Michael Koomey

List of Publications by Year
in descending order

92 papers	6,439 citations	53794 45 h-index	69250 77 g-index
93 all docs	93 docs citations	93 times ranked	2908 citing authors

#	Article	IF	Citations
1	PilT mutations lead to simultaneous defects in competence for natural transformation and twitching motility in piliatedNeisseria gonorrhoeae. Molecular Microbiology, 1998, 29, 321-330.	2.5	306
2	Components and dynamics of fiber formation define a ubiquitous biogenesis pathway for bacterial pili. EMBO Journal, 2000, 19, 6408-6418.	7.8	224
3	Phase variation of gonococcal protein II: Regulation of gene expression by slipped-strand mispairing of a repetitive DNA sequence. Cell, 1989, 56, 539-547.	28.9	212
4	Gonococcal pilin variants in experimental gonorrhea.. Journal of Experimental Medicine, 1987, 165, 1344-1357.	8.5	209
5	Effects of recA Mutations on Pilus Antigenic Variation and Phase Transitions in Neisseria gonorrhoeae. Genetics, 1987, 117, 391-398.	2.9	204
6	Gene conversion involving the pilin structural gene correlates with pilus+ â‡„ pilusâ^' changes in Neisseria gonorrhoeae. Cell, 1986, 47, 267-276.	28.9	193
7	General secretion pathway (eps) genes required for toxin secretion and outer membrane biogenesis in Vibrio cholerae. Journal of Bacteriology, 1997, 179, 6994-7003.	2.2	188
8	Characterization of the pilF?pilD pilus-assembly locus of Neisseria gonorrhoeae. Molecular Microbiology, 1995, 16, 575-586.	2.5	159
9	Cloning of the recA gene of Neisseria gonorrhoeae and construction of gonococcal recA mutants. Journal of Bacteriology, 1987, 169, 790-795.	2.2	152
10	Identification and characterization of pilG, a highly conserved pilus-assembly gene in pathogenic Neisseria. Molecular Microbiology, 1995, 16, 451-464.	2.5	148
11	PilP, a pilus biogenesis lipoprotein in Neisseria gonorrhoeae, affects expression of PilQ as a highâ€molecularâ€mass multimer. Molecular Microbiology, 1997, 23, 657-668.	2.5	147
12	Piliation control mechanisms in Neisseria gonorrhoeae.. Proceedings of the National Academy of Sciences of the United States of America, 1986, 83, 3890-3894.	7.1	145
13	The product of the pilQ gene is essential for the biogenesis of type IV pili in Neisseria gonorrhoeae. Molecular Microbiology, 1995, 18, 975-986.	2.5	144
14	Porin protein of Neisseria gonorrhoeae: cloning and gene structure.. Proceedings of the National Academy of Sciences of the United States of America, 1987, 84, 8135-8139.	7.1	143
15	Broad spectrum O-linked protein glycosylation in the human pathogen Neisseria gonorrhoeae. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4447-4452.	7.1	142
16	Competence for natural transformation in Neisseria gonorrhoeae: components of DNA binding and uptake linked to type IV pilus expression. Molecular Microbiology, 2002, 46, 749-760.	2.5	141
17	Suppression of an absolute defect in Type IV pilus biogenesis by loss-of-function mutations in pilT , a twitching motility gene in Neisseria gonorrhoeae. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 14973-14978.	7.1	139
18	Genetic and biochemical analysis of gonococcal IgA1 protease: cloning in Escherichia coli and construction of mutants of gonococci that fail to produce the activity.. Proceedings of the National Academy of Sciences of the United States of America, 1982, 79, 7881-7885.	7.1	129

