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**Construction of Escherichia coli K-12 in-frame, single-gene knockout mutants: the Keio collection**

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2202	Highly accurate genome sequences of Escherichia coli K-12 strains MG1655 and W3110. <i>Molecular Systems Biology</i> , <b>2006</b> , 2, 2006.0007	12.2	348
2201	Escherichia coli K-12: a cooperatively developed annotation snapshot--2005. <b>2006</b> , 34, 1-9		525
2200	Genomewide screens for Escherichia coli genes affecting growth of T7 bacteriophage. <b>2006</b> , 103, 19039-44		139
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2012	The ybiN gene of Escherichia coli encodes adenine-N6 methyltransferase specific for modification of A1618 of 23 S ribosomal RNA, a methylated residue located close to the ribosomal exit tunnel. <b>2008</b> , 375, 291-300	52
2011	A study in molecular contingency: glutamine phosphoribosylpyrophosphate amidotransferase is a promiscuous and evolvable phosphoribosylanthranilate isomerase. <b>2008</b> , 377, 323-36	43
2010	Amino acid starvation and colicin D treatment induce A-site mRNA cleavage in Escherichia coli. <b>2008</b> , 378, 505-19	47
2009	Heterodimer formation within universal stress protein classes revealed by an in silico and experimental approach. <b>2008</b> , 380, 340-50	15
2008	An indigenous posttranscriptional modification in the ribosomal peptidyl transferase center confers resistance to an array of protein synthesis inhibitors. <b>2008</b> , 380, 593-7	36
2007	YccW is the m5C methyltransferase specific for 23S rRNA nucleotide 1962. <b>2008</b> , 383, 641-51	41
2006	Has nature already identified all useful antibacterial targets?. <b>2008</b> , 11, 387-92	38

2005	Engineered bacterial outer membrane vesicles with enhanced functionality. <b>2008</b> , 380, 51-66	112
2004	Development of new tools for studying gene function in fungi based on the Gateway system. <b>2008</b> , 45, 1147-54	58
2003	pH and monovalent cations regulate cytosolic free Ca(2+) in E. coli. <b>2008</b> , 1778, 1415-22	34
2002	Mistranslation of membrane proteins and two-component system activation trigger antibiotic-mediated cell death. <b>2008</b> , 135, 679-90	388
2001	Effect of global transcriptional regulators related to carbohydrate metabolism on organic solvent tolerance in Escherichia coli. <b>2008</b> , 105, 389-94	14
2000	Small and lethal: searching for new antibacterial compounds with novel modes of action. <b>2008</b> , 86, 111-5	12
1999	Proteomic analysis of nalidixic acid resistance in Escherichia coli: identification and functional characterization of OM proteins. <b>2008</b> , 7, 2399-405	55
1998	The structure of the efflux pump AcrB in complex with bile acid. <b>2008</b> , 25, 677-82	49
1997	Structural identification of piecewise-linear models of genetic regulatory networks. <b>2008</b> , 15, 1365-80	30
1996	Depiction of metabolome changes in histidine-starved Escherichia coli by CE-TOFMS. <b>2008</b> , 4, 135-47	179
1995	Expanding metabolism for biosynthesis of nonnatural alcohols. <b>2008</b> , 105, 20653-8	326
1994	Minimal Escherichia coli cell for the most efficient production of ethanol from hexoses and pentoses. <b>2008</b> , 74, 3634-43	233
1993	Functional and structural characterization of four glutaminases from Escherichia coli and Bacillus subtilis. <b>2008</b> , 47, 5724-35	79
1992	Engineering of an Escherichia coli strain for the production of 3-methyl-1-butanol. <b>2008</b> , 74, 5769-75	132
1991	Identification and network of outer membrane proteins regulating streptomycin resistance in Escherichia coli. <b>2008</b> , 7, 4040-9	49
1990	Modulation of Escherichia coli sister chromosome cohesion by topoisomerase IV. <b>2008</b> , 22, 2426-33	93
1989	A compromise required by gene sharing enables survival: Implications for evolution of new enzyme activities. <b>2008</b> , 105, 13497-502	53
