

Bayesian deconvolution and quantification of metabolites using BATMAN

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Citation Report

#	ARTICLE	IF	CITATIONS
2	Dolphin: a tool for automatic targeted metabolite profiling using 1D and 2D ¹ H-NMR data. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 7967-7976.	1.9	55
4	Analytical Methods in Untargeted Metabolomics: State of the Art in 2015. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 23.	2.0	495
5	Dolphin 1D: Improving Automation of Targeted Metabolomics in Multi-matrix Datasets of ¹ H-NMR Spectra. <i>Advances in Intelligent Systems and Computing</i> , 2015, , 59-67.	0.5	3
6	A quantitative ¹ H NMR approach for evaluating the metabolic response of <i>Saccharomyces cerevisiae</i> to mild heat stress. <i>Metabolomics</i> , 2015, 11, 1612-1625.	1.4	25
7	Pattern Recognition-Based Approach for Identifying Metabolites in Nuclear Magnetic Resonance-Based Metabolomics. <i>Analytical Chemistry</i> , 2015, 87, 7148-7155.	3.2	20
8	¹ H NMR Metabolic Profiling of Plasma Reveals Additional Phenotypes in Knockout Mouse Models. <i>Journal of Proteome Research</i> , 2015, 14, 2036-2045.	1.8	10
9	NMR Spectroscopy for Metabolomics and Metabolic Profiling. <i>Analytical Chemistry</i> , 2015, 87, 133-146.	3.2	192
10	Succinate Accumulation and Ischemia-Induced Reperfusion Injury: Of Mice but Not Men, a Study in Renal Ischemia-Induced Reperfusion. <i>American Journal of Transplantation</i> , 2016, 16, 2741-2746.	2.6	24
11	Updates in metabolomics tools and resources: 2014-2015. <i>Electrophoresis</i> , 2016, 37, 86-110.	1.3	110
12	Assessment of dietary exposure and effect in humans: The role of NMR. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2016, 96, 58-72.	3.9	32
14	¹ H NMR metabolomic study of auxotrophic starvation in yeast using Multivariate Curve Resolution-Alternating Least Squares for Pathway Analysis. <i>Scientific Reports</i> , 2016, 6, 30982.	1.6	31
15	Software-assisted serum metabolite quantification using NMR. <i>Analytica Chimica Acta</i> , 2016, 934, 194-202.	2.6	28
16	Defective postreperfusion metabolic recovery directly associates with incident delayed graft function. <i>Kidney International</i> , 2016, 90, 181-191.	2.6	28
17	Introduction to Cheminformatics. <i>Current Protocols in Bioinformatics</i> , 2016, 53, 14.1.1-14.1.21.	25.8	15
18	Fragment Assembly Approach Based on Graph/Network Theory with Quantum Chemistry Verifications for Assigning Multidimensional NMR Signals in Metabolite Mixtures. <i>ACS Chemical Biology</i> , 2016, 11, 1030-1038.	1.6	21
19	SpinCouple: Development of a Web Tool for Analyzing Metabolite Mixtures via Two-Dimensional ¹ H-Resolved NMR Database. <i>Analytical Chemistry</i> , 2016, 88, 659-665.	3.2	61
20	Emerging applications of metabolomics in drug discovery and precision medicine. <i>Nature Reviews Drug Discovery</i> , 2016, 15, 473-484.	21.5	1,029
21	Recommendations and Standardization of Biomarker Quantification Using NMR-Based Metabolomics with Particular Focus on Urinary Analysis. <i>Journal of Proteome Research</i> , 2016, 15, 360-373.	1.8	122

#	ARTICLE	IF	CITATIONS
22	Bioinformatics tools for the analysis of NMR metabolomics studies focused on the identification of clinically relevant biomarkers. <i>Briefings in Bioinformatics</i> , 2016, 17, 541-552.	3.2	29
23	Evolution of Quantitative Measures in NMR: Quantum Mechanical qHNMR Advances Chemical Standardization of a Red Clover (<i>Trifolium pratense</i>) Extract. <i>Journal of Natural Products</i> , 2017, 80, 634-647.	1.5	42
24	Preprocessing and Pretreatment of Metabolomics Data for Statistical Analysis. <i>Advances in Experimental Medicine and Biology</i> , 2017, 965, 145-161.	0.8	34
