Oliver Fiehn

List of Publications by Citations

226 papers	24,669 citations	66 h-index	156 g-index
255 ext. papers	30,448 ext. citations	8.5 avg, IF	7.52 L-index

#	Paper	IF	Citations
226	Metabolomics the link between genotypes and phenotypes. *Plant Molecular Biology*, **2002**, 48, 155-171	4.6	2565
225	Proposed minimum reporting standards for chemical analysis Chemical Analysis Working Group (CAWG) Metabolomics Standards Initiative (MSI). *Metabolomics*, **2007**, 3, 211-221	4.7	2472
224	Metabolite profiling for plant functional genomics. *Nature Biotechnology*, **2000**, 18, 1157-61	44.5	1701
223	MS-DIAL: data-independent MS/MS deconvolution for comprehensive metabolome analysis. *Nature Methods*, **2015**, 12, 523-6	21.6	1036
222	FiehnLib: mass spectral and retention index libraries for metabolomics based on quadrupole and time-of-flight gas chromatography/mass spectrometry. *Analytical Chemistry*, **2009**, 81, 10038-48	7.8	939
221	Metabolomics--the link between genotypes and phenotypes. *Plant Molecular Biology*, **2002**, 48, 155-71	4.6	879
220	Seven Golden Rules for heuristic filtering of molecular formulas obtained by accurate mass spectrometry. *BMC Bioinformatics*, **2007**, 8, 105	3.6	777
219	LipidBlast in silico tandem mass spectrometry database for lipid identification. *Nature Methods*, **2013**, 10, 755-8	21.6	550
218	Metabolomic database annotations via query of elemental compositions: mass accuracy is insufficient even at less than 1 ppm. *BMC Bioinformatics*, **2006**, 7, 234	3.6	470
217	Quality control for plant metabolomics: reporting MSI-compliant studies. *Plant Journal*, **2008**, 53, 691-704	4.9	457
216	Toward Merging Untargeted and Targeted Methods in Mass Spectrometry-Based Metabolomics and Lipidomics. *Analytical Chemistry*, **2016**, 88, 524-45	7.8	438
215	Analysis of highly polar compounds of plant origin: combination of hydrophilic interaction chromatography and electrospray ion trap mass spectrometry. *Analytical Biochemistry*, **2002**, 301, 298-307	3.1	407
214	A comprehensive urinary metabolomic approach for identifying kidney cancerr. *Analytical Biochemistry*, **2007**, 363, 185-95	3.1	405
213	Comprehensive analysis of lipids in biological systems by liquid chromatography-mass spectrometry. *TrAC - Trends in Analytical Chemistry*, **2014**, 61, 192-206	14.6	368
212	Advances in structure elucidation of small molecules using mass spectrometry. *Bioanalytical Reviews*, **2010**, 2, 23-60	1	343
211	Metabolomics enables precision medicine: "A White Paper, Community Perspective". *Metabolomics*, **2016**, 12, 149	4.7	327
210	Mass spectrometry-based metabolic profiling reveals different metabolite patterns in invasive ovarian carcinomas and ovarian borderline tumors. *Cancer Research*, **2006**, 66, 10795-804	10.1	323

209	Metabolomics Workbench: An international repository for metabolomics data and metadata, metabolite standards, protocols, tutorials and training, and analysis tools. *Nucleic Acids Research*, **2016**, 44, D463-70	20.1	309
208	The metabolomics standards initiative (MSI). *Metabolomics*, **2007**, 3, 175-178	4.7	304
207	Plasma metabolomic profiles reflective of glucose homeostasis in non-diabetic and type 2 diabetic obese African-American women. *PLoS ONE*, **2010**, 5, e15234	3.7	294
206	Hydrogen Rearrangement Rules: Computational MS/MS Fragmentation and Structure Elucidation Using MS-FINDER Software. *Analytical Chemistry*, **2016**, 88, 7946-58	7.8	292
205	Metabolomics by Gas Chromatography-Mass Spectrometry: Combined Targeted and Untargeted Profiling. *Current Protocols in Molecular Biology*, **2016**, 114, 30.4.1-30.4.32	2.9	291
204	Software Tools and Approaches for Compound Identification of LC-MS/MS Data in Metabolomics. *Metabolites*, **2018**, 8,	5.6	253
203	The metabolome regulates the epigenetic landscape during naive-to-primed human embryonic stem cell transition. *Nature Cell Biology*, **2015**, 17, 1523-35	23.4	249
202	Human gut microbiome adopts an alternative state following small bowel transplantation. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 17187-92	11.5	243
201	Metabolite profiling of human colon carcinoma--deregulation of TCA cycle and amino acid turnover. *Molecular Cancer*, **2008**, 7, 72	42.1	235
200	Harmonizing lipidomics: NIST interlaboratory comparison exercise for lipidomics using SRM 1950-Metabolites in Frozen Human Plasma. *Journal of Lipid Research*, **2017**, 58, 2275-2288	6.3	220
199	Identifying metabolites by integrating metabolome databases with mass spectrometry cheminformatics. *Nature Methods*, **2018**, 15, 53-56	21.6	200
198	Metabolite Measurement: Pitfalls to Avoid and Practices to Follow. *Annual Review of Biochemistry*, **2017**, 86, 277-304	29.1	196
197	Identification of small molecules using accurate mass MS/MS search. *Mass Spectrometry Reviews*, **2018**, 37, 513-532	11	194
196	Metabolite profiling of Chlamydomonas reinhardtii under nutrient deprivation. *Plant Physiology*, **2005**, 139, 1995-2005	6.6	181
195	Extending the breadth of metabolite profiling by gas chromatography coupled to mass spectrometry. *TrAC - Trends in Analytical Chemistry*, **2008**, 27, 261-269	14.6	178
194	Metabolite identification: are you sure? And how do your peers gauge your confidence?. *Metabolomics*, **2014**, 10, 350-353	4.7	162
193	MetaMapp: mapping and visualizing metabolomic data by integrating information from biochemical pathways and chemical and mass spectral similarity. *BMC Bioinformatics*, **2012**, 13, 99	3.6	161
192	Proteomics reveals NNMT as a master metabolic regulator of cancer-associated fibroblasts. *Nature*, **2019**, 569, 723-728	50.4	155