1988	Bioinformatics identification of MurJ (MviN) as the peptidoglycan lipid II flippase in Escherichia coli. <b>2008</b> , 105, 15553-7	160

1987	Superpositioning of deletions promotes growth of Escherichia coli with a reduced genome. <b>2008</b> , 15, 277-84	62
1986	High glycolytic flux improves pyruvate production by a metabolically engineered Escherichia coli strain. <b>2008</b> , 74, 6649-55	80
1985	Temperature sensitivity and cell division defects in an Escherichia coli strain with mutations in yghB and yqjA, encoding related and conserved inner membrane proteins. <b>2008</b> , 190, 4489-500	40
1984	Buoyant plumes from solute gradients generated by non-motile Escherichia coli. <b>2008</b> , 5, 046007	12
1983	The Escherichia coli RutR transcription factor binds at targets within genes as well as intergenic regions. <b>2008</b> , 36, 3950-5	116
1982	Differential selectivity of the Escherichia coli cell membrane shifts the equilibrium for the enzyme-catalyzed isomerization of galactose to tagatose. <b>2008</b> , 74, 2307-13	12
1981	Evolution of the iss gene in Escherichia coli. <b>2008</b> , 74, 2360-9	100
1980	Identification of pseudouridine methyltransferase in Escherichia coli. <b>2008</b> , 14, 2223-33	51
1979	Transcriptional regulation of NAD metabolism in bacteria: genomic reconstruction of NiaR (YrxA) regulon. <b>2008</b> , 36, 2032-46	54
1978	Suppression of DeltabipA phenotypes in Escherichia coli by abolishment of pseudouridylation at specific sites on the 23S rRNA. <b>2008</b> , 190, 7675-83	28
1977	A complete collection of single-gene deletion mutants of Acinetobacter baylyi ADP1. <i>Molecular Systems Biology</i> , <b>2008</b> , 4, 174	12.2 234
1976	A bifunctional locus (BIO3-BIO1) required for biotin biosynthesis in Arabidopsis. <b>2008</b> , 146, 60-73	39
1975	Identification and analysis of essential genes in Haemophilus influenzae. <b>2008</b> , 416, 27-44	10
1974	Genetic interaction screens with ordered overexpression and deletion clone sets implicate the Escherichia coli GTPase YjeQ in late ribosome biogenesis. <b>2008</b> , 190, 2537-45	47
1973	Cre/lox system and PCR-based genome engineering in Bacillus subtilis. <b>2008</b> , 74, 5556-62	153
1972	Growth of Escherichia coli: significance of peptidoglycan degradation during elongation and septation. <b>2008</b> , 190, 3914-22	78
1971	Null mutations in human and mouse orthologs frequently result in different phenotypes. <b>2008</b> , 105, 6987-92	182
1970	Revisiting the mechanism of macrolide-antibiotic resistance mediated by ribosomal protein L22. <b>2008</b> , 105, 18261-6	36

1969	Sialic acid mutarotation is catalyzed by the Escherichia coli beta-propeller protein YjhT. <b>2008</b> , 283, 4841-9	46
1968	Cardiolipin controls the osmotic stress response and the subcellular location of transporter ProP in Escherichia coli. <b>2008</b> , 283, 12314-23	66
1967	Structure and function of sedoheptulose-7-phosphate isomerase, a critical enzyme for lipopolysaccharide biosynthesis and a target for antibiotic adjuvants. <b>2008</b> , 283, 2835-45	50
1966	Escherichia coli cytosolic glycerophosphodiester phosphodiesterase (UgpQ) requires Mg <sup>2+</sup> , Co <sup>2+</sup> , or Mn <sup>2+</sup> for its enzyme activity. <b>2008</b> , 190, 1219-23	41
1965	Genetic toggling of alkaline phosphatase folding reveals signal peptides for all major modes of transport across the inner membrane of bacteria. <b>2008</b> , 283, 35223-35	40
1964	Identification of two inner-membrane proteins required for the transport of lipopolysaccharide to the outer membrane of Escherichia coli. <b>2008</b> , 105, 5537-42	183
1963	Contribution of the SitABCD, MntH, and FeoB metal transporters to the virulence of avian pathogenic Escherichia coli O78 strain chi7122. <b>2008</b> , 76, 601-11	75
1962	PSICIC: noise and asymmetry in bacterial division revealed by computational image analysis at sub-pixel resolution. <b>2008</b> , 4, e1000233	83
