Markus Aebi

List of Publications by Year
in descending order

101 papers	12,973 citations	31902 53 h-index	34900 98 g-index
103 all docs	103 docs citations	103 times ranked	11059 citing authors

#	Article	IF	Citations
1	Roles of N-Linked Glycans in the Endoplasmic Reticulum. Annual Review of Biochemistry, 2004, 73, 1019-1049.	5.0	1,789
2	Symbol Nomenclature for Graphical Representations of Glycans. Glycobiology, 2015, 25, 1323-1324.	1.3	818
3	N-Linked Glycosylation in Campylobacter jejuni and Its Functional Transfer into E. coli. Science, 2002, 298, 1790-1793.	6.0	716
4	Mechanisms and principles of N-linked protein glycosylation. Current Opinion in Structural Biology, 2011, 21, 576-582.	2.6	567
5	N-linked protein glycosylation in the ER. Biochimica Et Biophysica Acta - Molecular Cell Research, 2013, 1833, 2430-2437.	1.9	561
6	The dolichol pathway of N-linked glycosylation. Biochimica Et Biophysica Acta - General Subjects, 1999, 1426, 239-257.	1.1	556
7	N-glycan structures: recognition and processing in the ER. Trends in Biochemical Sciences, 2010, 35, 74-82.	3.7	404
8	Engineering N-linked protein glycosylation with diverse O antigen lipopolysaccharide structures in Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3016-3021.	3.3	384
9	Degradation of Misfolded Endoplasmic Reticulum Glycoproteins in Saccharomyces cerevisiae Is Determined by a Specific Oligosaccharide Structure. Journal of Cell Biology, 1998, 142, 1223-1233.	2.3	324
10	X-ray structure of a bacterial oligosaccharyltransferase. Nature, 2011, 474, 350-355.	13.7	323
11	Definition of the bacterial N-glycosylation site consensus sequence. EMBO Journal, 2006, 25, 1957-1966.	3.5	314
12	Translocation of lipid-linked oligosaccharides across the ER membrane requires Rft1 protein. Nature, 2002, 415, 447-450.	13.7	240
13	Htm1p, a mannosidaseâ€like protein, is involved in glycoprotein degradation in yeast. EMBO Reports, 2001, 2, 423-430.	2.0	234
14	An engineered eukaryotic protein glycosylation pathway in Escherichia coli. Nature Chemical Biology, 2012, 8, 434-436.	3.9	232
15	Altered glycan structures: the molecular basis of congenital disorders of glycosylation. Current Opinion in Structural Biology, 2005, 15, 490-498.	2.6	227
16	Htm1 protein generates the N-glycan signal for glycoprotein degradation in the endoplasmic reticulum. Journal of Cell Biology, 2009, 184, 159-172.	2.3	219
17	N-Linked Glycosylation of Folded Proteins by the Bacterial Oligosaccharyltransferase. Science, 2006, 314, 1148-1150.	6.0	210
18	N-Linked Protein Glycosylation in the Endoplasmic Reticulum. Cold Spring Harbor Perspectives in Biology, 2013, 5, a013359-a013359.	2.3	209

