

Elke Dittmann

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102
papers

9,323
citations

53
h-index

96
g-index

109
ext. papers

10,846
ext. citations

6.3
avg, IF

5.9
L-index

#	Paper	IF	Citations
102	Ribosomally synthesized and post-translationally modified peptide natural products: overview and recommendations for a universal nomenclature. <i>Natural Product Reports</i> , 2013 , 30, 108-60	15.1	1298
101	Structural organization of microcystin biosynthesis in <i>Microcystis aeruginosa</i> PCC7806: an integrated peptide-polyketide synthetase system. <i>Chemistry and Biology</i> , 2000 , 7, 753-64		671
100	Insertional mutagenesis of a peptide synthetase gene that is responsible for hepatotoxin production in the cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. <i>Molecular Microbiology</i> , 1997 , 26, 779-87	4.1	312
99	Exploiting the mosaic structure of trans-acyltransferase polyketide synthases for natural product discovery and pathway dissection. <i>Nature Biotechnology</i> , 2008 , 26, 225-33	44.5	310
98	Light and the transcriptional response of the microcystin biosynthesis gene cluster. <i>Applied and Environmental Microbiology</i> , 2000 , 66, 3387-92	4.8	290
97	Cyanobacterial toxins--occurrence, biosynthesis and impact on human affairs. <i>Molecular Nutrition and Food Research</i> , 2006 , 50, 7-17	5.9	277
96	Microcystin biosynthesis in planktothrix: genes, evolution, and manipulation. <i>Journal of Bacteriology</i> , 2003 , 185, 564-72	3.5	277
95	The cyanobacterial hepatotoxin microcystin binds to proteins and increases the fitness of microcystis under oxidative stress conditions. <i>PLoS ONE</i> , 2011 , 6, e17615	3.7	269
94	Evolutionary implications of bacterial polyketide synthases. <i>Molecular Biology and Evolution</i> , 2005 , 22, 2027-39	8.3	266
93	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. <i>FEMS Microbiology Reviews</i> , 2013 , 37, 23-43	15.1	229
92	Environmental conditions that influence toxin biosynthesis in cyanobacteria. <i>Environmental Microbiology</i> , 2013 , 15, 1239-53	5.2	218
91	Nonribosomal peptide synthesis and toxigenicity of cyanobacteria. <i>Journal of Bacteriology</i> , 1999 , 181, 4089-97	3.5	205
90	Diversity of microcystin genes within a population of the toxic cyanobacterium <i>Microcystis</i> spp. in Lake Wannsee (Berlin, Germany). <i>Microbial Ecology</i> , 2002 , 43, 107-18	4.4	177
89	Natural Product Biosynthetic Diversity and Comparative Genomics of the Cyanobacteria. <i>Trends in Microbiology</i> , 2015 , 23, 642-652	12.4	172
88	Role of microcystins in poisoning and food ingestion inhibition of <i>Daphnia galeata</i> caused by the cyanobacterium <i>Microcystis aeruginosa</i> . <i>Applied and Environmental Microbiology</i> , 1999 , 65, 737-9	4.8	168
87	Towards clarification of the biological role of microcystins, a family of cyanobacterial toxins. <i>Environmental Microbiology</i> , 2007 , 9, 965-70	5.2	160
86	Distribution of microcystin-producing and non-microcystin-producing <i>Microcystis</i> sp. in European freshwater bodies: detection of microcystins and microcystin genes in individual colonies. <i>Systematic and Applied Microbiology</i> , 2004 , 27, 592-602	4.2	157

