Chris Whitfield

List of Publications by Year
in descending order

98	12,136	46918 47	40881 93
papers	citations	h-index	g-index

186	186	186	10597
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Investigation of core machinery for biosynthesis of Vi antigen capsular polysaccharides in Gram-negative bacteria. Journal of Biological Chemistry, 2022, 298, 101486.	1.6	4
2	The biosynthetic origin of ribofuranose in bacterial polysaccharides. Nature Chemical Biology, 2022, 18, 530-537.	3.9	3
3	Correction for Sande and Whitfield, â€œCapsules and Extracellular Polysaccharides in Escherichia coli and Salmonellaâ€• EcoSal Plus, 2022, 10, eesp00072022.	2.1	0
4	The molecular basis of regulation of bacterial capsule assembly by Wzc. Nature Communications, 2021, 12, 4349.	5.8	25
5	Capsules and Extracellular Polysaccharides in Escherichia coli and Salmonella. EcoSal Plus, 2021, 9, eESP00332020.	2.1	17
6	Assembly of Bacterial Capsular Polysaccharides and Exopolysaccharides. Annual Review of Microbiology, 2020, 74, 521-543.	2.9	141
7	Analysis of the Topology and Active-Site Residues of WbbF, a Putative O-Polysaccharide Synthase from Salmonella enterica Serovar Borreze. Journal of Bacteriology, 2020, 202, .	1.0	5
8	A bifunctional O-antigen polymerase structure reveals a new glycosyltransferase family. Nature Chemical Biology, 2020, 16, 450-457.	3.9	26
9	Lipopolysaccharide O-antigensâ€”bacterial glycans made to measure. Journal of Biological Chemistry, 2020, 295, 10593-10609.	1.6	90
10	Substrate recognition by a carbohydrate-binding module in the prototypical ABC transporter for lipopolysaccharide O-antigen from Escherichia coli O9a. Journal of Biological Chemistry, 2019, 294, 14978-14990.	1.6	9
11	Bioinformatics analysis of diversity in bacterial glycan chain-termination chemistry and organization of carbohydrate-binding modules linked to ABC transporters. Glycobiology, 2019, 29, 822-838.	1.3	5
12	High-Throughput â€œFP-Tagâ€•Assay for the Identification of Glycosyltransferase Inhibitors. Journal of the American Chemical Society, 2019, 141, 2201-2204.	6.6	21
13	Klebsiella pneumoniae O1 and O2ac antigens provide prototypes for an unusual strategy for polysaccharide antigen diversification. Journal of Biological Chemistry, 2019, 294, 10863-10876.	1.6	20
14	Biosynthesis of a conserved glycolipid anchor for Gram-negative bacterial capsules. Nature Chemical Biology, 2019, 15, 632-640.	3.9	31
15	Structural and Functional Variation in Outer Membrane Polysaccharide Export (OPX) Proteins from the Two Major Capsule Assembly Pathways Present in Escherichia coli. Journal of Bacteriology, 2019, 201, .	1.0	12
16	Utilization of Fluorescently Tagged Synthetic Acceptor Molecules for In Vitro Characterization of a Dual-Domain Glycosyltransferase Enzyme, KpsC, from Escherichia coli. Methods in Molecular Biology, 2019, 1954, 151-159.	0.4	1
17	In Vitro Characterization of a Multidomain Glycosyltransferase Using Fluorescently Tagged Synthetic Acceptors. Methods in Molecular Biology, 2019, 1954, 245-253.	0.4	0
18	Lipopolysaccharides (Endotoxins). , 2019, , .		4

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19	Architecture of a channel-forming O-antigen polysaccharide ABC transporter. Nature, 2018, 553, 361-365.	13.7	82
20	Molecular basis for the structural diversity in serogroup O2-antigen polysaccharides in Klebsiella pneumoniae. Journal of Biological Chemistry, 2018, 293, 4666-4679.	1.6	42
21	Capsules and Secreted Extracellular Polysaccharides. , 2018, , 604-604.		0
22	Structural Insight into a Novel Formyltransferase and Evolution to a Nonribosomal Peptide Synthetase Tailoring Domain. ACS Chemical Biology, 2018, 13, 3161-3172.	1.6	8
