

Markus KÃ¼nzler

List of Publications by Year in descending order

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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	Yeast Los1p Has Properties of an Exportin-Like Nucleocytoplasmic Transport Factor for tRNA. <i>Molecular and Cellular Biology</i> , 1998, 18, 6374-6386.	2.3	226
2	Copsin, a Novel Peptide-based Fungal Antibiotic Interfering with the Peptidoglycan Synthesis. <i>Journal of Biological Chemistry</i> , 2014, 289, 34953-34964.	3.4	125
3	Structure and Functional Analysis of the Fungal Galectin CGL2. <i>Structure</i> , 2004, 12, 689-702.	3.3	107
4	Autocatalytic backbone N-methylation in a family of ribosomal peptide natural products. <i>Nature Chemical Biology</i> , 2017, 13, 833-835.	8.0	105
5	Cell surface counter receptors are essential components of the unconventional export machinery of galectin-1. <i>Journal of Cell Biology</i> , 2005, 171, 373-381.	5.2	99
6	How fungi defend themselves against microbial competitors and animal predators. <i>PLoS Pathogens</i> , 2018, 14, e1007184.	4.7	97
7	<i>Caenorhabditis elegans</i> N-glycan Core Î²-galactoside Confers Sensitivity towards Nematotoxic Fungal Galectin CGL2. <i>PLoS Pathogens</i> , 2010, 6, e1000717.	4.7	95
8	A lectin-mediated resistance of higher fungi against predators and parasites. <i>Molecular Ecology</i> , 2011, 20, 3056-3070.	3.9	92
9	Bidirectional Propagation of Signals and Nutrients in Fungal Networks via Specialized Hyphae. <i>Current Biology</i> , 2019, 29, 217-228.e4.	3.9	82
10	Csep1 functions as the nuclear export receptor for importin Î± in yeast. <i>FEBS Letters</i> , 1998, 433, 185-190.	2.8	79
11	Methylated glycans as conserved targets of animal and fungal innate defense. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E2787-96.	7.1	74
12	Targeted Gene Silencing in the Model Mushroom <i>Coprinopsis cinerea</i> (<i>Coprinus cinereus</i>) by Expression of Homologous Hairpin RNAs. <i>Eukaryotic Cell</i> , 2006, 5, 732-744.	3.4	73
13	Probing bacterial-fungal interactions at the single cell level. <i>Integrative Biology (United Kingdom)</i> , 2014, 6, 935-945.	1.3	73
14	Membrane cholesterol and sphingomyelin, and ostreolysin A are obligatory for pore-formation by a MACPF/CDC-like pore-forming protein, pleurotolysin B. <i>Biochimie</i> , 2013, 95, 1855-1864.	2.6	68
15	Plasticity of the Î²-Trefoil Protein Fold in the Recognition and Control of Invertebrate Predators and Parasites by a Fungal Defence System. <i>PLoS Pathogens</i> , 2012, 8, e1002706.	4.7	65
16	Comparative transcriptomics of the model mushroom <i>Coprinopsis cinerea</i> reveals tissue-specific armories and a conserved circuitry for sexual development. <i>BMC Genomics</i> , 2014, 15, 492.	2.8	65
17	Entomotoxic and nematotoxic lectins and protease inhibitors from fungal fruiting bodies. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 91-111.	3.6	60
18	Induction of antibacterial proteins and peptides in the coprophilous mushroom <i>Coprinopsis cinerea</i> in response to bacteria. <i>ISME Journal</i> , 2019, 13, 588-602.	9.8	60