1961	Nucleotide biosynthesis is critical for growth of bacteria in human blood. <b>2008</b> , 4, e37	152
1960	A genome-wide approach to identify the genes involved in biofilm formation in E. coli. <b>2007</b> , 14, 237-46	98
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1957	Cyclic AMP-dependent catabolite repression is the dominant control mechanism of metabolic fluxes under glucose limitation in Escherichia coli. <b>2008</b> , 190, 2323-30	63
1956	AraC regulatory protein mutants with altered effector specificity. <b>2008</b> , 130, 5267-71	108
1955	Effects of SecE depletion on the inner and outer membrane proteomes of Escherichia coli. <b>2008</b> , 190, 3505-25	40
1954	A defined transposon mutant library and its use in identifying motility genes in Vibrio cholerae. <b>2008</b> , 105, 8736-41	160
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1952	Modes of overinitiation, dnaA gene expression, and inhibition of cell division in a novel cold-sensitive hda mutant of Escherichia coli. <b>2008</b> , 190, 5368-81	50

1951	Francisella tularensis subsp. tularensis Schu S4 disulfide bond formation protein B, but not an RND-type efflux pump, is required for virulence. <b>2008</b> , 76, 3086-92	44
1950	Molecular identification of pseudouridine-metabolizing enzymes. <b>2008</b> , 283, 25238-25246	34
1949	The R1 conjugative plasmid increases Escherichia coli biofilm formation through an envelope stress response. <b>2008</b> , 74, 2690-9	42
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1947	Antimicrobial studies with the Pseudomonas aeruginosa two-allele library require caution. <b>2008</b> , 52, 3826-7	4
1946	Genetic interaction between the Escherichia coli AcpT phosphopantetheinyl transferase and the YejM inner membrane protein. <b>2008</b> , 178, 1327-37	31
1945	A combination of sbmA and tolC mutations in Escherichia coli K-12 Tn10-carrying strains results in hypersusceptibility to tetracycline. <b>2008</b> , 190, 1491-4	11
1944	Fur-dependent detoxification of organic acids by rpoS mutants during prolonged incubation under aerobic, phosphate starvation conditions. <b>2008</b> , 190, 5567-75	10
1943	YbeA is the m3Psi methyltransferase RlmH that targets nucleotide 1915 in 23S rRNA. <b>2008</b> , 14, 2234-44	55
1942	Vibrio cholerae VciB promotes iron uptake via ferrous iron transporters. <b>2008</b> , 190, 5953-62	17
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1940	Determination of antibiotic hypersensitivity among 4,000 single-gene-knockout mutants of Escherichia coli. <b>2008</b> , 190, 5981-8	171
1939	Diacylglycerol specifically blocks spontaneous integration of membrane proteins and allows detection of a factor-assisted integration. <b>2008</b> , 283, 24489-96	34
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1935	Predicting synthetic rescues in metabolic networks. <i>Molecular Systems Biology</i> , <b>2008</b> , 4, 168	12.2 107
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1933	Conserved amphiphilic feature is essential for periplasmic chaperone HdeA to support acid resistance in enteric bacteria. <b>2008</b> , 412, 389-97	31
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1931	Modification of the Ribosome and the Translational Machinery during Reduced Growth Due to Environmental Stress. <b>2008</b> , 3,	1
1930	Biotin and Lipoic Acid: Synthesis, Attachment, and Regulation. <b>2008</b> , 3,	17
1929	?????????(?????????)?????? ??????????????. <b>2008</b> , 46, 228-229	
1928	The extracytoplasmic stress factor, sigmaE, is required to maintain cell envelope integrity in Escherichia coli. <b>2008</b> , 3, e1573	116
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1924	The fitness effects of random mutations in single-stranded DNA and RNA bacteriophages. <b>2009</b> , 5, e1000742	79
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1922	Concurrent growth rate and transcript analyses reveal essential gene stringency in Escherichia coli. <b>2009</b> , 4, e6061	56
