Ray Dixon

List of Publications by Year
in descending order

133 papers	9,723 citations	31976 53 h-index	38395 95 g-index
158 all docs	158 docs citations	158 times ranked	6421 citing authors

#	Article	IF	Citations
1	Genetic Determinants of Ammonium Excretion in nifL Mutants of Azotobacter vinelandii. Applied and Environmental Microbiology, 2022, 88, AEM0187621.	3.1	9
2	Control of nitrogen fixation and ammonia excretion in Azorhizobium caulinodans. PLoS Genetics, 2022, 18, e1010276.	3.5	9
3	Disrupting hierarchical control of nitrogen fixation enables carbon-dependent regulation of ammonia excretion in soil diazotrophs. PLoS Genetics, 2021, 17, e1009617.	3.5	17
4	Regulation of Herbaspirillum seropedicae NifA by the GlnK PII signal transduction protein is mediated by effectors binding to allosteric sites. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140348.	2.3	6
5	Using synthetic biology to overcome barriers to stable expression of nitrogenase in eukaryotic organelles. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16537-16545.	7.1	28
6	Manipulating nitrogen regulation in diazotrophic bacteria for agronomic benefit. Biochemical Society Transactions, 2019, 47, 603-614.	3.4	83
7	Hierarchical interactions between Fnr orthologs allows fine-tuning of transcription in response to oxygen in Herbaspirillum seropedicae. Nucleic Acids Research, 2018, 46, 3953-3966.	14.5	5
8	Polyprotein strategy for stoichiometric assembly of nitrogen fixation components for synthetic biology. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8509-E8517.	7.1	60
9	Energy shifts induce membrane sequestration of DraG in Rhodospirillum rubrum independent of the ammonium transporters and diazotrophic conditions. FEMS Microbiology Letters, 2018, 365, .	1.8	2
10	PHB Biosynthesis Counteracts Redox Stress in Herbaspirillum seropedicae. Frontiers in Microbiology, 2018, 9, 472.	3.5	44
11	Modular electron-transport chains from eukaryotic organelles function to support nitrogenase activity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2460-E2465.	7.1	57
12	Diazotrophic Growth Allows Azotobacter vinelandii To Overcome the Deleterious Effects of a glnE Deletion. Applied and Environmental Microbiology, 2017, 83, .	3.1	9
13	Novel insights into ecological distribution and plant growth promotion by nitrogenâ€fixing endophytes â€“ how specialised are they?. Environmental Microbiology Reports, 2017, 9, 179-181.	2.4	6
14	John Raymond Postgate FIBiol. 24 June 1922 â€” 22 October 2014. Biographical Memoirs of Fellows of the Royal Society, 2016, 62, 483-504.	0.1	0
15	Major cereal crops benefit from biological nitrogen fixation when inoculated with the nitrogenâ€fixing bacterium Pseudomonas protegens Pfâ€5 X940. Environmental Microbiology, 2016, 18, 3522-3534.	3.8	92
16	Deciphering the Principles of Bacterial Nitrogen Dietary Preferences: a Strategy for Nutrient Containment. MBio, 2016, 7, .	4.1	36
17	Molecular adaptations of <scp>H</scp>erbaspirillum seropedicae during colonization of the maize rhizosphere. Environmental Microbiology, 2016, 18, 2343-2356.	3.8	52
18	Enhanced oxygen consumption in Herbaspirillum seropedicae fnr mutants leads to increased NifA mediated transcriptional activation. BMC Microbiology, 2015, 15, 95.	3.3	4

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19	The Emergence of 2-Oxoglutarate as a Master Regulator Metabolite. Microbiology and Molecular Biology Reviews, 2015, 79, 419-435.	6.6	222
20	The structural basis for enhancerâ€dependent assembly and activation of the AAA transcriptional activator NorR. Molecular Microbiology, 2015, 95, 17-30.	2.5	13
