Mark J Buttner

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 121
 8,841
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#	Paper	IF	Citations
121	Streptomyces morphogenetics: dissecting differentiation in a filamentous bacterium. <i>Nature Reviews Microbiology</i> , 2009 , 7, 36-49	22.2	45 ¹
120	Analysis of the Streptomyces coelicolor sigE gene reveals the existence of a subfamily of eubacterial RNA polymerase sigma factors involved in the regulation of extracytoplasmic functions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1994 , 91, 7573-7	11.5	441
119	Construction and characterisation of a series of multi-copy promoter-probe plasmid vectors for Streptomyces using the aminoglycoside phosphotransferase gene from Tn5 as indicator. <i>Molecular Genetics and Genomics</i> , 1986 , 203, 468-78		347
118	Evidence that the extracytoplasmic function sigma factor sigmaE is required for normal cell wall structure in Streptomyces coelicolor A3(2). <i>Journal of Bacteriology</i> , 1999 , 181, 204-11	3.5	325
117	Thiol-based regulatory switches. <i>Annual Review of Genetics</i> , 2003 , 37, 91-121	14.5	256
116	The SapB morphogen is a lantibiotic-like peptide derived from the product of the developmental gene ramS in Streptomyces coelicolor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 11448-53	11.5	242
115	The chaplins: a family of hydrophobic cell-surface proteins involved in aerial mycelium formation in Streptomyces coelicolor. <i>Genes and Development</i> , 2003 , 17, 1727-40	12.6	2 00
114	RsrA, an anti-sigma factor regulated by redox change. <i>EMBO Journal</i> , 1999 , 18, 4292-8	13	200
113	sigmaR, an RNA polymerase sigma factor that modulates expression of the thioredoxin system in response to oxidative stress in Streptomyces coelicolor A3(2). <i>EMBO Journal</i> , 1998 , 17, 5776-82	13	169
112	The developmental fate of S. coelicolor hyphae depends upon a gene product homologous with the motility sigma factor of B. subtilis. <i>Cell</i> , 1989 , 59, 133-43	56.2	168
111	Defining the disulphide stress response in Streptomyces coelicolor A3(2): identification of the sigmaR regulon. <i>Molecular Microbiology</i> , 2001 , 42, 1007-20	4.1	159
110	Tetrameric c-di-GMP mediates effective transcription factor dimerization to control Streptomyces development. <i>Cell</i> , 2014 , 158, 1136-1147	56.2	157
109	At least three different RNA polymerase holoenzymes direct transcription of the agarase gene (dagA) of Streptomyces coelicolor A3(2). <i>Cell</i> , 1988 , 52, 599-607	56.2	147
108	Cross-regulation among disparate antibiotic biosynthetic pathways of Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2005 , 58, 1276-87	4.1	144
107	Cloning, disruption, and transcriptional analysis of three RNA polymerase sigma factor genes of Streptomyces coelicolor A3(2). <i>Journal of Bacteriology</i> , 1990 , 172, 3367-78	3.5	138
106	The agarase gene (dagA) of Streptomyces coelicolor A3(2): nucleotide sequence and transcriptional analysis. <i>Molecular Genetics and Genomics</i> , 1987 , 209, 101-9		134
105	Genes essential for morphological development and antibiotic production in Streptomyces coelicolor are targets of BldD during vegetative growth. <i>Molecular Microbiology</i> , 2010 , 78, 361-79	4.1	132

(2005-2004)

104	Sensing and responding to diverse extracellular signals? Analysis of the sensor kinases and response regulators of Streptomyces coelicolor A3(2). <i>Microbiology (United Kingdom)</i> , 2004 , 150, 2795-2005.	2806	125
103	The role of the novel Fem protein VanK in vancomycin resistance in Streptomyces coelicolor. Journal of Biological Chemistry, 2005 , 280, 13055-61	5.4	116
102	sigma(BldN), an extracytoplasmic function RNA polymerase sigma factor required for aerial mycelium formation in Streptomyces coelicolor A3(2). <i>Journal of Bacteriology</i> , 2000 , 182, 4606-16	3.5	113
101	Developmental regulation of transcription of whiE, a locus specifying the polyketide spore pigment in Streptomyces coelicolor A3 (2). <i>Journal of Bacteriology</i> , 1998 , 180, 2515-21	3.5	112
100	Mechanistic insight into the nitrosylation of the [4Fe-4S] cluster of WhiB-like proteins. <i>Journal of the American Chemical Society</i> , 2011 , 133, 1112-21	16.4	109
