Markus KÃ¼nzler

List of Publications by Year
in descending order

76 papers	2,955 citations	136950 32 h-index	182427 51 g-index
80 all docs	80 docs citations	80 times ranked	2948 citing authors

#	Article	IF	Citations
1	Structureâ€“function relationship of a novel fucoside-binding fruiting body lectin from <i>Coprinopsis cinerea</i> exhibiting nematotoxic activity. Glycobiology, 2022, , .	2.5	2
2	Injection into and extraction from single fungal cells. Communications Biology, 2022, 5, 180.	4.4	11
3	Genome sequences of <i>Rhizopogon roseolus</i>, <i>Mariannaea elegans, Myrothecium verrucaria</i> and <i>Sphaerostilbella broomeana</i> and the identification of biosynthetic gene clusters for fungal peptide natural products. G3: Genes, Genomes, Genetics, 2022, , .	1.8	0
4	Cocaprins, Î²-Trefoil Fold Inhibitors of Cysteine and Aspartic Proteases from Coprinopsis cinerea. International Journal of Molecular Sciences, 2022, 23, 4916.	4.1	3
5	Mycorrhizaâ€induced mycocypins of <i>Laccaria bicolor</i> are potent protease inhibitors with nematotoxic and collembola antifeedant activity. Environmental Microbiology, 2022, 24, 4607-4622.	3.8	2
6	The infectious propagules of <i>Aspergillus fumigatus</i> are coated with antimicrobial peptides. Cellular Microbiology, 2021, 23, e13301.	2.1	1
7	Enzyme-mediated backbone N-methylation in ribosomally encoded peptides. Methods in Enzymology, 2021, 656, 429-458.	1.0	4
8	Identification, heterologous production and bioactivity of lentinulin A and dendrothelin A, two natural variants of backbone N-methylated peptide macrocycle omphalotin A. Scientific Reports, 2021, 11, 3541.	3.3	19
9	Expression of a Fungal Lectin in Arabidopsis Enhances Plant Growth and Resistance Toward Microbial Pathogens and a Plant-Parasitic Nematode. Frontiers in Plant Science, 2021, 12, 657451.	3.6	13
10	Pseudomonas Strains Induce Transcriptional and Morphological Changes and Reduce Root Colonization of Verticillium spp.. Frontiers in Microbiology, 2021, 12, 652468.	3.5	6
11	Engineering of a Peptide Î±â€Nâ€Methyltransferase to Methylate Nonâ€Proteinogenic Amino Acids. Angewandte Chemie, 2021, 133, 14440-14444.	2.0	0
12	Engineering of a Peptide Î±â€Nâ€Methyltransferase to Methylate Nonâ€Proteinogenic Amino Acids. Angewandte Chemie - International Edition, 2021, 60, 14319-14323.	13.8	10
13	Cytoplasmic Lipasesâ€”A Novel Class of Fungal Defense Proteins Against Nematodes. Frontiers in Fungal Biology, 2021, 2, .	2.0	4
14	Marasmius oreades agglutinin enhances resistance of Arabidopsis against plant-parasitic nematodes and a herbivorous insect. BMC Plant Biology, 2021, 21, 402.	3.6	1
15	Substrate Plasticity of a Fungal Peptide Î±-<i>N</i>-Methyltransferase. ACS Chemical Biology, 2020, 15, 1901-1912.	3.4	14
16	Expression, Purification, and Functional Characterization of Tectonin 2 from Laccaria bicolor: A Six-Bladed Beta-Propeller Lectin Specific for O-Methylated Glycans. Methods in Molecular Biology, 2020, 2132, 669-682.	0.9	1
17	Heterologous Production and Functional Characterization of Ageritin, a Novel Type of Ribotoxin Highly Expressed during Fruiting of the Edible Mushroom Agrocybe aegerita. Applied and Environmental Microbiology, 2019, 85, .	3.1	18
18	Discovery of novel fungal RiPP biosynthetic pathways and their application for the development of peptide therapeutics. Applied Microbiology and Biotechnology, 2019, 103, 5567-5581.	3.6	28