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19	Neisseria gonorrhoeae PilV, a type IV pilus-associated protein essential to human epithelial cell adherence. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 15276-15281.	7.1	122
20	Unique modifications with phosphocholine and phosphoethanolamine define alternate antigenic forms ofNeisseria gonorrhoeaetype IV pili. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10798-10803.	7.1	119
21	Charged tmRNA but not tmRNA-mediated proteolysis is essential for Neisseria gonorrhoeae viability. EMBO Journal, 2000, 19, 1098-1107.	7.8	117
22	Single amino acid substitutions in the N-terminus of Vibrio cholerae TcpA affect colonization, autoagglutination, and serum resistance. Molecular Microbiology, 1995, 17, 1133-1142.	2.5	115
23	Neisseria gonorrhoeae O-linked pilin glycosylation: functional analyses define both the biosynthetic pathway and glycan structure. Molecular Microbiology, 2007, 65, 607-624.	2.5	112
24	Gene conversion in Neisseria gonorrhoeae: evidence for its role in pilus antigenic variation.. Proceedings of the National Academy of Sciences of the United States of America, 1992, 89, 5366-5370.	7.1	110
25	The comP locus of Neisseria gonorrhoeae encodes a type IV prepilin that is dispensable for pilus biogenesis but essential for natural transformation. Molecular Microbiology, 1999, 31, 1345-1357.	2.5	108
26	Type IV pilus retraction in pathogenic Neisseria is regulated by the PilC proteins. EMBO Journal, 2004, 23, 2009-2017.	7.8	108
27	The pilus colonization factor of pathogenic neisserial species: organelle biogenesis and structure/function relationships â€“ areview. Gene, 1997, 192, 155-163.	2.2	107
28	A conserved set of pilinâ€like molecules controls type IV pilus dynamics and organelleâ€associated functions in Neisseria gonorrhoeae. Molecular Microbiology, 2005, 56, 903-917.	2.5	99
29	Infection of human mucosal tissue by Pseudomonas aeruginosa requires sequential and mutually dependent virulence factors and a novel pilus-associated adhesin. Cellular Microbiology, 2010, 12, 1158-1173.	2.1	98
30	A force-dependent switch reverses type IV pilus retraction. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10961-10966.	7.1	96
31	Conservation of genes encoding components of a type IV pilus assembly/two-step protein export pathway in Neisseria gonorrhoeae. Molecular Microbiology, 1993, 8, 357-368.	2.5	95
32	Crystallographic structure reveals phosphorylated pilin from Neisseria: phosphoserine sites modify type IV pilus surface chemistry and fibre morphology. Molecular Microbiology, 1999, 31, 743-752.	2.5	93
33	Biochemical Characterization of the O-Linked Glycosylation Pathway in Neisseria gonorrhoeae Responsible for Biosynthesis of Protein Glycans Containing N,Nâ€²-Diacetylbacillosamine. Biochemistry, 2011, 50, 4936-4948.	2.5	79
34	Sweet New Roles for Protein Glycosylation in Prokaryotes. Trends in Microbiology, 2017, 25, 662-672.	7.7	65
35	Structure and function of repetitive sequence elements associated with a highly polymorphic domain of theNeisseria meningitidisPilQ protein. Molecular Microbiology, 1998, 29, 111-124.	2.5	62
36	Neisseria gonorrhoeae Type IV Pili Undergo Multisite, Hierarchical Modifications with Phosphoethanolamine and Phosphocholine Requiring an Enzyme Structurally Related to Lipopolysaccharide Phosphoethanolamine Transferases. Journal of Biological Chemistry, 2006, 281, 27712-27723.	3.4	61

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37	Dynamics of Type IV Pili Is Controlled by Switching Between Multiple States. Biophysical Journal, 2009, 96, 1169-1177.	0.5	60
38	Attachment to and Invasion of Human Fallopian Tube Mucosa by an IgA1 Protease-Deficient Mutant of Neisseria gonorrhoeae and Its Wild-Type Parent. Journal of Infectious Diseases, 1984, 150, 737-744.	4.0	58
39	An inhibitor of DNA binding and uptake events dictates the proficiency of genetic transformation in Neisseria gonorrhoeae: mechanism of action and links to Type IV pilus expression. Molecular Microbiology, 2002, 46, 1441-1450.	2.5	58
40	Gene conversion variations generate structurally distinct pilin polypeptides in Neisseria gonorrhoeae.. Journal of Experimental Medicine, 1987, 165, 1016-1025.	8.5	55
41	Cloning of the structural genes of three H8 antigens and of protein III of Neisseria gonorrhoeae.. Journal of Experimental Medicine, 1986, 164, 868-881.	8.5	54
42	Pilin expression and processing in pilus mutants of Neisseria gonorrhoeae: critical role of Gly-1in assembly. Molecular Microbiology, 1991, 5, 279-287.	2.5	54
43	Multiple Pilus Motors Cooperate for Persistent Bacterial Movement in Two Dimensions. Physical Review Letters, 2010, 104, 178104.	7.8	52
44	Genetic, Structural, and Antigenic Analyses of Glycan Diversity in the O-Linked Protein Glycosylation Systems of HumanNeisseriaSpecies. Journal of Bacteriology, 2010, 192, 2816-2829.	2.2	52
45	Competence for Natural transformation in Neisseria gonorrhoeae: A Model System for Studies of Horizontal Gene Transfer. Apmis, 1998, 106, 56-61.	2.0	51
46	An Extended Spectrum of Target Proteins and Modification Sites in the General O-Linked Protein Glycosylation System in Neisseria gonorrhoeae. Journal of Proteome Research, 2012, 11, 5781-5793.	3.7	49
47	Concerted Spatio-Temporal Dynamics of Imported DNA and ComE DNA Uptake Protein during Gonococcal Transformation. PLoS Pathogens, 2014, 10, e1004043.	4.7	48
48	Modification of Type IV Pilus-Associated Epithelial Cell Adherence and Multicellular Behavior by the PilU Protein of Neisseria gonorrhoeae. Infection and Immunity, 2002, 70, 3891-3903.	2.2	47
49	Down-regulation of CD46 by Piliated Neisseria gonorrhoeae. Journal of Experimental Medicine, 2003, 198, 1313-1322.	8.5	47
50	Molecular cloning and characterization of a proline iminopeptidase gene from Neisseria gonorrhoeae. Molecular Microbiology, 1993, 9, 1203-1211.	2.5	44
51	O-Linked Glycosylation of the PilA Pilin Protein of Francisella tularensis: Identification of the Endogenous Protein-Targeting Oligosaccharyltransferase and Characterization of the Native Oligosaccharide. Journal of Bacteriology, 2011, 193, 5487-5497.	2.2	44
52	Substitutions in the N-terminal alpha helical spine of Neisseria gonorrhoeae pilin affect Type IV pilus assembly, dynamics and associated functions. Molecular Microbiology, 2007, 63, 69-85.	2.5	43
53	Genetic and Functional Analyses of PptA, a Phospho-Form Transferase Targeting Type IV Pili in Neisseria gonorrhoeae. Journal of Bacteriology, 2008, 190, 387-400.	2.2	43
54	Genetic and molecular analyses reveal an evolutionary trajectory for glycan synthesis in a bacterial protein glycosylation system. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9643-9648.	7.1	43

