Michaela Wimmerova

List of Publications by Year
in descending order

90	3,972	136885	123376
papers	citations	32 h-index	61 g-index

93	93	93	3709
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Structures of the lectins from Pseudomonas aeruginosa: insights into the molecular basis for host glycan recognition. Microbes and Infection, 2004, 6, 221-228.	1.0	271
2	Role of LecA and LecB Lectins in Pseudomonas aeruginosa -Induced Lung Injury and Effect of Carbohydrate Ligands. Infection and Immunity, 2009, 77, 2065-2075.	1.0	262
3	Structural basis for oligosaccharide-mediated adhesion of Pseudomonas aeruginosa in the lungs of cystic fibrosis patients. Nature Structural Biology, 2002, 9, 918-921.	9.7	247
4	Structural basis of calcium and galactose recognition by the lectin PA-IL ofPseudomonas aeruginosa. FEBS Letters, 2003, 555, 297-301.	1.3	175
5	Crystal Structure of Fungal Lectin. Journal of Biological Chemistry, 2003, 278, 27059-27067.	1.6	164
6	The Fucose-binding Lectin from Ralstonia solanacearum. Journal of Biological Chemistry, 2005, 280, 27839-27849.	1.6	160
7	Dirigent proteins in plants: modulating cell wall metabolism during abiotic and biotic stress exposure. Journal of Experimental Botany, 2017, 68, 3287-3301.	2.4	159
8	Structural Basis of the Preferential Binding for Globo-Series Glycosphingolipids Displayed by Pseudomonas aeruginosa Lectin I. Journal of Molecular Biology, 2008, 383, 837-853.	2.0	133
9	Structural basis for the interaction between human milk oligosaccharides and the bacterial lectin PA-IIL of Pseudomonas aeruginosa. Biochemical Journal, 2005, 389, 325-332.	1.7	129
10	Selectivity among Two Lectins: Probing the Effect of Topology, Multivalency and Flexibility of â€œClickedâ€•Multivalent Glycoclusters. Chemistry - A European Journal, 2011, 17, 2146-2159.	1.7	108
11	Bambus[n]urils: a New Family of Macrocyclic Anion Receptors. Organic Letters, 2011, 13, 4000-4003.	2.4	107
12	High affinity fucose binding of Pseudomonas aeruginosa lectin PA-IIL: 1.0 Ã... resolution crystal structure of the complex combined with thermodynamics and computational chemistry approaches. Proteins: Structure, Function and Bioinformatics, 2004, 58, 735-746.	1.5	104
13	Rational Design and Synthesis of Optimized Glycoclusters for Multivalent Lectinâ€“Carbohydrate Interactions: Influence of the Linker Arm. Chemistry - A European Journal, 2012, 18, 6250-6263.	1.7	100
14	Binding of different monosaccharides by lectin PA-IIL fromPseudomonas aeruginosa: Thermodynamics data correlated with X-ray structures. FEBS Letters, 2006, 580, 982-987.	1.3	94
15	Fucose-binding Lectin from Opportunistic Pathogen Burkholderia ambifaria Binds to Both Plant and Human Oligosaccharidic Epitopes. Journal of Biological Chemistry, 2012, 287, 4335-4347.	1.6	92
16	Structural basis of high-affinity glycan recognition by bacterial and fungal lectins. Current Opinion in Structural Biology, 2005, 15, 525-534.	2.6	88
17	A Soluble Fucose-Specific Lectin from Aspergillus fumigatus Conidia - Structure, Specificity and Possible Role in Fungal Pathogenicity. PLoS ONE, 2013, 8, e83077.	1.1	87
18	A TNF-like Trimeric Lectin Domain from Burkholderia cenocepacia with Specificity for Fucosylated Human Histo-Blood Group Antigens. Structure, 2010, 18, 59-72.	1.6	76