23	Periplasmic depolymerase provides insight into ABC transporter-dependent secretion of bacterial capsular polysaccharides. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4870-E4879.	3.3	23
24	Single polysaccharide assembly protein that integrates polymerization, termination, and chain-length quality control. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1215-E1223.	3.3	31
25	Pentamidine sensitizes Gram-negative pathogens to antibiotics and overcomes acquired colistin resistance. Nature Microbiology, 2017, 2, 17028.	5.9	256
26	Full-length, Oligomeric Structure of Wzz Determined by Cryoelectron Microscopy Reveals Insights into Membrane-Bound States. Structure, 2017, 25, 806-815.e3.	1.6	31
27	Peptidoglycan Association of Murein Lipoprotein Is Required for KpsD-Dependent Group 2 Capsular Polysaccharide Expression and Serum Resistance in a Uropathogenic Escherichia coli Isolate. MBio, 2017, 8, .	1.8	27
28	Glycolipid substrates for ABC transporters required for the assembly of bacterial cell-envelope and cell-surface glycoconjugates. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2017, 1862, 1394-1403.	1.2	32
29	Unique lipid anchor attaches Vi antigen capsule to the surface of Salmonella enterica serovar Typhi. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6719-6724.	3.3	37
30	Bacterial Î²-Kdo glycosyltransferases represent a new glycosyltransferase family (GT99). Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E3120-9.	3.3	43
31	The Klebsiella pneumoniae O12 ATP-binding Cassette (ABC) Transporter Recognizes the Terminal Residue of Its O-antigen Polysaccharide Substrate. Journal of Biological Chemistry, 2016, 291, 9748-9761.	1.6	26
32	Biochemical Characterization of Bifunctional 3-Deoxy-Î²-d-manno-oct-2-ulosonic Acid (Î²-Kdo) Transferase KpsC from Escherichia coli Involved in Capsule Biosynthesis. Journal of Biological Chemistry, 2016, 291, 21519-21530.	1.6	22
33	Dectin-2 Recognizes Mannosylated O-antigens of Human Opportunistic Pathogens and Augments Lipopolysaccharide Activation of Myeloid Cells. Journal of Biological Chemistry, 2016, 291, 17629-17638.	1.6	31
34	Cold Stress Makes Escherichia coli Susceptible to Glycopeptide Antibiotics by Altering Outer Membrane Integrity. Cell Chemical Biology, 2016, 23, 267-277.	2.5	65
35	Editorial: The many wonders of the bacterial cell surface. FEMS Microbiology Reviews, 2016, 40, 161-163.	3.9	8
36	A widespread three-component mechanism for the periplasmic modification of bacterial glycoconjugates. Canadian Journal of Chemistry, 2016, 94, 883-893.	0.6	22

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37	Domain Interactions Control Complex Formation and Polymerase Specificity in the Biosynthesis of the Escherichia coli O9a Antigen. Journal of Biological Chemistry, 2015, 290, 1075-1085.	1.6	19
38	Bacteriophage-mediated Glucosylation Can Modify Lipopolysaccharide O-Antigens Synthesized by an ATP-binding Cassette (ABC) Transporter-dependent Assembly Mechanism. Journal of Biological Chemistry, 2015, 290, 25561-25570.	1.6	21
39	A coiled-coil domain acts as a molecular ruler to regulate O-antigen chain length in lipopolysaccharide. Nature Structural and Molecular Biology, 2015, 22, 50-56.	3.6	55
40	Trapped translocation intermediates establish the route for export of capsular polysaccharides across Escherichia coli outer membranes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8203-8208.	3.3	44
41	Lipopolysaccharide O antigen size distribution is determined by a chain extension complex of variable stoichiometry in Escherichia coli O9a. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6407-6412.	3.3	41
42	Biosynthesis and Export of Bacterial Lipopolysaccharides. Annual Review of Biochemistry, 2014, 83, 99-128.	5.0	565
