
456	Combined multivariate statistical and flux balance analyses uncover media bottlenecks to the growth and productivity of Chinese hamster ovary cell cultures. Biotechnology and Bioengineering, 2022, 119, 1740-1754.	1.7	7
482	Elucidating Human Milk Oligosaccharide biosynthetic genes through network-based multi-omics integration. Nature Communications, 2022, 13, 2455.	5.8	27
483	Synthetic mutualism in engineered $\langle i \rangle$ E. coli $\langle i \rangle$ mutant strains as functional basis for microbial production consortia. Engineering in Life Sciences, 0, , .	2.0	2
485	Genome-Scale Metabolic Model Analysis of Metabolic Differences between Lauren Diffuse and Intestinal Subtypes in Gastric Cancer. Cancers, 2022, 14, 2340.	1.7	2
486	Design, Analysis, and Implementation of a Novel Biochemical Pathway for Ethylene Glycol Production in <i>Clostridium autoethanogenum</i>). ACS Synthetic Biology, 2022, 11, 1790-1800.	1.9	6
487	Flux balance network expansion predicts stage-specific human peri_implantation embryo metabolism. Journal of Bioinformatics and Computational Biology, 2022, 20, .	0.3	1
488	Engineering cofactor supply and recycling to drive phenolic acid biosynthesis in yeast. Nature Chemical Biology, 2022, 18, 520-529.	3.9	65
490	A Practical Guide to Integrating Multimodal Machine Learning and Metabolic Modeling. Methods in Molecular Biology, 2022, , 87-122.	0.4	2
492	Examining organic acid production potential and growthâ€coupled strategies in <i>lssatchenkia orientalis</i> using constraintâ€based modeling. Biotechnology Progress, 2022, 38, .	1.3	4
493	A genome-scale metabolic model of Cupriavidus necator H16 integrated with TraDIS and transcriptomic data reveals metabolic insights for biotechnological applications. PLoS Computational Biology, 2022, 18, e1010106.	1.5	10
494	Improving recombinant protein production by yeast through genome-scale modeling using proteome constraints. Nature Communications, 2022, 13, .	5.8	18
499	Dual transcriptome based reconstruction of Salmonella-human integrated metabolic network to screen potential drug targets. PLoS ONE, 2022, 17, e0268889.	1.1	7
500	Machine learning aided construction of the quorum sensing communication network for human gut microbiota. Nature Communications, 2022, 13 , .	5.8	20
501	Reconstruction of the Genome-Scale Metabolic Model of Saccharopolyspora erythraea and Its Application in the Overproduction of Erythromycin. Metabolites, 2022, 12, 509.	1.3	6

#	Article	IF	CITATIONS
502	Genome-scale metabolic modelling of the human gut microbiome reveals changes in the glyoxylate and dicarboxylate metabolism in metabolic disorders. IScience, 2022, 25, 104513.	1.9	15
503	gcFront: a tool for determining a Pareto front of growth-coupled cell factory designs. Bioinformatics, 2022, 38, 3657-3659.	1.8	3
504	De novo biosynthesis of rubusoside and rebaudiosides in engineered yeasts. Nature Communications, 2022, 13, .	5.8	36
505	Trimming Gene Deletion Strategies for Growth-Coupled Production in Constraint-Based Metabolic Networks: TrimGdel. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2023, 20, 1540-1549.	1.9	2
506	Whole-Cell Energy Modeling Reveals Quantitative Changes of Predicted Energy Flows in RAS Mutant Cancer Cell Lines. SSRN Electronic Journal, 0, , .	0.4	0
507	Machine learning-guided evaluation of extraction and simulation methods for cancer patient-specific metabolic models. Computational and Structural Biotechnology Journal, 2022, 20, 3041-3052.	1.9	8
508	Flux Regulation Through Glycolysis and Respiration is Balanced by Inositol Pyrophosphates. SSRN Electronic Journal, 0, , .	0.4	0
509	Metabolic systems analysis identifies a novel mechanism contributing to shock in patients with endotheliopathy of trauma (EoT) involving thromboxane A2 and LTC4. Matrix Biology Plus, 2022, 15, 100115.	1.9	4
