Emily Balskus

List of Publications by Year in Descending Order

103 papers	5,412 citations	38 h-index	72 g-index
126 ext. papers	7,012 ext. citations	13.6 avg, IF	6.46 L-index

#	Paper	IF	Citations
103	The Stickland Reaction Precursor -4-Hydroxy-l-Proline Differentially Impacts the Metabolism of Clostridioides difficile and Commensal .. *MSphere*, **2022**, e0092621	5	0
102	Cysteine dependence of Lactobacillus iners is a potential therapeutic target for vaginal microbiota modulation.. *Nature Microbiology*, **2022**, 7, 434-450	26.6	3
101	Extension of Diagnostic Fragmentation Filtering for Automated Discovery in DNA Adductomics. *Analytical Chemistry*, **2021**, 93, 5754-5762	7.8	1
100	Leveraging Microbial Genomes and Genomic Context for Chemical Discovery. *Accounts of Chemical Research*, **2021**, 54, 2788-2797	24.3	1
99	Deciphering Human Microbiota-Host Chemical Interactions. *ACS Central Science*, **2021**, 7, 20-29	16.8	3
98	Structure and assembly of the diiron cofactor in the heme-oxygenase-like domain of the -nitrosourea-producing enzyme SznF. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	14
97	Elucidation of an anaerobic pathway for metabolism of l-carnitine-derived Ebutyrobetaine to trimethylamine in human gut bacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	4
96	Distribution and diversity of dimetal-carboxylate halogenases in cyanobacteria. *BMC Genomics*, **2021**, 22, 633	4.5	2
95	Molecular basis of C-S bond cleavage in the glycyl radical enzyme isethionate sulfite-lyase. *Cell Chemical Biology*, **2021**, 28, 1333-1346.e7	8.2	5
94	A Genomic Toolkit for the Mechanistic Dissection of Intractable Human Gut Bacteria. *Cell Host and Microbe*, **2020**, 27, 1001-1013.e9	23.4	16
93	Discovery of CC bond-forming and bond-breaking radical enzymes: enabling transformations for metabolic engineering. *Current Opinion in Biotechnology*, **2020**, 65, 94-101	11.4	4
92	Cholesterol Metabolism by Uncultured Human Gut Bacteria Influences Host Cholesterol Level. *Cell Host and Microbe*, **2020**, 28, 245-257.e6	23.4	56
91	A Peroxodiiron(III/III) Intermediate Mediating Both -Hydroxylation Steps in Biosynthesis of the -Nitrosourea Pharmacophore of Streptozotocin by the Multi-domain Metalloenzyme SznF. *Journal of the American Chemical Society*, **2020**, 142, 11818-11828	16.4	21
90	Discovery of a Cyclic Choline Analog That Inhibits Anaerobic Choline Metabolism by Human Gut Bacteria. *ACS Medicinal Chemistry Letters*, **2020**, 11, 1980-1985	4.3	7
89	A widely distributed metalloenzyme class enables gut microbial metabolism of host- and diet-derived catechols. *ELife*, **2020**, 9,	8.9	14
88	Molecular basis for catabolism of the abundant metabolite -4-hydroxy-L-proline by a microbial glycyl radical enzyme. *ELife*, **2020**, 9,	8.9	6
87	The l-Alanosine Gene Cluster Encodes a Pathway for Diazeniumdiolate Biosynthesis. *ChemBioChem*, **2020**, 21, 1155-1160	3.8	16