191	A Cardiovascular Disease-Linked Gut Microbial Metabolite Acts via Adrenergic Receptors. *Cell*, **2020**, 180, 862-877.e22	56.2	146
190	A lipidome atlas in MS-DIAL 4. *Nature Biotechnology*, **2020**, 38, 1159-1163	44.5	141
189	MINEs: open access databases of computationally predicted enzyme promiscuity products for untargeted metabolomics. *Journal of Cheminformatics*, **2015**, 7, 44	8.6	137
188	High quality metabolomic data for Chlamydomonas reinhardtii. *Plant Methods*, **2008**, 4, 7	5.8	136
187	Chemical Similarity Enrichment Analysis (ChemRICH) as alternative to biochemical pathway mapping for metabolomic datasets. *Scientific Reports*, **2017**, 7, 14567	4.9	133
186	Validating Quantitative Untargeted Lipidomics Across Nine Liquid Chromatography-High-Resolution Mass Spectrometry Platforms. *Analytical Chemistry*, **2017**, 89, 12360-12368	7.8	123
185	The volatile compound BinBase mass spectral database. *BMC Bioinformatics*, **2011**, 12, 321	3.6	123
184	Comparative metabolomics of estrogen receptor positive and estrogen receptor negative breast cancer: alterations in glutamine and beta-alanine metabolism. *Journal of Proteomics*, **2013**, 94, 279-88	3.9	113
183	Associations of Trimethylamine N-Oxide With Nutritional and Inflammatory Biomarkers and Cardiovascular Outcomes in Patients New to Dialysis. *Journal of Renal Nutrition*, **2015**, 25, 351-6	3	112
182	Setup and Annotation of Metabolomic Experiments by Integrating Biological and Mass Spectrometric Metadata. *Lecture Notes in Computer Science*, **2005**, 224-239	0.9	108
181	Remodeling of central metabolism in invasive breast cancer compared to normal breast tissue - a GC-TOFMS based metabolomics study. *BMC Genomics*, **2012**, 13, 334	4.5	102
180	Bacteria engineered to produce IL-22 in intestine induce expression of REG3G to reduce ethanol-induced liver disease in mice. *Gut*, **2019**, 68, 1504-1515	19.2	100
179	Critical Assessment of Small Molecule Identification 2016: automated methods. *Journal of Cheminformatics*, **2017**, 9, 22	8.6	89
178	Using fragmentation trees and mass spectral trees for identifying unknown compounds in metabolomics. *TrAC - Trends in Analytical Chemistry*, **2015**, 69, 52-61	14.6	88
177	The Chemical Translation Service--a web-based tool to improve standardization of metabolomic reports. *Bioinformatics*, **2010**, 26, 2647-8	7.2	86
176	Mass Spectral Feature List Optimizer (MS-FLO): A Tool To Minimize False Positive Peak Reports in Untargeted Liquid Chromatography-Mass Spectroscopy (LC-MS) Data Processing. *Analytical Chemistry*, **2017**, 89, 3250-3255	7.8	85
175	MetaMapR: pathway independent metabolomic network analysis incorporating unknowns. *Bioinformatics*, **2015**, 31, 2757-60	7.2	82
174	Systematic Error Removal Using Random Forest for Normalizing Large-Scale Untargeted Lipidomics Data. *Analytical Chemistry*, **2019**, 91, 3590-3596	7.8	82