1921	Simultaneous assay of every Salmonella Typhi gene using one million transposon mutants. <b>2009</b> , 19, 2308-16	422
1920	Roles of the extraintestinal pathogenic Escherichia coli ZnuACB and ZupT zinc transporters during urinary tract infection. <b>2009</b> , 77, 1155-64	94
1919	Contribution of the periplasmic chaperone Skp to efficient presentation of the autotransporter IcsA on the surface of Shigella flexneri. <b>2009</b> , 191, 815-21	53
1918	Genomic reconstruction of Shewanella oneidensis MR-1 metabolism reveals a previously uncharacterized machinery for lactate utilization. <b>2009</b> , 106, 2874-9	111
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1915	Involvement of the leucine response transcription factor LeuO in regulation of the genes for sulfa drug efflux. <b>2009</b> , 191, 4562-71		48
1914	Self-enhanced accumulation of FtsN at Division Sites and Roles for Other Proteins with a SPOR domain (DamX, DedD, and RlpA) in Escherichia coli cell constriction. <b>2009</b> , 191, 7383-401		133
1913	A widely conserved gene cluster required for lactate utilization in Bacillus subtilis and its involvement in biofilm formation. <b>2009</b> , 191, 2423-30		86
1912	Promoter strength properties of the complete sigma E regulon of Escherichia coli and Salmonella enterica. <b>2009</b> , 191, 7279-87		58
1911	Characterization of YmgF, a 72-residue inner membrane protein that associates with the Escherichia coli cell division machinery. <b>2009</b> , 191, 333-46		50
1910	A dominant negative mutant of the E. coli RNA helicase DbpA blocks assembly of the 50S ribosomal subunit. <b>2009</b> , 37, 6503-14		50
1909	Grasping at shadows: revealing the elusive nature of essential genes. <b>2009</b> , 191, 4701-4		11
1908	In vivo and in vitro patterns of the activity of simocyclinone D8, an angucyclinone antibiotic from Streptomyces antibioticus. <b>2009</b> , 53, 2110-9		42
1907	Characterization of the Cpx regulon in Escherichia coli strain MC4100. <b>2009</b> , 191, 1798-815		165
1906	Update on the Keio collection of Escherichia coli single-gene deletion mutants. <i>Molecular Systems Biology</i> , <b>2009</b> , 5, 335	12.2	161
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1904	Metabolite profiling reveals YihU as a novel hydroxybutyrate dehydrogenase for alternative succinic semialdehyde metabolism in Escherichia coli. <b>2009</b> , 284, 16442-16451		53
1903	Escherichia coli K-12 Suppressor-free Mutants Lacking Early Glycosyltransferases and Late Acyltransferases: minimal lipopolysaccharide structure and induction of envelope stress response. <b>2009</b> , 284, 15369-89		68
1902	Acetolactate synthase from Bacillus subtilis serves as a 2-ketoisovalerate decarboxylase for isobutanol biosynthesis in Escherichia coli. <b>2009</b> , 75, 6306-11		75
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1899	LytM-domain factors are required for daughter cell separation and rapid ampicillin-induced lysis in Escherichia coli. <b>2009</b> , 191, 5094-107		156
1898	Molecular identification and functional characterization of a mitochondrial sulfonyleurea receptor 2 splice variant generated by intraexonic splicing. <b>2009</b> , 105, 1083-93		51

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1895	Inactivation of <i>KsgA</i> , a 16S rRNA methyltransferase, causes vigorous emergence of mutants with high-level kasugamycin resistance. <b>2009</b> , 53, 193-201	26
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1892	Two essential arginine residues in the T components of energy-coupling factor transporters. <b>2009</b> , 191, 6482-8	40
1891	<i>UvrD303</i> , a hyperhelicase mutant that antagonizes RecA-dependent SOS expression by a mechanism that depends on its C terminus. <b>2009</b> , 191, 1429-38	21