99	Mutational analysis of RsrA, a zinc-binding anti-sigma factor with a thiol-disulphide redox switch. <i>Molecular Microbiology</i> , 2001 , 39, 1036-47	4.1	109
98	The vancomycin resistance VanRS two-component signal transduction system of Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2006 , 59, 923-35	4.1	107
97	Characterization of an inducible vancomycin resistance system in Streptomyces coelicolor reveals a novel gene (vanK) required for drug resistance. <i>Molecular Microbiology</i> , 2004 , 52, 1107-21	4.1	107
96	A rare leucine codon in adpA is implicated in the morphological defect of bldA mutants of Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2003 , 50, 475-86	4.1	106
95	A vancomycin photoprobe identifies the histidine kinase VanSsc as a vancomycin receptor. <i>Nature Chemical Biology</i> , 2010 , 6, 327-9	11.7	105
94	A new RNA polymerase sigma factor, sigma F, is required for the late stages of morphological differentiation in Streptomyces spp. <i>Molecular Microbiology</i> , 1995 , 17, 37-48	4.1	102
93	The positions of the sigma-factor genes, whiG and sigF, in the hierarchy controlling the development of spore chains in the aerial hyphae of Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 1996 , 21, 593-603	4.1	97
92	The Role of zinc in the disulphide stress-regulated anti-sigma factor RsrA from Streptomyces coelicolor. <i>Journal of Molecular Biology</i> , 2003 , 333, 461-72	6.5	94
91	c-di-GMP signalling and the regulation of developmental transitions in streptomycetes. <i>Nature Reviews Microbiology</i> , 2015 , 13, 749-60	22.2	92
90	Initiation of aerial mycelium formation in Streptomyces. Current Opinion in Microbiology, 1998, 1, 656-6	2 7.9	92
89	Redox control in actinobacteria. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2008 , 1780, 1201-16	4	92
88	Glucose repression in Streptomyces coelicolor A3(2): a likely regulatory role for glucose kinase. <i>Molecular Genetics and Genomics</i> , 1994 , 244, 135-43		92
87	Evidence that the Streptomyces developmental protein WhiD, a member of the WhiB family, binds a [4Fe-4S] cluster. <i>Journal of Biological Chemistry</i> , 2005 , 280, 8309-15	5.4	91

86	A connection between stress and development in the multicellular prokaryote Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 2001 , 40, 804-14	4.1	90
85	A developmentally regulated gene encoding a repressor-like protein is essential for sporulation in Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 1998 , 29, 343-57	4.1	89
84	BldD is a direct regulator of key developmental genes in Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 2001 , 40, 257-69	4.1	88
83	A signal transduction system in Streptomyces coelicolor that activates the expression of a putative cell wall glycan operon in response to vancomycin and other cell wall-specific antibiotics. <i>Molecular Microbiology</i> , 2002 , 44, 1199-1211	4.1	87
82	The Ser/Thr protein kinase AfsK regulates polar growth and hyphal branching in the filamentous bacteria Streptomyces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, E2371-9	11.5	83
81	WhiD and WhiB, homologous proteins required for different stages of sporulation in Streptomyces coelicolor A3(2). <i>Journal of Bacteriology</i> , 2000 , 182, 1286-95	3.5	83
80	Genes required for aerial growth, cell division, and chromosome segregation are targets of WhiA before sporulation in Streptomyces venezuelae. <i>MBio</i> , 2013 , 4, e00684-13	7.8	79
79	A putative two-component signal transduction system regulates sigmaE, a sigma factor required for normal cell wall integrity in Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 1999 , 33, 97-107	4.1	79
78	RNA polymerase heterogeneity in Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 1989 , 3, 1653	-9 .1	79
77	The IE Cell Envelope Stress Response of Streptomyces coelicolor Is Influenced by a Novel Lipoprotein, CseA. <i>Journal of Bacteriology</i> , 2008 , 190, 6037-6037	3.5	78
76	Isolation and characterization of the major vegetative RNA polymerase of Streptomyces coelicolor A3(2); renaturation of a sigma subunit using GroEL. <i>Molecular Microbiology</i> , 1992 , 6, 1133-9	4.1	78
75	Expression of the chaplin and rodlin hydrophobic sheath proteins in Streptomyces venezuelae is controlled by (BldN) and a cognate anti-sigma factor, RsbN. <i>Molecular Microbiology</i> , 2012 , 84, 1033-49	4.1	77
