Gavin Hugh Thomas

List of Publications by Year
in descending order

132 papers	7,189 citations	87843 38 h-index	60583 81 g-index
144 all docs	144 docs citations	144 times ranked	9088 citing authors

#	Article	IF	Citations
1	Genome Sequence of the Pea Aphid Acyrthosiphon pisum. PLoS Biology, 2010, 8, e1000313.	2.6	913
2	Escherichia coli K-12: a cooperatively developed annotation snapshot--2005. Nucleic Acids Research, 2006, 34, 1-9.	6.5	606
3	A Novel and Ubiquitous System for Membrane Targeting and Secretion of Cofactor-Containing Proteins. Cell, 1998, 93, 93-101.	13.5	446
4	Sialic acid utilization by bacterial pathogens. Microbiology (United Kingdom), 2007, 153, 2817-2822.	0.7	436
5	Genome Sequence of the Tsetse Fly (<i>Glossina morsitans</i>): Vector of African Trypanosomiasis. Science, 2014, 344, 380-386.	6.0	254
6	Comprehensive identification of RNAâ€“protein interactions in any organism using orthogonal organic phase separation (OOPS). Nature Biotechnology, 2019, 37, 169-178.	9.4	247
7	Genomic insight into the amino acid relations of the pea aphid, <i>Acyrthosiphon pisum</i>, with its symbiotic bacterium <i>Buchnera aphidicola</i>. Insect Molecular Biology, 2010, 19, 249-258.	1.0	219
8	Membrane sequestration of the signal transduction protein GlnK by the ammonium transporter AmtB. EMBO Journal, 2002, 21, 536-545.	3.5	208
9	Tripartite ATP-independent periplasmic (TRAP) transporters in bacteria and archaea. FEMS Microbiology Reviews, 2011, 35, 68-86.	3.9	190
10	Escherichia coli Kâ€12 genes essential for the synthesis of c â€type cytochromes and a third nitrate reductase located in the periplasm. Molecular Microbiology, 1996, 19, 467-481.	1.2	163
11	Intrinsic challenges in ancient microbiome reconstruction using 16S rRNA gene amplification. Scientific Reports, 2015, 5, 16498.	1.6	153
12	The tripartite ATP-independent periplasmic (TRAP) transporters of bacteria and archaea. FEMS Microbiology Reviews, 2001, 25, 405-424.	3.9	144
13	Competition between <i>Escherichia coli</i> strains expressing either a periplasmic or a membrane-bound nitrate reductase: does Nap confer a selective advantage during nitrate-limited growth?. Biochemical Journal, 1999, 344, 77-84.	1.7	133
14	Sialic acid transport inHaemophilus influenzaeis essential for lipopolysaccharide sialylation and serum resistance and is dependent on a novel tripartite ATP-independent periplasmic transporter. Molecular Microbiology, 2005, 58, 1173-1185.	1.2	120
15	The glnKamtB operon. Trends in Genetics, 2000, 16, 11-14.	2.9	119
16	The substrate-binding protein in bacterial ABC transporters: dissecting roles in the evolution of substrate specificity. Biochemical Society Transactions, 2015, 43, 1011-1017.	1.6	115
17	Membrane topology of the Mep/Amt family of ammonium transporters. Molecular Microbiology, 2000, 37, 331-344.	1.2	113
18	Evolutionary diversification of an ancient gene family (rhs) through C-terminal displacement. BMC Genomics, 2009, 10, 584.	1.2	99