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19	Distinct Autocatalytic Î±-<i>N-</i>Methylating Precursors Expand the Borosin RiPP Family of Peptide Natural Products. Journal of the American Chemical Society, 2019, 141, 9637-9644.	13.7	41
20	Bacteriaâ€induced production of the antibacterial sesquiterpene lagopodin B in Coprinopsis cinerea. Molecular Microbiology, 2019, 112, 605-619.	2.5	26
21	Combining microfluidics and RNA-sequencing to assess the inducible defensome of a mushroom against nematodes. BMC Genomics, 2019, 20, 243.	2.8	19
22	Bidirectional Propagation of Signals and Nutrients in Fungal Networks via Specialized Hyphae. Current Biology, 2019, 29, 217-228.e4.	3.9	82
23	Induction of antibacterial proteins and peptides in the coprophilous mushroom <i>Coprinopsis cinerea</i> in response to bacteria. ISME Journal, 2019, 13, 588-602.	9.8	60
24	Crystal Structures of Fungal Tectonin in Complex with O-Methylated Glycans Suggest Key Role in Innate Immune Defense. Structure, 2018, 26, 391-402.e4.	3.3	28
25	Multi-genome analysis identifies functional and phylogenetic diversity of basidiomycete adenylate-forming reductases. Fungal Genetics and Biology, 2018, 112, 55-63.	2.1	26
26	Toxicity of Potential Fungal Defense Proteins towards the Fungivorous Nematodes Aphelenchus avenae and Bursaphelenchus okinawaensis. Applied and Environmental Microbiology, 2018, 84, .	3.1	20
27	How fungi defend themselves against microbial competitors and animal predators. PLoS Pathogens, 2018, 14, e1007184.	4.7	97
28	A molecular mechanism for the enzymatic methylation of nitrogen atoms within peptide bonds. Science Advances, 2018, 4, eaat2720.	10.3	48
29	Autocatalytic backbone N-methylation in a family of ribosomal peptide natural products. Nature Chemical Biology, 2017, 13, 833-835.	8.0	105
30	Coprinopsis cinerea intracellular lactonases hydrolyze quorum sensing molecules of Gram-negative bacteria. Fungal Genetics and Biology, 2017, 102, 49-62.	2.1	19
31	Polyporus squamosus Lectin 1a (PSL1a) Exhibits Cytotoxicity in Mammalian Cells by Disruption of Focal Adhesions, Inhibition of Protein Synthesis and Induction of Apoptosis. PLoS ONE, 2017, 12, e0170716.	2.5	10
32	<i>O</i>-Alkylated heavy atom carbohydrate probes for protein X-ray crystallography: Studies towards the synthesis of methyl 2-<i>O</i>-methyl-L-selenofucopyranoside. Beilstein Journal of Organic Chemistry, 2016, 12, 2828-2833.	2.2	6
33	Identification of a Novel Nematotoxic Protein by Challenging the Model Mushroom <i>Coprinopsis cinerea</i> with a Fungivorous Nematode. G3: Genes, Genomes, Genetics, 2016, 6, 87-98.	1.8	26
34	Dimerization of the fungal defense lectin CCL2 is essential for its toxicity against nematodes. Glycobiology, 2016, 27, 486-500.	2.5	17
35	Uptake of Marasmius oreades agglutinin disrupts integrin-dependent cell adhesion. Biochimica Et Biophysica Acta - General Subjects, 2016, 1860, 392-401.	2.4	11
36	Entomotoxic and nematotoxic lectins and protease inhibitors from fungal fruiting bodies. Applied Microbiology and Biotechnology, 2016, 100, 91-111.	3.6	60