74	Generation of a non-sporulating strain of Streptomyces coelicolor A3(2) by the manipulation of a developmentally controlled ftsZ promoter. <i>Molecular Microbiology</i> , 2000 , 38, 737-49	4.1	76
73	Vancomycin resistance VanS/VanR two-component systems. <i>Advances in Experimental Medicine and Biology</i> , 2008 , 631, 200-13	3.6	75
72	A crystal structure of the bifunctional antibiotic simocyclinone D8, bound to DNA gyrase. <i>Science</i> , 2009 , 326, 1415-8	33.3	74
71	Regulation of apical growth and hyphal branching in Streptomyces. <i>Current Opinion in Microbiology</i> , 2012 , 15, 737-43	7.9	68
7º	SapB and the chaplins: connections between morphogenetic proteins in Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2007 , 64, 602-13	4.1	65
69	Genome-Wide Chromatin Immunoprecipitation Sequencing Analysis Shows that WhiB Is a Transcription Factor That Cocontrols Its Regulon with WhiA To Initiate Developmental Cell Division in Streptomyces. <i>MBio</i> , 2016 , 7, e00523-16	7.8	64

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68	Phage p1-derived artificial chromosomes facilitate heterologous expression of the FK506 gene cluster. <i>PLoS ONE</i> , 2013 , 8, e69319	3.7	64
67	Different alleles of the response regulator gene bldM arrest Streptomyces coelicolor development at distinct stages. <i>Molecular Microbiology</i> , 2000 , 36, 1265-78	4.1	63
66	Specialized osmotic stress response systems involve multiple SigB-like sigma factors in Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2003 , 47, 699-714	4.1	63
65	Assignment of the zinc ligands in RsrA, a redox-sensing ZAS protein from Streptomyces coelicolor. <i>Biochemistry</i> , 2006 , 45, 8294-300	3.2	62
64	Response regulator heterodimer formation controls a key stage in Streptomyces development. <i>PLoS Genetics</i> , 2014 , 10, e1004554	6	58
63	Characterization of [4Fe-4S]-containing and cluster-free forms of Streptomyces WhiD. <i>Biochemistry</i> , 2009 , 48, 12252-64	3.2	58
62	Identification and structure of the anti-sigma factor-binding domain of the disulphide-stress regulated sigma factor sigma(R) from Streptomyces coelicolor. <i>Journal of Molecular Biology</i> , 2002 , 323, 225-36	6.5	56
61	Function and redundancy of the chaplin cell surface proteins in aerial hypha formation, rodlet assembly, and viability in Streptomyces coelicolor. <i>Journal of Bacteriology</i> , 2008 , 190, 5879-89	3.5	50
60	The crystal structure of the TetR family transcriptional repressor SimR bound to DNA and the role of a flexible N-terminal extension in minor groove binding. <i>Nucleic Acids Research</i> , 2011 , 39, 9433-47	20.1	49
59	Developmentally regulated volatiles geosmin and 2-methylisoborneol attract a soil arthropod to Streptomyces bacteria promoting spore dispersal. <i>Nature Microbiology</i> , 2020 , 5, 821-829	26.6	46
58	DevA, a GntR-like transcriptional regulator required for development in Streptomyces coelicolor. Journal of Bacteriology, 2006 , 188, 5014-23	3.5	45
57	Construction and characterization of Streptomyces coelicolor A3(2) mutants that are multiply deficient in the nonessential hrd-encoded RNA polymerase sigma factors. <i>Journal of Bacteriology</i> , 1992 , 174, 5165-7	3.5	44
56	SmeA, a small membrane protein with multiple functions in Streptomyces sporulation including targeting of a SpoIIIE/FtsK-like protein to cell division septa. <i>Molecular Microbiology</i> , 2007 , 65, 1458-73	4.1	42
55	The sigma(E) cell envelope stress response of Streptomyces coelicolor is influenced by a novel lipoprotein, CseA. <i>Journal of Bacteriology</i> , 2006 , 188, 7222-9	3.5	41
54	RNA polymerase-DNA interactions in Streptomyces. In vitro studies of a S. lividans plasmid promoter with S. coelicolor RNA polymerase. <i>Journal of Molecular Biology</i> , 1985 , 185, 177-88	6.5	41
53	Coupling of the biosynthesis and export of the DNA gyrase inhibitor simocyclinone in Streptomyces antibioticus. <i>Molecular Microbiology</i> , 2009 , 72, 1462-74	4.1	40
52	New sporulation loci in Streptomyces coelicolor A3(2). <i>Journal of Bacteriology</i> , 1999 , 181, 5419-25	3.5	40