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19	A fragile metabolic network adapted for cooperation in the symbiotic bacterium Buchnera aphidicola. BMC Systems Biology, 2009, 3, 24.	3.0	98
20	Water Networks Can Determine the Affinity of Ligand Binding to Proteins. Journal of the American Chemical Society, 2019, 141, 15818-15826.	6.6	98
21	The substrate-binding protein imposes directionality on an electrochemical sodium gradient-driven TRAP transporter. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1778-1783.	3.3	93
22	In vivo functional characterization of the Escherichia coli ammonium channel AmtB: evidence for metabolic coupling of AmtB to glutamine synthetase. Biochemical Journal, 2005, 390, 215-222.	1.7	89
23	Purification of the Escherichia coli ammonium transporter AmtB reveals a trimeric stoichiometry. Biochemical Journal, 2002, 364, 527-535.	1.7	88
24	Elucidation of a sialic acid metabolism pathway in mucus-foraging Ruminococcus gnavus unravels mechanisms of bacterial adaptation to the gut. Nature Microbiology, 2019, 4, 2393-2404.	5.9	83
25	Conservation of Structure and Mechanism in Primary and Secondary Transporters Exemplified by SiaP, a Sialic Acid Binding Virulence Factor from Haemophilus influenzae. Journal of Biological Chemistry, 2006, 281, 22212-22222.	1.6	81
26	Tripartite ATP-Independent Periplasmic (TRAP) Transporters and Tripartite Tricarboxylate Transporters (TTT): From Uptake to Pathogenicity. Frontiers in Cellular and Infection Microbiology, 2018, 8, 33.	1.8	77
27	Screening of <i>Streptococcus pneumoniae</i> ABC Transporter Mutants Demonstrates that LivJHMGF, a Branched-Chain Amino Acid ABC Transporter, Is Necessary for Disease Pathogenesis. Infection and Immunity, 2009, 77, 3412-3423.	1.0	76
28	The central role of the host cell in symbiotic nitrogen metabolism. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 2965-2973.	1.2	75
29	An ATP-binding cassette-type cysteine transporter in Campylobacter jejuni inferred from the structure of an extracytoplasmic solute receptor protein. Molecular Microbiology, 2005, 57, 143-155.	1.2	72
30	EchoBASE: an integrated post-genomic database for Escherichia coli. Nucleic Acids Research, 2004, 33, D329-D333.	6.5	70
31	Staphyloferrin A as siderophore-component in fluoroquinolone-based Trojan horse antibiotics. Organic and Biomolecular Chemistry, 2013, 11, 3461.	1.5	66
32	Genetic and metabolic determinants of nutritional phenotype in an insect-bacterial symbiosis. Molecular Ecology, 2011, 20, 2073-2084.	2.0	60
33	The Effects of Methionine Acquisition and Synthesis on Streptococcus Pneumoniae Growth and Virulence. PLoS ONE, 2013, 8, e49638.	1.1	60
34	Sialic Acid Mutarotation Is Catalyzed by the Escherichia coli Î²-Propeller Protein YjhT. Journal of Biological Chemistry, 2008, 283, 4841-4849.	1.6	55
35	Caught in a TRAP: substrate-binding proteins in secondary transport. Trends in Microbiology, 2010, 18, 471-478.	3.5	54
36	Novel ligands for the extracellular solute receptors of two bacterial TRAP transporters. Microbiology (United Kingdom), 2006, 152, 187-198.	0.7	46

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37	Genomic evidence for complementary purine metabolism in the pea aphid, <i>Acyrthosiphon pisum</i>, and its symbiotic bacterium <i>Buchnera aphidicola</i>. Insect Molecular Biology, 2010, 19, 241-248.	1.0	46
38	The Membrane Proteins SiaQ and SiaM Form an Essential Stoichiometric Complex in the Sialic Acid Tripartite ATP-independent Periplasmic (TRAP) Transporter SiaPQM (VC1777â€“1779) from Vibrio cholerae. Journal of Biological Chemistry, 2012, 287, 3598-3608.	1.6	46
39	Characterization of a novel sialic acid transporter of the sodium solute symporter (SSS) family and in vivo comparison with known bacterial sialic acid transporters. FEMS Microbiology Letters, 2010, 304, 47-54.	0.7	44
40	Tripartite ATP-Independent Periplasmic Transporters: Application of a Relational Database for Genome-Wide Analysis of Transporter Gene Frequency and Organization. Journal of Molecular Microbiology and Biotechnology, 2007, 12, 218-226.	1.0	43
41	Tripartite ATP-independent Periplasmic (TRAP) Transporters Use an Arginine-mediated Selectivity Filter for High Affinity Substrate Binding. Journal of Biological Chemistry, 2015, 290, 27113-27123.	1.6	38
42	Sialic acid acquisition in bacteriaâ€“one substrate, many transporters. Biochemical Society Transactions, 2016, 44, 760-765.	1.6	37
43	Competition between Escherichia coli strains expressing either a periplasmic or a membrane-bound nitrate reductase: does Nap confer a selective advantage during nitrate-limited growth?. Biochemical Journal, 1999, 344, 77.	1.7	35
44	The periplasmic nitrate reductase fromEscherichia coli: a heterodimeric molybdoprotein with a double-arginine signal sequence and an unusual leader peptide cleavage site. FEMS Microbiology Letters, 1999, 174, 167-171.	0.7	34
45	A different path: Revealing the function of staphylococcal proteins in biofilm formation. FEBS Letters, 2014, 588, 1869-1872.	1.3	34
46	Identification of axillary<i>Staphylococcus</i>sp. involved in the production of the malodorous thioalcohol 3-methyl-3-sufanylhexan-1-ol. FEMS Microbiology Letters, 2015, 362, fnv111.	0.7	34
47	Structural basis of malodour precursor transport in the human axilla. ELife, 2018, 7, .	2.8	34
48	Compensating Stereochemical Changes Allow Murein Tripeptide to Be Accommodated in a Conventional Peptide-binding Protein. Journal of Biological Chemistry, 2011, 286, 31512-31521.	1.6	33
49	Synthesis of citrateâ€“ciprofloxacin conjugates. Bioorganic and Medicinal Chemistry Letters, 2009, 19, 1496-1498.	1.0	32
50	Completing the E. coli proteome: a database of gene products characterised since the completion of the genome sequence. Bioinformatics, 1999, 15, 860-861.	1.8	31
51	PELDOR Spectroscopy Reveals Two Defined States of a Sialic Acid TRAP Transporter SBP in Solution. Biophysical Journal, 2017, 112, 109-120.	0.2	31
52	<i>Echo</i>LOCATION: an <i>in silico</i> analysis of the subcellular locations of <i>Escherichia coli</i> proteins and comparison with experimentally derived locations. Bioinformatics, 2009, 25, 163-166.	1.8	27
53	Furanose-specific Sugar Transport. Journal of Biological Chemistry, 2009, 284, 31156-31163.	1.6	27
54	Homes for the orphans: utilization of multiple substrate-binding proteins by ABC transporters. Molecular Microbiology, 2010, 75, 6-9.	1.2	26