173	Preanalytical Processing and Biobanking Procedures of Biological Samples for Metabolomics Research: A White Paper, Community Perspective (for "Precision Medicine and Pharmacometabolomics Task Group"-The Metabolomics Society Initiative). *Clinical Chemistry*, **2018**, 64, 1158-1182	5.5	81
172	Metabolite profiling in blood plasma. *Methods in Molecular Biology*, **2007**, 358, 3-17	1.4	81
171	System response of metabolic networks in Chlamydomonas reinhardtii to total available ammonium. *Molecular and Cellular Proteomics*, **2012**, 11, 973-88	7.6	78
170	Structure Annotation of All Mass Spectra in Untargeted Metabolomics. *Analytical Chemistry*, **2019**, 91, 2155-2162	7.8	78
169	Untargeted metabolomics identifies trimethyllysine, a TMAO-producing nutrient precursor, as a predictor of incident cardiovascular disease risk. *JCI Insight*, **2018**, 3,	9.9	78
168	SetupX--a public study design database for metabolomic projects. *Pacific Symposium on Biocomputing Pacific Symposium on Biocomputing*, **2007**, 169-80	1.3	76
167	Metabolomics of human breast cancer: new approaches for tumor typing and biomarker discovery. *Genome Medicine*, **2012**, 4, 37	14.4	74
166	Increasing lipidomic coverage by selecting optimal mobile-phase modifiers in LCMS of blood plasma. *Metabolomics*, **2016**, 12, 1	4.7	71
165	Diacetylspermine Is a Novel Prediagnostic Serum Biomarker for Non-Small-Cell Lung Cancer and Has Additive Performance With Pro-Surfactant Protein B. *Journal of Clinical Oncology*, **2015**, 33, 3880-6	2.2	69
164	Metabolomics Standards Workshop and the development of international standards for reporting metabolomics experimental results. *Briefings in Bioinformatics*, **2006**, 7, 159-65	13.4	68
163	MS2Analyzer: A software for small molecule substructure annotations from accurate tandem mass spectra. *Analytical Chemistry*, **2014**, 86, 10724-31	7.8	67
162	Applying in-silico retention index and mass spectra matching for identification of unknown metabolites in accurate mass GC-TOF mass spectrometry. *Analytical Chemistry*, **2011**, 83, 5895-902	7.8	67
161	Metabox: A Toolbox for Metabolomic Data Analysis, Interpretation and Integrative Exploration. *PLoS ONE*, **2017**, 12, e0171046	3.7	67
160	Comprehensive comparison of in silico MS/MS fragmentation tools of the CASMI contest: database boosting is needed to achieve 93% accuracy. *Journal of Cheminformatics*, **2017**, 9, 32	8.6	64
159	Pharmacometabolomics of response to sertraline and to placebo in major depressive disorder - possible role for methoxyindole pathway. *PLoS ONE*, **2013**, 8, e68283	3.7	62
158	Extending biochemical databases by metabolomic surveys. *Journal of Biological Chemistry*, **2011**, 286, 23637-43	5.4	61
157	Metabolomic markers of altered nucleotide metabolism in early stage adenocarcinoma. *Cancer Prevention Research*, **2015**, 8, 410-8	3.2	59
156	Association genetics of the loblolly pine (Pinus taeda, Pinaceae) metabolome. *New Phytologist*, **2012**, 193, 890-902	9.8	59

155	Genomic and experimental evidence for multiple metabolic functions in the RidA/YjgF/YER057c/UK114 (Rid) protein family. *BMC Genomics*, **2015**, 16, 382	4.5	58
154	Generating the Blood Exposome Database Using a Comprehensive Text Mining and Database Fusion Approach. *Environmental Health Perspectives*, **2019**, 127, 97008	8.4	57
153	'Nothing of chemistry disappears in biology': the Top 30 damage-prone endogenous metabolites. *Biochemical Society Transactions*, **2016**, 44, 961-71	5.1	56
152	A non-hallucinogenic psychedelic analogue with therapeutic potential. *Nature*, **2021**, 589, 474-479	50.4	56
151	Metabolic variations in different citrus rootstock cultivars associated with different responses to Huanglongbing. *Plant Physiology and Biochemistry*, **2016**, 107, 33-44	5.4	55
150	LC-MS-Based Lipidomics and Automated Identification of Lipids Using the LipidBlast In-Silico MS/MS Library. *Methods in Molecular Biology*, **2017**, 1609, 149-170	1.4	52
149	An in silico MS/MS library for automatic annotation of novel FAHFA lipids. *Journal of Cheminformatics*, **2015**, 7, 53	8.6	51
148	Systemic Metabolomic Changes in Blood Samples of Lung Cancer Patients Identified by Gas Chromatography Time-of-Flight Mass Spectrometry. *Metabolites*, **2015**, 5, 192-210	5.6	51
147	Chronic, Intermittent Microdoses of the Psychedelic ,-Dimethyltryptamine (DMT) Produce Positive Effects on Mood and Anxiety in Rodents. *ACS Chemical Neuroscience*, **2019**, 10, 3261-3270	5.7	49
146	Primed mesenchymal stem cells package exosomes with metabolites associated with immunomodulation. *Biochemical and Biophysical Research Communications*, **2019**, 512, 729-735	3.4	49
145	Increasing Compound Identification Rates in Untargeted Lipidomics Research with Liquid Chromatography Drift Time-Ion Mobility Mass Spectrometry. *Analytical Chemistry*, **2018**, 90, 10758-10764	7.8	49
144	SPLASH, a hashed identifier for mass spectra. *Nature Biotechnology*, **2016**, 34, 1099-1101	44.5	48
143	Insights into myalgic encephalomyelitis/chronic fatigue syndrome phenotypes through comprehensive metabolomics. *Scientific Reports*, **2018**, 8, 10056	4.9	48
142	Metabolomic characteristics of cholesterol-induced non-obese nonalcoholic fatty liver disease in mice. *Scientific Reports*, **2017**, 7, 6120	4.9	45
141	Investigation of metabolomic blood biomarkers for detection of adenocarcinoma lung cancer. *Cancer Epidemiology Biomarkers and Prevention*, **2015**, 24, 1716-23	4	44
140	Retip: Retention Time Prediction for Compound Annotation in Untargeted Metabolomics. *Analytical Chemistry*, **2020**, 92, 7515-7522	7.8	44
139	Adipocyte-Induced FABP4 Expression in Ovarian Cancer Cells Promotes Metastasis and Mediates Carboplatin Resistance. *Cancer Research*, **2020**, 80, 1748-1761	10.1	44
138	Cofactor symbiosis for enhanced algal growth, biofuel production, and wastewater treatment. *Algal Research*, **2016**, 17, 308-315	5	43