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19	Structure and mechanism of an active lipid-linked oligosaccharide flippase. Nature, 2015, 524, 433-438.	13.7	184
20	Substrate specificity of bacterial oligosaccharyltransferase suggests a common transfer mechanism for the bacterial and eukaryotic systems. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 7088-7093.	3.3	177
21	Oligosaccharyltransferase: the central enzyme of Nâ€linked protein glycosylation. Journal of Inherited Metabolic Disease, 2011, 34, 869-878.	1.7	170
22	Structure of the yeast oligosaccharyltransferase complex gives insight into eukaryotic N-glycosylation. Science, 2018, 359, 545-550.	6.0	157
23	Copsin, a Novel Peptide-based Fungal Antibiotic Interfering with the Peptidoglycan Synthesis. Journal of Biological Chemistry, 2014, 289, 34953-34964.	1.6	125
24	Cloning and characterization of the ALG3 gene of Saccharomyces cerevisiae. Glycobiology, 1996, 6, 439-444.	1.3	121
25	Oxidoreductase activity of oligosaccharyltransferase subunits Ost3p and Ost6p defines site-specific glycosylation efficiency. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 11061-11066.	3.3	117
26	Structure and Functional Analysis of the Fungal Galectin CGL2. Structure, 2004, 12, 689-702.	1.6	107
27	Fruiting body development in Coprinus cinereus: regulated expression of two galectins secreted by a non-classical pathway The GenBank accession number for the sequence reported in this paper is AF130360. Microbiology (United Kingdom), 2000, 146, 1841-1853.	0.7	104
28	A Complex of Pdi1p and the Mannosidase Htm1p Initiates Clearance of Unfolded Glycoproteins from the Endoplasmic Reticulum. Molecular Cell, 2011, 42, 782-793.	4.5	104
29	Isolation of the ALG5 Locus Encoding the UDP-Glucose:Dolichyl-Phosphate Glucosyltransferase from Saccharomyces cerevisiae. FEBS Journal, 1994, 224, 71-79.	0.2	97
30	Distinct donor and acceptor specificities of Trypanosoma brucei oligosaccharyltransferases. EMBO Journal, 2009, 28, 2650-2661.	3.5	96
31	Caenorhabditis elegans N-glycan Core Î²-galactoside Confers Sensitivity towards Nematotoxic Fungal Galectin CGL2. PLoS Pathogens, 2010, 6, e1000717.	2.1	95
32	Isolation of the ALG6 locus of Saccharomyces cerevisiae required for glucosylation in the N-linked glycosylation pathway. Glycobiology, 1996, 6, 493-498.	1.3	94
33	Genetic tailoring of N-linked oligosaccharides: The role of glucose residues in glycoprotein processing of Saccharomyces cerevisiae in vivo. Glycobiology, 1998, 8, 155-164.	1.3	82
34	Analysis of Glycosylation Site Occupancy Reveals a Role for Ost3p and Ost6p in Site-specific N-Glycosylation Efficiency. Molecular and Cellular Proteomics, 2009, 8, 357-364.	2.5	82
35	Bidirectional Propagation of Signals and Nutrients in Fungal Networks via Specialized Hyphae. Current Biology, 2019, 29, 217-228.e4.	1.8	82
36	Architecture and function of human uromodulin filaments in urinary tract infections. Science, 2020, 369, 1005-1010.	6.0	81

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37	Structural Basis of Substrate Specificity of Human Oligosaccharyl Transferase Subunit N33/Tusc3 and Its Role in Regulating Protein N-Glycosylation. Structure, 2014, 22, 590-601.	1.6	78
38	Cytoplasmic N-Glycosyltransferase of Actinobacillus pleuropneumoniae Is an Inverting Enzyme and Recognizes the NX(S/T) Consensus Sequence. Journal of Biological Chemistry, 2011, 286, 35267-35274.	1.6	77
39	All in One:<i>Leishmania major</i>STT3 Proteins Substitute for the Whole Oligosaccharyltransferase Complex in<i>Saccharomyces cerevisiae</i>. Molecular Biology of the Cell, 2008, 19, 3758-3768.	0.9	74
40	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.	3.3	74
41	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
42	Mechanism of Bacterial Oligosaccharyltransferase. Journal of Biological Chemistry, 2013, 288, 8849-8861.	1.6	72
43	SnapShot: O-Glycosylation Pathways across Kingdoms. Cell, 2018, 172, 632-632.e2.	13.5	72
44	Transmembrane movement of dolichol linked carbohydrates during N-glycoprotein biosynthesis in the endoplasmic reticulum. Seminars in Cell and Developmental Biology, 2002, 13, 171-178.	2.3	71
45	Molecular Analysis of an Alternative N-Glycosylation Machinery by Functional Transfer from Actinobacillus pleuropneumoniae to Escherichia coli. Journal of Biological Chemistry, 2014, 289, 2170-2179.	1.6	70
46	Molecular basis of lipid-linked oligosaccharide recognition and processing by bacterial oligosaccharyltransferase. Nature Structural and Molecular Biology, 2017, 24, 1100-1106.	3.6	68
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.	2.1	65
48	Multi-allelic origin of congenital disorder of glycosylation (CDG)-Ic. Human Genetics, 2000, 106, 538-545.	1.8	62
49	Mapping the O-Mannose Glycoproteome in Saccharomyces cerevisiae. Molecular and Cellular Proteomics, 2016, 15, 1323-1337.	2.5	61
50	Biosynthesis of Lipid-linked Oligosaccharides in Saccharomyces cerevisiae. Journal of Biological Chemistry, 2005, 280, 34500-34506.	1.6	60
51	Analysis of site-specific<i>N</i>-glycan remodeling in the endoplasmic reticulum and the Golgi. Glycobiology, 2015, 25, 1335-1349.	1.3	60
52	Induction of antibacterial proteins and peptides in the coprophilous mushroom <i>Coprinopsis cinerea</i> in response to bacteria. ISME Journal, 2019, 13, 588-602.	4.4	60
53	The 3.4-kDa Ost4 protein is required for the assembly of two distinct oligosaccharyltransferase complexes in yeast. Glycobiology, 2005, 15, 1396-1406.	1.3	59
54	A two-step enzymatic glycosylation of polypeptides with complex N -glycans. Bioorganic and Medicinal Chemistry, 2013, 21, 2262-2270.	1.4	56