51	Identification and characterization of CdgB, a diguanylate cyclase involved in developmental processes in Streptomyces coelicolor. <i>Journal of Bacteriology</i> , 2011 , 193, 3100-8	3.5	39

50	Sigma-E is required for the production of the antibiotic actinomycin in Streptomyces antibioticus. <i>Molecular Microbiology</i> , 1997 , 23, 169-78	4.1	39
49	Specific peptide-activated proteolytic cleavage of Escherichia coli elongation factor Tu. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998 , 95, 2891-5	11.5	39
48	Mechanistic basis of branch-site selection in filamentous bacteria. <i>PLoS Computational Biology</i> , 2012 , 8, e1002423	5	37
47	Two dynamin-like proteins stabilize FtsZ rings during sporulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E6176-E6183	11.5	36
46	c-di-GMP Arms an Anti-Ito Control Progression of Multicellular Differentiation in Streptomyces. <i>Molecular Cell</i> , 2020 , 77, 586-599.e6	17.6	36
45	Discovery of a family of Eminobutyrate ureas via rational derepression of a silent bacterial gene cluster. <i>Chemical Science</i> , 2014 , 5, 86-89	9.4	34
44	Two promoters for the whiB sporulation gene of Streptomyces coelicolor A3(2) and their activities in relation to development. <i>Journal of Bacteriology</i> , 1992 , 174, 6215-20	3.5	33
43	Two promoters from the Streptomyces plasmid pIJ101 and their expression in Escherichia coli. <i>Gene</i> , 1987 , 51, 179-86	3.8	32
42	Deletion of DNA lying close to the glkA locus induces ectopic sporulation in Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 1995 , 17, 221-30	4.1	31
41	Structures of the TetR-like simocyclinone efflux pump repressor, SimR, and the mechanism of ligand-mediated derepression. <i>Journal of Molecular Biology</i> , 2011 , 408, 40-56	6.5	28
40	The Streptomyces coelicolor sporulation-specific sigma WhiG form of RNA polymerase transcribes a gene encoding a ProX-like protein that is dispensable for sporulation. <i>Gene</i> , 1998 , 212, 137-46	3.8	28
39	Identification and characterization of the mre gene region of Streptomyces coelicolor A3(2). <i>Molecular Genetics and Genomics</i> , 2000 , 263, 1053-60		27
38	Evolutionary relationships among actinophages and a putative adaptation for growth in Streptomyces spp. <i>Journal of Bacteriology</i> , 2013 , 195, 4924-35	3.5	26
37	The bldC developmental locus of Streptomyces coelicolor encodes a member of a family of small DNA-binding proteins related to the DNA-binding domains of the MerR family. <i>Journal of Bacteriology</i> , 2005 , 187, 716-28	3.5	26
36	Fluorescence Time-lapse Imaging of the Complete S. venezuelae Life Cycle Using a Microfluidic Device. <i>Journal of Visualized Experiments</i> , 2016 , 53863	1.6	25
35	The gene encoding RNase III in Streptomyces coelicolor is transcribed during exponential phase and is required for antibiotic production and for proper sporulation. <i>Journal of Bacteriology</i> , 2008 , 190, 4079-83	3.5	25
34	Multicellular Development in Streptomyces 2014 , 419-438		24
33	The Streptomyces master regulator BldD binds c-di-GMP sequentially to create a functional BldD2-(c-di-GMP)4 complex. <i>Nucleic Acids Research</i> , 2017 , 45, 6923-6933	20.1	22

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32	The Streptomyces coelicolor developmental transcription factor sigmaBldN is synthesized as a proprotein. <i>Journal of Bacteriology</i> , 2003 , 185, 2338-45	3.5	22
31	When is a transcription factor a NAP?. Current Opinion in Microbiology, 2020 , 55, 26-33	7.9	21
30	Characterisation of Streptomyces spheroides NovW and revision of its functional assignment to a dTDP-6-deoxy-D-xylo-4-hexulose 3-epimerase. <i>Chemical Communications</i> , 2006 , 1079-81	5.8	21
29	Genetic analysis of the phi C31-specific phage growth limitation (Pgl) system of Streptomyces coelicolor A3(2). <i>Molecular Microbiology</i> , 1993 , 7, 329-36	4.1	20
28	Characterization of a gene conferring bialaphos resistance in Streptomyces coelicolor A3(2). <i>Gene</i> , 1991 , 104, 39-45	3.8	18
27	The 1.6-A resolution crystal structure of NovW: a 4-keto-6-deoxy sugar epimerase from the novobiocin biosynthetic gene cluster of Streptomyces spheroides. <i>Proteins: Structure, Function and Bioinformatics</i> , 2006 , 63, 261-5	4.2	17
