Jon Beckwith

List of Publications by Year
in descending order

120 papers	12,559 citations	26567 56 h-index	24915 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. Molecular Microbiology, 2019, 111, 918-937.	1.2	21
2	Disulfide bond formation in prokaryotes. Nature Microbiology, 2018, 3, 270-280.	5.9	120
3	Identification of the Thioredoxin Partner of Vitamin K Epoxide Reductase in Mycobacterial Disulfide Bond Formation. Journal of Bacteriology, 2018, 200, .	1.0	11
4	The essential cell division protein FtsN contains a critical disulfide bond in a nonâ€essential domain. Molecular Microbiology, 2017, 103, 413-422.	1.2	17
5	Inhibition of virulence-promoting disulfide bond formation enzyme DsbB is blocked by mutating residues in two distinct regions. Journal of Biological Chemistry, 2017, 292, 6529-6541.	1.6	14
6	Aeropyrum pernix membrane topology of protein VKOR promotes protein disulfide bond formation in two subcellular compartments. Microbiology (United Kingdom), 2017, 163, 1864-1879.	0.7	4
7	Compounds targeting disulfide bond forming enzyme DsbB of Gram-negative bacteria. Nature Chemical Biology, 2015, 11, 292-298.	3.9	47
8	Folding LacZ in the Periplasm of Escherichia coli. Journal of Bacteriology, 2014, 196, 3343-3350.	1.0	21
9	Disulfide bond formation in prokaryotes: History, diversity and design. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2014, 1844, 1402-1414.	1.1	107
10	Mission possible: Getting to yes with FranÃ§ois Jacob. Research in Microbiology, 2014, 165, 348-350.	1.0	1
11	FranÃ§ois Jacob (1920â€"2013). Current Biology, 2013, 23, R422-R425.	1.8	2
12	The Sec-dependent pathway. Research in Microbiology, 2013, 164, 497-504.	1.0	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. MBio, 2012, 3, .	1.8	57
14	The Operon as Paradigm: Normal Science and the Beginning of Biological Complexity. Journal of Molecular Biology, 2011, 409, 7-13.	2.0	21
15	Role of Leucine Zipper Motifs in Association of the Escherichia coli Cell Division Proteins FtsL and FtsB. Journal of Bacteriology, 2011, 193, 4988-4992.	1.0	39
16	Determinants of activity in glutaredoxins: an <i>in vitro</i> evolved Grx1-like variant of <i>Escherichia coli</i> Grx3. Biochemical Journal, 2010, 430, 487-495.	1.7	10
17	<i>In vivo</i>oxidative protein folding can be facilitated by oxidationÃ¢Â€Â"reduction cycling. Molecular Microbiology, 2010, 75, 13-28.	1.2	38
18	Evidence from Artificial Septal Targeting and Site-Directed Mutagenesis that Residues in the Extracytoplasmic Î² Domain of DivIB Mediate Its Interaction with the Divisomal Transpeptidase PBP 2B. Journal of Bacteriology, 2010, 192, 6116-6125.	1.0	12

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19	Multiple Interaction Domains in FtsL, a Protein Component of the Widely Conserved Bacterial FtsLBQ Cell Division Complex. Journal of Bacteriology, 2010, 192, 2757-2768.	1.0	52
20	Mechanisms of Oxidative Protein Folding in the Bacterial Cell Envelope. Antioxidants and Redox Signaling, 2010, 13, 1231-1246.	2.5	120
21	Inhibition of bacterial disulfide bond formation by the anticoagulant warfarin. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 297-301.	3.3	58
22	Divisome under Construction: Distinct Domains of the Small Membrane Protein FtsB Are Necessary for Interaction with Multiple Cell Division Proteins. Journal of Bacteriology, 2009, 191, 2815-2825.	1.0	49
23	Genetic Suppressors and Recovery of Repressed Biochemical Memory. Journal of Biological Chemistry, 2009, 284, 12585-12592.	1.6	9
24	Two Snapshots of Electron Transport across the Membrane. Journal of Biological Chemistry, 2009, 284, 11416-11424.	1.6	31
25	Rapid Î^2-lactam-induced lysis requires successful assembly of the cell division machinery. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21872-21877.	3.3	106
26	The prokaryotic enzyme DsbB may share key structural features with eukaryotic disulfide bond forming oxidoreductases. Protein Science, 2009, 14, 1630-1642.	3.1	41
27	Detecting Folding Intermediates of a Protein as It Passes through the Bacterial Translocation Channel. Cell, 2009, 138, 1164-1173.	13.5	102
28	NMR Solution Structure of the Integral Membrane Enzyme DsbB: Functional Insights into DsbB-Catalyzed Disulfide Bond Formation. Molecular Cell, 2008, 31, 896-908.	4.5	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. Journal of Bacteriology, 2008, 190, 6048-6059.	1.0	20
30	Functional plasticity of a peroxidase allows evolution of diverse disulfide-reducing pathways. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6735-6740.	3.3	40
31	Bacterial species exhibit diversity in their mechanisms and capacity for protein disulfide bond formation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11933-11938.	3.3	213
32	Twin Studies of Political Behavior: Untenable Assumptions?. Perspectives on Politics, 2008, 6, 785-791.	0.2	62
33	What Lies Beyond Uranus?: Preconceptions, Ignorance, Serendipity and Suppressors in the Search for Biology's Secrets. Genetics, 2007, 176, 733-740.	1.2	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. Journal of Bacteriology, 2007, 189, 633-645.	1.0	48
35	Contribution of the FtsQ Transmembrane Segment to Localization to the Cell Division Site. Journal of Bacteriology, 2007, 189, 7273-7280.	1.0	19
36	Role for the Nonessential N Terminus of FtsN in Divisome Assembly. Journal of Bacteriology, 2007, 189, 646-649.	1.0	38