86	Trimethylamine N-Oxide Binds and Activates PERK to Promote Metabolic Dysfunction. *Cell Metabolism*, **2019**, 30, 1141-1151.e5	24.6	98
85	The mysteries of macrocyclic colibactins. *Nature Chemistry*, **2019**, 11, 867-869	17.6	2
84	Metabolic functions of the human gut microbiota: the role of metalloenzymes. *Natural Product Reports*, **2019**, 36, 593-625	15.1	36
83	Biocatalytic Friedel-Crafts Alkylation Using a Promiscuous Biosynthetic Enzyme. *Angewandte Chemie - International Edition*, **2019**, 58, 3151-3155	16.4	21
82	Chemistry, bioactivity and biosynthesis of cyanobacterial alkylresorcinols. *Natural Product Reports*, **2019**, 36, 1437-1461	15.1	23
81	Biocatalytic Friedel□Crafts Alkylation Using a Promiscuous Biosynthetic Enzyme. *Angewandte Chemie*, **2019**, 131, 3183-3187	3.6	5
80	A glycyl radical enzyme enables hydrogen sulfide production by the human intestinal bacterium. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 3171-3176	11.5	75
79	Discovery and inhibition of an interspecies gut bacterial pathway for Levodopa metabolism. *Science* , **2019**, 364,	33.3	217
78	In Vitro Characterization of the Colibactin-Activating Peptidase ClbP Enables Development of a Fluorogenic Activity Probe. *ACS Chemical Biology*, **2019**, 14, 1097-1101	4.9	5
77	An N-nitrosating metalloenzyme constructs the pharmacophore of streptozotocin. *Nature*, **2019**, 566, 94-99	50.4	62
76	Reactivity of an Unusual Amidase May Explain Colibactin's DNA Cross-Linking Activity. *Journal of the American Chemical Society*, **2019**, 141, 11489-11496	16.4	26
75	The human gut bacterial genotoxin colibactin alkylates DNA. *Science*, **2019**, 363,	33.3	234
74	Structure-Guided Identification of a Small Molecule That Inhibits Anaerobic Choline Metabolism by Human Gut Bacteria. *Journal of the American Chemical Society*, **2019**, 141, 33-37	16.4	25
73	Gut bacterial phospholipase Ds support disease-associated metabolism by generating choline. *Nature Microbiology*, **2019**, 4, 155-163	26.6	36
72	Engineering chemical interactions in microbial communities. *Chemical Society Reviews*, **2018**, 47, 1705-1735	38.5	19
71	Deciphering Human Gut Microbiota-Nutrient Interactions: A Role for Biochemistry. *Biochemistry*, **2018**, 57, 2567-2577	3.2	12
70	Gut Microbiota: Rational Manipulation of Gut Bacterial Metalloenzymes Provides Insights into Dysbiosis and Inflammation. *Biochemistry*, **2018**, 57, 2291-2293	3.2	2
69	Anaerobic 4-hydroxyproline utilization: Discovery of a new glycyl radical enzyme in the human gut microbiome uncovers a widespread microbial metabolic activity. *Gut Microbes*, **2018**, 9, 437-451	8.8	22

68	Discovery of small molecule protease inhibitors by investigating a widespread human gut bacterial biosynthetic pathway. *Tetrahedron*, **2018**, 74, 3215-3230	2.4	8
67	Characterization of 1,2-Propanediol Dehydratases Reveals Distinct Mechanisms for B-Dependent and Glycyl Radical Enzymes. *Biochemistry*, **2018**, 57, 3222-3226	3.2	23
66	Purification and Characterization of the Choline Trimethylamine-Lyase (CutC)-Activating Protein CutD. *Methods in Enzymology*, **2018**, 606, 73-94	1.7	4
65	Discovery and characterization of a prevalent human gut bacterial enzyme sufficient for the inactivation of a family of plant toxins. *ELife*, **2018**, 7,	8.9	60
64	Anaerobic 4-Hydroxyproline Metabolism by a Widespread Microbial Glycyl Radical Enzyme. *FASEB Journal*, **2018**, 32, 534.16	0.9	
63	The Human Microbiota, Infectious Disease, and Global Health: Challenges and Opportunities. *ACS Infectious Diseases*, **2018**, 4, 14-26	5.5	27
62	Discovering radical-dependent enzymes in the human gut microbiota. *Current Opinion in Chemical Biology*, **2018**, 47, 86-93	9.7	8
61	Glutamic acid is a carrier for hydrazine during the biosyntheses of fosfazinomycin and kinamycin. *Nature Communications*, **2018**, 9, 3687	17.4	37
60	Discovery of a Diazo-Forming Enzyme in Cremeomycin Biosynthesis. *Journal of Organic Chemistry*, **2018**, 83, 7539-7546	4.2	29
59	A prominent glycyl radical enzyme in human gut microbiomes metabolizes -4-hydroxy-l-proline. *Science*, **2017**, 355,	33.3	85
58	Production of Stealthin C Involves an S-N-Type Smiles Rearrangement. *Journal of the American Chemical Society*, **2017**, 139, 2864-2867	16.4	16
57	Natural product discovery from the human microbiome. *Journal of Biological Chemistry*, **2017**, 292, 8546-8552	3.4	45
56	Chemical transformation of xenobiotics by the human gut microbiota. *Science*, **2017**, 356,	33.3	413
55	Heteroatom-Heteroatom Bond Formation in Natural Product Biosynthesis. *Chemical Reviews*, **2017**, 117, 5784-5863	68.1	66
54	Metabolic, Epigenetic, and Transgenerational Effects of Gut Bacterial Choline Consumption. *Cell Host and Microbe*, **2017**, 22, 279-290.e7	23.4	100
53	Colibactin assembly line enzymes use S-adenosylmethionine to build a cyclopropane ring. *Nature Chemical Biology*, **2017**, 13, 1063-1065	11.7	40
52	A new strategy for aromatic ring alkylation in cylindrocyclophane biosynthesis. *Nature Chemical Biology*, **2017**, 13, 916-921	11.7	48
51	Interfacing Biocompatible Reactions with Engineered Escherichia coli. *Methods in Molecular Biology*, **2017**, 1586, 409-421	1.4	