#	Article	IF	Citations
19	Structural basis for mannose recognition by a lectin from opportunistic bacteria Burkholderia cenocepacia. Biochemical Journal, 2008, 411, 307-318.	1.7	74
20	Microbe-focused glycan array screening platform. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1958-1967.	3.3	71
21	A new Ralstonia solanacearum high-affinity mannose-binding lectin RS-IIL structurally resembling the Pseudomonas aeruginosa fucose-specific lectin PA-IIL. Molecular Microbiology, 2004, 52, 691-700.	1.2	70
22	Xâ€ray Structures and Thermodynamics of the Interaction of PAâ€IIL from Pseudomonas aeruginosa with Disaccharide Derivatives. ChemMedChem, 2007, 2, 1328-1338.	1.6	61
23	Burkholderia cenocepacia BC2L-C Is a Super Lectin with Dual Specificity and Proinflammatory Activity. PLoS Pathogens, 2011, 7, e1002238.	2.1	61
24	Stacking Interactions between Carbohydrate and Protein Quantified by Combination of Theoretical and Experimental Methods. PLoS ONE, 2012, 7, e46032.	1.1	54
25	Sensitive amperometric biosensor for the determination of biogenic and synthetic amines using pea seedlings amine oxidase: a novel approach for enzyme immobilisation. Biosensors and Bioelectronics, 1999, 14, 695-702.	5.3	48
26	Structural basis of the affinity for oligomannosides and analogs displayed by BC2L-A, a Burkholderia cenocepacia soluble lectin. Glycobiology, 2010, 20, 87-98.	1.3	48
27	Anion Binding by Bambus[6]uril Probed in the Gas Phase and in Solution. Journal of Physical Chemistry A, 2011, 115, 11378-11386.	1.1	45
28	FleA Expression in Aspergillus fumigatus Is Recognized by Fucosylated Structures on Mucins and Macrophages to Prevent Lung Infection. PLoS Pathogens, 2016, 12, e1005555.	2.1	44
29	Engineering of PA-IIL lectin from Pseudomonas aeruginosa â€“ Unravelling the role of the specificity loop for sugar preference. BMC Structural Biology, 2007, 7, 36.	2.3	40
30	Substrate-Assisted Catalytic Mechanism of O-GlcNAc Transferase Discovered by Quantum Mechanics/Molecular Mechanics Investigation. Journal of the American Chemical Society, 2012, 134, 15563-15571.	6.6	39
31	Unusual Entropy-Driven Affinity of Chromobacterium violaceum Lectin CV-IIL toward Fucose and Mannose,. Biochemistry, 2006, 45, 7501-7510.	1.2	36
32	In Silico Mutagenesis and Docking Study of Ralstonia solanacearum RSL Lectin: Performance of Docking Software To Predict Saccharide Binding. Journal of Chemical Information and Modeling, 2012, 52, 1250-1261.	2.5	34
33	Burkholderia cenocepacia lectin A binding to heptoses from the bacterial lipopolysaccharide. Glycobiology, 2012, 22, 1387-1398.	1.3	31
34	Combination of Several Bioinformatics Approaches for the Identification of New Putative Glycosyltransferases inArabidopsis. Journal of Proteome Research, 2009, 8, 743-753.	1.8	30
35	New sensitive detection method for lectin hemagglutination using microscopy. Microscopy Research and Technique, 2014, 77, 841-849.	1.2	30
36	The CHâ€“Ï€ Interaction in Proteinâ€“Carbohydrate Binding: Bioinformatics and In Vitro Quantification. Chemistry - A European Journal, 2020, 26, 10769-10780.	1.7	30