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1889	Influence of membrane organization on the dimerization ability of <i>ToxR</i> from <i>Photobacterium profundum</i> under high hydrostatic pressure. <b>2009</b> , 29, 431-442	4
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1887	DEG 5.0, a database of essential genes in both prokaryotes and eukaryotes. <b>2009</b> , 37, D455-8	376
1886	Cellular stress created by intermediary metabolite imbalances. <b>2009</b> , 106, 19515-20	47
1885	<i>MocA</i> is a specific cytidyltransferase involved in molybdopterin cytosine dinucleotide biosynthesis in <i>Escherichia coli</i> . <b>2009</b> , 284, 21891-21898	46
1884	<i>Escherichia coli</i> unsaturated fatty acid synthesis: complex transcription of the <i>fabA</i> gene and in vivo identification of the essential reaction catalyzed by <i>FabB</i> . <b>2009</b> , 284, 29526-35	128
1883	Transcriptional regulation of membrane lipid homeostasis in <i>Escherichia coli</i> . <b>2009</b> , 284, 34880-8	59
1882	<i>Fre</i> Is the Major Flavin Reductase Supporting Bioluminescence from <i>Vibrio harveyi</i> Luciferase in <i>Escherichia coli</i> . <b>2009</b> , 284, 8322-8	34
1881	Hypomodification of the wobble base in tRNA <sup>Glu</sup> , tRNA <sup>Lys</sup> , and tRNA <sup>Gln</sup> suppresses the temperature-sensitive phenotype caused by mutant release factor 1. <b>2009</b> , 191, 1604-9	4
1880	An excretory function for the <i>Escherichia coli</i> outer membrane pore TolC: upregulation of <i>marA</i> and <i>soxS</i> transcription and Rob activity due to metabolites accumulated in <i>tolC</i> mutants. <b>2009</b> , 191, 5283-92	50

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1878	The response regulator SprE (RssB) modulates polyadenylation and mRNA stability in Escherichia coli. <b>2009</b> , 191, 6812-21	15
1877	An alternative route for recycling of N-acetylglucosamine from peptidoglycan involves the N-acetylglucosamine phosphotransferase system in Escherichia coli. <b>2009</b> , 191, 5641-7	35
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1875	The glycerol-3-phosphate permease GlpT is the only fosfomycin transporter in Pseudomonas aeruginosa. <b>2009</b> , 191, 6968-74	78
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1871	Self-organization of the Escherichia coli chemotaxis network imaged with super-resolution light microscopy. <b>2009</b> , 7, e1000137	264
1870	Rapid pathway evolution facilitated by horizontal gene transfers across prokaryotic lineages. <b>2009</b> , 5, e1000402	34
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1868	Evolutionary plasticity and innovations in complex metabolic reaction networks. <b>2009</b> , 5, e1000613	95
1867	Organised genome dynamics in the Escherichia coli species results in highly diverse adaptive paths. <b>2009</b> , 5, e1000344	802
1866	Genetic dissection of an exogenously induced biofilm in laboratory and clinical isolates of E. coli. <b>2009</b> , 5, e1000432	32
1865	Epistatic effects of the protease/chaperone HflB on some damaged forms of the Escherichia coli ammonium channel AmtB. <b>2009</b> , 183, 1327-40	10
1864	Steric gate variants of UmuC confer UV hypersensitivity on Escherichia coli. <b>2009</b> , 191, 4815-23	15
1863	Stress-induced beta-lactam antibiotic resistance mutation and sequences of stationary-phase mutations in the Escherichia coli chromosome. <b>2009</b> , 191, 5881-9	70
1862	A genome-scale proteomic screen identifies a role for DnaK in chaperoning of polar autotransporters in Shigella. <b>2009</b> , 191, 6300-11	23

1861	Global functional atlas of <i>Escherichia coli</i> encompassing previously uncharacterized proteins. <b>2009</b> , 7, e96	280
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1859	Rapid oligonucleotide-based recombineering of the chromosome of <i>Salmonella enterica</i> . <b>2009</b> , 75, 1575-80	33
1858	The universal YrdC/Sua5 family is required for the formation of threonylcarbamoyladenosine in tRNA. <b>2009</b> , 37, 2894-909	118