85	Highly plastic genome of <i>Microcystis aeruginosa</i> PCC 7806, a ubiquitous toxic freshwater cyanobacterium. <i>BMC Genomics</i> , 2008 , 9, 274	4.5	148
84	New developments in RiPP discovery, enzymology and engineering. <i>Natural Product Reports</i> , 2021 , 38, 130-239	15.1	146
83	Effects of cell-bound microcystins on survival and feeding of <i>Daphnia</i> spp. <i>Applied and Environmental Microbiology</i> , 2001 , 67, 3523-9	4.8	145
82	Inactivation of an ABC transporter gene, <i>mcyH</i> , results in loss of microcystin production in the cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. <i>Applied and Environmental Microbiology</i> , 2004 , 70, 6370-8	4.8	130
81	The microcystin composition of the cyanobacterium <i>Planktothrix agardhii</i> changes toward a more toxic variant with increasing light intensity. <i>Applied and Environmental Microbiology</i> , 2005 , 71, 5177-81	4.8	130
80	Ribosomal synthesis of tricyclic depsipeptides in bloom-forming cyanobacteria. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 7756-9	16.4	115
79	Multiple alternate transcripts direct the biosynthesis of microcystin, a cyanobacterial nonribosomal peptide. <i>Applied and Environmental Microbiology</i> , 2002 , 68, 449-55	4.8	106
78	Natural product biosyntheses in cyanobacteria: A treasure trove of unique enzymes. <i>Beilstein Journal of Organic Chemistry</i> , 2011 , 7, 1622-35	2.5	98
77	A mannan binding lectin is involved in cell-cell attachment in a toxic strain of <i>Microcystis aeruginosa</i> . <i>Molecular Microbiology</i> , 2006 , 59, 893-906	4.1	98
76	Microcyclamide biosynthesis in two strains of <i>Microcystis aeruginosa</i> : from structure to genes and vice versa. <i>Applied and Environmental Microbiology</i> , 2008 , 74, 1791-7	4.8	97
75	Evolution of metabolic diversity: insights from microbial polyketide synthases. <i>Phytochemistry</i> , 2009 , 70, 1858-66	4	92
74	Natural biocombinatorics in the polyketide synthase genes of the actinobacterium <i>Streptomyces avermitilis</i> . <i>PLoS Computational Biology</i> , 2006 , 2, e132	5	92
73	Altered expression of two light-dependent genes in a microcystin-lacking mutant of <i>Microcystis aeruginosa</i> PCC 7806. <i>Microbiology (United Kingdom)</i> , 2001 , 147, 3113-9	2.9	90
72	Microvirin, a novel alpha(1,2)-mannose-specific lectin isolated from <i>Microcystis aeruginosa</i> , has anti-HIV-1 activity comparable with that of cyanovirin-N but a much higher safety profile. <i>Journal of Biological Chemistry</i> , 2010 , 285, 24845-54	5.4	88
71	Biosynthesis and structure of aeruginoside 126A and 126B, cyanobacterial peptide glycosides bearing a 2-carboxy-6-hydroxyoctahydroindole moiety. <i>Chemistry and Biology</i> , 2007 , 14, 565-576		85
70	Bacterial type III polyketide synthases: phylogenetic analysis and potential for the production of novel secondary metabolites by heterologous expression in pseudomonads. <i>Archives of Microbiology</i> , 2006 , 185, 28-38	3	84
69	Ingestion of microcystins by <i>Daphnia</i> : Intestinal uptake and toxic effects. <i>Limnology and Oceanography</i> , 2005 , 50, 440-448	4.8	78
68	Genetic contributions to the risk assessment of microcystin in the environment. <i>Toxicology and Applied Pharmacology</i> , 2005 , 203, 192-200	4.6	78