25	Computational Strategies for Biological Interpretation of Metabolomics Data. <i>Advances in Experimental Medicine and Biology</i> , 2017, 965, 191-206.	0.8	8
26	Untargeted assignment and automatic integration of 1 H NMR metabolomic datasets using a multivariate curve resolution approach. <i>Analytica Chimica Acta</i> , 2017, 964, 55-66.	2.6	14
27	Facilitating the performance of qNMR analysis using automated quantification and results verification. <i>Magnetic Resonance in Chemistry</i> , 2017, 55, 813-820.	1.1	9
28	Quantitative NMR analysis of intra- and extracellular metabolism of mammalian cells: A tutorial. <i>Analytica Chimica Acta</i> , 2017, 980, 1-24.	2.6	109
30	The hypoxanthine-xanthine oxidase axis is not involved in the initial phase of clinical transplantation-related ischemia-reperfusion injury. <i>American Journal of Physiology - Renal Physiology</i> , 2017, 312, F457-F464.	1.3	7
31	Global metabolome changes induced by cyanobacterial blooms in three representative fish species. <i>Science of the Total Environment</i> , 2017, 590-591, 333-342.	3.9	14
32	NMR window of molecular complexity showing homeostasis in superorganisms. <i>Analyst</i> , 2017, 142, 4161-4172.	1.7	20
33	Application of BATMAN and BAYESIL for quantitative 1H-NMR based metabolomics of urine: discriminant analysis of lean, obese, and obese-diabetic rats. <i>Metabolomics</i> , 2017, 13, 1.	1.4	10
34	ASICS: an automatic method for identification and quantification of metabolites in complex 1D 1H NMR spectra. <i>Metabolomics</i> , 2017, 13, 1.	1.4	61
35	New Strategies and Challenges in Lung Proteomics and Metabolomics. An Official American Thoracic Society Workshop Report. <i>Annals of the American Thoracic Society</i> , 2017, 14, 1721-1743.	1.5	44
36	Diagnostic Applications of Nuclear Magnetic Resonance-Based Urinary Metabolomics. <i>Magnetic Resonance Insights</i> , 2017, 10, 1178623X1769434.	2.5	18
37	Metabolic changes in Medaka fish induced by cyanobacterial exposures in mesocosms: an integrative approach combining proteomic and metabolomic analyses. <i>Scientific Reports</i> , 2017, 7, 4051.	1.6	13
38	Complex mixtures by NMR and complex NMR for mixtures: experimental and publication challenges. <i>Magnetic Resonance in Chemistry</i> , 2017, 55, 22-28.	1.1	15
39	Time is ripe: maturation of metabolomics in chronobiology. <i>Current Opinion in Biotechnology</i> , 2017, 43, 70-76.	3.3	24
40	Deconvoluting interrelationships between concentrations and chemical shifts in urine provides a powerful analysis tool. <i>Nature Communications</i> , 2017, 8, 1662.	5.8	48

#	ARTICLE	IF	CITATIONS
41	[Dedicated to Prof. T. Okada and Prof. T. Nishioka: data science in chemistry]Visualizing Individual and Region-specific Microbialâ€“metabolite Relations by Important Variable Selection Using Machine Learning Approaches. Journal of Computer Aided Chemistry, 2017, 18, 31-41.	0.3	2
42	Comparison of global metabolite extraction strategies for soybeans using UHPLC-HRMS. Analytical and Bioanalytical Chemistry, 2017, 409, 6173-6180.	1.9	13
43	The integrative metabolomic-transcriptomic landscape of glioblastoma multiforme. Oncotarget, 2017, 8, 49178-49190.	0.8	22
44	Recommended strategies for spectral processing and post-processing of 1D 1H-NMR data of biofluids with a particular focus on urine. Metabolomics, 2018, 14, 31.	1.4	107
45	Comparison of computational approaches for identification and quantification of urinary metabolites in ¹ H NMR spectra. Analytical Methods, 2018, 10, 2129-2137.	1.3	4
46	Clinical Metabolomics. Methods in Molecular Biology, 2018, , .	0.4	5
