Jacob G Bundy

List of Publications by Year in Descending Order

92 papers	6,288 citations	39 h-index	78 g-index
99 ext. papers	7,164 ext. citations	5.5 avg, IF	5.48 L-index

#	Paper	IF	Citations
92	Calm on the surface, dynamic on the inside. Molecular homeostasis of Anabaena sp. PCC 7120 nitrogen metabolism. *Plant, Cell and Environment*, **2021**, 44, 1885-1907	8.4	1
91	Pathway analysis in metabolomics: Recommendations for the use of over-representation analysis. *PLoS Computational Biology*, **2021**, 17, e1009105	5	4
90	C Labeling of Nematode Worms to Improve Metabolome Coverage by Heteronuclear Nuclear Magnetic Resonance Experiments. *Frontiers in Molecular Biosciences*, **2019**, 6, 27	5.6	4
89	Rapid screening of cellular stress responses in recombinant Pichia pastoris strains using metabolite profiling. *Journal of Industrial Microbiology and Biotechnology*, **2017**, 44, 413-417	4.2	11
88	Remodelling of microRNAs in colorectal cancer by hypoxia alters metabolism profiles and 5-fluorouracil resistance. *Human Molecular Genetics*, **2017**, 26, 1552-1564	5.6	31
87	Current and future therapies for Pseudomonas aeruginosa infection in patients with cystic fibrosis. *FEMS Microbiology Letters*, **2017**, 364,	2.9	60
86	Aromatic metabolites from the coelomic fluid of Eisenia earthworm species. *European Journal of Soil Biology*, **2017**, 78, 17-19	2.9	7
85	Analysis and imaging of biocidal agrochemicals using ToF-SIMS. *Scientific Reports*, **2017**, 7, 10728	4.9	3
84	Visualizing Antimicrobials in Bacterial Biofilms: Three-Dimensional Biochemical Imaging Using TOF-SIMS. *MSphere*, **2017**, 2,	5	12
83	GlnK Facilitates the Dynamic Regulation of Bacterial Nitrogen Assimilation. *Biophysical Journal*, **2017**, 112, 2219-2230	2.9	11
82	Modelling the acid/base H NMR chemical shift limits of metabolites in human urine. *Metabolomics*, **2016**, 12, 152	4.7	24
81	The mutational structure of metabolism in Caenorhabditis elegans. *Evolution; International Journal of Organic Evolution*, **2016**, 70, 2239-2246	3.8	9
80	Identification of the Elusive Pyruvate Reductase of Chlamydomonas reinhardtii Chloroplasts. *Plant and Cell Physiology*, **2016**, 57, 82-94	4.9	19
79	Statistical Correlations between NMR Spectroscopy and Direct Infusion FT-ICR Mass Spectrometry Aid Annotation of Unknowns in Metabolomics. *Analytical Chemistry*, **2016**, 88, 2583-9	7.8	20
78	Sub-lethal cadmium exposure increases phytochelatin concentrations in the aquatic snail Lymnaea stagnalis. *Science of the Total Environment*, **2016**, 568, 1054-1058	10.2	11
77	Influence of the Crc regulator on the hierarchical use of carbon sources from a complete medium in Pseudomonas. *Environmental Microbiology*, **2016**, 18, 807-18	5.2	34
76	Ageing with elegans: a research proposal to map healthspan pathways. *Biogerontology*, **2016**, 17, 771-82	4.5	24