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19	Cloning, primary structure and regulation of the ARO4 gene, encoding the tyrosine-inhibited 3-deoxy-D-arabino-heptulosonate-7-phosphate synthase from <i>Saccharomyces cerevisiae</i> . <i>Gene</i> , 1992, 113, 67-74.	2.2	56
20	Yeast Ran-Binding Protein 1 (Yrb1) Shuttles between the Nucleus and Cytoplasm and Is Exported from the Nucleus via a CRM1 (XPO1)-Dependent Pathway. <i>Molecular and Cellular Biology</i> , 2000, 20, 4295-4308.	2.3	55
21	Structural Basis for Chitotetraose Coordination by CGL3, a Novel Galectin-Related Protein from <i>Coprinopsis cinerea</i> . <i>Journal of Molecular Biology</i> , 2008, 379, 146-159.	4.2	53
22	Bivalent Carbohydrate Binding Is Required for Biological Activity of <i>Clitocybe nebularis</i> Lectin (CNL), the N,N'-Diacetyllactosediamine (GalNAc ² 1â€‘4GlcNAc, LacdiNAc)-specific Lectin from Basidiomycete <i>C. nebularis</i> . <i>Journal of Biological Chemistry</i> , 2012, 287, 10602-10612.	3.4	51
23	Molecular Basis for Galactosylation of Core Fucose Residues in Invertebrates. <i>Journal of Biological Chemistry</i> , 2009, 284, 36223-36233.	3.4	48
24	A molecular mechanism for the enzymatic methylation of nitrogen atoms within peptide bonds. <i>Science Advances</i> , 2018, 4, eaat2720.	10.3	48
25	Structural Basis of Trypsin Inhibition and Entomotoxicity of Cospin, Serine Protease Inhibitor Involved in Defense of <i>Coprinopsis cinerea</i> Fruiting Bodies. <i>Journal of Biological Chemistry</i> , 2012, 287, 3898-3907.	3.4	46
26	Galactosylated Fucose Epitopes in Nematodes. <i>Journal of Biological Chemistry</i> , 2012, 287, 28276-28290.	3.4	43
27	Nematotoxicity of <i>Marasmius oreades</i> Agglutinin (MOA) Depends on Glycolipid Binding and Cysteine Protease Activity. <i>Journal of Biological Chemistry</i> , 2011, 286, 30337-30343.	3.4	42
28	Inhibition of <i>Haemonchus contortus</i> larval development by fungal lectins. <i>Parasites and Vectors</i> , 2015, 8, 425.	2.5	42
29	Distinct Autocatalytic Î±-N-Methylating Precursors Expand the Borosin RiPP Family of Peptide Natural Products. <i>Journal of the American Chemical Society</i> , 2019, 141, 9637-9644.	13.7	41
30	Hitting the Sweet Spot: Glycans as Targets of Fungal Defense Effector Proteins. <i>Molecules</i> , 2015, 20, 8144-8167.	3.8	39
31	Nucleus-Specific and Cell Cycle-Regulated Degradation of Mitogen-Activated Protein Kinase Scaffold Protein Ste5 Contributes to the Control of Signaling Competence. <i>Molecular and Cellular Biology</i> , 2009, 29, 582-601.	2.3	38
32	Disruption of the <i>C. elegans</i> Intestinal Brush Border by the Fungal Lectin CCL2 Phenocopies Dietary Lectin Toxicity in Mammals. <i>PLoS ONE</i> , 2015, 10, e0129381.	2.5	37
33	Amino Acid and Adenine Cross-pathway Regulation Act through the Same 5â€‘-TGA CTC-3â€‘ Motif in the Yeast HIS7 Promoter. <i>Journal of Biological Chemistry</i> , 1996, 271, 29637-29643.	3.4	35
34	A novel Î±-trefoil lectin from the parasol mushroom (<i>Macrolepiota procera</i>) is nematotoxic. <i>FEBS Journal</i> , 2014, 281, 3489-3506.	4.7	33
35	Mutations in the <i>YRB1</i> Gene Encoding Yeast Ran-Binding-Protein-1 That Impair Nucleocytoplasmic Transport and Suppress Yeast Mating Defects. <i>Genetics</i> , 2001, 157, 1089-1105.	2.9	29
36	Crystal Structures of Fungal Tectonin in Complex with O-Methylated Glycans Suggest Key Role in Innate Immune Defense. <i>Structure</i> , 2018, 26, 391-402.e4.	3.3	28