510	Linear programming based gene expression model (LPM-GEM) predicts the carbon source for Bacillus subtilis. BMC Bioinformatics, 2022, 23, .	1.2	0
511	Standardization of Human Metabolic Stoichiometric Models: Challenges and Directions. Frontiers in Systems Biology, 0, 2, .	0.5	1
512	In Silico Models on Algal Cultivation and Processing. Impact of Meat Consumption on Health and Environmental Sustainability, 2022, , 228-255.	0.4	0
514	Genome-Wide Analysis of Yeast Metabolic Cycle through Metabolic Network Models Reveals Superiority of Integrated ATAC-seq Data over RNA-seq Data. MSystems, 2022, 7, .	1.7	1
515	Communities of Niche-optimized Strains (CoNoS) – Design and creation of stable, genome-reduced co-cultures. Metabolic Engineering, 2022, 73, 91-103.	3.6	6
516	Exploring the metabolic versatility of cyanobacteria for an emerging carbon-neutral bioeconomy., 2022,, 165-187.		0
517	Reconstruction of a catalogue of genome-scale metabolic models with enzymatic constraints using GECKO 2.0. Nature Communications, 2022, 13, .	5.8	39
518	Oxidoreduction potential controlling for increasing the fermentability of enzymatically hydrolyzed steam-exploded corn stover for butanol production. Microbial Cell Factories, 2022, 21, .	1.9	1
519	Genome-scale metabolic network model of Eriocheir sinensis icrab4665 and nutritional requirement analysis. BMC Genomics, 2022, 23, .	1,2	0
520	Deep learning-based kcat prediction enables improved enzyme-constrained model reconstruction. Nature Catalysis, 2022, 5, 662-672.	16.1	98

#	Article	IF	Citations
521	Multi-omics personalized network analyses highlight progressive disruption of central metabolism associated with COVID-19 severity. Cell Systems, 2022, 13, 665-681.e4.	2.9	17
522	Prediction of degradation pathways of phenolic compounds in the human gut microbiota through enzyme promiscuity methods. Npj Systems Biology and Applications, 2022, 8, .	1.4	8
523	Understanding the adaptive laboratory evolution of multiple stressâ€resistant yeast strains by genome scale modeling. Yeast, 0, , .	0.8	0
524	Genome-scale metabolic network models: from first-generation to next-generation. Applied Microbiology and Biotechnology, 2022, 106, 4907-4920.	1.7	19
526	Constraint-Based Reconstruction and Analyses of Metabolic Models: Open-Source Python Tools and Applications to Cancer. Frontiers in Oncology, 0, 12, .	1.3	6
527	Data-driven and model-guided systematic framework for media development in CHO cell culture. Metabolic Engineering, 2022, 73, 114-123.	3.6	9
528	Iron availability enhances the cellular energetics of aerobic Escherichia coli cultures while upregulating anaerobic respiratory chains. New Biotechnology, 2022, 71, 11-20.	2.4	4
529	Whole-body metabolic modelling predicts isoleucine dependency of SARS-CoV-2 replication. Computational and Structural Biotechnology Journal, 2022, 20, 4098-4109.	1.9	11
531	In silico cell factory design driven by comprehensive genome-scale metabolic models: development and challenges. Systems Microbiology and Biomanufacturing, 2023, 3, 207-222.	1.5	2
532	Rapid-SL identifies synthetic lethal sets with an arbitrary cardinality. Scientific Reports, 2022, 12, .	1.6	1
533	Metagenome-scale community metabolic modelling for understanding the role of gut microbiota in human health. Computers in Biology and Medicine, 2022, 149, 105997.	3.9	5
534	Importance of carbon to nitrogen ratio in microbial cement production: Insights through experiments and genome-scale metabolic modelling. Biochemical Engineering Journal, 2022, 186, 108573.	1.8	4
535	Toward FAIR Representations of Microbial Interactions. MSystems, 2022, 7, .	1.7	7
536	Review of Current Human Genome-Scale Metabolic Models for Brain Cancer and Neurodegenerative Diseases. Cells, 2022, 11, 2486.	1.8	2
