

Christopher S Hayes

List of Publications by Year in descending order

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83
papers

5,009
citations

81743

39
h-index

98622

67
g-index

85
all docs

85
docs citations

85
times ranked

3905
citing authors

#	ARTICLE	IF	CITATIONS
1	Rhs proteins from diverse bacteria mediate intercellular competition. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7032-7037.	3.3	381
2	A widespread family of polymorphic contact-dependent toxin delivery systems in bacteria. Nature, 2010, 468, 439-442.	13.7	292
3	Bacterial Contact-Dependent Delivery Systems. Annual Review of Genetics, 2010, 44, 71-90.	3.2	238
4	The Role of Secretion Systems and Small Molecules in Soft-Rot <i>Enterobacteriaceae</i> Pathogenicity. Annual Review of Phytopathology, 2012, 50, 425-449.	3.5	217
5	Cleavage of the A Site mRNA Codon during Ribosome Pausing Provides a Mechanism for Translational Quality Control. Molecular Cell, 2003, 12, 903-911.	4.5	203
6	Genetically distinct pathways guide effector export through the type VI secretion system. Molecular Microbiology, 2014, 92, 529-542.	1.2	192
7	Identification of Functional Toxin/Immunity Genes Linked to Contact-Dependent Growth Inhibition (CDI) and Rearrangement Hotspot (Rhs) Systems. PLoS Genetics, 2011, 7, e1002217.	1.5	175
8	Bacterial contact-dependent growth inhibition. Trends in Microbiology, 2013, 21, 230-237.	3.5	150
9	Proline Residues at the C Terminus of Nascent Chains Induce SsrA Tagging during Translation Termination. Journal of Biological Chemistry, 2002, 277, 33825-33832.	1.6	139
10	The tmRNA ribosome-rescue system. Advances in Protein Chemistry and Structural Biology, 2012, 86, 151-191.	1.0	138
11	Contact-dependent growth inhibition toxins exploit multiple independent cell-entry pathways. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11341-11346.	3.3	108
12	Stop codons preceded by rare arginine codons are efficient determinants of SsrA tagging in <i>Escherichia coli</i> . Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 3440-3445.	3.3	105
13	Contact-Dependent Growth Inhibition (CDI) and CdiB/CdiA Two-Partner Secretion Proteins. Journal of Molecular Biology, 2015, 427, 3754-3765.	2.0	101
14	Prolyl-tRNA ^{Pro} in the A-site of SecM-arrested Ribosomes Inhibits the Recruitment of Transfer-messenger RNA. Journal of Biological Chemistry, 2006, 281, 34258-34268.	1.6	89
15	Mechanisms and Biological Roles of Contact-Dependent Growth Inhibition Systems. Cold Spring Harbor Perspectives in Medicine, 2014, 4, a010025-a010025.	2.9	89
16	Structural basis of toxicity and immunity in contact-dependent growth inhibition (CDI) systems. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 21480-21485.	3.3	86
17	The toxin/immunity network of <i>Burkholderia pseudomallei</i> contact-dependent growth inhibition (CDI) systems. Molecular Microbiology, 2012, 84, 516-529.	1.2	86
18	Identification of a target cell permissive factor required for contact-dependent growth inhibition (CDI). Genes and Development, 2012, 26, 515-525.	2.7	85