1857	Feedback inhibition in the PhoQ/PhoP signaling system by a membrane peptide. <b>2009</b> , 5, e1000788	144
1856	GrowMatch: an automated method for reconciling in silico/in vivo growth predictions. <b>2009</b> , 5, e1000308	169
1855	The complete genome and proteome of <i>Laribacter hongkongensis</i> reveal potential mechanisms for adaptations to different temperatures and habitats. <b>2009</b> , 5, e1000416	45
1854	Analysis of pools of targeted <i>Salmonella</i> deletion mutants identifies novel genes affecting fitness during competitive infection in mice. <b>2009</b> , 5, e1000477	146
1853	SOS response induces persistence to fluoroquinolones in <i>Escherichia coli</i> . <b>2009</b> , 5, e1000760	313
1852	Slave nodes and the controllability of metabolic networks. <b>2009</b> , 11, 113047	19
1851	The role of annexin 1 in drought stress in <i>Arabidopsis</i> . <b>2009</b> , 150, 1394-410	156
1850	Genome scale reconstruction of a <i>Salmonella</i> metabolic model: comparison of similarity and differences with a commensal <i>Escherichia coli</i> strain. <b>2009</b> , 284, 29480-8	75
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1848	Lysine acetylation is a highly abundant and evolutionarily conserved modification in <i>Escherichia coli</i> . <b>2009</b> , 8, 215-25	370
1847	Polyamines are not required for aerobic growth of <i>Escherichia coli</i> : preparation of a strain with deletions in all of the genes for polyamine biosynthesis. <b>2009</b> , 191, 5549-52	52
1846	From damaged genome to cell surface: transcriptome changes during bacterial cell death triggered by loss of a restriction-modification gene complex. <b>2009</b> , 37, 3021-31	35
1845	The fumarate/succinate antiporter DcuB of <i>Escherichia coli</i> is a bifunctional protein with sites for regulation of DcuS-dependent gene expression. <b>2009</b> , 284, 265-275	54
1844	Cyclic AMP receptor protein-dependent repression of heat-labile enterotoxin. <b>2009</b> , 77, 791-8	36

1843	Unbiased quantitation of Escherichia coli membrane proteome using phase transfer surfactants. <b>2009</b> , 8, 2770-7	99
1842	Transforming DNA uptake gene orthologs do not mediate spontaneous plasmid transformation in Escherichia coli. <b>2009</b> , 191, 713-9	23
1841	A DNA damage response in Escherichia coli involving the alternative sigma factor, RpoS. <b>2009</b> , 106, 611-6	64
1840	A critical process controlled by MalT and OmpR is revealed through synthetic lethality. <b>2009</b> , 191, 5320-4	4
1839	Hydroxyl radicals are involved in cell killing by the bacterial topoisomerase I cleavage complex. <b>2009</b> , 191, 5315-9	22
1838	RodZ, a component of the bacterial core morphogenic apparatus. <b>2009</b> , 106, 1239-44	124
1837	An SOS-regulated type 2 toxin-antitoxin system. <b>2009</b> , 191, 7456-65	45
1836	Inhibitors of RecA activity discovered by high-throughput screening: cell-permeable small molecules attenuate the SOS response in Escherichia coli. <b>2009</b> , 14, 1092-101	49
1835	YjhS (NanS) is required for Escherichia coli to grow on 9-O-acetylated N-acetylneuraminic acid. <b>2009</b> , 191, 7134-9	40
1834	Polyphosphate accumulation in Escherichia coli in response to defects in DNA metabolism. <b>2009</b> , 191, 7410-6	6
1833	Importance of proteins controlling initiation of DNA replication in the growth of the high-pressure-loving bacterium Photobacterium profundum SS9. <b>2009</b> , 191, 6383-93	15
1832	The r1162 mob proteins can promote conjugative transfer from cryptic origins in the bacterial chromosome. <b>2009</b> , 191, 1574-80	13
1831	Construction and enhancement of a minimal genetic and logic gate. <b>2009</b> , 75, 637-42	36
1830	Glycerol metabolism is important for cytotoxicity of Mycoplasma pneumoniae. <b>2009</b> , 191, 747-53	98
1829	SoxRS-mediated lipopolysaccharide modification enhances resistance against multiple drugs in Escherichia coli. <b>2009</b> , 191, 4441-50	39
