

Jon Beckwith

List of Publications by Year in descending order

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120
papers

12,559
citations

26630

56
h-index

24982

109
g-index

126
all docs

126
docs citations

126
times ranked

7213
citing authors

#	ARTICLE	IF	CITATIONS
1	Inhibition of <i>Pseudomonas aeruginosa</i> and <i>Mycobacterium tuberculosis</i> disulfide bond forming enzymes. <i>Molecular Microbiology</i> , 2019, 111, 918-937.	2.5	21
2	Disulfide bond formation in prokaryotes. <i>Nature Microbiology</i> , 2018, 3, 270-280.	13.3	120
3	Identification of the Thioredoxin Partner of Vitamin K Epoxide Reductase in Mycobacterial Disulfide Bond Formation. <i>Journal of Bacteriology</i> , 2018, 200, .	2.2	11
4	The essential cell division protein FtsN contains a critical disulfide bond in a non-essential domain. <i>Molecular Microbiology</i> , 2017, 103, 413-422.	2.5	17
5	Inhibition of virulence-promoting disulfide bond formation enzyme DsbB is blocked by mutating residues in two distinct regions. <i>Journal of Biological Chemistry</i> , 2017, 292, 6529-6541.	3.4	14
6	Aeropyrum pernix membrane topology of protein VKOR promotes protein disulfide bond formation in two subcellular compartments. <i>Microbiology (United Kingdom)</i> , 2017, 163, 1864-1879.	1.8	4
7	Compounds targeting disulfide bond forming enzyme DsbB of Gram-negative bacteria. <i>Nature Chemical Biology</i> , 2015, 11, 292-298.	8.0	47
8	Folding LacZ in the Periplasm of Escherichia coli. <i>Journal of Bacteriology</i> , 2014, 196, 3343-3350.	2.2	21
9	Disulfide bond formation in prokaryotes: History, diversity and design. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2014, 1844, 1402-1414.	2.3	107
10	Mission possible: Getting to yes with François Jacob. <i>Research in Microbiology</i> , 2014, 165, 348-350.	2.1	1
11	François Jacob (1920-2013). <i>Current Biology</i> , 2013, 23, R422-R425.	3.9	2
12	The Sec-dependent pathway. <i>Research in Microbiology</i> , 2013, 164, 497-504.	2.1	79
13	A New Family of Membrane Electron Transporters and Its Substrates, Including a New Cell Envelope Peroxiredoxin, Reveal a Broadened Reductive Capacity of the Oxidative Bacterial Cell Envelope. <i>MBio</i> , 2012, 3, .	4.1	57
14	The Operon as Paradigm: Normal Science and the Beginning of Biological Complexity. <i>Journal of Molecular Biology</i> , 2011, 409, 7-13.	4.2	21
15	Role of Leucine Zipper Motifs in Association of the Escherichia coli Cell Division Proteins FtsL and FtsB. <i>Journal of Bacteriology</i> , 2011, 193, 4988-4992.	2.2	39
16	Determinants of activity in glutaredoxins: an <i>in vitro</i> evolved Grx1-like variant of <i>Escherichia coli</i> Grx3. <i>Biochemical Journal</i> , 2010, 430, 487-495.	3.7	10
17	<i>In vivo</i> oxidative protein folding can be facilitated by oxidation-reduction cycling. <i>Molecular Microbiology</i> , 2010, 75, 13-28.	2.5	38
18	Evidence from Artificial Septal Targeting and Site-Directed Mutagenesis that Residues in the Extracytoplasmic β Domain of DivIB Mediate Its Interaction with the Divisomal Transpeptidase PBP 2B. <i>Journal of Bacteriology</i> , 2010, 192, 6116-6125.	2.2	12