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37	The Reducing Activity of Glutaredoxin 3 toward Cytoplasmic Substrate Proteins Is Restricted by Methionine 43â€. Biochemistry, 2007, 46, 3366-3377.	1.2	16
38	Redox-active cysteines of a membrane electron transporter DsbD show dual compartment accessibility. EMBO Journal, 2007, 26, 3509-3520.	3.5	47
39	Ribonucleotide Reductases: Influence of Environment on Synthesis and Activity. Antioxidants and Redox Signaling, 2006, 8, 773-780.	2.5	26
40	Premature targeting of cell division proteins to midcell reveals hierarchies of protein interactions involved in divisome assembly. Molecular Microbiology, 2006, 61, 33-45.	1.2	119
41	A novel regulatory mechanism couples deoxyribonucleotide synthesis and DNA replication in Escherichia coli. EMBO Journal, 2006, 25, 1137-1147.	3.5	121
42	Conserved Role of the Linker Î±-Helix of the Bacterial Disulfide Isomerase DsbC in the Avoidance of Misoxidation by DsbB. Journal of Biological Chemistry, 2006, 281, 4911-4919.	1.6	32
43	In VivoRequirement for Glutaredoxins and Thioredoxins in the Reduction of the Ribonucleotide Reductases ofEscherichia coli. Antioxidants and Redox Signaling, 2006, 8, 735-742.	2.5	72
44	Mutations of the Membrane-Bound Disulfide Reductase DsbD That Block Electron Transfer Steps from Cytoplasm to Periplasm in Escherichia coli. Journal of Bacteriology, 2006, 188, 5066-5076.	1.0	19
45	Should we make a fuss? A case for social responsibility in science. Nature Biotechnology, 2005, 23, 1479-1480.	9.4	37
46	Diverse Paths to Midcell: Assembly of the Bacterial Cell Division Machinery. Current Biology, 2005, 15, R514-R526.	1.8	353
47	Use of Thioredoxin as a Reporter To Identify a Subset of Escherichia coli Signal Sequences That Promote Signal Recognition Particle-Dependent Translocation. Journal of Bacteriology, 2005, 187, 2983-2991.	1.0	128
48	The Nonconsecutive Disulfide Bond of Escherichia coli Phytase (AppA) Renders It Dependent on the Protein-disulfide Isomerase, DsbC. Journal of Biological Chemistry, 2005, 280, 11387-11394.	1.6	114
49	A selection for mutants that interfere with folding of Escherichia coli thioredoxin-1 in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18872-18877.	3.3	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. Journal of Bacteriology, 2005, 187, 1519-1522.	1.0	24
51	Premature targeting of a cell division protein to midcell allows dissection of divisome assembly in Escherichia coli. Genes and Development, 2005, 19, 127-137.	2.7	123
52	Snapshots of DsbA in Action: Detection of Proteins in the Process of Oxidative Folding. Science, 2004, 303, 534-537.	6.0	203
53	Interactions of glutaredoxins, ribonucleotide reductase, and components of the DNA replication system of Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7439-7444.	3.3	59
54	A complex of the Escherichia coli cell division proteins FtsL, FtsB and FtsQ forms independently of its localization to the septal region. Molecular Microbiology, 2004, 52, 1315-1327.	1.2	162