537	Metabolic Modeling and Bidirectional Culturing of Two Gut Microbes Reveal Cross-Feeding Interactions and Protective Effects on Intestinal Cells. MSystems, 2022, 7, .	1.7	9
539	Enhancing Genome-Scale Model by Integrative Exometabolome and Transcriptome: Unveiling Carbon Assimilation towards Sphingolipid Biosynthetic Capability of Cordyceps militaris. Journal of Fungi (Basel, Switzerland), 2022, 8, 887.	1.5	3
540	Quantitative modeling of human liver reveals dysregulation of glycosphingolipid pathways in nonalcoholic fatty liver disease. IScience, 2022, 25, 104949.	1.9	12
541	Integrated Profiling of Gram-Positive and Gram-Negative Probiotic Genomes, Proteomes and Metabolomes Revealed Small Molecules with Differential Growth Inhibition of Antimicrobial-Resistant Pathogens. Journal of Dietary Supplements, 2023, 20, 788-810.	1.4	2

#	Article	IF	CITATIONS
542	Proteomic, Genomic, and Metabolomic Understanding and Designing for Bioremediation of Environmental Contaminants., 2022, , 415-435.		1
543	Genome-scale Metabolic Model Guided Subtyping Lung Cancer towards Personalized Diagnosis. IFAC-PapersOnLine, 2022, 55, 641-646.	0.5	0
544	Angiogenesis goes computational $\hat{a} \in$ The future way forward to discover new angiogenic targets?. Computational and Structural Biotechnology Journal, 2022, 20, 5235-5255.	1.9	6
545	Characterizing Basal and Feed Media Effects on Mammalian Cell Cultures by Systems Engineering Approaches. IFAC-PapersOnLine, 2022, 55, 31-36.	0.5	2
546	Drug Target Prediction Using Context-Specific Metabolic Models Reconstructed from rFASTCORMICS. Methods in Molecular Biology, 2022, , 221-240.	0.4	1
547	Reconstructing Kinetic Models for Dynamical Studies of Metabolism using Generative Adversarial Networks. Nature Machine Intelligence, 2022, 4, 710-719.	8.3	22
549	StrainDesign: a comprehensive Python package for computational design of metabolic networks. Bioinformatics, 2022, 38, 4981-4983.	1.8	10
550	Loss of full-length dystrophin expression results in major cell-autonomous abnormalities in proliferating myoblasts. ELife, $0,11,.$	2.8	13
551	Metabolic collateral lethal target identification reveals MTHFD2 paralogue dependency in ovarian cancer. Nature Metabolism, 2022, 4, 1119-1137.	5.1	13
553	Architect: A tool for aiding the reconstruction of high-quality metabolic models through improved enzyme annotation. PLoS Computational Biology, 2022, 18, e1010452.	1.5	3
554	Interspecies Metabolic Interactions in a Synergistic Consortium Drive Efficient Degradation of the Herbicide Bromoxynil Octanoate. Journal of Agricultural and Food Chemistry, 2022, 70, 11613-11622.	2.4	7
555	Optimization and Scale-Up of Fermentation Processes Driven by Models. Bioengineering, 2022, 9, 473.	1.6	17
557	Generation of an Escherichia coli strain growing on methanol via the ribulose monophosphate cycle. Nature Communications, 2022, 13, .	5.8	37
558	MetaboAnnotator: an efficient toolbox to annotate metabolites in genome-scale metabolic reconstructions. Bioinformatics, 2022, 38, 4831-4832.	1.8	2
560	Strain engineering and metabolic flux analysis of a probiotic yeast Saccharomyces boulardii for metabolizing l-fucose, a mammalian mucin component. Microbial Cell Factories, 2022, 21, .	1.9	4
561	Dysregulation of secondary bile acid metabolism precedes islet autoimmunity and type 1 diabetes. Cell Reports Medicine, 2022, 3, 100762.	3.3	9
562	Genome-Scale Modeling and Systems Metabolic Engineering of Vibrio natriegens for the Production of 1,3-Propanediol. Methods in Molecular Biology, 2023, , 209-220.	0.4	1
564	Systems engineering of Escherichia coli for high-level shikimate production. Metabolic Engineering, 2023, 75, 1-11.	3.6	16

#	ARTICLE	IF	CITATIONS
566	Flux-Balance Analysis and Mobile CRISPRi-Guided Deletion of a Conditionally Essential Gene in <i>Shewanella oneidensis </i> MR-1. ACS Synthetic Biology, 2022, 11, 3405-3413.	1.9	2