43	Structure, biosynthesis, and function of bacterial capsular polysaccharides synthesized by ABC transporter-dependent pathways. Carbohydrate Research, 2013, 378, 35-44.	1.1	183
44	Wzi Is an Outer Membrane Lectin that Underpins Group 1 Capsule Assembly in Escherichia coli. Structure, 2013, 21, 844-853.	1.6	63
45	KpsC and KpsS are retaining 3-deoxy- <scp>d</scp> - manno -oct-2-ulosonic acid (Kdo) transferases involved in synthesis of bacterial capsules. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20753-20758.	3.3	95
46	The UDP-glucose Dehydrogenase of Escherichia coli K-12 Displays Substrate Inhibition by NAD That Is Relieved by Nucleotide Triphosphates. Journal of Biological Chemistry, 2013, 288, 23064-23074.	1.6	16
47	Conserved glycolipid termini in capsular polysaccharides synthesized by ATP-binding cassette transporter-dependent pathways in Gram-negative pathogens. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7868-7873.	3.3	89
48	Biosynthesis of the Polymannose Lipopolysaccharide O-antigens from Escherichia coli Serotypes O8 and O9a Requires a Unique Combination of Single- and Multiple-active Site Mannosyltransferases. Journal of Biological Chemistry, 2012, 287, 35078-35091.	1.6	41
49	Domain Organization of the Polymerizing Mannosyltransferases Involved in Synthesis of the Escherichia coli O8 and O9a Lipopolysaccharide O-antigens. Journal of Biological Chemistry, 2012, 287, 38135-38149.	1.6	32
50	Structure of <scp>WbdD</scp>: a bifunctional kinase and methyltransferase that regulates the chain length of the <scp>O</scp> antigen in <scp>E</scp>scherichia coli<scp>O9a</scp>. Molecular Microbiology, 2012, 86, 730-742.	1.2	29
51	Identification of the methyl phosphate substituent at the non-reducing terminal mannose residue of the O-specific polysaccharides of Klebsiella pneumoniae O3, Hafnia alvei PCM 1223 and Escherichia coli O9/O9a LPS. Carbohydrate Research, 2012, 347, 186-188.	1.1	20
52	Synthesis of lipopolysaccharide O-antigens by ABC transporter-dependent pathways. Carbohydrate Research, 2012, 356, 12-24.	1.1	142
53	Functional and Structural Characterization of Polysaccharide Co-polymerase Proteins Required for Polymer Export in ATP-binding Cassette Transporter-dependent Capsule Biosynthesis Pathways. Journal of Biological Chemistry, 2011, 286, 16658-16668.	1.6	29
54	In Vitro Reconstruction of the Chain Termination Reaction in Biosynthesis of the Escherichia coli O9a O-Polysaccharide. Journal of Biological Chemistry, 2011, 286, 41391-41401.	1.6	36

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55	A Membrane-located Glycosyltransferase Complex Required for Biosynthesis of the d-Galactan I Lipopolysaccharide O Antigen in Klebsiella pneumoniae. Journal of Biological Chemistry, 2010, 285, 19668-19678.	1.6	26
56	ABC Transporters Involved in Export of Cell Surface Glycoconjugates. Microbiology and Molecular Biology Reviews, 2010, 74, 341-362.	2.9	172
57	Structure and Functional Analysis of LptC, a Conserved Membrane Protein Involved in the Lipopolysaccharide Export Pathway in Escherichia coli*. Journal of Biological Chemistry, 2010, 285, 33529-33539.	1.6	114
58	Coordination of Polymerization, Chain Termination, and Export in Assembly of the Escherichia coli Lipopolysaccharide O9a Antigen in an ATP-binding Cassette Transporter-dependent Pathway. Journal of Biological Chemistry, 2009, 284, 30662-30672.	1.6	40
59	The Klebsiella pneumoniae O2a Antigen Defines a Second Mechanism for O Antigen ATP-binding Cassette Transporters. Journal of Biological Chemistry, 2009, 284, 2947-2956.	1.6	51
60	Biochemical and Structural Analysis of Bacterial O-antigen Chain Length Regulator Proteins Reveals a Conserved Quaternary Structure. Journal of Biological Chemistry, 2009, 284, 7395-7403.	1.6	63