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55	The unusual transmembrane electron transporter DsbD and its homologues: a bacterial family of disulfide reductases. Research in Microbiology, 2004, 155, 617-622.	1.0	40
56	Functions of Thiol-Disulfide Oxidoreductases inE. coli: Redox Myths, Realities, and Practicalities. Antioxidants and Redox Signaling, 2003, 5, 403-411.	2.5	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. Molecular Microbiology, 2003, 50, 45-60.	1.2	113
58	Protein Disulfide Bond Formation in Prokaryotes. Annual Review of Biochemistry, 2003, 72, 111-135.	5.0	494
59	The DsbA Signal Sequence Directs Efficient, Cotranslational Export of Passenger Proteins to the Escherichia coli Periplasm via the Signal Recognition Particle Pathway. Journal of Bacteriology, 2003, 185, 5706-5713.	1.0	183
60	Role and location of the unusual redox-active cysteines in the hydrophobic domain of the transmembrane electron transporter DsbD. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 10471-10476.	3.3	40
61	Disulfide Bond Formation in the Periplasm and Cytoplasm of Escherichia Coli. , 2003, , 213-232.		2
62	Analysis of ftsQ Mutant Alleles in Escherichia coli: Complementation, Septal Localization, and Recruitment of Downstream Cell Division Proteins. Journal of Bacteriology, 2002, 184, 695-705.	1.0	45
63	Redox State of Cytoplasmic Thioredoxin. Methods in Enzymology, 2002, 347, 360-370.	0.4	12
64	Genetic Screen Yields Mutations in Genes Encoding All Known Components of the Escherichia coli Signal Recognition Particle Pathway. Journal of Bacteriology, 2002, 184, 111-118.	1.0	45
65	[7] Disulfide bond formation in periplasm of Escherichia coli. Methods in Enzymology, 2002, 348, 54-66.	0.4	13
66	Production of Functional Single-Chain Fv Antibodies in the Cytoplasm of Escherichia coli. Journal of Molecular Biology, 2002, 320, 1-10.	2.0	139
67	Assembly of cell division proteins at the E. coli cell center. Current Opinion in Microbiology, 2002, 5, 553-557.	2.3	122
68	Four cysteines of the membrane protein DsbB act in concert to oxidize its substrate DsbA. EMBO Journal, 2002, 21, 2354-2363.	3.5	96
69	Evolutionary domain fusion expanded the substrate specificity of the transmembrane electron transporter DsbD. EMBO Journal, 2002, 21, 3960-3969.	3.5	78
70	The disulfide bond isomerase DsbC is activated by an immunoglobulin-fold thiol oxidoreductase: crystal structure of the DsbC-DsbDalpha complex. EMBO Journal, 2002, 21, 4774-4784.	3.5	117
71	Roles of Thiol-Redox Pathways in Bacteria. Annual Review of Microbiology, 2001, 55, 21-48.	2.9	302
72	FtsQ, FtsL and FtsI require FtsK, but not FtsN, for co-localization with FtsZ during Escherichia coli cell division. Molecular Microbiology, 2001, 42, 395-413.	1.2	170

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73	The expanding world of oxidative protein folding. Nature Cell Biology, 2001, 3, E247-E249.	4.6	10
74	Conversion of a Peroxiredoxin into a Disulfide Reductase by a Triplet Repeat Expansion. Science, 2001, 294, 158-160.	6.0	120
75	[1] The all purpose gene fusion. Methods in Enzymology, 2000, 326, 3-7.	0.4	14
76	On the philosophical analysis of genetic essentialism. Science and Engineering Ethics, 2000, 6, 311-314.	1.7	1
77	Thioredoxin 2 Is Involved in the Oxidative Stress Response inEscherichia coli. Journal of Biological Chemistry, 2000, 275, 2505-2512.	1.6	132
78	Cell Division in <i>Escherichia coli</i> : Role of FtsL Domains in Septal Localization, Function, and Oligomerization. Journal of Bacteriology, 2000, 182, 116-129.	1.0	42
79	On the Functional Interchangeability, Oxidant versus Reductant, of Members of the Thioredoxin Superfamily. Journal of Bacteriology, 2000, 182, 723-727.	1.0	52
80	Transmembrane Electron Transfer by the Membrane Protein DsbD Occurs via a Disulfide Bond Cascade. Cell, 2000, 103, 769-779.	13.5	188
81	Towards Single-Copy Gene Expression Systems Making Gene Cloning Physiologically Relevant: Lambda InCh, a Simple Escherichia coli Plasmid-Chromosome Shuttle System. Journal of Bacteriology, 2000, 182, 842-847.	1.0	165
82	Racism: A Central Problem for the Human Genome Diversity Project. Politics and the Life Sciences, 1999, 18, 285-288.	0.5	11
83	Importance of Redox Potential for the in Vivo Function of the Cytoplasmic Disulfide Reductant Thioredoxin from Escherichia coli. Journal of Biological Chemistry, 1999, 274, 25254-25259.	1.6	65
84	Localization of FtsL to the Escherichia coli septal ring. Molecular Microbiology, 1999, 31, 725-737.	1.2	80
85	Bridge over Troubled Waters. Cell, 1999, 96, 751-753.	13.5	254
86	Electron Avenue. Cell, 1999, 99, 117-119.	13.5	88
87	Localization of FtsI (PBP3) to the Septal Ring Requires Its Membrane Anchor, the Z Ring, FtsA, FtsQ, and FtsL. Journal of Bacteriology, 1999, 181, 508-520.	1.0	356
88	Septal Localization of FtsQ, an Essential Cell Division Protein in <i>Escherichia coli</i>. Journal of Bacteriology, 1999, 181, 521-530.	1.0	118
89	The Thioredoxin Superfamily: Redundancy, Specificity, and Gray-Area Genomics. Journal of Bacteriology, 1999, 181, 1375-1379.	1.0	122
90	How many membrane proteins are there?. Protein Science, 1998, 7, 201-205.	3.1	128