47	NMR Analysis of Fecal Samples. Methods in Molecular Biology, 2018, 1730, 317-328.	0.4	12
48	Quantitative Analysis of Central Energy Metabolism in Cell Culture Samples. Methods in Molecular Biology, 2018, 1730, 329-342.	0.4	3
49	AQuA: An Automated Quantification Algorithm for High-Throughput NMR-Based Metabolomics and Its Application in Human Plasma. Analytical Chemistry, 2018, 90, 2095-2102.	3.2	67
50	Microenvironment-Derived Regulation of HIF Signaling Drives Transcriptional Heterogeneity in Glioblastoma Multiforme. Molecular Cancer Research, 2018, 16, 655-668.	1.5	21
51	Physiological effects caused by microcystin-producing and non-microcystin producing Microcystis aeruginosa on medaka fish: A proteomic and metabolomic study on liver. Environmental Pollution, 2018, 234, 523-537.	3.7	51
52	Deciphering the Underlying Metabolomic and Lipidomic Patterns Linked to Thermal Acclimation in <i>Saccharomyces cerevisiae</i> . Journal of Proteome Research, 2018, 17, 2034-2044.	1.8	14
53	Increased urinary osmolyte excretion indicates chronic kidney disease severity and progression rate. Nephrology Dialysis Transplantation, 2018, 33, 2156-2164.	0.4	46
54	Environmental metabolomics with data science for investigating ecosystem homeostasis. Progress in Nuclear Magnetic Resonance Spectroscopy, 2018, 104, 56-88.	3.9	43
55	NMR Analysis of Molecular Complexity. , 2018, , 461-489.		1
56	Applications of Metabolomics Analysis in Environmental Research. Comprehensive Analytical Chemistry, 2018, 82, 533-582.	0.7	15
57	Metabolomics Data Preprocessing: From Raw Data to Features for Statistical Analysis. Comprehensive Analytical Chemistry, 2018, , 197-225.	0.7	5
58	Comparative analysis of 1H NMR and 1Hâ€“13C HSQC NMR metabolomics to understand the effects of medium composition in yeast growth. Analytical Chemistry, 2018, 90, 12422-12430.	3.2	16

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59	Current Challenges in Plant Eco-Metabolomics. International Journal of Molecular Sciences, 2018, 19, 1385.	1.8	106
60	Recent Advances in Targeted and Untargeted Metabolomics by NMR and MS/NMR Methods. High-Throughput, 2018, 7, 9.	4.4	116
61	¹ H NMR metabolomics of microbial metabolites in the four MW agricultural biogas plant reactors: A case study of inhibition mirroring the acute rumen acidosis symptoms. Journal of Environmental Management, 2018, 222, 428-435.	3.8	14
62	High-Throughput Metabolomics by 1D NMR. Angewandte Chemie - International Edition, 2019, 58, 968-994.	7.2	254
63	Hochdurchsatz-Metabolomik mit 1D-NMR. Angewandte Chemie, 2019, 131, 980-1007.	1.6	8
64	NMR metabolomics: A look ahead. Journal of Magnetic Resonance, 2019, 306, 155-161.	1.2	129
65	Marine Metagenomics. , 2019, , .		1
66	New Aquaculture Technology Based on Host-Symbiotic Co-metabolism. , 2019, , 189-228.		0
67	Sample Preparation Focusing on Plant Omics. Advances in Experimental Medicine and Biology, 2019, 1073, 161-185.	0.8	4
70	Decoding the Metabolome and Lipidome of Child Malnutrition by Mass Spectrometric Techniques: Present Status and Future Perspectives. Analytical Chemistry, 2019, 91, 14784-14791.	3.2	10
71	NMR-Based Metabolomics. Methods in Molecular Biology, 2019, , .	0.4	9
73	Emerging Sample Treatments in Proteomics. Advances in Experimental Medicine and Biology, 2019, , .	0.8	6
74	Protocols for NMR Analysis in Livestock Metabolomics. Methods in Molecular Biology, 2019, 1996, 311-324.	0.4	8
75	Cancer metabolomic markers in urine: evidence, techniques and recommendations. Nature Reviews Urology, 2019, 16, 339-362.	1.9	99
76	Improvement of bioactive metabolite production in microbial cultures – A systems approach by OSMAC and deconvolution-based ¹ H NMR quantification. Magnetic Resonance in Chemistry, 2019, 57, 458-471.	1.1	10