21	PipX, the coactivator of NtcA, is a global regulator in cyanobacteria. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2423-30.	7.1	80
22	Biotechnological solutions to the nitrogen problem. Current Opinion in Biotechnology, 2014, 26, 19-24.	6.6	259
23	Reconstruction and minimal gene requirements for the alternative iron-only nitrogenase in Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3718-25.	7.1	84
24	The Herbaspirillum seropedicae SmR1 Fnr orthologs controls the cytochrome composition of the electron transport chain. Scientific Reports, 2013, 3, 2544.	3.3	17
25	A Minimal Nitrogen Fixation Gene Cluster from Paenibacillus sp. WLY78 Enables Expression of Active Nitrogenase in Escherichia coli. PLoS Genetics, 2013, 9, e1003865.	3.5	122
26	Using Synthetic Biology to Distinguish and Overcome Regulatory and Functional Barriers Related to Nitrogen Fixation. PLoS ONE, 2013, 8, e68677.	2.5	40
27	The Role of Bacterial Enhancer Binding Proteins as Specialized Activators of Ïƒ ⁵⁴ -Dependent Transcription. Microbiology and Molecular Biology Reviews, 2012, 76, 497-529.	6.6	277
28	Interaction of GlnK with the GAF domain of Herbaspirillum seropedicae NifA mediates NH4+-regulation. Biochimie, 2012, 94, 1041-1047.	2.6	20
29	Distribution of nitrogen fixation and nitrogenase-like sequences amongst microbial genomes. BMC Genomics, 2012, 13, 162.	2.8	381
30	Influence of PAS Domain Flanking Regions on Oligomerisation and Redox Signalling By NifL. PLoS ONE, 2012, 7, e46651.	2.5	15
31	Transcriptional Profiling of Nitrogen Fixation in Azotobacter vinelandii. Journal of Bacteriology, 2011, 193, 4477-4486.	2.2	99
32	Transcriptional regulation by the dedicated nitric oxide sensor, NorR: a route towards NO detoxification. Biochemical Society Transactions, 2011, 39, 289-293.	3.4	36
33	Substitutions in the redoxâ€sensing PAS domain of the NifL regulatory protein define an interâ€subunit pathway for redox signal transmission. Molecular Microbiology, 2011, 82, 222-235.	2.5	17
34	Spectroscopic analysis of protein Feâ€“NO complexes. Biochemical Society Transactions, 2011, 39, 1293-1298.	3.4	13
35	Quaternary structure changes in a second Per-Arnt-Sim domain mediate intramolecular redox signal relay in the NifL regulatory protein. Molecular Microbiology, 2010, 75, 61-75.	2.5	36
36	Nitric oxide-responsive interdomain regulation targets the Ïƒ54-interaction surface in the enhancer binding protein NorR. Molecular Microbiology, 2010, 77, 1278-1288.	2.5	20

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37	Environmental control of phosphorylation pathways in a branched twoâ€component system. Molecular Microbiology, 2010, 78, 475-489.	2.5	46
38	Essential roles of three enhancer sites in Ïƒ54-dependent transcription by the nitric oxide sensing regulatory protein NorR. Nucleic Acids Research, 2010, 38, 1182-1194.	14.5	37
39	There's NO stopping NsrR, a global regulator of the bacterial NO stress response. Trends in Microbiology, 2010, 18, 149-156.	7.7	111
40	NtrC-Dependent Regulatory Network for Nitrogen Assimilation in Pseudomonas putida. Journal of Bacteriology, 2009, 191, 6123-6135.	2.2	70
41	Genome Sequence ofAzotobacter vinelandii, an Obligate Aerobe Specialized To Support Diverse Anaerobic Metabolic Processes. Journal of Bacteriology, 2009, 191, 4534-4545.	2.2	265
42	Role of conserved cysteine residues in Herbaspirillum seropedicae NifA activity. Research in Microbiology, 2009, 160, 389-395.	2.1	13
43	Analysis of the Nitric Oxide-sensing Non-heme Iron Center in the NorR Regulatory Protein. Journal of Biological Chemistry, 2008, 283, 908-918.	3.4	46