26	BldC Delays Entry into Development To Produce a Sustained Period of Vegetative Growth in Streptomyces venezuelae. <i>MBio</i> , 2019 , 10,	7.8	15
25	Multi-layered inhibition of Streptomyces development: BldO is a dedicated repressor of whiB. <i>Molecular Microbiology</i> , 2017 , 104, 700-711	4.1	14
24	Translational Control of the SigR-Directed Oxidative Stress Response in via IF3-Mediated Repression of a Noncanonical GTC Start Codon. <i>MBio</i> , 2017 , 8,	7.8	14
23	Characterization of the rpoC gene of Streptomyces coelicolor A3(2) and its use to develop a simple and rapid method for the purification of RNA polymerase. <i>Gene</i> , 1997 , 196, 31-42	3.8	14
22	Transcription from the P1 promoters of Micromonospora echinospora in the absence of native upstream DNA sequences. <i>Journal of Bacteriology</i> , 1989 , 171, 6503-10	3.5	14
21	Defining the regulon of genes controlled by [] a key regulator of the cell envelope stress response in Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2019 , 112, 461-481	4.1	12
20	The MerR-like protein BldC binds DNA direct repeats as cooperative multimers to regulate Streptomyces development. <i>Nature Communications</i> , 2018 , 9, 1139	17.4	12
19	Expansion and re-classification of the extracytoplasmic function (ECF) Ifactor family. <i>Nucleic Acids Research</i> , 2021 , 49, 986-1005	20.1	12
18	Discovery of the extracytoplasmic function [factors. <i>Molecular Microbiology</i> , 2019 , 112, 348-355	4.1	11
17	Determination of phosphorylation sites in the DivIVA cytoskeletal protein of Streptomyces coelicolor by targeted LC-MS/MS. <i>Journal of Proteome Research</i> , 2013 , 12, 4187-92	5.6	9
16	A sporulation-specific, sigF-dependent protein, SspA, affects septum positioning in Streptomyces coelicolor. <i>Molecular Microbiology</i> , 2014 , 91, 363-80	4.1	7
15	The oligoribonuclease gene in Streptomyces coelicolor is not transcriptionally or translationally coupled to adpA, a key bldA target. <i>FEMS Microbiology Letters</i> , 2008 , 286, 60-5	2.9	7

14	SimC7 Is a Novel NAD(P)H-Dependent Ketoreductase Essential for the Antibiotic Activity of the DNA Gyrase Inhibitor Simocyclinone. <i>Journal of Molecular Biology</i> , 2015 , 427, 2192-204	6.5	6
13	Substrate-Assisted Catalysis in Polyketide Reduction Proceeds via a Phenolate Intermediate. <i>Cell Chemical Biology</i> , 2016 , 23, 1091-1097	8.2	6
12	The crystal structure of the RsbN-BldN complex from Streptomyces venezuelae defines a new structural class of anti-Ifactor. <i>Nucleic Acids Research</i> , 2018 , 46, 7405-7417	20.1	6
11	Streptomyces venezuelae NRRL B-65442: genome sequence of a model strain used to study morphological differentiation in filamentous actinobacteria. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2021 ,	4.2	4
10	Actinoplanes Swims into the Molecular Age. Journal of Bacteriology, 2017, 199,	3.5	3
9	Interaction of the Wbl protein WhiD with the principal sigma factor depends on the WhiD [4Fe-4S] cluster. <i>Journal of Biological Chemistry</i> , 2020 , 295, 9752-9765	5.4	3
8	Structural insights into simocyclinone as an antibiotic, effector ligand and substrate. <i>FEMS Microbiology Reviews</i> , 2018 , 42,	15.1	3
7	Crystallization and preliminary X-ray studies on the putative dTDP sugar epimerase NovW from the novobiocin biosynthetic cluster of Streptomyces spheroides. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2003 , 59, 1507-9		3
6	Evolution of a E(c-di-GMP)-anti-Eswitch. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	3
5	Crystallization and preliminary X-ray analysis of the TetR-like efflux pump regulator SimR. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2011 , 67, 307-9		2
4	Expansion and re-classification of the extracytoplasmic function (ECF) [factor family		2
3	A signal transduction system in Streptomyces coelicolor that activates expression of a putative cell wall glycan operon in response to vancomycin and other cell wall-specific antibiotics. <i>Molecular Microbiology</i> , 2008 , 69, 1069-1069	4.1	1
2	BldC delays entry into development to produce a sustained period of vegetative growth in Streptomyces venezuelae		1
1	Sensing and Responding to Cell Envelope Stress in Streptomyces coelicolor <i>Nihon Hosenkin Gakkai Shi = Actinomycetologica</i> , 2002 , 16, 41-47		