67	Plasticity and evolution of aeruginosin biosynthesis in cyanobacteria. <i>Applied and Environmental Microbiology</i> , 2009 , 75, 2017-26	4.8	76
66	Toxic and non-toxic strains of the cyanobacterium <i>Microcystis aeruginosa</i> contain sequences homologous to peptide synthetase genes. <i>FEMS Microbiology Letters</i> , 1996 , 135, 295-303	2.9	76
65	Exploiting the natural diversity of microviridin gene clusters for discovery of novel tricyclic depsipeptides. <i>Applied and Environmental Microbiology</i> , 2010 , 76, 3568-74	4.8	74
64	Microcystin production revisited: conjugate formation makes a major contribution. <i>Environmental Microbiology</i> , 2013 , 15, 1810-20	5.2	73
63	Molecular biology of peptide and polyketide biosynthesis in cyanobacteria. <i>Applied Microbiology and Biotechnology</i> , 2001 , 57, 467-73	5.7	73
62	The genetics, biosynthesis and regulation of toxic specialized metabolites of cyanobacteria. <i>Harmful Algae</i> , 2016 , 54, 98-111	5.3	72
61	Biosynthesis and function of extracellular glycans in cyanobacteria. <i>Life</i> , 2015 , 5, 164-80	3	70
60	The languages spoken in the water body (or the biological role of cyanobacterial toxins). <i>Frontiers in Microbiology</i> , 2012 , 3, 138	5.7	70
59	Metabolomic analysis indicates a pivotal role of the hepatotoxin microcystin in high light adaptation of <i>Microcystis</i> . <i>Environmental Microbiology</i> , 2015 , 17, 1497-509	5.2	66
58	Insights into the physiology and ecology of the brackish-water-adapted Cyanobacterium <i>Nodularia spumigena</i> CCY9414 based on a genome-transcriptome analysis. <i>PLoS ONE</i> , 2013 , 8, e60224	3.7	66
57	Consequences of impaired microcystin production for light-dependent growth and pigmentation of <i>Microcystis aeruginosa</i> PCC 7806. <i>FEMS Microbiology Ecology</i> , 2001 , 37, 39-43	4.3	66
56	A Type II polyketide synthase from the gram-negative Bacterium <i>Stigmatella aurantiaca</i> is involved in Aurachin alkaloid biosynthesis. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 2712-6	16.4	65
55	Biochemical Dissection of the Natural Diversification of Microcystin Provides Lessons for Synthetic Biology of NRPS. <i>Cell Chemical Biology</i> , 2016 , 23, 462-71	8.2	63
54	Non-colinear polyketide biosynthesis in the aureothin and neo-aureothin pathways: an evolutionary perspective. <i>ChemBioChem</i> , 2007 , 8, 1841-9	3.8	61
53	Variation between strains of the cyanobacterium <i>Microcystis aeruginosa</i> isolated from a Portuguese river. <i>Journal of Applied Microbiology</i> , 2005 , 99, 749-57	4.7	61
52	Bioinformatic perspectives on NRPS/PKS megasynthases: advances and challenges. <i>Natural Product Reports</i> , 2009 , 26, 874-83	15.1	59
51	An extracellular glycoprotein is implicated in cell-cell contacts in the toxic cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. <i>Journal of Bacteriology</i> , 2008 , 190, 2871-9	3.5	56
50	Transcriptomics-aided dissection of the intracellular and extracellular roles of microcystin in <i>Microcystis aeruginosa</i> PCC 7806. <i>Applied and Environmental Microbiology</i> , 2015 , 81, 544-54	4.8	53