137	Integrated Metabolomics and Proteomics Highlight Altered Nicotinamide- and Polyamine Pathways in Lung Adenocarcinoma. *Carcinogenesis*, **2017**, 38, 271-280	4.6	42
136	International Ring Trial of a High Resolution Targeted Metabolomics and Lipidomics Platform for Serum and Plasma Analysis. *Analytical Chemistry*, **2019**, 91, 14407-14416	7.8	42
135	Gut microbial and metabolomic profiles after fecal microbiota transplantation in pediatric ulcerative colitis patients. *FEMS Microbiology Ecology*, **2018**, 94,	4.3	41
134	Obesogenic diets alter metabolism in mice. *PLoS ONE*, **2018**, 13, e0190632	3.7	38
133	LipidBlast templates as flexible tools for creating new in-silico tandem mass spectral libraries. *Analytical Chemistry*, **2014**, 86, 11024-7	7.8	38
132	Metabolite profiling of Arabidopsis inoculated with Alternaria brassicicola reveals that ascorbate reduces disease severity. *Molecular Plant-Microbe Interactions*, **2012**, 25, 1628-38	3.6	38
131	Metabolic changes associated with methionine stress sensitivity in MDA-MB-468 breast cancer cells. *Cancer & Metabolism*, **2016**, 4, 9	5.4	38
130	Retention projection enables accurate calculation of liquid chromatographic retention times across labs and methods. *Journal of Chromatography A*, **2015**, 1412, 43-51	4.5	37
129	Systemic alterations in the metabolome of diabetic NOD mice delineate increased oxidative stress accompanied by reduced inflammation and hypertriglyceremia. *American Journal of Physiology - Endocrinology and Metabolism*, **2015**, 308, E978-89	6	37
128	TFPa/HADHA is required for fatty acid beta-oxidation and cardiolipin re-modeling in human cardiomyocytes. *Nature Communications*, **2019**, 10, 4671	17.4	37
127	Epimetabolites: discovering metabolism beyond building and burning. *Current Opinion in Chemical Biology*, **2017**, 36, 70-76	9.7	36
126	Eighteen new oleaginous yeast species. *Journal of Industrial Microbiology and Biotechnology*, **2016**, 43, 887-900	4.2	36
125	Perspective: Dietary Biomarkers of Intake and Exposure-Exploration with Omics Approaches. *Advances in Nutrition*, **2020**, 11, 200-215	10	35
124	RORα is a targetable master regulator of cholesterol biosynthesis in a cancer subtype. *Nature Communications*, **2019**, 10, 4621	17.4	35
123	Lipidomic Analysis of Chlamydomonas reinhardtii under Nitrogen and Sulfur Deprivation. *PLoS ONE*, **2015**, 10, e0137948	3.7	35
122	Metabolic Reprogramming by MYCN Confers Dependence on the Serine-Glycine-One-Carbon Biosynthetic Pathway. *Cancer Research*, **2019**, 79, 3837-3850	10.1	34
121	Mass spectral fragmentation of trimethylsilylated small molecules. *Mass Spectrometry Reviews*, **2018**, 37, 245-257	11	33
120	Structure of human GABA receptor in an inactive state. *Nature*, **2020**, 584, 304-309	50.4	32