#	Article	IF	Citations
37	Development and application of a novel recombinant Aleuria aurantia lectin with enhanced core fucose binding for identification of glycoprotein biomarkers of hepatocellular carcinoma. Proteomics, 2016, 16, 3126-3136.	1.3	29
38	Structural insights intoAspergillus fumigatuslectin specificity: AFL binding sites are functionally non-equivalent. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 442-453.	2.5	27
39	Architecture and Evolution of Blade Assembly in Î²-propeller Lectins. Structure, 2019, 27, 764-775.e3.	1.6	27
40	TRITON: a graphical tool for ligand-binding protein engineering. Bioinformatics, 2008, 24, 1955-1956.	1.8	25
41	Biochemical characterization of broad-specificity enzymes using multivariate experimental design and a colorimetric microplate assay: characterization of the haloalkane dehalogenase mutants. Journal of Microbiological Methods, 2001, 44, 149-157.	0.7	23
42	Combining fold recognition and exploratory data analysis for searching for glycosyltransferases in the genome of Mycobacterium tuberculosis. Biochimie, 2003, 85, 691-700.	1.3	22
43	ValidatorDB: database of up-to-date validation results for ligands and non-standard residues from the Protein Data Bank. Nucleic Acids Research, 2015, 43, D369-D375.	6.5	22
44	In Silico Mutagenesis and Docking Studies of Pseudomonas aeruginosa PA-IIL Lectin â€" Predicting Binding Modes and Energies. Journal of Chemical Information and Modeling, 2008, 48, 2234-2242.	2.5	19
45	Terminology of bioanalytical methods (IUPAC Recommendations 2018). Pure and Applied Chemistry, 2018, 90, 1121-1198.	0.9	19
46	Single-Myb-histone proteins from Arabidopsis thaliana: a quantitative study of telomere-binding specificity and kinetics. Biochemical Journal, 2009, 419, 221-230.	1.7	18
47	Synergism of the Two Myb Domains of Tay1 Protein Results in High Affinity Binding to Telomeres. Journal of Biological Chemistry, 2012, 287, 32206-32215.	1.6	18
48	A Novel Fucose-binding Lectin from Photorhabdus luminescens (PLL) with an Unusual Heptabladed Î²-Propeller Tetrameric Structure. Journal of Biological Chemistry, 2016, 291, 25032-25049.	1.6	18
49	Characterization of novel bangle lectin from Photorhabdus asymbiotica with dual sugar-binding specificity and its effect on host immunity. PLoS Pathogens, 2017, 13, e1006564.	2.1	18
50	Recognition of selected monosaccharides by Pseudomonas aeruginosa Lectin II analyzed by molecular dynamics and free energy calculations. Carbohydrate Research, 2010, 345, 1432-1441.	1.1	17
51	The mink as an animal model for Pseudomonas aeruginosa adhesion: binding of the bacterial lectins (PA-IL and PA-IIL) to neoglycoproteins and to sections of pancreas and lung tissues from healthy mink. Microbes and Infection, 2007, 9, 566-573.	1.0	16
52	A QM/MM Investigation of the Catalytic Mechanism of Metalâ€ionâ€independent Core 2 Î²1,6â€Nâ€Acetylglucosaminyltransferase. Chemistry - A European Journal, 2013, 19, 8153-8162.	1.7	15
53	Selectivity of original C-hexopyranosyl calix[4]arene conjugates towards lectins of different origin. Carbohydrate Research, 2018, 469, 60-72.	1.1	14
54	Tri- and tetravalent mannoclusters cross-link and aggregate BC2L-A lectin from Burkholderia cenocepacia. Carbohydrate Research, 2017, 437, 1-8.	1.1	12

#	Article	IF	Citations
55	Investigation of Thermal Denaturation of Barley Nonspecific Lipid Transfer Protein 1 (ns-LTP1b) by Nuclear Magnetic Resonance and Differential Scanning Calorimetry. Journal of Agricultural and Food Chemistry, 2009, 57, 8444-8452.	2.4	11
56	MotiveValidator: interactive web-based validation of ligand and residue structure in biomolecular complexes. Nucleic Acids Research, 2014, 42, W227-W233.	6.5	11
57	Synthesis of Î±â€<scp>l</scp>â€Fucopyranosideâ€Presenting Glycoclusters and Investigation of Their Interaction with Photorhabdus asymbiotica Lectin (PHL). Chemistry - A European Journal, 2018, 24, 4055-4068.	1.7	11
58	Microscopy examination of red blood and yeast cell agglutination induced by bacterial lectins. PLoS ONE, 2019, 14, e0220318.	1.1	11
59	Determination of haloalkane dehalogenase activity by capillary zone electrophoresis. Journal of Chromatography A, 2000, 895, 219-225.	1.8	10
60	Heterologous expression and molecular characterization of the NAD(P)H:acceptor oxidoreductase (FerB) of Paracoccus denitrificans. Protein Expression and Purification, 2009, 68, 233-238.	0.6	10
61	SiteBinder: An Improved Approach for Comparing Multiple Protein Structural Motifs. Journal of Chemical Information and Modeling, 2012, 52, 343-359.	2.5	10
62	Influence of Trp flipping on carbohydrate binding in lectins. An example on Aleuria aurantia lectin AAL. PLoS ONE, 2017, 12, e0189375.	1.1	10
63	Importance of oligomerisation on Pseudomonas aeruginosaLectin-II binding affinity. In silico and in vitro mutagenesis. Journal of Molecular Modeling, 2009, 15, 673-679.	0.8	9
64	Conformational dynamics are a key factor in signaling mediated by the receiver domain of a sensor histidine kinase from Arabidopsis thaliana. Journal of Biological Chemistry, 2017, 292, 17525-17540.	1.6	9
65	The Five Bacterial Lectins (PA-IL, PA-IIL, RSL, RS-IIL, and CV-IIL): Interactions with Diverse Animal Cells and Glycoproteins. Advances in Experimental Medicine and Biology, 2011, 705, 155-211.	0.8	9
66	X-ray vs. NMR structure of N-terminal domain of Î´-subunit of RNA polymerase. Journal of Structural Biology, 2014, 187, 174-186.	1.3	8
67	Synthesis of Î²-d-galactopyranoside-Presenting Glycoclusters, Investigation of Their Interactions with Pseudomonas aeruginosa Lectin A (PA-IL) and Evaluation of Their Anti-Adhesion Potential. Biomolecules, 2019, 9, 686.	1.8	8
68	Visualization of hydrogen atoms in a perdeuterated lectin-fucose complex reveals key details of protein-carbohydrate interactions. Structure, 2021, 29, 1003-1013.e4.	1.6	8
69	Differential pulse polarographic study of the redox centres in pea amine oxidase. Bioelectrochemistry, 1996, 41, 173-179.	1.0	7
70	Newly identified DNA methyltransferases of Ixodes ricinus ticks. Ticks and Tick-borne Diseases, 2020, 11, 101348.	1.1	7
71	Molecular Modeling of Glycosyltransferases. , 2006, 347, 145-156.		6
72	Investigation of the Binding Affinity of a Broad Array of l-Fucosides with Six Fucose-Specific Lectins of Bacterial and Fungal Origin. Molecules, 2019, 24, 2262.	1.7	6