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55	The construction and characterization of Neisseria gonorrhoeae lacking protein III in its outer membrane.. Journal of Experimental Medicine, 1989, 169, 2199-2209.	8.5	39
56	Characterization of exogenous bacterial oligosaccharyltransferases in Escherichia coli reveals the potential for O-linked protein glycosylation in Vibrio cholerae and Burkholderia thailandensis. Glycobiology, 2012, 22, 962-974.	2.5	38
57	Bacterial pathogenesis: A variation on variation in Lyme disease. Current Biology, 1997, 7, R538-R540.	3.9	36
58	Structural alterations in a type IV pilus subunit protein result in concurrent defects in multicellular behaviour and adherence to host tissue. Molecular Microbiology, 2001, 42, 293-307.	2.5	33
59	Roles of c-type cytochromes in respiration in Neisseria meningitidis. Microbiology (United Kingdom), 2008, 154, 2857-2864.	1.8	30
60	Pseudomonas aeruginosa Type IV Pilus Expression in Neisseria gonorrhoeae: Effects of Pilin Subunit Composition on Function and Organelle Dynamics. Journal of Bacteriology, 2007, 189, 6676-6685.	2.2	28
61	Characterization of a Unique Tetrasaccharide and Distinct Glycoproteome in the O -Linked Protein Glycosylation System of Neisseria elongata subsp. glycolytica. Journal of Bacteriology, 2016, 198, 256-267.	2.2	28
62	O-linked protein glycosylation in bacteria: snapshots and current perspectives. Current Opinion in Structural Biology, 2019, 56, 198-203.	5.7	28
63	Global biochemical and structural analysis of the type IV pilus from the Gram-positive bacterium Streptococcus sanguinis. Journal of Biological Chemistry, 2019, 294, 6796-6808.	3.4	26
64	Structural Alterations in a Component of Cytochrome c Oxidase and Molecular Evolution of Pathogenic Neisseria in Humans. PLoS Pathogens, 2010, 6, e1001055.	4.7	25
65	Transcriptional, chemosensory and cell-contact-dependent regulation of type IV pilus expression. Current Opinion in Microbiology, 2002, 5, 173-178.	5.1	22
66	Functional analyses of pilin-like proteins from Francisella tularensis: complementation of type IV pilus phenotypes in Neisseria gonorrhoeae. Microbiology (United Kingdom), 2009, 155, 2546-2559.	1.8	22
67	Novel Protein Substrates of the Phospho-Form Modification System in Neisseria gonorrhoeae and Their Connection to O -Linked Protein Glycosylation. Infection and Immunity, 2012, 80, 22-30.	2.2	22
68	Prepilin-like molecules in type 4 pilus biogenesis: minor subunits, chaperones or mediators of organelle translocation?. Trends in Microbiology, 1995, 3, 409-411.	7.7	20
69	Implications of molecular contacts and signaling initiated by Neisseria gonorrhoeae. Current Opinion in Microbiology, 2001, 4, 53-57.	5.1	19
70	Insights into type IV pilus biogenesis and dynamics from genetic analysis of a Câ€terminally tagged pilin: a role for Oâ€linked glycosylation. Molecular Microbiology, 2012, 85, 1166-1178.	2.5	19
71	An Unusual Neisseria Isolated from Conjunctival Cultures in Rural Egypt. Journal of Infectious Diseases, 1986, 154, 212-224.	4.0	18
72	Release of host-derived membrane vesicles following pilus-mediated adhesion of Neisseria gonorrhoeae. Cellular Microbiology, 2005, 7, 1672-1683.	2.1	16