119	Inborn Errors of Metabolism in the Era of Untargeted Metabolomics and Lipidomics. *Metabolites*, **2019**, 9,	5.6	31
118	Serum phosphatidylethanolamine levels distinguish benign from malignant solitary pulmonary nodules and represent a potential diagnostic biomarker for lung cancer. *Cancer Biomarkers*, **2016**, 16, 609-17	3.8	31
117	Integrating bioinformatics approaches for a comprehensive interpretation of metabolomics datasets. *Current Opinion in Biotechnology*, **2018**, 54, 1-9	11.4	30
116	Hunter-gatherer tobacco smoking: earliest evidence from the Pacific Northwest Coast of North America. *Journal of Archaeological Science*, **2013**, 40, 1397-1407	2.9	30
115	Metabolic Control over mTOR-Dependent Diapause-like State. *Developmental Cell*, **2020**, 52, 236-250.e7	10.2	29
114	Generation and quality control of lipidomics data for the alzheimer's disease neuroimaging initiative cohort. *Scientific Data*, **2018**, 5, 180263	8.2	29
113	Efficiency of short, small-diameter columns for reversed-phase liquid chromatography under practical operating conditions. *Journal of Chromatography A*, **2015**, 1383, 47-57	4.5	28
112	Interstitial Cystitis-Associated Urinary Metabolites Identified by Mass-Spectrometry Based Metabolomics Analysis. *Scientific Reports*, **2016**, 6, 39227	4.9	27
111	Diabetes Associated Metabolomic Perturbations in NOD Mice. *Metabolomics*, **2015**, 11, 425-437	4.7	26
110	A family of metal-dependent phosphatases implicated in metabolite damage-control. *Nature Chemical Biology*, **2016**, 12, 621-7	11.7	26
109	Sets of coregulated serum lipids are associated with Alzheimer's disease pathophysiology. *Alzheimerls and Dementia: Diagnosis, Assessment and Disease Monitoring*, **2019**, 11, 619-627	5.2	24
108	Changes in plasma metabolites and glucose homeostasis during omega-3 polyunsaturated fatty acid supplementation in women with polycystic ovary syndrome. *BBA Clinical*, **2016**, 5, 179-85		24
107	Omega-6 and omega-3 oxylipins are implicated in soybean oil-induced obesity in mice. *Scientific Reports*, **2017**, 7, 12488	4.9	23
106	17-□estradiol ameliorates age-associated sarcopenia and improves late-life physical function in male mice but not in females or castrated males. *Aging Cell*, **2019**, 18, e12920	9.9	23
105	Alternative outlets for sustaining photosynthetic electron transport during dark-to-light transitions. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 11518-11527	11.5	22
104	Using untargeted metabolomics for detecting exposome compounds. *Current Opinion in Toxicology*, **2018**, 8, 87-92	4.4	22
103	Tracking Polymicrobial Metabolism in Cystic Fibrosis Airways: Metabolism and Physiology Are Influenced by -Derived Metabolites. *MSphere*, **2018**, 3,	5	22
102	Multiplatform Mass Spectrometry-Based Approach Identifies Extracellular Glycolipids of the Yeast Rhodotorula babjevae UCDFST 04-877. *Journal of Natural Products*, **2016**, 79, 2580-2589	4.9	21

101	Patterns of metabolite changes identified from large-scale gene perturbations in Arabidopsis using a genome-scale metabolic network. *Plant Physiology*, **2015**, 167, 1685-98	6.6	20
100	Using Accurate Mass Gas Chromatography-Mass Spectrometry with the MINE Database for Epimetabolite Annotation. *Analytical Chemistry*, **2017**, 89, 10171-10180	7.8	20
99	Pharmacometabolomic Assessment of Metformin in Non-diabetic, African Americans. *Frontiers in Pharmacology*, **2016**, 7, 135	5.6	20
98	A Comprehensive Plasma Metabolomics Dataset for a Cohort of Mouse Knockouts within the International Mouse Phenotyping Consortium. *Metabolites*, **2019**, 9,	5.6	19
97	Metabolite-related dietary patterns and the development of islet autoimmunity. *Scientific Reports*, **2019**, 9, 14819	4.9	19
96	Plasma amino acid and metabolite signatures tracking diabetes progression in the UCD-T2DM rat model. *American Journal of Physiology - Endocrinology and Metabolism*, **2016**, 310, E958-69	6	19
95	Quantum Chemistry Calculations for Metabolomics. *Chemical Reviews*, **2021**, 121, 5633-5670	68.1	18
94	Distinctive Patterns of Flavonoid Biosynthesis in Roots and Nodules of and Revealed by Metabolomic and Gene Expression Profiles. *Frontiers in Plant Science*, **2018**, 9, 1463	6.2	18
93	Serum triglycerides in Alzheimer disease: Relation to neuroimaging and CSF biomarkers. *Neurology*, **2020**, 94, e2088-e2098	6.5	17
92	Evaluation of metabolomics profiles of grain from maize hybrids derived from near-isogenic GM positive and negative segregant inbreds demonstrates that observed differences cannot be attributed unequivocally to the GM trait. *Metabolomics*, **2016**, 12, 82	4.7	17
91	Impact of post-collection freezing delay on the reliability of serum metabolomics in samples reflecting the California mid-term pregnancy biobank. *Metabolomics*, **2018**, 14, 151	4.7	17
90	Biosynthesis of the microtubule-destabilizing diterpene pseudolaric acid B from golden larch involves an unusual diterpene synthase. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 974-979	11.5	16
89	Diversity of Neuropeptide Cell-Cell Signaling Molecules Generated by Proteolytic Processing Revealed by Neuropeptidomics Mass Spectrometry. *Journal of the American Society for Mass Spectrometry*, **2018**, 29, 807-816	3.5	16
88	Discovery of synthesis and secretion of polyol esters of fatty acids by four basidiomycetous yeast species in the order Sporidiobolales. *Journal of Industrial Microbiology and Biotechnology*, **2017**, 44, 923-936	4.2	15
87	Informatics for improved algal taxonomic classification and research: A case study of UTEX 2341. *Algal Research*, **2015**, 12, 545-549	5	15
86	The use of metabolomics in population-based research. *Advances in Nutrition*, **2014**, 5, 785-8	10	15
85	Exercise plasma metabolomics and xenometabolomics in obese, sedentary, insulin-resistant women: impact of a fitness and weight loss intervention. *American Journal of Physiology - Endocrinology and Metabolism*, **2019**, 317, E999-E1014	6	14
84	Intratracheal instillation of pravastatin for the treatment of murine allergic asthma: a lung-targeted approach to deliver statins. *Physiological Reports*, **2015**, 3, e12352	2.6	14