75	Pseudomonas aeruginosa infection in cystic fibrosis: pathophysiological mechanisms and therapeutic approaches. *Expert Review of Respiratory Medicine*, **2016**, 10, 685-97	3.8	74
74	Ecological drivers influence the distributions of two cryptic lineages in an earthworm morphospecies. *Applied Soil Ecology*, **2016**, 108, 8-15	5	9
73	Identification of hydroxyapatite spherules provides new insight into subretinal pigment epithelial deposit formation in the aging eye. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 1565-70	11.5	75
72	Unique metabolites protect earthworms against plant polyphenols. *Nature Communications*, **2015**, 6, 7869	17.4	53
71	Metabolic Youth in Middle Age: Predicting Aging in Caenorhabditis elegans Using Metabolomics. *Journal of Proteome Research*, **2015**, 14, 4603-9	5.6	17
70	Low Serum Levels of MicroRNA-19 Are Associated with a Stricturing Crohn's Disease Phenotype. *Inflammatory Bowel Diseases*, **2015**, 21, 1926-34	4.5	37
69	Translational arrest due to cytoplasmic redox stress delays adaptation to growth on methanol and heterologous protein expression in a typical fed-batch culture of Pichia pastoris. *PLoS ONE*, **2015**, 10, e0119637	3.7	10
68	A metabolic trade-off between phosphate and glucose utilization in Escherichia coli. *Molecular BioSystems*, **2014**, 10, 2820-2		10
67	Identifying biochemical phenotypic differences between cryptic species. *Biology Letters*, **2014**, 10,	3.6	12
66	Bayesian deconvolution and quantification of metabolites in complex 1D NMR spectra using BATMAN. *Nature Protocols*, **2014**, 9, 1416-27	18.8	132
65	Metabolites and metals in Metazoa--what role do phytochelatins play in animals?. *Metallomics*, **2014**, 6, 1576-82	4.5	16
64	Metabolic footprinting: extracellular metabolomic analysis. *Methods in Molecular Biology*, **2014**, 1149, 281-92	1.4	12
63	Metallothioneins may not be enough--the role of phytochelatins in invertebrate metal detoxification. *Environmental Science & Technology*, **2014**, 48, 885-6	10.3	33
62	Phenylalanine metabolism regulates reproduction and parasite melanization in the malaria mosquito. *PLoS ONE*, **2014**, 9, e84865	3.7	38
61	ToF-SIMS analysis of biomolecules in the model organism Caenorhabditis elegans. *Surface and Interface Analysis*, **2013**, 45, 234-236	1.5	5
60	Analysis of intact bacteria using rapid evaporative ionisation mass spectrometry. *Chemical Communications*, **2013**, 49, 6188-90	5.8	46
59	Metabolic adaptations of Pseudomonas aeruginosa during cystic fibrosis chronic lung infections. *Environmental Microbiology*, **2013**, 15, 398-408	5.2	53
58	Biochemical diversity of betaines in earthworms. *Biochemical and Biophysical Research Communications*, **2013**, 430, 1306-11	3.4	16

57	Profiling the metabolic signature of senescence. *Methods in Molecular Biology*, **2013**, 965, 355-71	1.4	4
56	Combining spectral ordering with peak fitting for one-dimensional NMR quantitative metabolomics. *Analytical Chemistry*, **2013**, 85, 4605-12	7.8	18
55	DNA sequence variation and methylation in an arsenic tolerant earthworm population. *Soil Biology and Biochemistry*, **2013**, 57, 524-532	7.5	58
54	Nitrogen and carbon status are integrated at the transcriptional level by the nitrogen regulator NtrC in vivo. *MBio*, **2013**, 4, e00881-13	7.8	44
53	Direct assessment of metabolite utilization by Pseudomonas aeruginosa during growth on artificial sputum medium. *Applied and Environmental Microbiology*, **2013**, 79, 2467-70	4.8	14
52	Metabolite profiling to characterize disease-related bacteria: gluconate excretion by Pseudomonas aeruginosa mutants and clinical isolates from cystic fibrosis patients. *Journal of Biological Chemistry* , **2013**, 288, 15098-109	5.4	30
51	Earthworms produce phytochelatins in response to arsenic. *PLoS ONE*, **2013**, 8, e81271	3.7	23
50	Fluorodeoxyuridine affects the identification of metabolic responses to daf-2 status in Caenorhabditis elegans. *Mechanisms of Ageing and Development*, **2012**, 133, 46-9	5.6	39
49	Tissue disruption and extraction methods for metabolic profiling of an invertebrate sentinel species. *Metabolomics*, **2012**, 8, 819-830	4.7	27
48	Artificial microRNA-mediated knockdown of pyruvate formate lyase (PFL1) provides evidence for an active 3-hydroxybutyrate production pathway in the green alga Chlamydomonas reinhardtii. *Journal of Biotechnology*, **2012**, 162, 57-66	3.7	20
47	Free glucosylglycerate is a novel marker of nitrogen stress in Mycobacterium smegmatis. *Journal of Proteome Research*, **2012**, 11, 3888-96	5.6	20
46	Metabolic profiling detects early effects of environmental and lifestyle exposure to cadmium in a human population. *BMC Medicine*, **2012**, 10, 61	11.4	98
45	Species interactions alter evolutionary responses to a novel environment. *PLoS Biology*, **2012**, 10, e1001330	9.7	247
44	The development of metabolomic sampling procedures for Pichia pastoris, and baseline metabolome data. *PLoS ONE*, **2011**, 6, e16286	3.7	47
43	Cross-platform comparison of Caenorhabditis elegans tissue extraction strategies for comprehensive metabolome coverage. *Analytical Chemistry*, **2011**, 83, 3730-6	7.8	98
42	Outdoor and indoor cadmium distributions near an abandoned smelting works and their relations to human exposure. *Environmental Pollution*, **2011**, 159, 3425-32	9.3	11
41	The analysis of para-cresol production and tolerance in Clostridium difficile 027 and 012 strains. *BMC Microbiology*, **2011**, 11, 86	4.5	66
40	C. elegans metallothioneins: response to and defence against ROS toxicity. *Molecular BioSystems*, **2011**, 7, 2397-406		57