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19	Multiple Interaction Domains in FtsL, a Protein Component of the Widely Conserved Bacterial FtsLBQ Cell Division Complex. <i>Journal of Bacteriology</i> , 2010, 192, 2757-2768.	2.2	52
20	Mechanisms of Oxidative Protein Folding in the Bacterial Cell Envelope. <i>Antioxidants and Redox Signaling</i> , 2010, 13, 1231-1246.	5.4	120
21	Inhibition of bacterial disulfide bond formation by the anticoagulant warfarin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 297-301.	7.1	58
22	Divisome under Construction: Distinct Domains of the Small Membrane Protein FtsB Are Necessary for Interaction with Multiple Cell Division Proteins. <i>Journal of Bacteriology</i> , 2009, 191, 2815-2825.	2.2	49
23	Genetic Suppressors and Recovery of Repressed Biochemical Memory. <i>Journal of Biological Chemistry</i> , 2009, 284, 12585-12592.	3.4	9
24	Two Snapshots of Electron Transport across the Membrane. <i>Journal of Biological Chemistry</i> , 2009, 284, 11416-11424.	3.4	31
25	Rapid β -lactam-induced lysis requires successful assembly of the cell division machinery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 21872-21877.	7.1	106
26	The prokaryotic enzyme DsbB may share key structural features with eukaryotic disulfide bond forming oxidoreductases. <i>Protein Science</i> , 2009, 14, 1630-1642.	7.6	41
27	Detecting Folding Intermediates of a Protein as It Passes through the Bacterial Translocation Channel. <i>Cell</i> , 2009, 138, 1164-1173.	28.9	102
28	NMR Solution Structure of the Integral Membrane Enzyme DsbB: Functional Insights into DsbB-Catalyzed Disulfide Bond Formation. <i>Molecular Cell</i> , 2008, 31, 896-908.	9.7	171
29	Artificial Septal Targeting of <i>Bacillus subtilis</i> Cell Division Proteins in <i>Escherichia coli</i> : an Interspecies Approach to the Study of Protein-Protein Interactions in Multiprotein Complexes. <i>Journal of Bacteriology</i> , 2008, 190, 6048-6059.	2.2	20
30	Functional plasticity of a peroxidase allows evolution of diverse disulfide-reducing pathways. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 6735-6740.	7.1	40
31	Bacterial species exhibit diversity in their mechanisms and capacity for protein disulfide bond formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 11933-11938.	7.1	213
32	Twin Studies of Political Behavior: Untenable Assumptions?. <i>Perspectives on Politics</i> , 2008, 6, 785-791.	0.3	62
33	What Lies Beyond Uranus?: Preconceptions, Ignorance, Serendipity and Suppressors in the Search for Biology's Secrets. <i>Genetics</i> , 2007, 176, 733-740.	2.9	8
34	Mutants, Suppressors, and Wrinkled Colonies: Mutant Alleles of the Cell Division Gene ftsQ Point to Functional Domains in FtsQ and a Role for Domain 1C of FtsA in Divisome Assembly. <i>Journal of Bacteriology</i> , 2007, 189, 633-645.	2.2	48
35	Contribution of the FtsQ Transmembrane Segment to Localization to the Cell Division Site. <i>Journal of Bacteriology</i> , 2007, 189, 7273-7280.	2.2	19
36	Role for the Nonessential N Terminus of FtsN in Divisome Assembly. <i>Journal of Bacteriology</i> , 2007, 189, 646-649.	2.2	38