61	Crystal Structures of Wzb of Escherichia coli and CpsB of Streptococcus pneumoniae, Representatives of Two Families of Tyrosine Phosphatases that Regulate Capsule Assembly. Journal of Molecular Biology, 2009, 392, 678-688.	2.0	69
62	Pivotal Roles of the Outer Membrane Polysaccharide Export and Polysaccharide Copolymerase Protein Families in Export of Extracellular Polysaccharides in Gram-Negative Bacteria. Microbiology and Molecular Biology Reviews, 2009, 73, 155-177.	2.9	249
63	Periplasmic export machines for outer membrane assembly. Current Opinion in Structural Biology, 2008, 18, 466-474.	2.6	19
64	Substrate binding by a bacterial ABC transporter involved in polysaccharide export. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 19529-19534.	3.3	94
65	The 3D structure of a periplasm-spanning platform required for assembly of group 1 capsular polysaccharides in Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2390-2395.	3.3	139
66	Functional Characterization of the Initiation Enzyme of S-Layer Glycoprotein Glycan Biosynthesis in Geobacillus stearothermophilus NRS 2004/3a. Journal of Bacteriology, 2007, 189, 2590-2598.	1.0	47
67	Glycosyltransferases Involved in Biosynthesis of the Outer Core Region of Escherichia coli Lipopolysaccharides Exhibit Broader Substrate Specificities Than Is Predicted from Lipopolysaccharide Structures. Journal of Biological Chemistry, 2007, 282, 26786-26792.	1.6	15
68	Biosynthesis and Assembly of Capsular Polysaccharides inEscherichia coli. Annual Review of Biochemistry, 2006, 75, 39-68.	5.0	883
69	Wza the translocon for E. coli capsular polysaccharides defines a new class of membrane protein. Nature, 2006, 444, 226-229.	13.7	321
70	The C-terminal Domain of the Nucleotide-binding Domain Protein Wzt Determines Substrate Specificity in the ATP-binding Cassette Transporter for the Lipopolysaccharide O-antigens in Escherichia coli Serotypes O8 and O9a. Journal of Biological Chemistry, 2005, 280, 30310-30319.	1.6	79
71	Functional Analysis of Conserved Gene Products Involved in Assembly of Escherichia coli Capsules and Exopolysaccharides: Evidence for Molecular Recognition between Wza and Wzc for Colanic Acid Biosynthesis. Journal of Bacteriology, 2005, 187, 5470-5481.	1.0	81
72	Biosynthesis of a Novel 3-Deoxy-D-manno-oct-2-ulosonic Acid-containing Outer Core Oligosaccharide in the Lipopolysaccharide of Klebsiella pneumoniae. Journal of Biological Chemistry, 2004, 279, 27928-27940.	1.6	28

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73	Nonreducing Terminal Modifications Determine the Chain Length of Polymannose O Antigens of Escherichia coli and Couple Chain Termination to Polymer Export via an ATP-binding Cassette Transporter. Journal of Biological Chemistry, 2004, 279, 35709-35718.	1.6	100
74	Biosynthesis and assembly of Group 1 capsular polysaccharides in Escherichia coli and related extracellular polysaccharides in other bacteria. Carbohydrate Research, 2003, 338, 2491-2502.	1.1	124
75	Transcriptional organization and regulation of the Escherichia coli K30 group 1 capsule biosynthesis (cps) gene cluster. Molecular Microbiology, 2003, 47, 1045-1060.	1.2	82
76	Translocation of Group 1 Capsular Polysaccharide in Escherichia coli Serotype K30. Journal of Biological Chemistry, 2003, 278, 49763-49772.	1.6	80
77	A Novel Outer Membrane Protein, Wzi, Is Involved in Surface Assembly of the Escherichia coli K30 Group 1 Capsule. Journal of Bacteriology, 2003, 185, 5882-5890.	1.0	79
78	Molecular insights into the assembly and diversity of the outer core oligosaccharide in lipopolysaccharides from <I>Escherichia coli</I> and <I>Salmonella</I>. Journal of Endotoxin Research, 2003, 9, 244-249.	2.5	32
79	Structures of Lipopolysaccharides from Klebsiella pneumoniae. Journal of Biological Chemistry, 2002, 277, 25070-25081.	1.6	146