83	Temporal metabolomic responses of cultured HepG2 liver cells to high fructose and high glucose exposures. *Metabolomics*, **2015**, 11, 707-721	4.7	14
82	Using a lipidomics approach for nutritional phenotyping in response to a test meal containing gamma-linolenic acid. *Metabolomics*, **2016**, 12, 1	4.7	14
81	Human-like hyperplastic prostate with low ZIP1 induced solely by Zn deficiency in rats. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E11091-E11100	11.5	14
80	Mevalonate Pathway Promiscuity Enables Noncanonical Terpene Production. *ACS Synthetic Biology*, **2019**, 8, 2238-2247	5.7	13
79	Tissue-Specific Transcriptome Analysis Reveals Candidate Genes for Terpenoid and Phenylpropanoid Metabolism in the Medicinal Plant. *G3: Genes, Genomes, Genetics*, **2019**, 9, 807-816	3.2	13
78	Multi-Omics Analyses Detail Metabolic Reprogramming in Lipids, Carnitines, and Use of Glycolytic Intermediates between Prostate Small Cell Neuroendocrine Carcinoma and Prostate Adenocarcinoma. *Metabolites*, **2019**, 9,	5.6	13
77	Longitudinal Metabolome-Wide Signals Prior to the Appearance of a First Islet Autoantibody in Children Participating in the TEDDY Study. *Diabetes*, **2020**, 69, 465-476	0.9	13
76	Predicting in silico electron ionization mass spectra using quantum chemistry. *Journal of Cheminformatics*, **2020**, 12, 63	8.6	12
75	Evidence that the metabolite repair enzyme NAD(P)HX epimerase has a moonlighting function. *Bioscience Reports*, **2018**, 38,	4.1	12
74	Environmental Tobacco Smoke Alters Metabolic Systems in Adult Rats. *Chemical Research in Toxicology*, **2016**, 29, 1818-1827	4	12
73	Sex-associated differences in baseline urinary metabolites of healthy adults. *Scientific Reports*, **2018**, 8, 11883	4.9	12
72	The Human Serum Metabolome of Vitamin B-12 Deficiency and Repletion, and Associations with Neurological Function in Elderly Adults. *Journal of Nutrition*, **2017**, 147, 1839-1849	4.1	12
71	Cervicovaginal Microbiome Composition Is Associated with Metabolic Profiles in Healthy Pregnancy. *MBio*, **2020**, 11,	7.8	12
70	Mesothelial Cell HIF1Expression Is Metabolically Downregulated by Metformin to Prevent Oncogenic Tumor-Stromal Crosstalk. *Cell Reports*, **2019**, 29, 4086-4098.e6	10.6	12
69	The Emerging and Diverse Roles of Bis(monoacylglycero) Phosphate Lipids in Cellular Physiology and Disease. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	11
68	Abrogation of esophageal carcinoma development in miR-31 knockout rats. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 6075-6085	11.5	11
67	Simultaneous production of intracellular triacylglycerols and extracellular polyol esters of fatty acids by Rhodotorula babjevae and Rhodotorula aff. paludigena. *Journal of Industrial Microbiology and Biotechnology*, **2017**, 44, 1397-1413	4.2	11
66	Metabolomics unveils the influence of dietary phytochemicals on residual pesticide concentrations in honey bees. *Environment International*, **2021**, 152, 106503	12.9	11

65	Using MS-FINDER for identifying 19 natural products in the CASMI 2016 contest. *Phytochemistry Letters*, **2017**, 21, 306-312	1.9	10
64	Remodeling Lipids in the Transition from Chronic Liver Disease to Hepatocellular Carcinoma. *Cancers*, **2020**, 13,	6.6	10
63	Pharmacophore hybridisation and nanoscale assembly to discover self-delivering lysosomotropic new-chemical entities for cancer therapy. *Nature Communications*, **2020**, 11, 4615	17.4	10
62	Serum and urinary metabolomics and outcomes in cirrhosis. *PLoS ONE*, **2019**, 14, e0223061	3.7	9
61	The metabolite repair enzyme Nit1 is a dual-targeted amidase that disposes of damaged glutathione in. *Biochemical Journal*, **2019**, 476, 683-697	3.8	9
60	In-Silico-Generated Library for Sensitive Detection of 2-Dimethylaminoethylamine Derivatized FAHFA Lipids Using High-Resolution Tandem Mass Spectrometry. *Analytical Chemistry*, **2020**, 92, 5960-5968	7.8	9
59	Integration of metabolomics, transcriptomics, and microRNA expression profiling reveals a miR-143-HK2-glucose network underlying zinc-deficiency-associated esophageal neoplasia. *Oncotarget*, **2017**, 8, 81910-81925	3.3	9
58	Salvage of the 5-deoxyribose byproduct of radical SAM enzymes. *Nature Communications*, **2018**, 9, 3105	17.4	9
57	Prioritization of metabolic genes as novel therapeutic targets in estrogen-receptor negative breast tumors using multi-omics data and text mining. *Oncotarget*, **2019**, 10, 3894-3909	3.3	9
56	A metabolome atlas of the aging mouse brain. *Nature Communications*, **2021**, 12, 6021	17.4	9
55	Skeletal muscle interstitial fluid metabolomics at rest and associated with an exercise bout: application in rats and humans. *American Journal of Physiology - Endocrinology and Metabolism*, **2019**, 316, E43-E53	6	9
54	Hexosamine biosynthetic pathway and O-GlcNAc-processing enzymes regulate daily rhythms in protein O-GlcNAcylation. *Nature Communications*, **2021**, 12, 4173	17.4	9
53	Impact of thiamine metabolites and spent medium from Chlorella sorokiniana on metabolism in the green algae Auxenochlorella protothecioides. *Algal Research*, **2018**, 33, 197-208	5	8
52	MS-DIAL 4: accelerating lipidomics using an MS/MS, CCS, and retention time atlas		8
51	Rethinking the PDH Bypass and GABA Shunt as Thiamin-Deficiency Workarounds. *Plant Physiology*, **2019**, 181, 389-393	6.6	8
50	l-Arginine supplementation in severe asthma. *JCI Insight*, **2020**, 5,	9.9	7
49	Mid-gestation serum lipidomic profile associations with spontaneous preterm birth are influenced by body mass index. *PLoS ONE*, **2020**, 15, e0239115	3.7	7
48	Spectral entropy outperforms MS/MS dot product similarity for small-molecule compound identification. *Nature Methods*, **2021**, 18, 1524-1531	21.6	7