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55	Uncovering a novel molecular mechanism for scavenging sialic acids in bacteria. Journal of Biological Chemistry, 2020, 295, 13724-13736.	1.6	26
56	The VC1777â€“VC1779 proteins are members of a sialic acid-specific subfamily of TRAP transporters (SiaPQM) and constitute the sole route of sialic acid uptake in the human pathogen Vibrio cholerae. Microbiology (United Kingdom), 2012, 158, 2158-2167.	0.7	25
57	Transport and catabolism of the sialic acids<i>N-</i>glycolylneuraminic acid and 3-keto-3-deoxy-<scp>d</scp>-glycero-<scp>d</scp>-galactonononic acid by<i>Escherichia coli</i>K-12. FEMS Microbiology Letters, 2013, 347, 14-22.	0.7	25
58	Robust microorganisms for biofuel and chemical production from municipal solid waste. Microbial Cell Factories, 2020, 19, 68.	1.9	24
59	Antibiotic export: transporters involved in the final step of natural product production. Microbiology (United Kingdom), 2019, 165, 805-818.	0.7	24
60	A Tale of Three Species: Adaptation of Sodalis glossinidius to Tsetse Biology, <i>Wigglesworthia</i> Metabolism, and Host Diet. MBio, 2019, 10, .	1.8	23
61	Acetylation of Surface Carbohydrates in Bacterial Pathogens Requires Coordinated Action of a Two-Domain Membrane-Bound Acyltransferase. MBio, 2020, 11, .	1.8	22
62	Sialic acid utilization by the soil bacteriumCorynebacterium glutamicum. FEMS Microbiology Letters, 2012, 336, 131-138.	0.7	21
63	Probing linker design in citric acidâ€“ciprofloxacin conjugates. Bioorganic and Medicinal Chemistry, 2014, 22, 4499-4505.	1.4	21
64	A Salmochelin S4-Inspired Ciprofloxacin Trojan Horse Conjugate. ACS Infectious Diseases, 2020, 6, 2532-2541.	1.8	19
65	BuchneraBASE: a post-genomic resource for Buchnera sp. APS. Bioinformatics, 2006, 22, 641-642.	1.8	17
66	Part by Part: Synthetic Biology Parts Used in Solventogenic Clostridia. ACS Synthetic Biology, 2018, 7, 311-327.	1.9	17
67	The molecular basis of thioalcohol production in human body odour. Scientific Reports, 2020, 10, 12500.	1.6	16
68	Bioethanol from autoclaved municipal solid waste: Assessment of environmental and financial viability under policy contexts. Applied Energy, 2021, 298, 117118.	5.1	16
69	Novel growth characteristics and high rates of nitrate reduction of anEscherichia colistrain, LCB2048, that expresses only a periplasmic nitrate reductase. FEMS Microbiology Letters, 2000, 185, 51-57.	0.7	15
70	Reconstitution and optimisation of the biosynthesis of bacterial sugar pseudaminic acid (Pse5Ac7Ac) enables preparative enzymatic synthesis of CMP-Pse5Ac7Ac. Scientific Reports, 2021, 11, 4756.	1.6	14
71	MpaA is a murein-tripeptide-specific zinc carboxypeptidase that functions as part of a catabolic pathway for peptidoglycan-derived peptides in Î³-proteobacteria. Biochemical Journal, 2012, 448, 329-341.	1.7	12
72	Multiple evolutionary origins reflect the importance of sialic acid transporters in the colonization potential of bacterial pathogens and commensals. Microbial Genomics, 2021, 7, .	1.0	12