50	Chemical discovery in the microbial world. *FASEB Journal*, **2017**, 31, 258.2	0.9	
49	Addressing Infectious Disease Challenges by Investigating Microbiomes. *ACS Infectious Diseases*, **2016**, 2, 453-5	5.5	2
48	Characterization of Polyketide Synthase Machinery from the pks Island Facilitates Isolation of a Candidate Precolibactin. *ACS Chemical Biology*, **2016**, 11, 1287-95	4.9	44
47	Exploring and Understanding the Biochemical Diversity of the Human Microbiota. *Cell Chemical Biology*, **2016**, 23, 18-30	8.2	83
46	Designer Micelles Accelerate Flux Through Engineered Metabolism in E. coli and Support Biocompatible Chemistry. *Angewandte Chemie - International Edition*, **2016**, 55, 6023-7	16.4	47
45	Designer Micelles Accelerate Flux Through Engineered Metabolism in E. coli and Support Biocompatible Chemistry. *Angewandte Chemie*, **2016**, 128, 6127-6131	3.6	18
44	The Plot Thickens: Diet Microbe Interactions May Modulate Thrombosis Risk. *Cell Metabolism*, **2016**, 23, 573-5	24.6	7
43	Molecular Basis of C-N Bond Cleavage by the Glycyl Radical Enzyme Choline Trimethylamine-Lyase. *Cell Chemical Biology*, **2016**, 23, 1206-1216	8.2	41
42	Assembly line termination in cylindrocyclophane biosynthesis: discovery of an editing type II thioesterase domain in a type I polyketide synthase. *Chemical Science*, **2015**, 6, 3816-3822	9.4	17
41	Interfacing microbial styrene production with a biocompatible cyclopropanation reaction. *Angewandte Chemie - International Edition*, **2015**, 54, 7106-9	16.4	55
40	Isolation of a metabolite from the pks island provides insights into colibactin biosynthesis and activity. *Organic Letters*, **2015**, 17, 1545-8	6.2	52
39	Colibactin: understanding an elusive gut bacterial genotoxin. *Natural Product Reports*, **2015**, 32, 1534-40	15.1	67
38	Minimum Information about a Biosynthetic Gene cluster. *Nature Chemical Biology*, **2015**, 11, 625-31	11.7	498
37	Characterization and detection of a widely distributed gene cluster that predicts anaerobic choline utilization by human gut bacteria. *MBio*, **2015**, 6,	7.8	114
36	The Cremeomycin Biosynthetic Gene Cluster Encodes a Pathway for Diazo Formation. *ChemBioChem*, **2015**, 16, 2172-5	3.8	23
35	Biosynthesis-Assisted Structural Elucidation of the Bartolosides, Chlorinated Aromatic Glycolipids from Cyanobacteria. *Angewandte Chemie*, **2015**, 127, 11215-11219	3.6	3
34	Biosynthesis-assisted structural elucidation of the bartolosides, chlorinated aromatic glycolipids from cyanobacteria. *Angewandte Chemie - International Edition*, **2015**, 54, 11063-7	16.4	33
33	Interfacing Microbial Styrene Production with a Biocompatible Cyclopropanation Reaction. *Angewandte Chemie*, **2015**, 127, 7212-7215	3.6	21