47	Indoxyl sulfate, a gut microbiome-derived uremic toxin, is associated with psychic anxiety and its functional magnetic resonance imaging-based neurologic signature. *Scientific Reports*, **2021**, 11, 21011	4.9	7
46	Hyperosmotic stress in Chlamydomonas induces metabolomic changes in biosynthesis of complex lipids. *European Journal of Phycology*, **2020**, 55, 11-29	2.2	7
45	Plasma lipidomics profile in pregnancy and gestational diabetes risk: a prospective study in a multiracial/ethnic cohort. *BMJ Open Diabetes Research and Care*, **2021**, 9,	4.5	7
44	Distinction of synthetic dl-□ocopherol from natural vitamin E (d-□ocopherol) by reversed-phase liquid chromatography. Enhanced selectivity of a polymeric C18 stationary phase at low temperature and/or at high pressure. *Journal of Chromatography A*, **2016**, 1450, 45-52	4.5	7
43	Novel plasma biomarker of atenolol-induced hyperglycemia identified through a metabolomics-genomics integrative approach. *Metabolomics*, **2016**, 12, 1	4.7	7
42	Functional characterization of the cytochrome P450 monooxygenase CYP71AU87 indicates a role in marrubiin biosynthesis in the medicinal plant Marrubium vulgare. *BMC Plant Biology*, **2019**, 19, 114	5.3	6
41	L-arginine as a potential GLP-1-mediated immunomodulator of Th17-related cytokines in people with obesity and asthma. *Obesity Science and Practice*, **2021**, 7, 339-345	2.6	6
40	Sugar Alcohols Have a Key Role in Pathogenesis of Chronic Liver Disease and Hepatocellular Carcinoma in Whole Blood and Liver Tissues. *Cancers*, **2020**, 12,	6.6	5
39	Comparative analysis of obesity-related cardiometabolic and renal biomarkers in human plasma and serum. *Scientific Reports*, **2019**, 9, 15385	4.9	5
38	Acarbose has sex-dependent and -independent effects on age-related physical function, cardiac health, and lipid biology. *JCI Insight*, **2020**, 5,	9.9	5
37	Metabolomics-related nutrient patterns at seroconversion and risk of progression to type 1 diabetes. *Pediatric Diabetes*, **2020**, 21, 1202-1209	3.6	5
36	Comprehensive metabolomic study of the response of HK-2 cells to hyperglycemic hypoxic diabetic-like milieu. *Scientific Reports*, **2021**, 11, 5058	4.9	5
35	Rapid LC-MS/MS quantification of cancer related acetylated polyamines in human biofluids. *Talanta* , **2019**, 196, 415-419	6.2	5
34	Interaction of Gut Microbiota and High-Sodium, Low-Potassium Diet in Altering Plasma Triglyceride Profiles Revealed by Lipidomics Analysis. *Molecular Nutrition and Food Research*, **2019**, 63, e1900752	5.9	4
33	Leucoselect Phytosome Modulates Serum Eicosapentaenoic Acid, Docosahexaenoic Acid, and Prostaglandin E3 in a Phase I Lung Cancer Chemoprevention Study. *Cancer Prevention Research*, **2021**, 14, 619-626	3.2	4
32	Ethnicity-specific alterations of plasma and hepatic lipidomic profiles are related to high NAFLD rate and severity in Hispanic Americans, a pilot study. *Free Radical Biology and Medicine*, **2021**, 172, 490-502	7.8	4
31	Identifying Toxicologically Significant Compounds in Urban Wildfire Ash Using Bioassays and High-Resolution Mass Spectrometry. *Environmental Science & Technology*, **2021**, 55, 3657-3667	10.3	3
30	Teosinte introgression modulates phosphatidylcholine levels and induces early maize flowering time		3