567	Machine Learning and Hybrid Methods for Metabolic Pathway Modeling. Methods in Molecular Biology, 2023, , 417-439.	0.4	7
569	Probing patterning in microbial consortia with a cellular automaton for spatial organisation. Scientific Reports, 2022, 12, .	1.6	2
571	Multi-Omic analyses characterize the ceramide/sphingomyelin pathway as a therapeutic target in Alzheimer's disease. Communications Biology, 2022, 5, .	2.0	21
572	The influence of machine learning technologies in gut microbiome research and cancer studies - A review. Life Sciences, 2022, 311, 121118.	2.0	5
573	Synthetic Biology Meets Machine Learning. Methods in Molecular Biology, 2023, , 21-39.	0.4	2
574	Predictive evolution of metabolic phenotypes using modelâ€designed environments. Molecular Systems Biology, 2022, 18, .	3.2	10
575	Clinical stratification improves the diagnostic accuracy of small omics datasets within machine learning and genome-scale metabolic modelling methods. Computers in Biology and Medicine, 2022, 151, 106244.	3.9	3
576	Genome-scale modeling of Chinese hamster ovary cells by hybrid semi-parametric flux balance analysis. Bioprocess and Biosystems Engineering, 2022, 45, 1889-1904.	1.7	13
577	Cross-sectional observational study protocol: missing microbes in infants born by caesarean section (MiMIC): antenatal antibiotics and mode of delivery. BMJ Open, 2022, 12, e064398.	0.8	1
578	Protocol for CAROM: A machine learning tool to predict post-translational regulation from metabolic signatures. STAR Protocols, 2022, 3, 101799.	0.5	1
579	Engineering of Pseudomonas putida for accelerated co-utilization of glucose and cellobiose yields aerobic overproduction of pyruvate explained by an upgraded metabolic model. Metabolic Engineering, 2023, 75, 29-46.	3 . 6	10
580	Engineering yeast for high-level production of diterpenoid sclareol. Metabolic Engineering, 2023, 75, 19-28.	3.6	20
581	A workflow for annotating the knowledge gaps in metabolic reconstructions using known and hypothetical reactions. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119 , .	3.3	8
585	Genome-scale reconstruction and metabolic modelling of the fast-growing thermophile Geobacillus sp. LC300. Metabolic Engineering Communications, 2022, 15, e00212.	1.9	1
586	Computational Approaches to Assess Abnormal Metabolism in Alzheimer's Disease Using Transcriptomics. Methods in Molecular Biology, 2023, , 173-189.	0.4	0
588	Machine learning in bioprocess development: from promise to practice. Trends in Biotechnology, 2023, 41, 817-835.	4.9	24
589	Genetically personalised organ-specific metabolic models in health and disease. Nature Communications, 2022, 13, .	5.8	7

#	Article	IF	CITATIONS
590	Synthetic biology for sustainable food ingredients production: recent trends. Systems Microbiology and Biomanufacturing, 2023, 3, 137-149.	1.5	7
591	Systems Biology: New Insight into Antibiotic Resistance. Microorganisms, 2022, 10, 2362.	1.6	5
592	Analysis of the Propionate Metabolism in Bacillus subtilis during 3-Indolacetic Production. Microorganisms, 2022, 10, 2352.	1.6	1
593	Computer-Based Design of a Cell Factory for High-Yield Cytidine Production. ACS Synthetic Biology, 2022, 11, 4123-4133.	1.9	4
595	Systematic evaluation of genome-wide metabolic landscapes in lactic acid bacteria reveals diet- and strain-specific probiotic idiosyncrasies. Cell Reports, 2022, 41, 111735.	2.9	8
596	Guidelines for extracting biologically relevant context-specific metabolic models using gene expression data. Metabolic Engineering, 2023, 75, 181-191.	3.6	6
598	scFASTCORMICS: A Contextualization Algorithm to Reconstruct Metabolic Multi-Cell Population Models from Single-Cell RNAseq Data. Metabolites, 2022, 12, 1211.	1.3	2