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37	Inhibition of Haemonchus contortus larval development by fungal lectins. Parasites and Vectors, 2015, 8, 425.	2.5	42
38	Hitting the Sweet Spot: Glycans as Targets of Fungal Defense Effector Proteins. Molecules, 2015, 20, 8144-8167.	3.8	39
39	Disruption of the C. elegans Intestinal Brush Border by the Fungal Lectin CCL2 Phenocopies Dietary Lectin Toxicity in Mammals. PLoS ONE, 2015, 10, e0129381.	2.5	37
40	Copsin, a Novel Peptide-based Fungal Antibiotic Interfering with the Peptidoglycan Synthesis. Journal of Biological Chemistry, 2014, 289, 34953-34964.	3.4	125
41	Probing bacterialâ€“fungal interactions at the single cell level. Integrative Biology (United Kingdom), 2014, 6, 935-945.	1.3	73
42	A novel Î²â€trefoil lectin from the parasol mushroom (<i>MacrolepiotaÂprocera</i>) is nematotoxic. FEBS Journal, 2014, 281, 3489-3506.	4.7	33
43	Comparative transcriptomics of the model mushroom Coprinopsis cinerea reveals tissue-specific armories and a conserved circuitry for sexual development. BMC Genomics, 2014, 15, 492.	2.8	65
44	Methylated glycans as conserved targets of animal and fungal innate defense. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2787-96.	7.1	74
45	Membrane cholesterol and sphingomyelin, and ostreolysin A are obligatory for pore-formation by a MACPF/CDC-like pore-forming protein, pleurotolysin B. Biochimie, 2013, 95, 1855-1864.	2.6	68
46	Identification of the galactosyltransferase of Cryptococcus neoformans involved in the biosynthesis of basidiomycete-type glycosylinositolphosphoceramide. Glycobiology, 2013, 23, 1210-1219.	2.5	7
47	Plasticity of the Î²-Trefoil Protein Fold in the Recognition and Control of Invertebrate Predators and Parasites by a Fungal Defence System. PLoS Pathogens, 2012, 8, e1002706.	4.7	65
48	Galactosylated Fucose Epitopes in Nematodes. Journal of Biological Chemistry, 2012, 287, 28276-28290.	3.4	43
49	Biotin-Binding Proteins in the Defense of Mushrooms against Predators and Parasites. Applied and Environmental Microbiology, 2012, 78, 8485-8487.	3.1	20
50	Structural Basis of Trypsin Inhibition and Entomotoxicity of Cospin, Serine Protease Inhibitor Involved in Defense of Coprinopsis cinerea Fruiting Bodies. Journal of Biological Chemistry, 2012, 287, 3898-3907.	3.4	46
51	Bivalent Carbohydrate Binding Is Required for Biological Activity of Clitocybe nebularis Lectin (CNL), the N,Nâ€²-Diacetyllactosediamine (GalNAcÎ²1â€“4GlcNAc, LacdiNAc)-specific Lectin from Basidiomycete C. nebularis. Journal of Biological Chemistry, 2012, 287, 10602-10612.	3.4	51
52	Nematotoxicity of Marasmius oreades Agglutinin (MOA) Depends on Glycolipid Binding and Cysteine Protease Activity. Journal of Biological Chemistry, 2011, 286, 30337-30343.	3.4	42
53	A lectinâ€mediated resistance of higher fungi against predators and parasites. Molecular Ecology, 2011, 20, 3056-3070.	3.9	92
54	Identification, Characterization, and Biosynthesis of a Novel N-Glycan Modification in the Fruiting Body of the Basidiomycete Coprinopsis cinerea. Journal of Biological Chemistry, 2010, 285, 10715-10723.	3.4	24