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73	Extended glycan diversity in a bacterial protein glycosylation system linked to allelic polymorphisms and minimal genetic alterations in a glycosyltransferase gene. Molecular Microbiology, 2014, 94, 688-699.	2.5	16
74	Genetic determinants of genus-level glycan diversity in a bacterial protein glycosylation system. PLoS Genetics, 2019, 15, e1008532.	3.5	16
75	Structural and genetic analyses of glycan O-acetylation in a bacterial protein glycosylation system: evidence for differential effects on glycan chain length. Glycobiology, 2017, 27, 888-899.	2.5	15
76	Gene conversion accounts for pilin structural changes and for reversible piliation ?phase? changes in gonococci. Antonie Van Leeuwenhoek, 1987, 53, 441-446.	1.7	13
77	Type IV Pilin Post-Translational Modifications Modulate Material Properties of Bacterial Colonies. Biophysical Journal, 2019, 116, 938-947.	0.5	13
78	A Broad Spectrum Protein Glycosylation System Influences Type II Protein Secretion and Associated Phenotypes in Vibrio cholerae. Frontiers in Microbiology, 2019, 10, 2780.	3.5	13
79	Microbial genome dynamics in CNS pathogenesis. Neuroscience, 2007, 145, 1375-1387.	2.3	12
80	Adenovirus type 12 VA RNA I. Synthesis in productive infection and gene mapping. Virology, 1979, 95, 295-302.	2.4	11
81	Hypomorphic Glycosyltransferase Alleles and Recoding at Contingency Loci Influence Glycan Microheterogeneity in the Protein Glycosylation System of Neisseria Species. Journal of Bacteriology, 2012, 194, 5034-5043.	2.2	11
82	Transformation and DNA repair: linkage by DNA recombination. Trends in Microbiology, 2004, 12, 1-4.	7.7	10
83	Genetic diversity among the T-protein genes of group A streptococci. Molecular Microbiology, 1991, 5, 2947-2952.	2.5	8
84	Allelic Variation in a Simple Sequence Repeat Element of Neisserial pglB2 and Its Consequences for Protein Expression and Protein Glycosylation. Journal of Bacteriology, 2013, 195, 3476-3485.	2.2	7
85	Cytochrome c â€based domain modularity governs genusâ€level diversification of electron transfer to dissimilatory nitrite reduction. Environmental Microbiology, 2015, 17, 2114-2132.	3.8	7
86	Allelic polymorphisms in a glycosyltransferase gene shape glycan repertoire in theO-linked protein glycosylation system ofNeisseria. Glycobiology, 2021, 31, 477-491.	2.5	6
87	Mechanisms of Pilus Antigenic Variation in Neisseria gonorrhoeae. , 0, , 113-126.		6
88	Disrupted Synthesis of a Di- N -acetylated Sugar Perturbs Mature Glycoform Structure and Microheterogeneity in the O -Linked Protein Glycosylation System of Neisseria elongata subsp. glycolytica. Journal of Bacteriology, 2019, 201, .	2.2	4
89	Global Regulatory Pathways Converge To Control Expression of Pseudomonas aeruginosa Type IV Pili. MBio, 2022, , e0369621.	4.1	4
90	Type IV Pilus Assembly Proficiency and Dynamics Influence Pilin Subunit Phospho-Form Macro- and Microheterogeneity in Neisseria gonorrhoeae. PLoS ONE, 2014, 9, e96419.	2.5	3

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91	Sculpting the Bacterial O -Glycoproteome: Functional Analyses of Orthologous Oligosaccharyltransferases with Diverse Targeting Specificities. MBio, 2022, 13, e0379721.	4.1	2
92	Kiss and Run â€“ Phosphoglycerol Modifications of N. Meningitidis Pili Mediate Detachment. Frontiers in Microbiology, 2011, 2, 82.	3.5	0