599	Growth productivity as a determinant of the inoculum effect for bactericidal antibiotics. Science Advances, 2022, 8, .	4.7	5
600	Preterm birth is associated with xenobiotics and predicted by the vaginal metabolome. Nature Microbiology, 2023, 8, 246-259.	5.9	23
601	Novel context-specific genome-scale modelling explores the potential of triacylglycerol production by Chlamydomonas reinhardtii. Microbial Cell Factories, 2023, 22, .	1.9	4
602	Comprehensive genome-scale metabolic model of the human pathogen Cryptococcus neoformans: A platform for understanding pathogen metabolism and identifying new drug targets. Frontiers in Bioinformatics, 0, 3, .	1.0	1
603	Identifying metabolic shifts in Crohn's disease using 'omics-driven contextualized computational metabolic network models. Scientific Reports, 2023, 13, .	1.6	1
604	Cell-cell metabolite exchange creates a pro-survival metabolic environment that extends lifespan. Cell, 2023, 186, 63-79.e21.	13.5	14
605	Context-Specific Genome-Scale Metabolic Modelling and Its Application to the Analysis of COVID-19 Metabolic Signatures. Metabolites, 2023, 13, 126.	1.3	7
606	Whole-cell energy modeling reveals quantitative changes of predicted energy flows in RAS mutant cancer cell lines. IScience, 2023, 26, 105931.	1.9	1
607	Investigation of two metabolic engineering approaches for (R,R)-2,3-butanediol production from glycerol in Bacillus subtilis. Journal of Biological Engineering, 2023, 17, .	2.0	2
608	A study of a diauxic growth experiment using an expanded dynamic flux balance framework. PLoS ONE, 2023, 18, e0280077.	1.1	22
609	Potential bacterial isolation by dosing metabolites in cross-feedings. Water Research, 2023, 231, 119589.	5.3	9

#	Article	IF	CITATIONS
610	Genome-scale metabolic reconstruction of 7,302 human microorganisms for personalized medicine. Nature Biotechnology, 2023, 41, 1320-1331.	9.4	55
611	Metabolic modelling of the human gut microbiome in type 2 diabetes patients in response to metformin treatment. Npj Systems Biology and Applications, 2023, 9, .	1.4	8
613	Metabolic Modeling Identifies a Novel Molecular Type of Glioblastoma Associated with Good Prognosis. Metabolites, 2023, 13, 172.	1.3	0
614	A nutrition algorithm to optimize feed and medium composition using genome-scale metabolic models. Metabolic Engineering, 2023, 76, 167-178.	3.6	2
615	COMPARATIVE FLUX BALANCE ANALYSES OF SERINE ALKALINE PROTEASE OVERPRODUCTION IN Bacillus subtilis AT GENOME AND SMALL SCALE. Eskişehir Teknik Üniversitesi Bilim Ve Teknoloji Dergisi - C Yaşam Bilimleri Ve Biyoteknoloji, 0, , .	0.1	0
616	The media composition as a crucial element in high-throughput metabolic network reconstruction. Interface Focus, 2023, 13, .	1.5	1
618	Moving beyond DNA: towards functional analysis of the vaginal microbiome by non-sequencing-based methods. Current Opinion in Microbiology, 2023, 73, 102292.	2.3	5
619	Systematic diet composition swap in a mouse genome-scale metabolic model reveals determinants of obesogenic diet metabolism in liver cancer. IScience, 2023, 26, 106040.	1.9	3
620	Multi-dimensional experimental and computational exploration of metabolism pinpoints complex probiotic interactions. Metabolic Engineering, 2023, 76, 120-132.	3.6	3
621	Flux regulation through glycolysis and respiration is balanced by inositol pyrophosphates in yeast. Cell, 2023, 186, 748-763.e15.	13.5	14
624	Neuroinflammation, Energy and Sphingolipid Metabolism Biomarkers Are Revealed by Metabolic Modeling of Autistic Brains. Biomedicines, 2023, 11, 583.	1.4	2
625	Construction and application of the genome-scale metabolic model of Streptomyces radiopugnans. Frontiers in Bioengineering and Biotechnology, 0, 11 , .	2.0	1
