Lukas Mach

List of Publications by Year
in descending order

67 papers	3,701 citations	136950 32 h-index	138484 58 g-index
71 all docs	71 docs citations	71 times ranked	4052 citing authors

#	Article	IF	Citations
1	Designed SARSâ€CoVâ€2 receptor binding domain variants form stable monomers. Biotechnology Journal, 2022, 17, e2100422.	3.5	8
2	Identification of two subtilisinâ€like serine proteases engaged in the degradation of recombinant proteins in <i>NicotianaÂbenthamiana</i>. FEBS Letters, 2021, 595, 379-388.	2.8	12
3	Generation of enzymatically competent SARSâ€CoVâ€2 decoy receptor ACE2â€Fc in glycoengineered <i>Nicotiana benthamiana</i>. Biotechnology Journal, 2021, 16, e2000566.	3.5	26
4	A comprehensive antigen production and characterisation study for easy-to-implement, specific and quantitative SARS-CoV-2 serotests. EBioMedicine, 2021, 67, 103348.	6.1	34
5	N-Glycosylation of the SARS-CoV-2 Receptor Binding Domain Is Important for Functional Expression in Plants. Frontiers in Plant Science, 2021, 12, 689104.	3.6	34
6	Identification of lectin receptors for conserved SARSâ€CoVâ€2 glycosylation sites. EMBO Journal, 2021, 40, e108375.	7.8	44
7	Impact of Specific N-Glycan Modifications on the Use of Plant-Produced SARS-CoV-2 Antigens in Serological Assays. Frontiers in Plant Science, 2021, 12, 747500.	3.6	8
8	Naphthylphthalamic acid associates with and inhibits PIN auxin transporters. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	79
9	Structure-guided glyco-engineering of ACE2 for improved potency as soluble SARS-CoV-2 decoy receptor. ELife, 2021, 10, .	6.0	29
10	Steric Accessibility of the Cleavage Sites Dictates the Proteolytic Vulnerability of the Antiâ€HIVâ€1 Antibodies 2F5, 2G12, and PG9 in Plants. Biotechnology Journal, 2020, 15, e1900308.	3.5	10
11	Plant-based production of highly potent anti-HIV antibodies with engineered posttranslational modifications. Scientific Reports, 2020, 10, 6201.	3.3	22
12	Genome and transcriptome characterization of the glycoengineered Nicotiana benthamiana line Î”XT/FT. BMC Genomics, 2019, 20, 594.	2.8	20
13	Comparative Antigenicity of Thiourea and Adipic Amide Linked Neoglycoconjugates Containing Modified Oligomannose Epitopes for the Carbohydrate-Specific anti-HIV Antibody 2G12. Bioconjugate Chemistry, 2019, 30, 70-82.	3.6	15
14	The two cathepsin B-like proteases of <i>Arabidopsis thaliana</i> are closely related enzymes with discrete endopeptidase and carboxydipeptidase activities. Biological Chemistry, 2018, 399, 1223-1235.	2.5	16
15	A novel HRM assay for the simultaneous detection and differentiation of eight poxviruses of medical and veterinary importance. Scientific Reports, 2017, 7, 42892.	3.3	43
16	The papain-like cysteine proteinases NbCysP6 and NbCysP7 are highly processive enzymes with substrate specificities complementary to Nicotiana benthamiana cathepsin B. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2017, 1865, 444-452.	2.3	28
17	Comparative glycoproteomics of stem cells identifies new players in ricin toxicity. Nature, 2017, 549, 538-542.	27.8	110
18	Identification of Protease Specificity by Combining Proteome-Derived Peptide Libraries and Quantitative Proteomics. Molecular and Cellular Proteomics, 2016, 15, 2515-2524.	3.8	43