44	Characterization of the Nitric Oxide-Reactive Transcriptional Activator NorR. Methods in Enzymology, 2008, 437, 235-251.	1.0	15
45	The Transcriptional Repressor Protein NsrR Senses Nitric Oxide Directly via a [2Fe-2S] Cluster. PLoS ONE, 2008, 3, e3623.	2.5	121
46	Role of the H Domain of the Histidine Kinase-like Protein NifL in Signal Transmission. Journal of Biological Chemistry, 2007, 282, 13429-13437.	3.4	18
47	Role of the central region of NifL in conformational switches that regulate nitrogen fixation. Biochemical Society Transactions, 2006, 34, 162-164.	3.4	22
48	Mechanism of transcriptional regulation by the Escherichia coli nitric oxide sensor NorR. Biochemical Society Transactions, 2006, 34, 191-194.	3.4	33
49	Crystal structure of the MYB domain of the RAD transcription factor from Antirrhinum majus. Proteins: Structure, Function and Bioinformatics, 2006, 65, 1041-1045.	2.6	22
50	Nitrogen fixation: key genetic regulatory mechanisms. Biochemical Society Transactions, 2005, 33, 152-156.	3.4	41
51	DNA binding properties of the Escherichia coli nitric oxide sensor NorR: towards an understanding of the regulation of flavorubredoxin expression. Biochemical Society Transactions, 2005, 33, 181-183.	3.4	11
52	A non-haem iron centre in the transcription factor NorR senses nitric oxide. Nature, 2005, 437, 769-772.	27.8	264
53	Crystallization and preliminary X-ray analysis of the RAD protein fromAntirrhinum majus. Acta Crystallographica Section F: Structural Biology Communications, 2005, 61, 885-888.	0.7	4
54	Mutational Analysis of the Nucleotide-binding Domain of the Anti-activator NifL. Journal of Molecular Biology, 2005, 346, 935-949.	4.2	14

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55	Getting the signals across: networking inside and out. Current Opinion in Microbiology, 2005, 8, 113-115.	5.1	0
56	The Klebsiella pneumoniae nitrogenase Fe protein gene (nifH) functionally substitutes for the chlL gene in Chlamydomonas reinhardtii. Biochemical and Biophysical Research Communications, 2005, 329, 966-975.	2.1	70
57	Genetic Regulation of Nitrogen Fixation: Integration of Multiple Signals. , 2005, , 53-57.		1
58	The NifL-NifA System: a Multidomain Transcriptional Regulatory Complex That Integrates Environmental Signals. Journal of Bacteriology, 2004, 186, 601-610.	2.2	142
59	A crucial arginine residue is required for a conformational switch in NifL to regulate nitrogen fixation in Azotobacter vinelandii. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 16316-16321.	7.1	16
60	DNA Binding Activity of the Escherichia coli Nitric Oxide Sensor NorR Suggests a Conserved Target Sequence in Diverse Proteobacteria. Journal of Bacteriology, 2004, 186, 6656-6660.	2.2	48
61	The PAS fold. FEBS Journal, 2004, 271, 1198-1208.	0.2	151
62	Role of the amino-terminal GAF domain of the NifA activator in controlling the response to the antiactivator protein NifL. Molecular Microbiology, 2004, 52, 1731-1744.	2.5	58
63	Genetic regulation of biological nitrogen fixation. Nature Reviews Microbiology, 2004, 2, 621-631.	28.6	943
64	In silico analysis of the ÃÂƒ54-dependent enhancer-binding proteins inPirellulaspecies strain 1. FEMS Microbiology Letters, 2004, 230, 215-225.	1.8	16
65	Domain Architectures of Ïƒ⁵⁴-Dependent Transcriptional Activators. Journal of Bacteriology, 2003, 185, 1757-1767.	2.2	272
66	The Amino-terminal GAF Domain of Azotobacter vinelandii NifA Binds 2-Oxoglutarate to Resist Inhibition by NifL under Nitrogen-limiting Conditions. Journal of Biological Chemistry, 2003, 278, 28711-28718.	3.4	78