32	Shedding light on sunscreen biosynthesis in zebrafish. *ELife*, **2015**, 4,	8.9	4
31	Using non-enzymatic chemistry to influence microbial metabolism. *Current Opinion in Chemical Biology*, **2015**, 25, 71-9	9.7	21
30	Radical Chemistry in the Human Gut: Discovery of Choline Trimethylamine-Lyase. *FASEB Journal*, **2015**, 29, 575.15	0.9	
29	Lomaiviticin biosynthesis employs a new strategy for starter unit generation. *Organic Letters*, **2014**, 16, 640-3	6.2	23
28	Natural products: Sponge symbionts play defense. *Nature Chemical Biology*, **2014**, 10, 611-2	11.7	3
27	Characterization of choline trimethylamine-lyase expands the chemistry of glycyl radical enzymes. *ACS Chemical Biology*, **2014**, 9, 1408-13	4.9	84
26	A biocompatible alkene hydrogenation merges organic synthesis with microbial metabolism. *Angewandte Chemie - International Edition*, **2014**, 53, 7785-8	16.4	53
25	Opportunities for merging chemical and biological synthesis. *Current Opinion in Biotechnology*, **2014**, 30, 1-8	11.4	61
24	A Biocompatible Alkene Hydrogenation Merges Organic Synthesis with Microbial Metabolism. *Angewandte Chemie*, **2014**, 126, 7919-7922	3.6	14
23	Discovery of the lomaiviticin biosynthetic gene cluster in. *Tetrahedron*, **2014**, 70, 4156-4164	2.4	46
22	Mechanistic insight into digoxin inactivation by Eggerthella lenta augments our understanding of its pharmacokinetics. *Gut Microbes*, **2014**, 5, 233-8	8.8	97
21	Predicting and manipulating cardiac drug inactivation by the human gut bacterium Eggerthella lenta. *Science*, **2013**, 341, 295-8	33.3	368
20	Rescuing auxotrophic microorganisms with nonenzymatic chemistry. *Angewandte Chemie - International Edition*, **2013**, 52, 11800-3	16.4	26
19	A prodrug resistance mechanism is involved in colibactin biosynthesis and cytotoxicity. *Journal of the American Chemical Society*, **2013**, 135, 3359-62	16.4	125
18	Using Chemical Knowledge to Uncover New Biological Function: Discovery of the Cylindrocyclophane Biosynthetic Pathway. *Synlett*, **2013**, 24, 1464-1470	2.2	6
17	Rescuing Auxotrophic Microorganisms with Nonenzymatic Chemistry. *Angewandte Chemie*, **2013**, 125, 12016-12019	3.6	7
16	Microbial conversion of choline to trimethylamine requires a glycyl radical enzyme. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 21307-12	11.5	414
15	Cylindrocyclophane biosynthesis involves functionalization of an unactivated carbon center. *Journal of the American Chemical Society*, **2012**, 134, 18518-21	16.4	53

14	The biosynthesis of cyanobacterial sunscreen scytonemin in intertidal microbial mat communities. *FEMS Microbiology Ecology*, **2011**, 77, 322-32	4.3	54
13	The genetic and molecular basis for sunscreen biosynthesis in cyanobacteria. *Science*, **2010**, 329, 1653-6	33.3	265
12	An enzymatic cyclopentyl[b]indole formation involved in scytonemin biosynthesis. *Journal of the American Chemical Society*, **2009**, 131, 14648-9	16.4	71
11	Structural analysis of spiro beta-lactone proteasome inhibitors. *Journal of the American Chemical Society*, **2008**, 130, 14981-3	16.4	36
10	Investigating the initial steps in the biosynthesis of cyanobacterial sunscreen scytonemin. *Journal of the American Chemical Society*, **2008**, 130, 15260-1	16.4	106
9	Asymmetric catalysis of the transannular Diels-Alder reaction. *Science*, **2007**, 317, 1736-40	33.3	91
8	Stereocontrolled Total Synthesis of Bengazole A: A Marine Bisoxazole Natural Product Displaying Potent Antifungal Properties. *Angewandte Chemie*, **2006**, 118, 6866-6870	3.6	1
7	Alpha,beta-unsaturated beta-silyl imide substrates for catalytic, enantioselective conjugate additions: a total synthesis of (+)-lactacystin and the discovery of a new proteasome inhibitor. *Journal of the American Chemical Society*, **2006**, 128, 6810-2	16.4	129
6	Structural Basis for an Unprecedented Enzymatic Alkylation in Cylindrocyclophane Biosynthesis		1
5	Structure and assembly of the diiron cofactor in the heme-oxygenase-like domain of theN-nitrosourea-producing enzyme SznF		3
4	Illuminating the microbiome's dark matter: a functional genomic toolkit for the study of human gut Actinobacteria		8
3	The reactivity of an unusual amidase may explain colibactin's DNA cross-linking activity		3
2	The gut bacterial natural product colibactin triggers induction of latent viruses in diverse bacteria		1
1	Characterization of vaginal microbial enzymes identifies amylopullulanases that support growth of Lactobacillus crispatus on glycogen		3