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73	Biocatalytic Transfer of Pseudaminic Acid (Pse5Ac7Ac) Using Promiscuous Sialyltransferases in a Chemoenzymatic Approach to Pse5Ac7Ac-Containing Glycosides. ACS Catalysis, 2020, 10, 9986-9993.	5.5	10
74	Synthetic Approaches for Accessing Pseudaminic Acid (Pse) Bacterial Glycans. ChemBioChem, 2020, 21, 1397-1407.	1.3	10
75	Triggering Closure of a Sialic Acid TRAP Transporter Substrate Binding Protein through Binding of Natural or Artificial Substrates. Journal of Molecular Biology, 2021, 433, 166756.	2.0	10
76	On sialic acid transport and utilization by Vibrio cholerae. Microbiology (United Kingdom), 2011, 157, 3253-3254.	0.7	10
77	Synthesis of the complete series of mono acetates of N-acetyl-<scp>d</scp>-neuraminic acid. Organic and Biomolecular Chemistry, 2012, 10, 529-535.	1.5	9
78	Evolutionary dynamics of membrane transporters and channels: enhancing function through fusion. Current Opinion in Genetics and Development, 2019, 58-59, 76-86.	1.5	9
79	Systems Analyses Reveal the Resilience of Escherichia coli Physiology during Accumulation and Export of the Nonnative Organic Acid Citramalate. MSystems, 2019, 4, .	1.7	9
80	Surface-Bound Antibiotic for the Detection of Î²-Lactamases. ACS Applied Materials & Interfaces, 2019, 11, 32599-32604.	4.0	7
81	Simulating the evolutionary trajectories of metabolic pathways for insect symbionts in the genus Sodalis. Microbial Genomics, 2020, 6, .	1.0	7
82	Enhanced functionalisation of major facilitator superfamily transporters via fusion of C-terminal protein domains is both extensive and varied in bacteria. Microbiology (United Kingdom), 2019, 165, 419-424.	0.7	7
83	Probing Bacterial Uptake of Glycosylated Ciprofloxacin Conjugates. ChemBioChem, 2014, 15, 466-471.	1.3	6
84	MORF: An online tool for exploring microbial cell responses using multi-omics analysis. Access Microbiology, 2020, 2, .	0.2	6
85	Antibiotic-functionalized gold nanoparticles for the detection of active Î²-lactamases. Nanoscale Advances, 2022, 4, 573-581.	2.2	6
86	Diverse functions for acyltransferase-3 proteins in the modification of bacterial cell surfaces. Microbiology (United Kingdom), 2022, 168, .	0.7	6
87	Multi-omic based production strain improvement (MOBpsi) for bio-manufacturing of toxic chemicals. Metabolic Engineering, 2022, 72, 133-149.	3.6	6
88	On the pull: periplasmic trapping of sugars before transport. Molecular Microbiology, 2017, 104, 883-888.	1.2	5
89	The tripartite ATP-independent periplasmic (TRAP) transporters of bacteria and archaea. FEMS Microbiology Reviews, 2001, 25, 405-424.	3.9	5
90	Massive over-representation of solute-binding proteins (SBPs) from the tripartite tricarboxylate transporter (TTT) family in the genome of the Î±-proteobacterium Rhodoplanes sp. Z2-YC6860. Microbial Genomics, 2018, 4, .	1.0	5