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37	Discovery of novel fungal RiPP biosynthetic pathways and their application for the development of peptide therapeutics. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 5567-5581.	3.6	28
38	Promoter analysis of <i>cgl2</i> , a galectin encoding gene transcribed during fruiting body formation in <i>Coprinopsis cinerea</i> (<i>Coprinus cinereus</i>). <i>Fungal Genetics and Biology</i> , 2004, 41, 1120-1131.	2.1	27
39	Ligand interactions of the <i>Coprinopsis cinerea</i> galectins. <i>Fungal Genetics and Biology</i> , 2005, 42, 293-305.	2.1	27
40	Identification of a Novel Nematotoxic Protein by Challenging the Model Mushroom <i>Coprinopsis cinerea</i> with a Fungivorous Nematode. <i>G3: Genes, Genomes, Genetics</i> , 2016, 6, 87-98.	1.8	26
41	Multi-genome analysis identifies functional and phylogenetic diversity of basidiomycete adenylate-forming reductases. <i>Fungal Genetics and Biology</i> , 2018, 112, 55-63.	2.1	26
42	Bacteria-induced production of the antibacterial sesquiterpene lagopodin B in <i>Coprinopsis cinerea</i> . <i>Molecular Microbiology</i> , 2019, 112, 605-619.	2.5	26
43	Yeast Ran-binding Protein Yrb1p Is Required for Efficient Proteolysis of Cell Cycle Regulatory Proteins Pds1p and Sic1p. <i>Journal of Biological Chemistry</i> , 2000, 275, 38929-38937.	3.4	25
44	Identification, Characterization, and Biosynthesis of a Novel N-Glycan Modification in the Fruiting Body of the Basidiomycete <i>Coprinopsis cinerea</i> . <i>Journal of Biological Chemistry</i> , 2010, 285, 10715-10723.	3.4	24
45	Biotoxicity Assays for Fruiting Body Lectins and Other Cytoplasmic Proteins. <i>Methods in Enzymology</i> , 2010, 480, 141-150.	1.0	21
46	Biotin-Binding Proteins in the Defense of Mushrooms against Predators and Parasites. <i>Applied and Environmental Microbiology</i> , 2012, 78, 8485-8487.	3.1	20
47	Toxicity of Potential Fungal Defense Proteins towards the Fungivorous Nematodes <i>Aphelenchus avenae</i> and <i>Bursaphelenchus okinawaensis</i> . <i>Applied and Environmental Microbiology</i> , 2018, 84, .	3.1	20
48	<i>Coprinopsis cinerea</i> intracellular lactonases hydrolyze quorum sensing molecules of Gram-negative bacteria. <i>Fungal Genetics and Biology</i> , 2017, 102, 49-62.	2.1	19
49	Combining microfluidics and RNA-sequencing to assess the inducible defensome of a mushroom against nematodes. <i>BMC Genomics</i> , 2019, 20, 243.	2.8	19
50	Identification, heterologous production and bioactivity of lentinulin A and dendrothelin A, two natural variants of backbone N-methylated peptide macrocycle omphalotin A. <i>Scientific Reports</i> , 2021, 11, 3541.	3.3	19
51	Heterologous Production and Functional Characterization of Ageritin, a Novel Type of Ribotoxin Highly Expressed during Fruiting of the Edible Mushroom <i>Agrocybe aegerita</i> . <i>Applied and Environmental Microbiology</i> , 2019, 85, .	3.1	18
52	Dimerization of the fungal defense lectin CCL2 is essential for its toxicity against nematodes. <i>Glycobiology</i> , 2016, 27, 486-500.	2.5	17
53	Purification of Protein A-tagged Yeast Ran Reveals Association with a Novel Karyopherin β^2 Family Member, Pdr6p. <i>Journal of Biological Chemistry</i> , 2000, 275, 467-471.	3.4	15
54	Substrate Plasticity of a Fungal Peptide N-Methyltransferase. <i>ACS Chemical Biology</i> , 2020, 15, 1901-1912.	3.4	14