626	Gene Deletion Algorithms for Minimum Reaction Network Design by Mixed-Integer Linear Programming for Metabolite Production in Constraint-Based Models: gDel_minRN. Journal of Computational Biology, 2023, 30, 553-568.	0.8	3
627	Metabolic Robustness to Growth Temperature of a Cold-Adapted Marine Bacterium. MSystems, 2023, 8,	1.7	4
628	How reliable are Chinese hamster ovary (CHO) cell genomeâ€scale metabolic models?. Biotechnology and Bioengineering, 2023, 120, 2460-2478.	1.7	1
630	Mapping out the gut microbiota-dependent trimethylamine N-oxide super pathway for systems biology applications. Frontiers in Systems Biology, 0, 3, .	0.5	0
632	Towards applications of genomeâ€scale metabolic modelâ€based approaches in designing synthetic microbial communities. Quantitative Biology, 2023, 11, 15-30.	0.3	2
635	Data integration across conditions improves turnover number estimates and metabolic predictions. Nature Communications, 2023, 14 , .	5.8	11

#	Article	IF	CITATIONS
637	New workflow predicts drug targets against SARS-CoV-2 via metabolic changes in infected cells. PLoS Computational Biology, 2023, 19, e1010903.	1.5	3
639	CompLaB v1.0: a scalable pore-scale model for flow, biogeochemistry, microbial metabolism, and biofilm dynamics. Geoscientific Model Development, 2023, 16, 1683-1696.	1.3	1
640	Thermodynamic and Kinetic Modeling Directs Pathway Optimization for Isopropanol Production in a Gas-Fermenting Bacterium. MSystems, 0, , .	1.7	0
641	Functional comparison of metabolic networks across species. Nature Communications, 2023, 14, .	5.8	2
642	Peptidomics. Nature Reviews Methods Primers, 2023, 3, .	11.8	11
643	Engineering yeast mitochondrial metabolism for 3-hydroxypropionate production. , 2023, 16, .		8
644	Accurate flux predictions using tissue-specific gene expression in plant metabolic modeling. Bioinformatics, 2023, 39, .	1.8	4
645	New Insights on Metabolic Features of Bacillus subtilis Based on Multistrain Genome-Scale Metabolic Modeling. International Journal of Molecular Sciences, 2023, 24, 7091.	1.8	8
646	A contribution of metabolic engineering to addressing medical problems: Metabolic flux analysis. Metabolic Engineering, 2023, , .	3.6	0
647	Metabolic compatibility and the rarity of prokaryote endosymbioses. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	0
648	Metabolic role of the hepatic valine/3-hydroxyisobutyrate (3-HIB) pathway in fatty liver disease. EBioMedicine, 2023, 91, 104569.	2.7	4
649	Integrative computational modeling to unravel novel potential biomarkers in hepatocellular carcinoma. Computers in Biology and Medicine, 2023, 159, 106957.	3.9	2
650	System metabolic engineering of Escherichia coli W for the production of 2-ketoisovalerate using unconventional feedstock. Frontiers in Bioengineering and Biotechnology, 0, 11 , .	2.0	2
681	Coupling constrained-based flux sampling and clustering to tackle cancer metabolic heterogeneity., 2023,,.		0
686	Flux exponent control predicts metabolic dynamics from network structure., 2023,,.		0
713	Machine Learning and Systems Level Insights into the Host–Pathogen Interactions of Post-infectious Reactive Arthritis. Algorithms for Intelligent Systems, 2023, , 729-744.	0.5	0
739	Modeling the Microbial Cells for Biotechnological Applications. Advances in Bioinformatics and Biomedical Engineering Book Series, 2023, , 121-151.	0.2	0
804	Hepatic glucose metabolism in the steatotic liver. Nature Reviews Gastroenterology and Hepatology, 0, , .	8.2	0

#	Article	IF	CITATIONS
820	Computational methods for detection of host-pathogen interactions. , 2024, , 103-130.		0
822	Development and applications of genome-scale metabolic network models. Advances in Applied Microbiology, 2024, , .	1.3	0
825	Flux Balance Analysis of Mammalian Cell Systems. Methods in Molecular Biology, 2024, , 119-134.	0.4	0
829	In Silico Models on Algal Cultivation and Processing. , 2023, , 989-1016.		0