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55	ALG9 mannosyltransferase is involved in two different steps of lipid-linked oligosaccharide biosynthesis. Glycobiology, 2005, 15, 1156-1163.	1.3	55
56	Structural Basis for Chitotetraose Coordination by CGL3, a Novel Galectin-Related Protein from Coprinopsis cinerea. Journal of Molecular Biology, 2008, 379, 146-159.	2.0	53
57	Unexpected reactivity and mechanism of carboxamide activation in bacterial N-linked protein glycosylation. Nature Communications, 2013, 4, 2627.	5.8	53
58	Structure and mechanism of the ER-based glucosyltransferase ALG6. Nature, 2020, 579, 443-447.	13.7	52
59	Protein degradation corrects for imbalanced subunit stoichiometry in OST complex assembly. Molecular Biology of the Cell, 2015, 26, 2596-2608.	0.9	49
60	Molecular Basis for Galactosylation of Core Fucose Residues in Invertebrates. Journal of Biological Chemistry, 2009, 284, 36223-36233.	1.6	48
61	Substrate Specificity of Cytoplasmic N-Glycosyltransferase. Journal of Biological Chemistry, 2014, 289, 24521-24532.	1.6	48
62	Posttranslational Modifications of Intact Proteins Detected by NMR Spectroscopy: Application to Glycosylation. Angewandte Chemie - International Edition, 2015, 54, 7096-7100.	7.2	48
63	A molecular mechanism for the enzymatic methylation of nitrogen atoms within peptide bonds. Science Advances, 2018, 4, eaat2720.	4.7	48
64	Eukaryotic Oligosaccharyltransferase Generates Free Oligosaccharides during N-Glycosylation. Journal of Biological Chemistry, 2013, 288, 32673-32684.	1.6	45
65	Galactosylated Fucose Epitopes in Nematodes. Journal of Biological Chemistry, 2012, 287, 28276-28290.	1.6	43
66	Nematotoxicity of Marasmius oreades Agglutinin (MOA) Depends on Glycolipid Binding and Cysteine Protease Activity. Journal of Biological Chemistry, 2011, 286, 30337-30343.	1.6	42
67	Inhibition of Haemonchus contortus larval development by fungal lectins. Parasites and Vectors, 2015, 8, 425.	1.0	42
68	Parasite Glycobiology: A Bittersweet Symphony. PLoS Pathogens, 2015, 11, e1005169.	2.1	40
69	Disruption of the C. elegans Intestinal Brush Border by the Fungal Lectin CCL2 Phenocopies Dietary Lectin Toxicity in Mammals. PLoS ONE, 2015, 10, e0129381.	1.1	37
70	Influence of protein/glycan interaction on siteâ€specific glycan heterogeneity. FASEB Journal, 2017, 31, 4623-4635.	0.2	37
71	Glycosylation profiles determine extravasation and disease-targeting properties of armed antibodies. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2000-2005.	3.3	36
72	Cytoplasmic glycoengineering enables biosynthesis of nanoscale glycoprotein assemblies. Nature Communications, 2019, 10, 5403.	5.8	36