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19	The death enzyme CP14 is a unique papain-like cysteine proteinase with a pronounced S2 subsite selectivity. Archives of Biochemistry and Biophysics, 2016, 603, 110-117.	3.0	28
20	Nicotiana benthamiana cathepsin B displays distinct enzymatic features which differ from its human relative and aleurain-like protease. Biochimie, 2016, 122, 119-125.	2.6	26
21	Introduction of germline residues improves the stability of anti-HIV mAb 2G12-IgM. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 1536-1544.	2.3	7
22	Glycan modulation and sulfoengineering of antiâ€“HIV-1 monoclonal antibody PG9 in plants. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12675-12680.	7.1	44
23	Inositol-phosphodihydroceramides in the periodontal pathogen Tannerella forsythia: Structural analysis and incorporation of exogenous myo-inositol. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2015, 1851, 1417-1427.	2.4	3
24	Drosophila melanogaster cellular repressor of E1A-stimulated genes is a lysosomal protein essential for fly development. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 2900-2912.	4.1	16
25	<i>Arabidopsis</i> Class I Î±-Mannosidases MNS4 and MNS5 Are Involved in Endoplasmic Reticulumâ€“Associated Degradation of Misfolded Glycoproteins. Plant Cell, 2014, 26, 1712-1728.	6.6	60
26	Proteolytic and <i>N</i>-Glycan Processing of Human <i>Î±</i>1-Antitrypsin Expressed in <i>Nicotiana benthamiana</i> Â Â Â Â. Plant Physiology, 2014, 166, 1839-1851.	4.8	55
27	The human antiâ€‘HIV antibodies 2F5, 2G12, and PG9 differ in their susceptibility to proteolytic degradation: Downâ€‘regulation of endogenous serine and cysteine proteinase activities could improve antibody production in plantâ€‘based expression platforms. Biotechnology Journal, 2014, 9, 493-500.	3.5	59
28	Oligomerization status influences subcellular deposition and glycosylation of recombinant butyrylcholinesterase in <i><scp>N</scp>icotiana benthamiana</i>. Plant Biotechnology Journal, 2014, 12, 832-839.	8.3	34
29	The<i>jiaoyao1</i>Mutant Is an Allele of<i>korrigan1</i>That Abolishes Endoglucanase Activity and Affects the Organization of Both Cellulose Microfibrils and Microtubules in<i>Arabidopsis</i>Â Â. Plant Cell, 2014, 26, 2601-2616.	6.6	63
30	The mannose 6-phosphate-binding sites of M6P/IGF2R determine its capacity to suppress matrix invasion by squamous cell carcinoma cells. Biochemical Journal, 2013, 451, 91-99.	3.7	11
31	Characterizing the Link between Glycosylation State and Enzymatic Activity of the Endo-Î²1,4-glucanase KORRIGAN1 from Arabidopsis thaliana. Journal of Biological Chemistry, 2013, 288, 22270-22280.	3.4	45
32	Cathepsins: Getting in Shape for Lysosomal Proteolysis. , 2013, , 127-173.		7
33	Molecular Insight into Propeptideâ€“Protein Interactions in Cathepsins L and O. Biochemistry, 2012, 51, 8636-8653.	2.5	6
34	M6P/IGF2R modulates the invasiveness of liver cells via its capacity to bind mannose 6-phosphate residues. Journal of Hepatology, 2012, 57, 337-343.	3.7	24
35	Post-Translational Regulation and Trafficking of the Granulin-Containing Protease RD21 of Arabidopsis thaliana. PLoS ONE, 2012, 7, e32422.	2.5	80
36	Î²-N-Acetylhexosaminidases HEXO1 and HEXO3 Are Responsible for the Formation of Paucimannosidic N-Glycans in Arabidopsis thaliana. Journal of Biological Chemistry, 2011, 286, 10793-10802.	3.4	69