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19	Receptor Polymorphism Restricts Contact-Dependent Growth Inhibition to Members of the Same Species. <i>MBio</i> , 2013, 4, .	1.8	85
20	tmRNA regulates synthesis of the ArfA ribosome rescue factor. <i>Molecular Microbiology</i> , 2011, 80, 1204-1219.	1.2	83
21	Programmed Secretion Arrest and Receptor-Triggered Toxin Export during Antibacterial Contact-Dependent Growth Inhibition. <i>Cell</i> , 2018, 175, 921-933.e14.	13.5	71
22	Beyond ribosome rescue: tmRNA and co-translational processes. <i>FEBS Letters</i> , 2010, 584, 413-419.	1.3	70
23	A novel family of toxin/antitoxin proteins in <i>Bacillus</i> species. <i>FEBS Letters</i> , 2012, 586, 132-136.	1.3	70
24	Infectious polymorphic toxins delivered by outer membrane exchange discriminate kin in myxobacteria. <i>ELife</i> , 2017, 6, .	2.8	70
25	Polymorphic Toxins and Their Immunity Proteins: Diversity, Evolution, and Mechanisms of Delivery. <i>Annual Review of Microbiology</i> , 2020, 74, 497-520.	2.9	68
26	Delivery of CdiA Nuclease Toxins into Target Cells during Contact-Dependent Growth Inhibition. <i>PLoS ONE</i> , 2013, 8, e57609.	1.1	62
27	Signals of growth regulation in bacteria. <i>Current Opinion in Microbiology</i> , 2009, 12, 667-673.	2.3	60
28	CdiA from <i>Enterobacter cloacae</i> Delivers a Toxic Ribosomal RNase into Target Bacteria. <i>Structure</i> , 2014, 22, 707-718.	1.6	60
29	Selection of Orphan Rhs Toxin Expression in Evolved <i>Salmonella enterica</i> Serovar Typhimurium. <i>PLoS Genetics</i> , 2014, 10, e1004255.	1.5	56
30	<i>scpC</i> promotes receptor-independent intercellular adhesion. <i>Molecular Microbiology</i> , 2015, 98, 175-192.	1.2	56
31	Toxin-Antitoxin Pairs in Bacteria. <i>Cell</i> , 2003, 112, 2-4.	13.5	51
32	Recombineering Reveals a Diverse Collection of Ribosomal Proteins L4 and L22 that Confer Resistance to Macrolide Antibiotics. <i>Journal of Molecular Biology</i> , 2009, 386, 300-315.	2.0	51
33	Mechanistic Model of <i>Rothia mucilaginosa</i> Adaptation toward Persistence in the CF Lung, Based on a Genome Reconstructed from Metagenomic Data. <i>PLoS ONE</i> , 2013, 8, e64285.	1.1	51
34	Amino Acid Starvation and Colicin D Treatment Induce A-site mRNA Cleavage in <i>Escherichia coli</i> . <i>Journal of Molecular Biology</i> , 2008, 378, 505-519.	2.0	50
35	Translation factor LepA contributes to tellurite resistance in <i>Escherichia coli</i> but plays no apparent role in the fidelity of protein synthesis. <i>Biochimie</i> , 2010, 92, 157-163.	1.3	49
36	CdiA Effectors Use Modular Receptor-Binding Domains To Recognize Target Bacteria. <i>MBio</i> , 2017, 8, .	1.8	46