77	Specificity of the metabolic signatures of fish from cyanobacteria rich lakes. Chemosphere, 2019, 226, 183-191.	4.2	18
78	Advances in the technologies for studying consortia of bacteria and cyanobacteria/microalgae in wastewaters. Critical Reviews in Biotechnology, 2019, 39, 709-731.	5.1	55
79	¹ H NMR metabolomic analysis of skin and blubber of bottlenose dolphins reveals a functional metabolic dichotomy. Comparative Biochemistry and Physiology Part D: Genomics and Proteomics, 2019, 30, 25-32.	0.4	9

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80	The impact of the method of extracting metabolic signal from 1H-NMR data on the classification of samples: A case study of binning and BATMAN in lung cancer. PLoS ONE, 2019, 14, e0211854.	1.1	7
81	Proof of concept for quantitative urine NMR metabolomics pipeline for large-scale epidemiology and genetics. International Journal of Epidemiology, 2019, 48, 978-993.	0.9	30
82	Probiotic or synbiotic alters the gut microbiota and metabolism in a randomised controlled trial of weight management in overweight adults. Beneficial Microbes, 2019, 10, 121-135.	1.0	118
83	Application of quantitative spectral deconvolution 1H NMR (qsd-NMR) in the simultaneous quantitative determination of creatinine and metformin in human urine. Analytical Methods, 2019, 11, 5487-5499.	1.3	4
84	PhenoMeNal: processing and analysis of metabolomics data in the cloud. GigaScience, 2019, 8, .	3.3	60
85	A field-invariant method for quantitative analysis with benchtop NMR. Journal of Magnetic Resonance, 2019, 298, 35-47.	1.2	25
86	Big Data and Databases for Metabolic Phenotyping. , 2019, , 329-367.		2
87	NMR-based metabolomics of biofluids in cancer. NMR in Biomedicine, 2019, 32, e3927.	1.6	29
88	Analysis of urinary metabolic alteration in type 2 diabetic rats treated with metformin using the metabolomics of quantitative spectral deconvolution 1H NMR spectroscopy. Microchemical Journal, 2020, 153, 104513.	2.3	10
89	RTEExtract: time-series NMR spectra quantification based on 3D surface ridge tracking. Bioinformatics, 2020, 36, 5068-5075.	1.8	7
90	Quantitative NMR-Based Biomedical Metabolomics: Current Status and Applications. Molecules, 2020, 25, 5128.	1.7	81
91	Mass Spectrometry Techniques in Emerging Pathogens Studies: COVID-19 Perspectives. Journal of the American Society for Mass Spectrometry, 2020, 31, 2013-2024.	1.2	62
92	Robust Metabolite Quantification from J-Compensated 2D 1H-13C-HSQC Experiments. Metabolites, 2020, 10, 449.	1.3	5
93	A comparison of high-throughput plasma NMR protocols for comparative untargeted metabolomics. Metabolomics, 2020, 16, 64.	1.4	18
94	Morphological and metabolic profiling of a tropical-adapted potato association panel subjected to water recovery treatment reveals new insights into plant vigor. Plant Journal, 2020, 103, 2193-2210.	2.8	10
95	MCR-ALS analysis of 1H NMR spectra by segments to study the zebrafish exposure to acrylamide. Analytical and Bioanalytical Chemistry, 2020, 412, 5695-5706.	1.9	10
96	NMR-based metabolomics and fluxomics: developments and future prospects. Analyst, The, 2020, 145, 2457-2472.	1.7	59
98	Targeting redox metabolism: the perfect storm induced by acrylamide poisoning in the brain. Scientific Reports, 2020, 10, 312.	1.6	14

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99	Advances in the use of microalgal-bacterial consortia for wastewater treatment: Community structures, interactions, economic resource reclamation, and study techniques. <i>Water Environment Research</i> , 2021, 93, 1217-1230.	1.3	25