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37	The Reducing Activity of Glutaredoxin 3 toward Cytoplasmic Substrate Proteins Is Restricted by Methionine 43â€. <i>Biochemistry</i> , 2007, 46, 3366-3377.	2.5	16
38	Redox-active cysteines of a membrane electron transporter DsbD show dual compartment accessibility. <i>EMBO Journal</i> , 2007, 26, 3509-3520.	7.8	47
39	Ribonucleotide Reductases: Influence of Environment on Synthesis and Activity. <i>Antioxidants and Redox Signaling</i> , 2006, 8, 773-780.	5.4	26
40	Premature targeting of cell division proteins to midcell reveals hierarchies of protein interactions involved in divisome assembly. <i>Molecular Microbiology</i> , 2006, 61, 33-45.	2.5	119
41	A novel regulatory mechanism couples deoxyribonucleotide synthesis and DNA replication in <i>Escherichia coli</i> . <i>EMBO Journal</i> , 2006, 25, 1137-1147.	7.8	121
42	Conserved Role of the Linker Î±-Helix of the Bacterial Disulfide Isomerase DsbC in the Avoidance of Misoxidation by DsbB. <i>Journal of Biological Chemistry</i> , 2006, 281, 4911-4919.	3.4	32
43	<i>In Vivo</i> Requirement for Glutaredoxins and Thioredoxins in the Reduction of the Ribonucleotide Reductases of <i>Escherichia coli</i> . <i>Antioxidants and Redox Signaling</i> , 2006, 8, 735-742.	5.4	72
44	Mutations of the Membrane-Bound Disulfide Reductase DsbD That Block Electron Transfer Steps from Cytoplasm to Periplasm in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 2006, 188, 5066-5076.	2.2	19
45	Should we make a fuss? A case for social responsibility in science. <i>Nature Biotechnology</i> , 2005, 23, 1479-1480.	17.5	37
46	Diverse Paths to Midcell: Assembly of the Bacterial Cell Division Machinery. <i>Current Biology</i> , 2005, 15, R514-R526.	3.9	353
47	Use of Thioredoxin as a Reporter To Identify a Subset of <i>Escherichia coli</i> Signal Sequences That Promote Signal Recognition Particle-Dependent Translocation. <i>Journal of Bacteriology</i> , 2005, 187, 2983-2991.	2.2	128
48	The Nonconsecutive Disulfide Bond of <i>Escherichia coli</i> Phytase (AppA) Renders It Dependent on the Protein-disulfide Isomerase, DsbC. <i>Journal of Biological Chemistry</i> , 2005, 280, 11387-11394.	3.4	114
49	A selection for mutants that interfere with folding of <i>Escherichia coli</i> thioredoxin-1 in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 18872-18877.	7.1	42
50	Mutational Alterations of the Key cis Proline Residue That Cause Accumulation of Enzymatic Reaction Intermediates of DsbA, a Member of the Thioredoxin Superfamily. <i>Journal of Bacteriology</i> , 2005, 187, 1519-1522.	2.2	24
51	Premature targeting of a cell division protein to midcell allows dissection of divisome assembly in <i>Escherichia coli</i> . <i>Genes and Development</i> , 2005, 19, 127-137.	5.9	123
52	Snapshots of DsbA in Action: Detection of Proteins in the Process of Oxidative Folding. <i>Science</i> , 2004, 303, 534-537.	12.6	203
53	Interactions of glutaredoxins, ribonucleotide reductase, and components of the DNA replication system of <i>Escherichia coli</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 7439-7444.	7.1	59
54	A complex of the <i>Escherichia coli</i> cell division proteins FtsL, FtsB and FtsQ forms independently of its localization to the septal region. <i>Molecular Microbiology</i> , 2004, 52, 1315-1327.	2.5	162

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55	The unusual transmembrane electron transporter DsbD and its homologues: a bacterial family of disulfide reductases. <i>Research in Microbiology</i> , 2004, 155, 617-622.	2.1	40
56	Functions of Thiol-Disulfide Oxidoreductases in <i>E. coli</i> : Redox Myths, Realities, and Practicalities. <i>Antioxidants and Redox Signaling</i> , 2003, 5, 403-411.	5.4	41
57	IcsA, a polarly localized autotransporter with an atypical signal peptide, uses the Sec apparatus for secretion, although the Sec apparatus is circumferentially distributed. <i>Molecular Microbiology</i> , 2003, 50, 45-60.	2.5	113
58	Protein Disulfide Bond Formation in Prokaryotes. <i>Annual Review of Biochemistry</i> , 2003, 72, 111-135.	11.1	494
59	The DsbA Signal Sequence Directs Efficient, Cotranslational Export of Passenger Proteins to the <i>Escherichia coli</i> Periplasm via the Signal Recognition Particle Pathway. <i>Journal of Bacteriology</i> , 2003, 185, 5706-5713.	2.2	183
60	Role and location of the unusual redox-active cysteines in the hydrophobic domain of the transmembrane electron transporter DsbD. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 10471-10476.	7.1	40
61	Disulfide Bond Formation in the Periplasm and Cytoplasm of <i>Escherichia Coli</i> . , 2003, , 213-232.		2
62	Analysis of ftsQ Mutant Alleles in <i>Escherichia coli</i> : Complementation, Septal Localization, and Recruitment of Downstream Cell Division Proteins. <i>Journal of Bacteriology</i> , 2002, 184, 695-705.	2.2	45
63	Redox State of Cytoplasmic Thioredoxin. <i>Methods in Enzymology</i> , 2002, 347, 360-370.	1.0	12
64	Genetic Screen Yields Mutations in Genes Encoding All Known Components of the <i>Escherichia coli</i> Signal Recognition Particle Pathway. <i>Journal of Bacteriology</i> , 2002, 184, 111-118.	2.2	45
65	[7] Disulfide bond formation in periplasm of <i>Escherichia coli</i> . <i>Methods in Enzymology</i> , 2002, 348, 54-66.	1.0	13
66	Production of Functional Single-Chain Fv Antibodies in the Cytoplasm of <i>Escherichia coli</i> . <i>Journal of Molecular Biology</i> , 2002, 320, 1-10.	4.2	139
67	Assembly of cell division proteins at the <i>E. coli</i> cell center. <i>Current Opinion in Microbiology</i> , 2002, 5, 553-557.	5.1	122
68	Four cysteines of the membrane protein DsbB act in concert to oxidize its substrate DsbA. <i>EMBO Journal</i> , 2002, 21, 2354-2363.	7.8	96
69	Evolutionary domain fusion expanded the substrate specificity of the transmembrane electron transporter DsbD. <i>EMBO Journal</i> , 2002, 21, 3960-3969.	7.8	78
70	The disulfide bond isomerase DsbC is activated by an immunoglobulin-fold thiol oxidoreductase: crystal structure of the DsbC-DsbAlpha complex. <i>EMBO Journal</i> , 2002, 21, 4774-4784.	7.8	117
71	Roles of Thiol-Redox Pathways in Bacteria. <i>Annual Review of Microbiology</i> , 2001, 55, 21-48.	7.3	302
72	FtsQ, FtsL and FtsI require FtsK, but not FtsN, for co-localization with FtsZ during <i>Escherichia coli</i> cell division. <i>Molecular Microbiology</i> , 2001, 42, 395-413.	2.5	170