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55	Caenorhabditis elegans N-glycan Core Î²-galactoside Confers Sensitivity towards Nematotoxic Fungal Galectin CGL2. PLoS Pathogens, 2010, 6, e1000717.	4.7	95
56	Biotoxicity Assays for Fruiting Body Lectins and Other Cytoplasmic Proteins. Methods in Enzymology, 2010, 480, 141-150.	1.0	21
57	Nucleus-Specific and Cell Cycle-Regulated Degradation of Mitogen-Activated Protein Kinase Scaffold Protein Ste5 Contributes to the Control of Signaling Competence. Molecular and Cellular Biology, 2009, 29, 582-601.	2.3	38
58	Molecular Basis for Galactosylation of Core Fucose Residues in Invertebrates. Journal of Biological Chemistry, 2009, 284, 36223-36233.	3.4	48
59	Crystal structure of the putative carbohydrate recognition domain of human galectinâ€related protein. Proteins: Structure, Function and Bioinformatics, 2008, 72, 804-808.	2.6	12
60	Structural Basis for Chitotetraose Coordination by CGL3, a Novel Galectin-Related Protein from Coprinopsis cinerea. Journal of Molecular Biology, 2008, 379, 146-159.	4.2	53
61	Targeted Gene Silencing in the Model Mushroom Coprinopsis cinerea (Coprinus cinereus) by Expression of Homologous Hairpin RNAs. Eukaryotic Cell, 2006, 5, 732-744.	3.4	73
62	Cell surface counter receptors are essential components of the unconventional export machinery of galectin-1. Journal of Cell Biology, 2005, 171, 373-381.	5.2	99
63	Ligand interactions of the Coprinopsis cinerea galectins. Fungal Genetics and Biology, 2005, 42, 293-305.	2.1	27
64	Structure and Functional Analysis of the Fungal Galectin CGL2. Structure, 2004, 12, 689-702.	3.3	107
65	Promoter analysis of cgl2, a galectin encoding gene transcribed during fruiting body formation in Coprinopsis cinerea (Coprinus cinereus). Fungal Genetics and Biology, 2004, 41, 1120-1131.	2.1	27
66	Identification and Characterization of a Novel RanGTP-binding Protein in the Yeast Saccharomyces cerevisiae. Journal of Biological Chemistry, 2003, 278, 15397-15405.	3.4	10
67	Mutations in the <i>YRB1</i> Gene Encoding Yeast Ran-Binding-Protein-1 That Impair Nucleocytoplasmic Transport and Suppress Yeast Mating Defects. Genetics, 2001, 157, 1089-1105.	2.9	29
68	Purification of Protein A-tagged Yeast Ran Reveals Association with a Novel Karyopherin Î² Family Member, Pdr6p. Journal of Biological Chemistry, 2000, 275, 467-471.	3.4	15
69	Yeast Ran-Binding Protein 1 (Yrb1) Shuttles between the Nucleus and Cytoplasm and Is Exported from the Nucleus via a CRM1 (XPO1)-Dependent Pathway. Molecular and Cellular Biology, 2000, 20, 4295-4308.	2.3	55
70	Yeast Ran-binding Protein Yrb1p Is Required for Efficient Proteolysis of Cell Cycle Regulatory Proteins Pds1p and Sic1p. Journal of Biological Chemistry, 2000, 275, 38929-38937.	3.4	25
71	Cselp functions as the nuclear export receptor for importin Î± in yeast. FEBS Letters, 1998, 433, 185-190.	2.8	79
72	Yeast Los1p Has Properties of an Exportin-Like Nucleocytoplasmic Transport Factor for tRNA. Molecular and Cellular Biology, 1998, 18, 6374-6386.	2.3	226

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73	The transcriptional apparatus required for mRNA encoding genes in the yeastSaccharomyces cerevisiaeemerges from a jigsaw puzzle of transcription factors. FEMS Microbiology Reviews, 1996, 19, 117-136.	8.6	7
74	Amino Acid and Adenine Cross-pathway Regulation Act through the Same 5â€²-TGACTC-3â€² Motif in the Yeast HIS7 Promoter. Journal of Biological Chemistry, 1996, 271, 29637-29643.	3.4	35
75	Activation and repression of the yeast ARO3 gene by global transcription factors. Molecular Microbiology, 1995, 15, 167-178.	2.5	13
76	Cloning, primary structure and regulation of the ARO4 gene, encoding the tyrosine-inhibited 3-deoxy-D-arabino-heptulosonate-7-phosphate synthase from Saccharomyces cerevisiae. Gene, 1992, 113, 67-74.	2.2	56