100	Automated metabolic assignment: Semi-supervised learning in metabolic analysis employing two dimensional Nuclear Magnetic Resonance (NMR). <i>Computational and Structural Biotechnology Journal</i> , 2021, 19, 5047-5058.	1.9	7
101	NMR-Based Metabolomics. , 2021, , 353-369.		1
102	Joint Automatic Metabolite Identification and Quantification of a Set of ¹ H NMR Spectra. <i>Analytical Chemistry</i> , 2021, 93, 2861-2870.	3.2	11
103	Magnetic resonance spectroscopy for the study of CNS malignancies. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2021, 122, 23-41.	3.9	19
104	Metabolic alterations in meningioma reflect the clinical course. <i>BMC Cancer</i> , 2021, 21, 211.	1.1	5
105	Metabolic Interactions and Differences between Coronary Heart Disease and Diabetes Mellitus: A Pilot Study on Biomarker Determination and Pathogenesis. <i>Journal of Proteome Research</i> , 2021, 20, 2364-2373.	1.8	11
106	Automatic 1D 1H NMR Metabolite Quantification for Bioreactor Monitoring. <i>Metabolites</i> , 2021, 11, 157.	1.3	7
107	Data Processing Optimization in Untargeted Metabolomics of Urine Using Voigt Lineshape Model Non-Linear Regression Analysis. <i>Metabolites</i> , 2021, 11, 285.	1.3	7
108	Urine metabolite profiling of Indian Antarctic Expedition members: NMR spectroscopy-based metabolomic investigation. <i>Heliyon</i> , 2021, 7, e07114.	1.4	3
109	Improved Automated Quantification Algorithm (AQuA) and Its Application to NMR-Based Metabolomics of EDTA-Containing Plasma. <i>Analytical Chemistry</i> , 2021, 93, 8729-8738.	3.2	6
110	Bayesian Deconvolution and Quantification of Metabolites from J-Resolved NMR Spectroscopy. <i>Bayesian Analysis</i> , 2021, 16, .	1.6	3
111	Metabolomic signatures in elite cyclists: differential characterization of a seeming normal endocrine status regarding three serum hormones. <i>Metabolomics</i> , 2021, 17, 67.	1.4	2
112	Metabolomics-Guided Elucidation of Plant Abiotic Stress Responses in the 4IR Era: An Overview. <i>Metabolites</i> , 2021, 11, 445.	1.3	11
113	Chronic Kidney Disease Cohort Studies: A Guide to Metabolome Analyses. <i>Metabolites</i> , 2021, 11, 460.	1.3	4
114	NMR Metabolite Profiles of the Bivalve Mollusc <i>Mytilus galloprovincialis</i> Before and After Immune Stimulation With <i>Vibrio splendidus</i> . <i>Frontiers in Molecular Biosciences</i> , 2021, 8, 686770.	1.6	11
115	A review on the enzymes and metabolites identified by mass spectrometry from bacteria and microalgae involved in the degradation of high molecular weight PAHs. <i>Science of the Total Environment</i> , 2021, 797, 149035.	3.9	40
116	NMR spectroscopy in wine authentication: An official control perspective. <i>Comprehensive Reviews in Food Science and Food Safety</i> , 2021, 20, 2040-2062.	5.9	37

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117	Analysis of NMR Metabolomics Data. <i>Methods in Molecular Biology</i> , 2020, 2104, 61-97.	0.4	7
118	NMR-Based Urinary Metabolomics Applications. <i>Methods in Molecular Biology</i> , 2019, 2037, 215-229.	0.4	3
119	Automated Tools for the Analysis of 1D-NMR and 2D-NMR Spectra. <i>Methods in Molecular Biology</i> , 2019, 2037, 429-449.	0.4	9
120	Metabolite Identification in Complex Mixtures Using Nuclear Magnetic Resonance Spectroscopy. , 2017, 1-33.		2
121	Consecutive Queries to Assess Biological Correlation in NMR Metabolomics: Performance of Comprehensive Search of Multiplets over Typical 1D ¹ H NMR Database Search. <i>Journal of Proteome Research</i> , 2020, 19, 2977-2988.	1.8	9
122	Deep sexual dimorphism in adult medaka fish liver highlighted by multi-omic approach. <i>Scientific Reports</i> , 2016, 6, 32459.	1.6	43
123	CHAPTER 17. Polysaccharides as Major Carbon Sources in Environmental Biodiversity. <i>New Developments in NMR</i> , 0, , 369-395.	0.1	2