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37	Class I Î±-Mannosidases Are Required for N-Glycan Processing and Root Development in<i>Arabidopsis thaliana</i>Â Â Â. Plant Cell, 2010, 21, 3850-3867.	6.6	172
38	Mannose trimming reactions in the early stages of the N-glycan processing pathway. Plant Signaling and Behavior, 2010, 5, 476-478.	2.4	7
39	The mannose 6â€phosphate/insulinâ€like growth factor II receptor restricts the tumourigenicity and invasiveness of squamous cell carcinoma cells. International Journal of Cancer, 2009, 124, 2559-2567.	5.1	19
40	Arginine/Lysine Residues in the Cytoplasmic Tail Promote ER Export of Plant Glycosylation Enzymes. Traffic, 2009, 10, 101-115.	2.7	84
41	Improved Virus Neutralization by Plant-produced Anti-HIV Antibodies with a Homogeneous Î²1,4-Galactosylated N-Glycan Profile. Journal of Biological Chemistry, 2009, 284, 20479-20485.	3.4	156
42	Proteinases and their inhibitors in liver cancer. World Journal of Hepatology, 2009, 1, 28.	2.0	12
43	Generation of glycoâ€engineered <i>Nicotiana benthamiana</i> for the production of monoclonal antibodies with a homogeneous humanâ€like <i>N</i>â€glycan structure. Plant Biotechnology Journal, 2008, 6, 392-402.	8.3	458
44	Cellular repressor of E1A-stimulated genes is a bona fide lysosomal protein which undergoes proteolytic maturation during its biosynthesis. Experimental Cell Research, 2008, 314, 3036-3047.	2.6	31
45	Construction of a Functional CMP-Sialic Acid Biosynthesis Pathway in Arabidopsis. Plant Physiology, 2008, 147, 331-339.	4.8	74
46	Enzymatic Properties and Subcellular Localization of Arabidopsis Î²-N-Acetylhexosaminidases. Plant Physiology, 2007, 145, 5-16.	4.8	104
47	A Unique Î²1,3-Galactosyltransferase Is Indispensable for the Biosynthesis of <i>N</i>-Glycans Containing Lewis a Structures in <i>Arabidopsis thaliana</i>. Plant Cell, 2007, 19, 2278-2292.	6.6	157
48	A plant-derived human monoclonal antibody induces an anti-carbohydrate immune response in rabbits. Glycobiology, 2007, 18, 235-241.	2.5	105
49	Mass + Retention Time = Structure:Â A Strategy for the Analysis ofN-Glycans by Carbon LC-ESI-MS and Its Application to FibrinN-Glycans. Analytical Chemistry, 2007, 79, 5051-5057.	6.5	193
50	A proteomic study of the major allergens from yellow jacket venoms. Proteomics, 2007, 7, 1615-1623.	2.2	33
51	Molecular cloning and characterization ofArabidopsis thalianaGolgi Î±-mannosidase II, a key enzyme in the formation of complex N-glycans in plants. Plant Journal, 2006, 45, 789-803.	5.7	105
52	Molecular cloning and heterologous expression of Î²1,2-xylosyltransferase and core Î±1,3-fucosyltransferase from maize. Phytochemistry, 2006, 67, 2215-2224.	2.9	18
53	The 46-kDa mannose 6-phosphate receptor does not depend on endosomal acidification for delivery of hydrolases to lysosomes. Journal of Cell Science, 2006, 119, 4935-4943.	2.0	19
54	Arabidopsis thaliana Î²1,2-xylosyltransferase: an unusual glycosyltransferase with the potential to act at multiple stages of the plant N-glycosylation pathway. Biochemical Journal, 2005, 388, 515-525.	3.7	57

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55	Molecular basis of N-acetylglucosaminyltransferase I deficiency in Arabidopsis thaliana plants lacking complex N-glycans. Biochemical Journal, 2005, 387, 385-391.	3.7	89
56	Folding Competence of N-terminally Truncated Forms of Human Procathepsin B. Journal of Biological Chemistry, 2005, 280, 11973-11980.	3.4	19
57	Thyroid Stimulating Hormone Upregulates Secretion of Cathepsin B from Thyroid Epithelial Cells. Biological Chemistry, 2002, 383, 773-84.	2.5	41
58	CA-074, But Not Its Methyl Ester CA-074Me, Is a Selective Inhibitor of Cathepsin B within Living Cells. Biological Chemistry, 2002, 383, 1305-8.	2.5	142
59	Biosynthesis of Lysosomal Proteinases in Health and Disease. Biological Chemistry, 2002, 383, 751-6.	2.5	33
60	Chain Elongation of Raffinose in Pea Seeds. Journal of Biological Chemistry, 2002, 277, 194-200.	3.4	91
61	Functional expression of a cDNA encoding pea (Pisum sativum L.) raffinose synthase, partial purification of the enzyme from maturing seeds, and steady-state kinetic analysis of raffinose synthesis. Planta, 2002, 215, 839-846.	3.2	75
62	The Golgi localization of Arabidopsis thaliana beta1,2-xylosyltransferase in plant cells is dependent on its cytoplasmic and transmembrane sequences. Plant Molecular Biology, 2002, 50, 273-281.	3.9	29
63	Two closely related forms of UDP-GlcNAc: Â6-D-mannoside Â1,2-N-acetylglucosaminyltransferase II occur in the clawed frog Xenopus laevis. Glycoconjugate Journal, 2002, 19, 187-195.	2.7	7
64	Accumulation of Sialic Acid in Endocytic Compartments Interferes with the Formation of Mature Lysosomes. Journal of Biological Chemistry, 1999, 274, 19063-19071.	3.4	36
65	Modulation of invasive properties of murine squamous carcinoma cells by heterologous expression of cathepsin B and cystatin C. , 1999, 83, 526-531.		81
66	Elder (Sambucus nigra L.)-fruit lectin (SNA-IV) occurs in monomeric, dimeric and oligomeric isoforms. Biochemical Journal, 1996, 315, 1061-1061.	3.7	6
67	Biosynthesis and endocytosis of lysosomal enzymes in human colon carcinoma SW 1116 cells: Impaired internalization of plasma membrane-associated cation-independent mannose 6-phosphate receptor. Archives of Biochemistry and Biophysics, 1992, 298, 176-181.	3.0	18