67	Direct Interaction of the NifL Regulatory Protein with the GlnK Signal Transducer Enables the Azotobacter vinelandiiNifL-NifA Regulatory System to Respond to Conditions Replete for Nitrogen. Journal of Biological Chemistry, 2002, 277, 15472-15481.	3.4	69
68	Mutant Forms of the Azotobacter vinelandii Transcriptional Activator NifA Resistant to Inhibition by the NifL Regulatory Protein. Journal of Bacteriology, 2002, 184, 6777-6785.	2.2	31
69	Secondary structure and DNA binding by the C-terminal domain of the transcriptional activator NifA from Klebsiella pneumoniae. Nucleic Acids Research, 2002, 30, 3972-3980.	14.5	19
70	The redox- and fixed nitrogen-responsive regulatory protein NIFL from Azotobacter vinelandii comprises discrete flavin and nucleotide-binding domains. Molecular Microbiology, 2002, 28, 179-192.	2.5	85
71	Integration of nitrogen, carbon and redox status by the Azotobacter vinelandii NifL-NifA regulatory complex.. , 2002, , 238-242.		2
72	Role of PII-Like Proteins in Nitrogen Sensing by Azotobacter vinelandii Nifl and Nifa. Current Plant Science and Biotechnology in Agriculture, 2002, , 139-139.	0.0	0

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73	Protein: Protein Interactions between the Enhancer Binding Protein, NIFA and the Sensor NIFL. , 2002, , 111-111.		0
74	Concerted inhibition of the transcriptional activation functions of the enhancer-binding protein NIFA by the anti-activator NIFL. Molecular Microbiology, 2001, 39, 480-494.	2.5	38
75	A Novel Purification Method for Histidine-Tagged Proteins Containing a Thrombin Cleavage Site. Analytical Biochemistry, 2001, 295, 180-185.	2.4	59
76	Role of Escherichia coli Nitrogen Regulatory Genes in the Nitrogen Response of the Azotobacter vinelandii NifL-NifA Complex. Journal of Bacteriology, 2001, 183, 3076-3082.	2.2	49
77	Protein-Protein Interactions in the Complex between the Enhancer Binding Protein NIFA and the Sensor NIFL from Azotobacter vinelandii. Journal of Bacteriology, 2001, 183, 1359-1368.	2.2	26
78	Secondary Structure and DNA binding of the C-terminal Domain of the Transcriptional Activator NifA from Klebsiella pneumoniae.. Biochemical Society Transactions, 2000, 28, A422-A422.	3.4	0
79	Signal transduction to the Azotobacter vinelandii NIFL-NIFA regulatory system is influenced directly by interaction with 2-oxoglutarate and the PII regulatory protein. EMBO Journal, 2000, 19, 6041-6050.	7.8	94
80	The upstream region of thenodD3gene ofSinorhizobium meliloticarries enhancer sequences for the transcriptional activator NtrC. FEMS Microbiology Letters, 1999, 179, 491-499.	1.8	13
81	The upstream region of the nodD3 gene of Sinorhizobium meliloti carries enhancer sequences for the transcriptional activator NtrC. FEMS Microbiology Letters, 1999, 179, 491-499.	1.8	1
82	Isolation and Properties of the Complex between the Enhancer Binding Protein NIFA and the Sensor NIFL. Journal of Bacteriology, 1999, 181, 4461-4468.	2.2	52
83	The oxygen-responsive NIFL-NIFA complex: a novel two-component regulatory system controlling nitrogenase synthesis in Î³-Proteobacteria. Archives of Microbiology, 1998, 169, 371-380.	2.2	139
84	Properties of a mutant form of the prokaryotic enhancer binding protein, NTRC, which hydrolyses ATP in the absence of effectors. FEBS Letters, 1998, 437, 70-74.	2.8	6
85	Electron donation to the flavoprotein NifL, a redox-sensing transcriptional regulator. Biochemical Journal, 1998, 332, 413-419.	3.7	68
86	Torsional Constraints on the Formation of Open Promoter Complexes on DNA Minicircles Carrying Ïƒ54-Dependent Promotersâ€. Biochemistry, 1997, 36, 12303-12316.	2.5	8