125	Metabolomics to understand placental biology: Where are we now?. <i>Tissue and Cell</i> , 2021, 73, 101663.	1.0	3
126	Metabolite Identification in Complex Mixtures Using Nuclear Magnetic Resonance Spectroscopy. , 2016, 1-32.		1
127	Metabolite Identification in Complex Mixtures Using Nuclear Magnetic Resonance Spectroscopy. , 2018, 1309-1341.		0
134	Multivariate analysis of NMR-based metabolomic data. <i>NMR in Biomedicine</i> , 2022, 35, e4638.	1.6	16
136	Polydextrose with and without <i>Bifidobacterium animalis</i> ssp. <i>lactis</i> 420 drives the prevalence of <i>Akkermansia</i> and improves liver health in a multi-compartmental obesogenic mice study. <i>PLoS ONE</i> , 2021, 16, e0260765.	1.1	7
137	Ultrafast 2D NMR for the analysis of complex mixtures. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2022, 130-131, 1-46.	3.9	21
138	Towards a semi-automated analysis of fish plasma by ¹ H NMR metabolomics - applications to aquaculture. <i>Aquaculture</i> , 2022, 552, 738028.	1.7	2
139	Biotechnological Enhancement of Probiotics through Co-Cultivation with Algae: Future or a Trend?. <i>Marine Drugs</i> , 2022, 20, 142.	2.2	11
140	Application of Machine Learning Solutions to Optimize Parameter Prediction to Enhance Automatic NMR Metabolite Profiling. <i>Metabolites</i> , 2022, 12, 283.	1.3	0
141	Fish metabolome from sub-urban lakes of the Paris area (France) and potential influence of noxious metabolites produced by cyanobacteria. <i>Chemosphere</i> , 2022, 296, 134035.	4.2	8
142	Novelty detection for metabolic dynamics established on breast cancer tissue using 2D NMR TOCSY spectra. <i>Computational and Structural Biotechnology Journal</i> , 2022, 20, 2965-2977.	1.9	2

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143	COLMARq: A Web Server for 2D NMR Peak Picking and Quantitative Comparative Analysis of Cohorts of Metabolomics Samples. <i>Analytical Chemistry</i> , 2022, 94, 8674-8682.	3.2	8
144	Time-Domain-Based Methyl Proton NMR with Absolute Quantitation Ability for Targeted Metabolomics. <i>Analytical Chemistry</i> , 2022, 94, 10062-10073.	3.2	1
145	NMR and Metabolomics—A Roadmap for the Future. <i>Metabolites</i> , 2022, 12, 678.	1.3	47
146	Practical Aspects of NMR-Based Metabolomics. <i>Handbook of Experimental Pharmacology</i> , 2022, , .	0.9	0
147	Systematic Review of NMR-Based Metabolomics Practices in Human Disease Research. <i>Metabolites</i> , 2022, 12, 963.	1.3	3
148	Advancing NMR-based metabolomics using complete reduction to amplitude frequency table: Cultivar differentiation of black ripe table olives as a case study. <i>Food Chemistry</i> , 2023, 405, 134868.	4.2	0
149	Problems, principles and progress in computational annotation of NMR metabolomics data. <i>Metabolomics</i> , 2022, 18, .	1.4	4
150	DEEP Picker1D and Voigt Fitter1D: a versatile tool set for the automated quantitative spectral deconvolution of complex 1D-NMR spectra. <i>Magnetic Resonance</i> , 2023, 4, 19-26.	0.8	2
151	Machine Learning in Automated Monitoring of Metabolic Changes Accompanying the Differentiation of Adipose-Tissue-Derived Human Mesenchymal Stem Cells Employing 1H-1H TOCSY NMR. <i>Metabolites</i> , 2023, 13, 352.	1.3	0
153	Metabolomics meets systems immunology. <i>EMBO Reports</i> , 2023, 24, .	2.0	10
154	Combination of peak-picking and binning for NMR-based untargeted metabolomics study. <i>Journal of Magnetic Resonance</i> , 2023, 351, 107429.	1.2	1
156	Fast 2D NMR for Metabolomics. , 2023, , 377-414.		0
158	Reprogramming the metabolomics of biofilms. , 2023, , 253-266.		0
159	Bioinformatic Tools for Clinical Metabolomics. , 2023, , 71-96.		0