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91	The Role of the Thioredoxin and Glutaredoxin Pathways in Reducing Protein Disulfide Bonds in the Escherichia coliCytoplasm. Journal of Biological Chemistry, 1997, 272, 15661-15667.	1.6	562
92	Localization of the Escherichia coli cell division protein FtsI (PBP3) to the division site and cell pole. Molecular Microbiology, 1997, 25, 671-681.	1.2	118
93	The topological analysis of integral cytoplasmic membrane proteins. Journal of Membrane Biology, 1993, 132, 1-11.	1.0	102
94	The bonds that tie: Catalyzed disulfide bond formation. Cell, 1993, 74, 769-771.	13.5	151
95	Chapter 5 Steps in the assembly of a cytoplasmic membrane protein: the MalF component of the maltose transport complex. New Comprehensive Biochemistry, 1992, 22, 49-61.	0.1	0
96	FtsL, an Essential Cytoplasmic Membrane Protein Involved in Cell Division in <i>Escherichia coli</i>. Journal of Bacteriology, 1992, 174, 7717-7728.	1.0	126
97	Protein export in Escherichia coli. Current Opinion in Biotechnology, 1992, 3, 481-485.	3.3	13
98	FtsL, an Essential Cytoplasmic Membrane Protein Involved in Cell Division in Escherichia coli. Journal of Bacteriology, 1992, 174, 7717-7728.	1.0	38
99	Identification of a protein required for disulfide bond formation in vivo. Cell, 1991, 67, 581-589.	13.5	977
100	[1] Strategies for finding mutants. Methods in Enzymology, 1991, 204, 3-18.	0.4	5
101	"Sequence-gazing?". Science, 1991, 251, 1161-1162.	6.0	8
102	Foreword: The Human Genome Initiative: Geneticsâ€™ Lightning Rod. American Journal of Law and Medicine, 1991, 17, 1-13.	0.5	10
103	Roots: Cloning with Ã¸80lac: The french connection. BioEssays, 1990, 12, 503-507.	1.2	0
104	Genetic analysis of the membrane insertion and topology of MalF, a cytoplasmic membrane protein of Escherichia coli. Journal of Molecular Biology, 1988, 200, 501-511.	2.0	177
105	Criticism and realism. Behavioral and Brain Sciences, 1987, 10, 72-73.	0.4	0
106	Mutations in a new chromosomal gene of Escherichia coli K-12, pcnB, reduce plasmid copy number of pBR322 and its derivatives. Molecular Genetics and Genomics, 1986, 205, 285-290.	2.4	266
107	Signal sequence mutations disrupt feedback between secretion of an exported protein and its synthesis in E. coli. Nature, 1984, 308, 863-864.	13.7	57
108	Mutations that alter the DNA sequence specificity of the catabolite gene activator protein of E. coli. Nature, 1984, 311, 232-235.	13.7	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.	13.5	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.	13.5	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.	13.5	425
114	Mutations which alter the function of the signal sequence of the maltose binding protein of Escherichia coli. Nature, 1980, 285, 78-81.	13.7	307
115	Escherichia coli mutants accumulating the precursor of a secreted protein in the cytoplasm. Nature, 1979, 277, 538-541.	13.7	151
116	Alkaline phosphatase synthesis in a cell-free system using DNA and RNA templates. Journal of Molecular Biology, 1977, 110, 75-87.	2.0	35
117	Analysis of the regulation of Escherichia coli alkaline phosphatase synthesis using deletions and Ï†80 transducing phages. Journal of Molecular Biology, 1975, 96, 307-316.	2.0	514
118	More Alarums and Excursions. Nature, 1969, 224, 1337-1337.	13.7	4
119	Direction of Transcription of a Regulatory Gene in E. coli. Nature, 1968, 220, 1287-1290.	13.7	71
120	Disulfide Bond Formation in the Periplasm. , 0, , 122-140.		4