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91	Reference-Grade Genome and Large Linear Plasmid of Streptomyces rimosus: Pushing the Limits of Nanopore Sequencing. Microbiology Spectrum, 2022, 10, e0243421.	1.2	5
92	Improved furfural tolerance in <i>Escherichia coli</i> mediated by heterologous NADH-dependent benzyl alcohol dehydrogenases. Biochemical Journal, 2022, 479, 1045-1058.	1.7	5
93	ESCHERICHIA COLI ON THE WWW. Letters in Applied Microbiology, 1998, 27, 122-123.	1.0	4
94	Synthesis and biochemical evaluation of cephalosporin analogues equipped with chemical tethers. RSC Advances, 2020, 10, 36485-36494.	1.7	3
95	The structural basis for highâ€affinity uptake of ligninâ€derived aromatic compounds by proteobacterial TRAP transporters. FEBS Journal, 2022, 289, 436-456.	2.2	3
96	Removing repression: novel roles for solute transporters in regulating gene expression. Trends in Microbiology, 2001, 9, 58.	3.5	2
97	Synthetic biology approaches to actinomycete strain improvement. FEMS Microbiology Letters, 2021, 368, .	0.7	2
98	Multi-omics Study of Planobispora rosea, Producer of the Thiopeptide Antibiotic GE2270A. MSystems, 2021, 6, e0034121.	1.7	2
99	The Salmonella enterica serovar Typhimurium virulence factor STM3169 is a hexuronic acid binding protein component of a TRAP transporter. Microbiology (United Kingdom), 2020, 166, 981-987.	0.7	2
100	Helicobacter takes the acid test. Trends in Microbiology, 2000, 8, 160-161.	3.5	1
101	New roles for nitrate reductases. Trends in Microbiology, 2000, 8, 15.	3.5	1
102	CBMNet: the â€˜Crossing Biological Membranesâ€™ network in industrial biotechnology and bioenergy. Biochemical Society Transactions, 2018, 46, 871-875.	1.6	1
103	Microbial Musings â€“ January 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	1
104	Microbial Musings â€“ May 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	1
105	Understanding the Model and the Menace: a Postgenomic View of Escherichia Coli. , 0, , 21-48.		1
106	Waste not, want not: Nitrogen recycling by metabolic pathways shared between an animal and its symbiotic bacteria. Biochemist, 2013, 35, 20-24.	0.2	1
107	Microbial Musings â€“ June 2020. Microbiology (United Kingdom), 2020, 166, 498-500.	0.7	1
108	Microbial Musings â€“ January 2020. Microbiology (United Kingdom), 2020, 166, 1-3.	0.7	1

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109	Microbial Musings â€“ March 2020. Microbiology (United Kingdom), 2020, 166, 227-229.	0.7	1
110	Microbial Musings â€“ July 2020. Microbiology (United Kingdom), 2020, 166, 594-596.	0.7	1
111	Microbial Musings â€“ October 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	1
112	Membrane topology of the Mep/Amt family of ammonium transport proteins. Biochemical Society Transactions, 2000, 28, A94-A94.	1.6	0
113	Helicobacter pylori retakes the acid test. Trends in Microbiology, 2001, 9, 360.	3.5	0
114	Mopping up transcription factors. Trends in Microbiology, 2002, 10, 65-66.	3.5	0
115	Membrane protein topology: phospholipids call the shots. Trends in Microbiology, 2002, 10, 310-311.	3.5	0
116	Microbial Musings â€“ February 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
117	Microbial Musings â€“ March 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
118	Microbial Musings â€“ June 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
119	Microbial Musings â€“ July 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
120	Microbial Musings â€“ August 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
121	Microbial Musings â€“ September 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
122	Microbial Musings â€“ May 2020. Microbiology (United Kingdom), 2020, 166, 422-424.	0.7	0
123	Microbial Musings â€“ August 2020. Microbiology (United Kingdom), 2020, 166, 680-682.	0.7	0
124	Microbial Musings â€“ November 2020. Microbiology (United Kingdom), 2020, 166, 1004-1006.	0.7	0
125	Microbial Musings â€“ December 2020. Microbiology (United Kingdom), 2020, 166, 1107-1109.	0.7	0
126	Microbial Musings â€“ February 2020. Microbiology (United Kingdom), 2020, 166, 93-95.	0.7	0

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127	Microbial musings â€“ April 2020. Microbiology (United Kingdom), 2020, 166, 332-334.	0.7	0
128	Microbial Musings â€“ September 2020. Microbiology (United Kingdom), 2020, 166, 794-796.	0.7	0
129	Microbial Musings â€“ October 2020. Microbiology (United Kingdom), 2020, 166, 891-893.	0.7	0
130	Microbial Musings â€“ November 2021. Microbiology (United Kingdom), 2022, 167, .	0.7	0
131	Microbial Musings â€“ December 2021. Microbiology (United Kingdom), 2021, 167, .	0.7	0
132	Microbial Musings â€“ Spring 2022. Microbiology (United Kingdom), 2022, 168, .	0.7	0