87	PAS domain S-boxes in archaea, bacteria and sensors for oxygen and redox. Trends in Biochemical Sciences, 1997, 22, 331-333.	7.5	412
88	Nif gene transfer and expression in chloroplasts: Prospects and problems. Plant and Soil, 1997, 194, 193-203.	3.7	46
89	Nif gene transfer and expression in chloroplasts: Prospects and problems. , 1997, , 193-203.		9
90	Regulation of Nitrogen Fixation Genes by the NIFA and NIFL Regulatory Proteins. , 1997, , 245-249.		0

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91	Azotobacter vinelandii NIFL is a flavoprotein that modulates transcriptional activation of nitrogen-fixation genes via a redox-sensitive switch.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 2143-2148.	7.1	168
92	Effectorâ€induced selfâ€association and conformational changes in the enhancerâ€binding protein NTRC. Molecular Microbiology, 1996, 22, 779-788.	2.5	26
93	Transcriptional activation of the nitrogenase promoter in vitro: adenosine nucleotides are required for inhibition of NIFA activity by NIFL. Journal of Bacteriology, 1995, 177, 1186-1195.	2.2	52
94	Purification and in vitro activities of the native nitrogen fixation control proteins NifA and NifL. Journal of Bacteriology, 1994, 176, 3460-3465.	2.2	85
95	Oxygen sensitivity and metal ion-dependent transcriptional activation by NIFA protein from Rhizobium leguminosarum biovar trifolii. Molecular Genetics and Genomics, 1994, 245, 313-322.	2.4	9
96	Plant expression cassettes for enhanced translational efficiency. Plant Molecular Biology Reporter, 1994, 12, 347-357.	1.8	12
97	Plant viral leaders influence expression of a reporter gene in tobacco. Plant Molecular Biology, 1993, 23, 97-109.	3.9	57
98	The function of the upstream region of the ?;54-dependent Klebsiella pneumoniae nifL promoter is sensitive to DNA supercoiling. Molecular Microbiology, 1993, 9, 1107-1117.	2.5	12
99	DNA supercoiling response of the Ïƒ54-dependent Klebsiella pneumoniae nifL promoter in vitro. Journal of Molecular Biology, 1992, 225, 591-607.	4.2	32
100	Substitutions at a single amino acid residue in the nitrogen-regulated activator protein NTRC differentially influence its activity in response to phosphorylation. Molecular Microbiology, 1991, 5, 1657-1667.	2.5	29
101	Influence of a mutation in the putative nucleotide binding site of the nitrogen regulatory protein NTRC on its positive control function. Nucleic Acids Research, 1991, 19, 2281-2287.	14.5	45
102	Characterisation of the Klebsiella pneumoniae nitrogen-fixation regulatory proteins NIFA and NIFL in vitro. FEBS Journal, 1990, 187, 353-360.	0.2	47
103	Role of metal ions in negative regulation of nitrogen fixation by the nifL gene product from Klebsiella pneumoniae. Molecular Genetics and Genomics, 1989, 216, 484-491.	2.4	82
104	The role of activator binding sites in transcriptional control of the divergently transcribed nifF and nif LA promoters from Klebsiella pneumoniae. Molecular Microbiology, 1988, 2, 433-442.	2.5	75
105	DNA supercolling and aerobic regulation of transcription from theKlebsiella pneumoniae nifLApromoter. Nucleic Acids Research, 1988, 16, 9933-9946.	14.5	54
106	Genetics and regulation of nif and related genes in Klebsiella pneumoniae. Philosophical Transactions of the Royal Society of London Series B, Biological Sciences, 1987, 317, 147-158.	2.3	7
107	nif genes in alien backgrounds. Philosophical Transactions of the Royal Society of London Series B, Biological Sciences, 1987, 317, 227-243.	2.3	5
108	Effect of inoculation withKlebsiella oxytoca andEnterobacter cloacae on dinitrogen fixation by rice-bacteria associations. Plant and Soil, 1987, 103, 221-226.	3.7	36