39	Between-person comparison of metabolite fitting for NMR-based quantitative metabolomics. *Analytical Chemistry*, **2011**, 83, 8683-7	7.8	41
38	A software complement to AMDIS for processing GC-MS metabolomic data. *Analytical Biochemistry*, **2011**, 415, 206-8	3.1	89
37	Hypertonic Saline Therapy in Cystic Fibrosis: Do Population Shifts Caused by the Osmotic Sensitivity of Infecting Bacteria Explain the Effectiveness of this Treatment?. *Frontiers in Microbiology*, **2010**, 1, 120	5.7	14
36	Metabolic profiling of Pseudomonas aeruginosa demonstrates that the anti-sigma factor MucA modulates osmotic stress tolerance. *Molecular BioSystems*, **2010**, 6, 562-9		34
35	A metabolic signature of long life in Caenorhabditis elegans. *BMC Biology*, **2010**, 8, 14	7.3	115
34	Time-resolved metabolic footprinting for nonlinear modeling of bacterial substrate utilization. *Applied and Environmental Microbiology*, **2009**, 75, 2453-63	4.8	46
33	The cellular geometry of growth drives the amino acid economy of Caenorhabditis elegans. *Proceedings of the Royal Society B: Biological Sciences*, **2009**, 276, 2747-54	4.4	12
32	Environmental metabolomics: a critical review and future perspectives. *Metabolomics*, **2009**, 5, 3-21	4.7	543
31	Validation of metabolomics for toxic mechanism of action screening with the earthworm Lumbricus rubellus. *Metabolomics*, **2009**, 5, 72-83	4.7	46
30	The metabolomic responses of Caenorhabditis elegans to cadmium are largely independent of metallothionein status, but dominated by changes in cystathionine and phytochelatins. *Journal of Proteome Research*, **2009**, 8, 3512-9	5.6	95
29	International NMR-based environmental metabolomics intercomparison exercise. *Environmental Science & Technology*, **2009**, 43, 219-25	10.3	131
28	Systems toxicologyTapproach identifies coordinated metabolic responses to copper in a terrestrial non-model invertebrate, the earthworm Lumbricus rubellus. *BMC Biology*, **2008**, 6, 25	7.3	152
27	Metabolic profiling, metabolomic and metabonomic procedures for NMR spectroscopy of urine, plasma, serum and tissue extracts. *Nature Protocols*, **2007**, 2, 2692-703	18.8	1536
26	Metabolomic profiling of rapid cold hardening and cold shock in Drosophila melanogaster. *Journal of Insect Physiology*, **2007**, 53, 1218-32	2.4	203
25	Standard reporting requirements for biological samples in metabolomics experiments: environmental context. *Metabolomics*, **2007**, 3, 203-210	4.7	78
24	Evaluation of predicted network modules in yeast metabolism using NMR-based metabolite profiling. *Genome Research*, **2007**, 17, 510-9	9.7	61
23	Metabolic profile biomarkers of metal contamination in a sentinel terrestrial species are applicable across multiple sites. *Environmental Science & Technology*, **2007**, 41, 4458-64	10.3	93
22	Metabolic consequences of p300 gene deletion in human colon cancer cells. *Cancer Research*, **2006**, 66, 7606-14	10.1	26