49	The mcyF gene of the microcystin biosynthetic gene cluster from <i>Microcystis aeruginosa</i> encodes an aspartate racemase. <i>Biochemical Journal</i> , 2003 , 373, 909-16	3.8	47
48	Microcystin interferes with defense against high oxidative stress in harmful cyanobacteria. <i>Harmful Algae</i> , 2018 , 78, 47-55	5.3	41
47	Leader peptide and a membrane protein scaffold guide the biosynthesis of the tricyclic peptide microviridin. <i>Chemistry and Biology</i> , 2011 , 18, 1413-21		41
46	Nonribosomal peptide synthetase genes occur in most cyanobacterial genera as evidenced by their distribution in axenic strains of the PCC. <i>Archives of Microbiology</i> , 2001 , 176, 452-8	3	41
45	Nostopeptolide plays a governing role during cellular differentiation of the symbiotic cyanobacterium <i>Nostoc punctiforme</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 1862-7	11.5	39
44	Horizontal gene transfer of two cytoskeletal elements from a eukaryote to a cyanobacterium. <i>Current Biology</i> , 2007 , 17, R757-9	6.3	38
43	Harnessing the evolvability of tricyclic microviridins to dissect protease-inhibitor interactions. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 3735-8	16.4	34
42	Leader Peptide-Free In Vitro Reconstitution of Microviridin Biosynthesis Enables Design of Synthetic Protease-Targeted Libraries. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 9398-401	16.4	33
41	A community resource for paired genomic and metabolomic data mining. <i>Nature Chemical Biology</i> , 2021 , 17, 363-368	11.7	32
40	Functional assessment of mycosporine-like amino acids in <i>Microcystis aeruginosa</i> strain PCC 7806. <i>Environmental Microbiology</i> , 2015 , 17, 1548-59	5.2	31
39	Phylogenomic Analysis of the Microviridin Biosynthetic Pathway Coupled with Targeted Chemo-Enzymatic Synthesis Yields Potent Protease Inhibitors. <i>ACS Chemical Biology</i> , 2017 , 12, 1538-1548	4.9	30
38	Functional analysis of environmental DNA-derived microviridins provides new insights into the diversity of the tricyclic peptide family. <i>Applied and Environmental Microbiology</i> , 2014 , 80, 1380-7	4.8	24
37	Evolutionary mechanisms underlying secondary metabolite diversity. <i>Progress in Drug Research Fortschritte Der Arzneimittelforschung Progres Des Recherches Pharmaceutiques</i> , 2008 , 65, 119, 121-40		21
36	Aurachin-Biosynthese im Gram-negativen Bakterium <i>Stigmatella aurantiaca</i> : Beteiligung einer Typ-II-Polyketidsynthase. <i>Angewandte Chemie</i> , 2007 , 119, 2768-2772	3.6	21
35	Conserved sequences of peptide synthetase genes in the cyanobacterium <i>Microcystis aeruginosa</i> . <i>Phycologia</i> , 1996 , 35, 62-67	2.7	21
34	A new rubisco-like protein coexists with a photosynthetic rubisco in the planktonic cyanobacteria <i>Microcystis</i> . <i>Journal of Biological Chemistry</i> , 2006 , 281, 24462-71	5.4	20
33	Molecular Biology of Cyanobacterial Toxins 2005 , 25-40		20
32	Cyanobacteria as a source of natural products. <i>Methods in Enzymology</i> , 2012 , 517, 23-46	1.7	19