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37	Toxin on a stick. <i>Virulence</i> , 2011, 2, 356-359.	1.8	44
38	Structure of the DNA-SspC Complex: Implications for DNA Packaging, Protection, and Repair in Bacterial Spores. <i>Journal of Bacteriology</i> , 2004, 186, 3525-3530.	1.0	43
39	Proteobacterial ArfA Peptides Are Synthesized from Non-stop Messenger RNAs. <i>Journal of Biological Chemistry</i> , 2012, 287, 29765-29775.	1.6	41
40	CdiA Effectors from Uropathogenic <i>Escherichia coli</i> Use Heterotrimeric Osmoporins as Receptors to Recognize Target Bacteria. <i>PLoS Pathogens</i> , 2016, 12, e1005925.	2.1	41
41	Analysis of Aminoacyl- and Peptidyl-tRNAs by Gel Electrophoresis. , 2012, 905, 291-309.		40
42	In Vitro and In Vivo Oxidation of Methionine Residues in Small, Acid-Soluble Spore Proteins from <i>Bacillus</i> Species. <i>Journal of Bacteriology</i> , 1998, 180, 2694-2700.	1.0	40
43	RNase II is important for σ site mRNA cleavage during ribosome pausing. <i>Molecular Microbiology</i> , 2009, 73, 882-897.	1.2	39
44	Unraveling the essential role of CysK in CDI toxin activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 9792-9797.	3.3	37
45	Moonlighting O-acetylserine sulfhydrylase: New functions for an old protein. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015, 1854, 1184-1193.	1.1	35
46	Activation of contact-dependent antibacterial tRNase toxins by translation elongation factors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E1951-E1957.	3.3	33
47	Kinetics of Paused Ribosome Recycling in <i>Escherichia coli</i> . <i>Journal of Molecular Biology</i> , 2009, 394, 251-267.	2.0	32
48	The σ -encapsulation cage of rearrangement hotspot (Rhs) effectors is required for type VI secretion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 33540-33548.	3.3	32
49	The proton-motive force is required for translocation of <i>scp</i> CDI toxins across the inner membrane of target bacteria. <i>Molecular Microbiology</i> , 2014, 94, 466-481.	1.2	30
50	Diversification of σ -Augmentation Interactions between CDI Toxin/Immunity Proteins. <i>Journal of Molecular Biology</i> , 2015, 427, 3766-3784.	2.0	30
51	The CDI toxin of <i>Yersinia kristensenii</i> is a novel bacterial member of the RNase A superfamily. <i>Nucleic Acids Research</i> , 2017, 45, 5013-5025.	6.5	30
52	Functional Diversity of Cytotoxic tRNase/Immunity Protein Complexes from <i>Burkholderia pseudomallei</i> . <i>Journal of Biological Chemistry</i> , 2016, 291, 19387-19400.	1.6	28
53	An σ -Type, Small, Acid-Soluble Spore Protein Which Has Very High Affinity for DNA Prevents Outgrowth of <i>Bacillus subtilis</i> Spores. <i>Journal of Bacteriology</i> , 2001, 183, 2662-2666.	1.0	27
54	Target highlights in <i>scp</i> CASP14: Analysis of models by structure providers. <i>Proteins: Structure, Function and Bioinformatics</i> , 2021, 89, 1647-1672.	1.5	27

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55	YoeB toxin is activated during thermal stress. <i>MicrobiologyOpen</i> , 2015, 4, 682-697.	1.2	26
56	Ribosomal Protein S12 and Aminoglycoside Antibiotics Modulate A-site mRNA Cleavage and Transfer-Messenger RNA Activity in <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 2009, 284, 32188-32200.	1.6	25
57	Genetic Analysis of the CDI Pathway from <i>Burkholderia pseudomallei</i> 1026b. <i>PLoS ONE</i> , 2015, 10, e0120265.	1.1	25
58	Functional plasticity of antibacterial EndoU toxins. <i>Molecular Microbiology</i> , 2018, 109, 509-527.	1.2	25
59	Structure of a novel antibacterial toxin that exploits elongation factor Tu to cleave specific transfer RNAs. <i>Nucleic Acids Research</i> , 2017, 45, 10306-10320.	6.5	23
60	Convergent Evolution of the Barnase/EndoU/Colicin/RelE (BECR) Fold in Antibacterial tRNase Toxins. <i>Structure</i> , 2019, 27, 1660-1674.e5.	1.6	22
61	Equilibrium and Kinetic Binding Interactions between DNA and a Group of Novel, Nonspecific DNA-binding Proteins from Spores of <i>Bacillus</i> and <i>Clostridium</i> Species. <i>Journal of Biological Chemistry</i> , 2000, 275, 35040-35050.	1.6	20
62	Alternative Fates of Paused Ribosomes during Translation Termination. <i>Journal of Biological Chemistry</i> , 2011, 286, 31105-31112.	1.6	20
63	CDI Systems Are Stably Maintained by a Cell-Contact Mediated Surveillance Mechanism. <i>PLoS Genetics</i> , 2016, 12, e1006145.	1.5	20
64	N-terminal Amino Acid Residues Mediate Protein-Protein Interactions between DNA-bound β -Type Small, Acid-soluble Spore Proteins from <i>Bacillus</i> Species. <i>Journal of Biological Chemistry</i> , 2001, 276, 2267-2275.	1.6	16
65	A-Site mRNA Cleavage Is Not Required for tmRNA-Mediated <i>ssrA</i> -Peptide Tagging. <i>PLoS ONE</i> , 2013, 8, e81319.	1.1	16
66	Modulation of <i>Escherichia coli</i> serine acetyltransferase catalytic activity in the cysteine synthase complex. <i>FEBS Letters</i> , 2017, 591, 1212-1224.	1.3	15
67	Deletion of the RluD pseudouridine synthase promotes <i>SsrA</i> peptide tagging of ribosomal protein S7. <i>Molecular Microbiology</i> , 2011, 79, 331-341.	1.2	14
68	The <i>F</i> pilus mediates a novel pathway of <i>CDI</i> toxin import. <i>Molecular Microbiology</i> , 2014, 93, 276-290.	1.2	14
69	Non-pathogenic <i>Escherichia coli</i> Enhance <i>Stx2a</i> Production of <i>E. coli</i> O157:H7 Through Both <i>bamA</i> -Dependent and Independent Mechanisms. <i>Frontiers in Microbiology</i> , 2018, 9, 1325.	1.5	13
70	Target highlights in CASP13: Experimental target structures through the eyes of their authors. <i>Proteins: Structure, Function and Bioinformatics</i> , 2019, 87, 1037-1057.	1.5	12
71	Can't you hear me knocking: contact-dependent competition and cooperation in bacteria. <i>Emerging Topics in Life Sciences</i> , 2017, 1, 75-83.	1.1	11
72	Target highlights from the first post-PSI CASP experiment (CASP12, May-August 2016). <i>Proteins: Structure, Function and Bioinformatics</i> , 2018, 86, 27-50.	1.5	11