29	Comparing Stable Isotope Enrichment by Gas Chromatography with Time-of-Flight, Quadrupole Time-of-Flight, and Quadrupole Mass Spectrometry. *Analytical Chemistry*, **2021**, 93, 2174-2182	7.8	3
28	Human Placenta Buffers the Fetus from Adverse Effects of Perceived Maternal Stress. *Cells*, **2021**, 10,	7.9	3
27	A lipidome-wide association study of the lipoprotein insulin resistance index. *Lipids in Health and Disease*, **2020**, 19, 153	4.4	2
26	Cervicovaginal microbiome composition drives metabolic profiles in healthy pregnancy		2
25	Gestational long-term hypoxia induces metabolomic reprogramming and phenotypic transformations in fetal sheep pulmonary arteries. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **2021**, 320, L770-L784	5.8	2
24	Metabolomics analysis of time-series human small intestine lumen samples collected. *Food and Function*, **2021**, 12, 9405-9415	6.1	2
23	HNF4 isoforms regulate the circadian balance between carbohydrate and lipid metabolism in the liver		2
22	Metabolomics Analyses of 14 Classical Neurotransmitters by GC-TOF with LC-MS Illustrates Secretion of 9 Cell-Cell Signaling Molecules from Sympathoadrenal Chromaffin Cells in the Presence of Lithium. *ACS Chemical Neuroscience*, **2019**, 10, 1369-1379	5.7	1
21	Mass Spectrometry-Based Metabolomics Reveals a Concurrent Action of Several Chemical Mechanisms in Compatible and Incompatible Interactions. *Journal of Agricultural and Food Chemistry*, **2020**, 68, 15335-15344	5.7	1
20	Laboratory Screening Protocol to Identify Novel Oleaginous Yeasts. *Methods in Molecular Biology*, **2019**, 1995, 33-50	1.4	1
19	Metabolomic and inflammatory signatures of symptom dimensions in major depression.. *Brain, Behavior, and Immunity*, **2022**, 102, 42-52	16.6	1
18	Quantum Chemical Prediction of Electron Ionization Mass Spectra of Trimethylsilylated Metabolites.. *Analytical Chemistry*, **2022**,	7.8	1
17	Untargeted Metabolomics Analysis of the Serum Metabolic Signature of Childhood Obesity.. *Nutrients*, **2022**, 14,	6.7	1
16	Longitudinal Plasma Lipidome and Risk of Type 2 Diabetes in a Large Sample of American Indians With Normal Fasting Glucose: The Strong Heart Family Study. *Diabetes Care*, **2021**, 44, 2664-2672	14.6	1
15	Serum triglycerides in Alzheimer disease: Relation to neuroimaging and CSF biomarkers		1
14	Exposure to DMSO during infancy alters neurochemistry, social interactions, and brain morphology in long-evans rats. *Brain and Behavior*, **2021**, 11, e02146	3.4	1
13	Evidence for Peroxisomal Dysfunction and Dysregulation of the CDP-Choline Pathway in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome. **2022**,		1
12	Exogenous GLP-1 stimulates TCA cycle and suppresses gluconeogenesis and ketogenesis in late-fasted northern elephant seals pups. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2021**, 320, R393-R403	3.2	0

11	Phospholipid Levels at Seroconversion Are Associated With Resolution of Persistent Islet Autoimmunity: The Diabetes Autoimmunity Study in the Young. *Diabetes*, **2021**, 70, 1592-1601	0.9	0
10	Metabolomics of Lung Microdissections Reveals Region- and Sex-Specific Metabolic Effects of Acute Naphthalene Exposure in Mice. *Toxicological Sciences*, **2021**, 184, 214-222	4.4	0
9	Multi-Site Observational Study to Assess Biomarkers for Susceptibility or Resilience to Chronic Pain: The Acute to Chronic Pain Signatures (A2CPS) Study Protocol.. *Frontiers in Medicine*, **2022**, 9, 849214	4.9	0
8	Arachidonic acid metabolism and inflammatory biomarkers associated with exposure to polycyclic aromatic hydrocarbons. *Environmental Research*, **2022**, 212, 113498	7.9	0
7	Maternal Pyrroloquinoline Quinone Supplementation Improves Offspring Liver Bioactive Lipid Profiles throughout the Lifespan and Protects against the Development of Adult NAFLD. *International Journal of Molecular Sciences*, **2022**, 23, 6043	6.3	0
6	Lipolysis products alter protein and lipid structural characteristics in the plasma membranes of human monocytes. *FASEB Journal*, **2006**, 20, A59	0.9	
5	Quantification of N-formylated lysine in bacterial protein digests using liquid chromatography/tandem mass spectrometry despite spontaneous formation and matrix effects. *Rapid Communications in Mass Spectrometry*, **2021**, 35, e9019	2.2	
4	Bioinformatics Approaches for Interpreting Metabolomics Datasets **2021**, 370-384		
3	Almond Consumption for 8 Weeks Altered Host and Microbial Metabolism in Comparison to a Control Snack in Young Adults. **2022**, 1-13		
2	Triglyceride profiles are associated with subacute exposure to bisphenol A in healthy young adults.. *Science of the Total Environment*, **2022**, 825, 153991	10.2	
1	Chemical set enrichment analysis: Novel insights into sex-specific alterations in primary metabolites in posttraumatic stress and disturbed sleep.. *Clinical and Translational Medicine*, **2021**, 11, e511	5.7	