80	Impact of Phosphorylation of Specific Residues in the Tyrosine Autokinase, Wzc, on Its Activity in Assembly of Group 1 Capsules in Escherichia coli. Journal of Bacteriology, 2002, 184, 6437-6447.	1.0	100
81	Lipopolysaccharide Endotoxins. Annual Review of Biochemistry, 2002, 71, 635-700.	5.0	3,873
82	UDP-galactopyranose mutase has a novel structure and mechanism. Nature Structural Biology, 2001, 8, 858-863.	9.7	138
83	Phosphorylation of Wzc, a Tyrosine Autokinase, Is Essential for Assembly of Group 1 Capsular Polysaccharides in Escherichia coli. Journal of Biological Chemistry, 2001, 276, 2361-2371.	1.6	173
84	Functional Analysis of the Galactosyltransferases Required for Biosynthesis of d -Galactan I, a Component of the Lipopolysaccharide O1 Antigen of Klebsiella pneumoniae. Journal of Bacteriology, 2001, 183, 3318-3327.	1.0	53
85	Conserved Organization in the cps Gene Clusters for Expression of Escherichia coli Group 1 K Antigens: Relationship to the Colanic Acid Biosynthesis Locus and the cps Genes from Klebsiella pneumoniae. Journal of Bacteriology, 1999, 181, 2307-2313.	1.0	107
86	Characterization of dTDP-4-dehydrorhamnose 3,5-Epimerase and dTDP-4-dehydrorhamnose Reductase, Required for dTDP-l-rhamnose Biosynthesis in Salmonella enterica Serovar Typhimurium LT2. Journal of Biological Chemistry, 1999, 274, 25069-25077.	1.6	111
87	Structure, assembly and regulation of expression of capsules in Escherichia coli. Molecular Microbiology, 1999, 31, 1307-1319.	1.2	481
88	Gene products required for surface expression of the capsular form of the group 1 K antigen in Escherichia coli (O9a:K30). Molecular Microbiology, 1999, 31, 1321-1332.	1.2	136
89	Molecular basis for structural diversity in the core regions of the lipopolysaccharides ofEscherichia coliandSalmonella enterica. Molecular Microbiology, 1998, 30, 221-232.	1.2	339
90	The Assembly System for the Outer Core Portion of R1- and R4-type Lipopolysaccharides of Escherichia coli. Journal of Biological Chemistry, 1998, 273, 29497-29505.	1.6	85

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91	UDP-galactofuranose Precursor Required for Formation of the Lipopolysaccharide O Antigen of Klebsiella pneumoniae Serotype O1 Is Synthesized by the Product of the rfbDKPO1 Gene. Journal of Biological Chemistry, 1997, 272, 4121-4128.	1.6	114
92	Modulation of the surface architecture of Gramâ€negative bacteria by the action of surface polymer:lipid Aâ€“core ligase and by determinants of polymer chain length. Molecular Microbiology, 1997, 23, 629-638.	1.2	146
93	Molecular and functional analysis of genes required for expression of group IB K antigens in Escherichia coli â€ƒ: characterization of the hisâ€region containing gene clusters for multiple cellâ€surface polysaccharides. Molecular Microbiology, 1997, 26, 145-161.	1.2	76
94	A Novel Pathway for O-Polysaccharide Biosynthesis in Salmonella enterica Serovar Borreze. Journal of Biological Chemistry, 1996, 271, 28581-28592.	1.6	143
95	A plasmid-encoded rfbO:54gene cluster is required for biosynthesis of the O:54 antigen in Salmonella enterica serovar Borreze. Molecular Microbiology, 1994, 11, 437-448.	1.2	47
96	Identification of an ATP-binding cassette transport system required for translocation of lipopolysaccharide O-antigen side-chains across the cytoplasmic membrane of Klebsiella pneumoniae serotype O1. Molecular Microbiology, 1994, 14, 505-519.	1.2	103
97	Structural variation in the O-specific polysaccharides of Klebsiella pneumoniae serotype O1 and O8 lipopolysaccharide: evidence for clonal diversity in rfb genes. Molecular Microbiology, 1993, 10, 615-625.	1.2	58
98	Periplasmic Events in the Assembly of Bacterial Lipopolysaccharides. , 0, , 214-234.		0