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73	The expanding world of oxidative protein folding. <i>Nature Cell Biology</i> , 2001, 3, E247-E249.	10.3	10
74	Conversion of a Peroxiredoxin into a Disulfide Reductase by a Triplet Repeat Expansion. <i>Science</i> , 2001, 294, 158-160.	12.6	120
75	[1] The all purpose gene fusion. <i>Methods in Enzymology</i> , 2000, 326, 3-7.	1.0	14
76	On the philosophical analysis of genetic essentialism. <i>Science and Engineering Ethics</i> , 2000, 6, 311-314.	2.9	1
77	Thioredoxin 2 Is Involved in the Oxidative Stress Response in <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 2000, 275, 2505-2512.	3.4	132
78	Cell Division in <i>Escherichia coli</i> : Role of FtsL Domains in Septal Localization, Function, and Oligomerization. <i>Journal of Bacteriology</i> , 2000, 182, 116-129.	2.2	42
79	On the Functional Interchangeability, Oxidant versus Reductant, of Members of the Thioredoxin Superfamily. <i>Journal of Bacteriology</i> , 2000, 182, 723-727.	2.2	52
80	Transmembrane Electron Transfer by the Membrane Protein DsbD Occurs via a Disulfide Bond Cascade. <i>Cell</i> , 2000, 103, 769-779.	28.9	188
81	Towards Single-Copy Gene Expression Systems Making Gene Cloning Physiologically Relevant: Lambda InCh, a Simple <i>Escherichia coli</i> Plasmid-Chromosome Shuttle System. <i>Journal of Bacteriology</i> , 2000, 182, 842-847.	2.2	165
82	Racism: A Central Problem for the Human Genome Diversity Project. <i>Politics and the Life Sciences</i> , 1999, 18, 285-288.	0.7	11
83	Importance of Redox Potential for the in Vivo Function of the Cytoplasmic Disulfide Reductant Thioredoxin from <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 1999, 274, 25254-25259.	3.4	65
84	Localization of FtsL to the <i>Escherichia coli</i> septal ring. <i>Molecular Microbiology</i> , 1999, 31, 725-737.	2.5	80
85	Bridge over Troubled Waters. <i>Cell</i> , 1999, 96, 751-753.	28.9	254
86	Electron Avenue. <i>Cell</i> , 1999, 99, 117-119.	28.9	88
87	Localization of FtsI (PBP3) to the Septal Ring Requires Its Membrane Anchor, the Z Ring, FtsA, FtsQ, and FtsL. <i>Journal of Bacteriology</i> , 1999, 181, 508-520.	2.2	356
88	Septal Localization of FtsQ, an Essential Cell Division Protein in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 1999, 181, 521-530.	2.2	118
89	The Thioredoxin Superfamily: Redundancy, Specificity, and Gray-Area Genomics. <i>Journal of Bacteriology</i> , 1999, 181, 1375-1379.	2.2	122
90	How many membrane proteins are there?. <i>Protein Science</i> , 1998, 7, 201-205.	7.6	128