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55	Activation and repression of the yeast ARO3 gene by global transcription factors. <i>Molecular Microbiology</i> , 1995, 15, 167-178.	2.5	13
56	Expression of a Fungal Lectin in Arabidopsis Enhances Plant Growth and Resistance Toward Microbial Pathogens and a Plant-Parasitic Nematode. <i>Frontiers in Plant Science</i> , 2021, 12, 657451.	3.6	13
57	Crystal structure of the putative carbohydrate recognition domain of human galectin-related protein. <i>Proteins: Structure, Function and Bioinformatics</i> , 2008, 72, 804-808.	2.6	12
58	Uptake of <i>Marasmius oryzae</i> agglutinin disrupts integrin-dependent cell adhesion. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2016, 1860, 392-401.	2.4	11
59	Injection into and extraction from single fungal cells. <i>Communications Biology</i> , 2022, 5, 180.	4.4	11
60	Identification and Characterization of a Novel RanGTP-binding Protein in the Yeast <i>Saccharomyces cerevisiae</i> . <i>Journal of Biological Chemistry</i> , 2003, 278, 15397-15405.	3.4	10
61	Engineering of a Peptide N-Methyltransferase to Methylate Non-Proteinogenic Amino Acids. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 14319-14323.	13.8	10
62	<i>Polyporus squamosus</i> Lectin 1a (PSL1a) Exhibits Cytotoxicity in Mammalian Cells by Disruption of Focal Adhesions, Inhibition of Protein Synthesis and Induction of Apoptosis. <i>PLoS ONE</i> , 2017, 12, e0170716.	2.5	10
63	The transcriptional apparatus required for mRNA encoding genes in the yeast <i>Saccharomyces cerevisiae</i> emerges from a jigsaw puzzle of transcription factors. <i>FEMS Microbiology Reviews</i> , 1996, 19, 117-136.	8.6	7
64	Identification of the galactosyltransferase of <i>Cryptococcus neoformans</i> involved in the biosynthesis of basidiomycete-type glycosylinositolphosphoceramide. <i>Glycobiology</i> , 2013, 23, 1210-1219.	2.5	7
65	O-Alkylated heavy atom carbohydrate probes for protein X-ray crystallography: Studies towards the synthesis of methyl 2-O-methyl-L-selenofucopyranoside. <i>Beilstein Journal of Organic Chemistry</i> , 2016, 12, 2828-2833.	2.2	6
66	<i>Pseudomonas</i> Strains Induce Transcriptional and Morphological Changes and Reduce Root Colonization of <i>Verticillium</i> spp.. <i>Frontiers in Microbiology</i> , 2021, 12, 652468.	3.5	6
67	Enzyme-mediated backbone N-methylation in ribosomally encoded peptides. <i>Methods in Enzymology</i> , 2021, 656, 429-458.	1.0	4
68	Cytoplasmic Lipases: A Novel Class of Fungal Defense Proteins Against Nematodes. <i>Frontiers in Fungal Biology</i> , 2021, 2, .	2.0	4
69	Cocaprins, β -Trefoil Fold Inhibitors of Cysteine and Aspartic Proteases from <i>Coprinopsis cinerea</i> . <i>International Journal of Molecular Sciences</i> , 2022, 23, 4916.	4.1	3
70	Structure-function relationship of a novel fucoside-binding fruiting body lectin from <i>Coprinopsis cinerea</i> exhibiting nematotoxic activity. <i>Glycobiology</i> , 2022, , .	2.5	2
71	Mycorrhiza-induced mycocypins of <i>Laccaria bicolor</i> are potent protease inhibitors with nematotoxic and collembola antifeedant activity. <i>Environmental Microbiology</i> , 2022, 24, 4607-4622.	3.8	2
72	The infectious propagules of <i>Aspergillus fumigatus</i> are coated with antimicrobial peptides. <i>Cellular Microbiology</i> , 2021, 23, e13301.	2.1	1

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73	Marasmius oreades agglutinin enhances resistance of Arabidopsis against plant-parasitic nematodes and a herbivorous insect. BMC Plant Biology, 2021, 21, 402.	3.6	1
74	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
75	Engineering of a Peptide N-Methyltransferase to Methylate Non-Proteinogenic Amino Acids. Angewandte Chemie, 2021, 133, 14440-14444.	2.0	0
76	Genome sequences of <i>Rhizopogon roseolus</i> , <i>Mariannaea elegans</i> , <i>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