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73	Identification of Protein-Protein Contacts between $\hat{1}\pm/\hat{1}^2$ -Type Small, Acid-soluble Spore Proteins of Bacillus Species Bound to DNA. Journal of Biological Chemistry, 1998, 273, 17326-17332.	1.6	9
74	The N-Terminus of GalE Induces tmRNA Activity in Escherichia coli. PLoS ONE, 2010, 5, e15207.	1.1	9
75	The structure of a contact-dependent growth-inhibition (CDI) immunity protein from <i>Neisseria meningitidis</i> MC58. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 702-709.	0.4	7
76	Activation of an anti-bacterial toxin by the biosynthetic enzyme CysK: mechanism of binding, interaction specificity and competition with cysteine synthase. Scientific Reports, 2017, 7, 8817.	1.6	7
77	The Cytoplasm-Entry Domain of Antibacterial CdiA Is a Dynamic $\hat{1}\pm$ -Helical Bundle with Disulfide-Dependent Structural Features. Journal of Molecular Biology, 2019, 431, 3203-3216.	2.0	7
78	Genetic Evidence for SecY Translocon-Mediated Import of Two Contact-Dependent Growth Inhibition (CDI) Toxins. MBio, 2021, 12, .	1.8	6
79	Escherichia coli EC93 deploys two plasmid-encoded class I contact-dependent growth inhibition systems for antagonistic bacterial interactions. Microbial Genomics, 2021, 7, .	1.0	6
80	Functional and Structural Diversity of Bacterial Contact-Dependent Growth Inhibition Effectors. Frontiers in Molecular Biosciences, 2022, 9, 866854.	1.6	6
81	Genome Engineering Using Targeted Oligonucleotide Libraries and Functional Selection. Methods in Molecular Biology, 2011, 765, 71-82.	0.4	4
82	Lipidation of Class IV CdiA Effector Proteins Promotes Target Cell Recognition during Contact-Dependent Growth Inhibition. MBio, 2021, 12, e0253021.	1.8	4
83	Measuring Cell-Cell Binding Using Flow-Cytometry. Methods in Molecular Biology, 2015, 1329, 127-136.	0.4	3