31	A Genetic and Chemical Perspective on Symbiotic Recruitment of Cyanobacteria of the Genus into the Host Plant <i>L. Frontiers in Microbiology</i> , 2016 , 7, 1693	5.7	19
30	High-Density Cultivation of Terrestrial Nostoc Strains Leads to Reprogramming of Secondary Metabolome. <i>Applied and Environmental Microbiology</i> , 2017 , 83,	4.8	18
29	Unlocking the Spatial Control of Secondary Metabolism Uncovers Hidden Natural Product Diversity in <i>Nostoc punctiforme</i> . <i>ACS Chemical Biology</i> , 2019 , 14, 1271-1279	4.9	18
28	The Landscape of Recombination Events That Create Nonribosomal Peptide Diversity. <i>Molecular Biology and Evolution</i> , 2021 , 38, 2116-2130	8.3	17
27	Toxic and non-toxic strains of the cyanobacterium <i>Microcystis aeruginosa</i> contain sequences homologous to peptide synthetase genes. <i>FEMS Microbiology Letters</i> , 1996 , 135, 295-303	2.9	16
26	A polyketide interferes with cellular differentiation in the symbiotic cyanobacterium <i>Nostoc punctiforme</i> . <i>Environmental Microbiology Reports</i> , 2011 , 3, 550-8	3.7	15
25	Synergistic in vitro anti-HIV type 1 activity of tenofovir with carbohydrate-binding agents (CBAs). <i>Antiviral Research</i> , 2011 , 90, 200-4	10.8	14
24	Structural and functional insights into the unique CBS-CP12 fusion protein family in cyanobacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 7141-7146	11.5	10
23	Ribosomal Synthesis of Tricyclic Depsipeptides in Bloom-Forming Cyanobacteria. <i>Angewandte Chemie</i> , 2008 , 120, 7870-7873	3.6	10
22	Unique Biosynthetic Pathway in Bloom-Forming Cyanobacterial Genus <i>Microcystis</i> Jointly Assembles Cytotoxic Aeruginoguanidines and Microguanidines. <i>ACS Chemical Biology</i> , 2019 , 14, 67-75	4.9	9
21	Casting a net: fibres produced by <i>Microcystis</i> sp. in field and laboratory populations. <i>Environmental Microbiology Reports</i> , 2012 , 4, 342-9	3.7	8
20	Salt Shock Responses of Revealed through Physiological, Transcript, and Metabolomic Analyses. <i>Toxins</i> , 2020 , 12,	4.9	7
19	Non-canonical localization of RubisCO under high-light conditions in the toxic cyanobacterium <i>Microcystis aeruginosa</i> PCC7806. <i>Environmental Microbiology</i> , 2019 , 21, 4836-4851	5.2	7
18	Mycosporine-like amino acids (MAAs)-producing <i>Microcystis</i> in Lake Erie: Development of a qPCR assay and insight into its ecology. <i>Harmful Algae</i> , 2018 , 77, 1-10	5.3	6
17	Unique properties of eukaryote-type actin and profilin horizontally transferred to cyanobacteria. <i>PLoS ONE</i> , 2012 , 7, e29926	3.7	6
16	Analyse von Protease-Inhibitor-Interaktionen unter Nutzung evolvierbarer tricyclischer Microviridine. <i>Angewandte Chemie</i> , 2014 , 126, 3810-3813	3.6	5
15	Protective tunicate endosymbiont with extreme genome reduction. <i>Environmental Microbiology</i> , 2015 , 17, 3430-2	5.2	5
14	Peptide Synthetase Genes Occur in Various Species of Cyanobacteria 1999 , 615-621		5

13	Prerequisites of Isopeptide Bond Formation in Microcystin Biosynthesis. <i>ChemBioChem</i> , 2017 , 18, 2376-2389	3.8	3
12	Leader Peptide-Free In Vitro Reconstitution of Microviridin Biosynthesis Enables Design of Synthetic Protease-Targeted Libraries. <i>Angewandte Chemie</i> , 2016 , 128, 9544-9547	3.6	3
11	Diel Variations of Extracellular Microcystin Influence the Subcellular Dynamics of RubisCO in PCC 7806. <i>Microorganisms</i> , 2021 , 9,	4.9	2
10	Draft Genome Sequences of Two Uncultured Associated with a sp. () Isolate. <i>Genome Announcements</i> , 2017 , 5,		1
9	Conventional PCR 2017 , 163-203		1
8	Depth profiles of protein-bound microcystin in K�kmece Lagoon. <i>Toxicon</i> , 2021 , 198, 156-163	2.8	1
7	Microviridins 2020 , 193-205		1
6	From Water into Sediment-Tracing Freshwater via DNA Analyses. <i>Microorganisms</i> , 2021 , 9,	4.9	1
5	Cyanobakterielle Toxine �von der Biosynthese zur Funktion. <i>BioSpektrum</i> , 2013 , 19, 16-18	0.1	0
4	Species-Level Spatio-Temporal Dynamics of Cyanobacteria in a Hard-Water Temperate Lake in the Southern Baltics. <i>Frontiers in Microbiology</i> , 2021 , 12, 761259	5.7	0
3	Nucleic Acid Extraction 2017 , 135-161		
2	Inside Cover: Ribosomal Synthesis of Tricyclic Depsipeptides in Bloom-Forming Cyanobacteria (Angew. Chem. Int. Ed. 40/2008). <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 7566-7566	16.4	
1	Cyanobacterial Genome Sequencing, Annotation, and Bioinformatics.. <i>Methods in Molecular Biology</i> , 2022 , 2489, 269-287	1.4	