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109	First things first. Nature, 1987, 326, 822-822.	27.8	0
110	Deletion loop mutagenesis of the nifL promoter from Klebsiella pneumoniae: role of the -26 to -12 region in promoter function. Gene, 1986, 45, 281-288.	2.2	22
111	The xylABC promoter from the Pseudomonas putida TOL plamid is activated by nitrogen regulatory genes in Escherichia coli. Molecular Genetics and Genomics, 1986, 203, 129-136.	2.4	137
112	Upstream activator sequences are present in the promoters of nitrogen fixation genes. Nature, 1986, 320, 374-378.	27.8	299
113	The nifH gene product is required for the synthesis or stability of the iron-molybdenum cofactor of nitrogenase from Klebsiella pneumoniae. FEBS Journal, 1986, 160, 371-377.	0.2	85
114	Regulation of the nitrogen fixation genes inKlebsiella pneumoniae: Implications for genetic manipulation. Plant and Soil, 1986, 90, 225-233.	3.7	4
115	Interaction of purified NtrC protein with nitrogen regulated promoters from Klebsiella pneumoniae. Molecular Genetics and Genomics, 1985, 201, 492-498.	2.4	50
116	Site-directed mutagenesis of theKlebsiella pneumoniae nifLandnifHpromoters andin vivoanalysis of promoter activity. Nucleic Acids Research, 1985, 13, 7621-7638.	14.5	77
117	Tandem promoters determine regulation of theKlebsiella pneumoniaeglutamine synthetase (glnA) gene. Nucleic Acids Research, 1984, 12, 7811-7830.	14.5	123
118	Why don't plants fix nitrogen?. Trends in Biotechnology, 1984, 2, 162-166.	9.3	51
119	Positive control and autogenous regulation of the nifLA promoter in Klebsiella pneumoniae. Nature, 1983, 301, 302-307.	27.8	187
120	REGULATION OF TRANSCRIPTION OF THE NITROGEN FIXATION OPERONS. , 1983, , 223-232.		6
121	Repressor properties of the nifL gene product in Klebsiella pneumoniae. Molecular Genetics and Genomics, 1982, 185, 75-81.	2.4	135
122	Cloning of the glnA, ntrB and ntrC genes of Klebsiella pneumoniae and studies of their role in regulation of the nitrogen fixation (nif) gene cluster. Molecular Genetics and Genomics, 1982, 186, 518-524.	2.4	90
123	Requirement of nifV gene for production of wild-type nitrogenase enzyme in Klebsiella pneumoniae. Nature, 1981, 292, 655-656.	27.8	98
124	Analysis of regulation of Klebsiella pneumoniae nitrogen fixation (nif) gene cluster with gene fusions. Nature, 1980, 286, 128-132.	27.8	207
125	Genetics of Nitrogen Fixation in the Bacterium Klebsiella Pneumoniae. , 1980, , 427-437.		1
126	Polarity of mutations induced by insertion of transposons Tn5, Tn7 and Tn10 into the nif gene cluster of Klebsiella pneumoniae. Molecular Genetics and Genomics, 1978, 165, 103-111.	2.4	106

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127	Complementation analysis of Klebsiella pneumoniae mutants defective in nitrogen fixation. Molecular Genetics and Genomics, 1977, 157, 189-198.	2.4	189
128	Ammonia assimilation and nitrogen fixation in Rhizobium meliloti. Molecular Genetics and Genomics, 1977, 151, 221-226.	2.4	82
129	The Nitrogen Fixation Cistrons of Klebsiella Pneumoniae. , 1977, 9, 51-66.		4
130	Construction of a P plasmid carrying nitrogen fixation genes from Klebsiella pneumoniae. Nature, 1976, 260, 268-271.	27.8	163
131	Genetic Transfer of Nitrogen Fixation from Klebsiella pneumoniae to Escherichia coli. Nature, 1972, 237, 102-103.	27.8	206
132	Transfer of Nitrogen-fixation Genes by Conjugation in Klebsiella pneumoniae. Nature, 1971, 234, 47-48.	27.8	113
133	Interactions between paralogous bacterial enhancer binding proteins enable metalâ€dependent regulation of alternative nitrogenases in Azotobacter vinelandii. Molecular Microbiology, 0, , .	2.5	3