21	Investigation of the physiological relationship between the cyanide-insensitive oxidase and cyanide production in Pseudomonas aeruginosa. *Microbiology (United Kingdom)*, **2006**, 152, 1407-1415	2.9	34
20	Metabolomic profiling of heat stress: hardening and recovery of homeostasis in Drosophila. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2006**, 291, R205-12	3.2	136
19	Establishing principal soil quality parameters influencing earthworms in urban soils using bioassays. *Environmental Pollution*, **2005**, 133, 199-211	9.3	18
18	Discrimination of pathogenic clinical isolates and laboratory strains of Bacillus cereus by NMR-based metabolomic profiling. *FEMS Microbiology Letters*, **2005**, 242, 127-36	2.9	68
17	NMR-derived developmental metabolic trajectories: an approach for visualizing the toxic actions of trichloroethylene during embryogenesis. *Metabolomics*, **2005**, 1, 149-158	4.7	83
16	Combined microbial community level and single species biosensor responses to monitor recovery of oil polluted soil. *Soil Biology and Biochemistry*, **2004**, 36, 1149-1159	7.5	75
15	Environmental metabonomics: applying combination biomarker analysis in earthworms at a metal contaminated site. *Ecotoxicology*, **2004**, 13, 797-806	2.9	117
14	Limitations of a cosolvent for ecotoxicity testing of hydrophobic compounds. *Bulletin of Environmental Contamination and Toxicology*, **2003**, 70, 1-8	2.7	9
13	Multivariate metabolic profiling using 1H nuclear magnetic resonance spectroscopy of freeze-tolerant and freeze-intolerant earthworms exposed to frost. *Cryo-Letters*, **2003**, 24, 347-58	0.3	11
12	Metabonomic assessment of toxicity of 4-fluoroaniline, 3,5-difluoroaniline and 2-fluoro-4-methylaniline to the earthworm Eisenia veneta (rosa): Identification of new endogenous biomarkers. *Environmental Toxicology and Chemistry*, **2002**, 21, 1966-1972	3.8	104
11	Microbial communities in different soil types do not converge after diesel contamination. *Journal of Applied Microbiology*, **2002**, 92, 276-88	4.7	114
10	Metabolism of 4-fluoroaniline and 4-fluorobiphenyl in the earthworm Eisenia veneta characterized by high-resolution NMR spectroscopy with directly coupled HPLC-NMR and HPLC-MS. *Xenobiotica*, **2002**, 32, 479-90	2	33
9	Earthworm species of the genus Eisenia can be phenotypically differentiated by metabolic profiling. *FEBS Letters*, **2002**, 521, 115-20	3.8	76
8	. *Environmental Toxicology and Chemistry*, **2002**, 21, 1966	3.8	21
7	Metabonomic assessment of toxicity of 4-fluoroaniline, 3,5-difluoroaniline and 2-fluoro-4-methylaniline to the earthworm Eisenia veneta (Rosa): identification of new endogenous biomarkers. *Environmental Toxicology and Chemistry*, **2002**, 21, 1966-72	3.8	15
6	An NMR-based metabonomic approach to the investigation of coelomic fluid biochemistry in earthworms under toxic stress. *FEBS Letters*, **2001**, 500, 31-5	3.8	87
5	Development of QSARs to investigate the bacterial toxicity and biotransformation potential of aromatic heterocylic compounds. *Chemosphere*, **2001**, 42, 885-92	8.4	40
4	Comparison of response of six different luminescent bacterial bioassays to bioremediation of five contrasting oils. *Journal of Environmental Monitoring*, **2001**, 3, 404-10		30

3	Investigating the specificity of regulators of degradation of hydrocarbons and hydrocarbon-based compounds using structure-activity relationships. *Biodegradation*, **2000**, 11, 37-47	4.1	4
2	Application of bioluminescence-based microbial biosensors to the ecotoxicity assessment of organotins. *Letters in Applied Microbiology*, **1997**, 25, 353-358	2.9	27
1	GlnK facilitates the dynamic regulation of bacterial nitrogen assimilation		1