#	Article	IF	Citations
73	Plant aminoaldehyde dehydrogenases oxidize a wide range of nitrogenous heterocyclic aldehydes. Amino Acids, 2012, 43, 1189-1202.	1.2	5
74	Fluorescent Cellular Assay for Screening Agents Inhibiting Pseudomonas aeruginosa Adherence. Sensors, 2015, 15, 1945-1953.	2.1	5
75	Characterization of novel lectins from Burkholderia pseudomallei and Chromobacterium violaceum with seven-bladed Î²-propeller fold. International Journal of Biological Macromolecules, 2020, 152, 1113-1124.	3.6	5
76	Heptabladed Î²â€propeller lectins PLL2 and PHL from Photorhabdus spp. recognize Oâ€methylated sugars and influence the host immune system. FEBS Journal, 2021, 288, 1343-1365.	2.2	5
77	Fucosylated inhibitors of recently identified bangle lectin from Photorhabdus asymbiotica. Scientific Reports, 2019, 9, 14904.	1.6	4
78	Engineering the Pseudomonas aeruginosa II lectin: designing mutants with changed affinity and specificity. Journal of Computer-Aided Molecular Design, 2014, 28, 951-960.	1.3	3
79	Structure and properties of AB21, a novel Agaricus bisporus protein with structural relation to bacterial poreâ€forming toxins. Proteins: Structure, Function and Bioinformatics, 2018, 86, 897-911.	1.5	3
80	Crystallization and initial X-ray diffraction studies of the flavoenzyme NAD(P)H:(acceptor) oxidoreductase (FerB) from the soil bacteriumParacoccus denitrificans. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 431-434.	0.7	2
81	Step-By-Step In Vitro Mutagenesis: Lessons From Fucose-Binding Lectin PA-IIL. Methods in Molecular Biology, 2017, 1498, 399-419.	0.4	2
82	Cytokinin and Ethylene Signaling. , 2018, , 165-200.		2
83	Lectin PLL3, a Novel Monomeric Member of the Seven-Bladed Î²-Propeller Lectin Family. Molecules, 2019, 24, 4540.	1.7	2
84	Synthesis of Tetravalent Thio- and Selenogalactoside-Presenting Galactoclusters and Their Interactions with Bacterial Lectin PA-IL from Pseudomonas aeruginosa. Molecules, 2021, 26, 542.	1.7	2
85	Development of 48-condition buffer screen for protein stability assessment. European Biophysics Journal, 2021, 50, 461-471.	1.2	2
86	Protein engineering study of Î²-mannosidase to set up a potential chemically efficient biocatalyst. Glycobiology, 2014, 24, 1301-1311.	1.3	1
87	Evaluation of anti-PAIIL lectin hen yolk antibody as an agent inhibiting Pseudomonas aeruginosa adherence to epithelial cells. Monatshefte FÃ¼r Chemie, 2016, 147, 889-896.	0.9	1
88	Purification and Some Properties of Isocitrate Dehydrogenase fromParacoccus denitrificans. Preparative Biochemistry and Biotechnology, 2004, 34, 279-289.	1.0	0
89	In Silico Engineering of Proteins That Recognize Small Molecules. , 2012, , .		0
90	Crystallization and preliminary X-ray crystallographic analysis of recombinant Î²-mannosidase fromAspergillus niger. Acta Crystallographica Section F: Structural Biology Communications, 2013, 69, 288-291.	0.7	0