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73	Mechanistic reconstruction of glycoprotein secretion through monitoring of intracellular N-glycan processing. Science Advances, 2019, 5, eaax8930.	4.7	36
74	Structural characterization of the N-linked pentasaccharide decorating glycoproteins of the halophilic archaeon<i>Haloferax volcanii</i>. Glycobiology, 2016, 26, 745-756.	1.3	35
75	Chemo-enzymatic synthesis of lipid-linked GlcNAc2Man5 oligosaccharides using recombinant Alg1, Alg2 and Alg11 proteins. Glycobiology, 2017, 27, 726-733.	1.3	33
76	The Saccharomyces cerevisiae CWH8 gene is required for full levels of dolichol-linked oligosaccharides in the endoplasmic reticulum and for efficient N-glycosylation. Glycobiology, 1999, 9, 243-253.	1.3	32
77	The interplay of Hrd3 and the molecular chaperone system ensures efficient degradation of malfolded secretory proteins. Molecular Biology of the Cell, 2015, 26, 185-194.	0.9	32
78	A biosynthetic route for polysialylating proteins in Escherichia coli. Metabolic Engineering, 2017, 44, 293-301.	3.6	31
79	Characterization of the single-subunit oligosaccharyltransferase STT3A from Trypanosoma brucei using synthetic peptides and lipid-linked oligosaccharide analogs. Glycobiology, 2017, 27, 525-535.	1.3	31
80	The <i>N</i> -linking glycosylation system from <i>Actinobacillus pleuropneumoniae</i> is required for adhesion and has potential use in glycoengineering. Open Biology, 2017, 7, 160212.	1.5	29
81	Ligand interactions of the Coprinopsis cinerea galectins. Fungal Genetics and Biology, 2005, 42, 293-305.	0.9	27
82	Quantitative Profiling of N-linked Glycosylation Machinery in Yeast Saccharomyces cerevisiae. Molecular and Cellular Proteomics, 2018, 17, 18-30.	2.5	27
83	Engineering protein glycosylation in prokaryotes. Current Opinion in Systems Biology, 2017, 5, 23-31.	1.3	26
84	The genomes of Crithidia bombi and C. expoeki, common parasites of bumblebees. PLoS ONE, 2018, 13, e0189738.	1.1	26
85	Multi-allelic origin of congenital disorder of glycosylation (CDG)-Ic. Human Genetics, 2000, 106, 538-545.	1.8	25
86	The N-glycosylation defect of cwh8Î” yeast cells causes a distinct defect in sphingolipid biosynthesis. Glycobiology, 2006, 16, 155-164.	1.3	21
87	Biotoxicity Assays for Fruiting Body Lectins and Other Cytoplasmic Proteins. Methods in Enzymology, 2010, 480, 141-150.	0.4	21
88	Protein O-Mannosyltransferases Associate with the Translocon to Modify Translocating Polypeptide Chains. Journal of Biological Chemistry, 2014, 289, 8599-8611.	1.6	18
89	Glycanâ€“protein interactions determine kinetics of <i>N</i>-glycan remodeling. RSC Chemical Biology, 2021, 2, 917-931.	2.0	16
90	N-Glycosylation Enhances Conformational Flexibility of Protein Disulfide Isomerase Revealed by Microsecond Molecular Dynamics and Markov State Modeling. Journal of Physical Chemistry B, 2021, 125, 9467-9479.	1.2	16

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91	Current Approaches to Engineering N-Linked Protein Glycosylation in Bacteria. Methods in Molecular Biology, 2015, 1321, 3-16.	0.4	14
92	Supercharging Reagent for Enhanced Liquid Chromatographic Separation and Charging of Sialylated and High-Molecular-Weight Glycopeptides for NanoHPLCâ€"ESI-MS/MS Analysis. Analytical Chemistry, 2016, 88, 8484-8494.	3.2	13
93	Analysis of substrate specificity of Trypanosoma brucei oligosaccharyltransferases (OSTs) by functional expression of domain-swapped chimeras in yeast. Journal of Biological Chemistry, 2017, 292, 20342-20352.	1.6	8
94	Helenius et al. reply. Nature, 2008, 454, E4-E5.	13.7	7
95	An enzyme-based screening system for the rapid assessment of protein N-glycosylation efficiency in yeast. Glycobiology, 2015, 25, 252-257.	1.3	6
96	Substrate specificities and reaction kinetics of the yeast oligosaccharyltransferase isoforms. Journal of Biological Chemistry, 2021, 296, 100809.	1.6	6
97	N-Linked Protein Glycosylation in Campylobacter. , 2014, , 445-469.		4
98	Functional analysis of Ost3p and Ost6p containing yeast oligosaccharyltransferases. Glycobiology, 2021, 31, 1604-1615.	1.3	4
99	Structureâ€"function relationship of a novel fucoside-binding fruiting body lectin from <i>Coprinopsis cinerea</i> exhibiting nematotoxic activity. Glycobiology, 2022, , .	1.3	2
100	N-LINKED PROTEIN GLYCOSYLATION. , 2014, , .		0
101	Precisely heterogeneous â€•the making of Nâ€glycoproteins. FASEB Journal, 2018, 32, 249.1.	0.2	0