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91	The Role of the Thioredoxin and Glutaredoxin Pathways in Reducing Protein Disulfide Bonds in the Escherichia coli Cytoplasm. <i>Journal of Biological Chemistry</i> , 1997, 272, 15661-15667.	3.4	562
92	Localization of the Escherichia coli cell division protein FtsI (PBP3) to the division site and cell pole. <i>Molecular Microbiology</i> , 1997, 25, 671-681.	2.5	118
93	The topological analysis of integral cytoplasmic membrane proteins. <i>Journal of Membrane Biology</i> , 1993, 132, 1-11.	2.1	102
94	The bonds that tie: Catalyzed disulfide bond formation. <i>Cell</i> , 1993, 74, 769-771.	28.9	151
95	Chapter 5 Steps in the assembly of a cytoplasmic membrane protein: the MalF component of the maltose transport complex. <i>New Comprehensive Biochemistry</i> , 1992, 22, 49-61.	0.1	0
96	FtsL, an Essential Cytoplasmic Membrane Protein Involved in Cell Division in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 1992, 174, 7717-7728.	2.2	126
97	Protein export in <i>Escherichia coli</i> . <i>Current Opinion in Biotechnology</i> , 1992, 3, 481-485.	6.6	13
98	FtsL, an Essential Cytoplasmic Membrane Protein Involved in Cell Division in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 1992, 174, 7717-7728.	2.2	38
99	Identification of a protein required for disulfide bond formation in vivo. <i>Cell</i> , 1991, 67, 581-589.	28.9	977
100	[1] Strategies for finding mutants. <i>Methods in Enzymology</i> , 1991, 204, 3-18.	1.0	5
101	"Sequence-gazing?". <i>Science</i> , 1991, 251, 1161-1162.	12.6	8
102	Foreword: The Human Genome Initiative: Genetics™ Lightning Rod. <i>American Journal of Law and Medicine</i> , 1991, 17, 1-13.	0.2	10
103	Roots: Cloning with λ 80lac: The french connection. <i>BioEssays</i> , 1990, 12, 503-507.	2.5	0
104	Genetic analysis of the membrane insertion and topology of MalF, a cytoplasmic membrane protein of <i>Escherichia coli</i> . <i>Journal of Molecular Biology</i> , 1988, 200, 501-511.	4.2	177
105	Criticism and realism. <i>Behavioral and Brain Sciences</i> , 1987, 10, 72-73.	0.7	0
106	Mutations in a new chromosomal gene of <i>Escherichia coli</i> K-12, <i>pcnB</i> , reduce plasmid copy number of pBR322 and its derivatives. <i>Molecular Genetics and Genomics</i> , 1986, 205, 285-290.	2.4	266
107	Signal sequence mutations disrupt feedback between secretion of an exported protein and its synthesis in <i>E. coli</i> . <i>Nature</i> , 1984, 308, 863-864.	27.8	57
108	Mutations that alter the DNA sequence specificity of the catabolite gene activator protein of <i>E. coli</i> . <i>Nature</i> , 1984, 311, 232-235.	27.8	252

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109	The use of extragenic suppressors to define genes involved in protein export in Escherichia coli. Molecular Genetics and Genomics, 1984, 196, 24-27.	2.4	55
110	The product of gene secC is involved in the synthesis of exported proteins in E. coli. Cell, 1984, 38, 211-217.	28.9	65
111	Genetic Approaches for Studying Protein Localization. , 1982, , 315-321.		2
112	E. coli mutant pleiotropically defective in the export of secreted proteins. Cell, 1981, 25, 765-772.	28.9	556
113	Protein localization in E. coli: Is there a common step in the secretion of periplasmic and outer-membrane proteins?. Cell, 1981, 24, 707-717.	28.9	425
114	Mutations which alter the function of the signal sequence of the maltose binding protein of Escherichia coli. Nature, 1980, 285, 78-81.	27.8	307
115	Escherichia coli mutants accumulating the precursor of a secreted protein in the cytoplasm. Nature, 1979, 277, 538-541.	27.8	151
116	Alkaline phosphatase synthesis in a cell-free system using DNA and RNA templates. Journal of Molecular Biology, 1977, 110, 75-87.	4.2	35
117	Analysis of the regulation of Escherichia coli alkaline phosphatase synthesis using deletions and λ 80 transducing phages. Journal of Molecular Biology, 1975, 96, 307-316.	4.2	514
118	More Alarums and Excursions. Nature, 1969, 224, 1337-1337.	27.8	4
119	Direction of Transcription of a Regulatory Gene in E. coli. Nature, 1968, 220, 1287-1290.	27.8	71
120	Disulfide Bond Formation in the Periplasm. , O, , 122-140.		4