1828	Cell envelope perturbation induces oxidative stress and changes in iron homeostasis in Vibrio cholerae. <b>2009</b> , 191, 5398-408	39
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1641	Functional dissection of <i>Escherichia coli</i> phosphotransacetylase structural domains and analysis of key compounds involved in activity regulation. <b>2010</b> , 277, 1957-66	29
1640	Translation initiation region dependency of translation initiation in <i>Escherichia coli</i> by IF1 and kasugamycin. <b>2010</b> , 277, 2428-39	7
1639	Activation of sigma 28-dependent transcription in <i>Escherichia coli</i> by the cyclic AMP receptor protein requires an unusual promoter organization. <b>2010</b> , 75, 1098-111	10
1638	Three new RelE-homologous mRNA interferases of <i>Escherichia coli</i> differentially induced by environmental stresses. <b>2010</b> , 75, 333-48	171
1637	Production of clastogenic DNA precursors by the nucleotide metabolism in <i>Escherichia coli</i> . <b>2010</b> , 75, 230-45	20
1636	Damped oscillations in the adaptive response of the iron homeostasis network of <i>E. coli</i> . <b>2010</b> , 76, 428-36	17
1635	DnaA-ATP acts as a molecular switch to control levels of ribonucleotide reductase expression in <i>Escherichia coli</i> . <b>2010</b> , 76, 1555-71	35
1634	Transcription, processing and function of CRISPR cassettes in <i>Escherichia coli</i> . <b>2010</b> , 77, 1367-79	187
1633	Removal of the outer Kdo from <i>Helicobacter pylori</i> lipopolysaccharide and its impact on the bacterial surface. <b>2010</b> , 78, 837-52	37
1632	An essential role for UshA in processing of extracellular flavin electron shuttles by <i>Shewanella oneidensis</i> . <b>2010</b> , 78, 519-32	62
1631	Importance of the tmRNA system for cell survival when transcription is blocked by DNA-protein cross-links. <b>2010</b> , 78, 686-700	6
1630	Ribosome rescue by <i>Escherichia coli</i> ArfA (YhdL) in the absence of trans-translation system. <b>2010</b> , 78, 796-808	106
1629	The critical role of S-lactoylglutathione formation during methylglyoxal detoxification in <i>Escherichia coli</i> . <b>2010</b> , 78, 1577-90	33
1628	A paralog of lysyl-tRNA synthetase aminoacylates a conserved lysine residue in translation elongation factor P. <b>2010</b> , 17, 1136-43	108

1627	The key function of a conserved and modified rRNA residue in the ribosomal response to the nascent peptide. <b>2010</b> , 29, 3108-17	117
1626	Differences in signalling by directly and indirectly binding ligands in bacterial chemotaxis. <b>2010</b> , 29, 3484-95	57
1625	Daughter cell separation is controlled by cytokinetic ring-activated cell wall hydrolysis. <b>2010</b> , 29, 1412-22	215
1624	A systematic survey of in vivo obligate chaperonin-dependent substrates. <b>2010</b> , 29, 1552-64	131
1623	A human gut microbial gene catalogue established by metagenomic sequencing. <b>2010</b> , 464, 59-65	7044
1622	Bacterial charity work leads to population-wide resistance. <b>2010</b> , 467, 82-5	423
1621	Rapid profiling of a microbial genome using mixtures of barcoded oligonucleotides. <b>2010</b> , 28, 856-62	236
1620	Shaking up genome engineering. <b>2010</b> , 28, 812-3	2
1619	Reprogramming bacteria to seek and destroy an herbicide. <b>2010</b> , 6, 464-70	144
1618	Widespread known and novel phosphonate utilization pathways in marine bacteria revealed by functional screening and metagenomic analyses. <b>2010</b> , 12, 222-38	135
1617	Escherichia coli toxin/antitoxin pair MqsR/MqsA regulate toxin CspD. <b>2010</b> , 12, 1105-21	125
1616	Identification of conditionally essential genes for growth of Pseudomonas putida KT2440 on minimal medium through the screening of a genome-wide mutant library. <b>2010</b> , 12, 1468-85	55
1615	Escherichia coli K-12 possesses multiple cryptic but functional chaperone-usher fimbriae with distinct surface specificities. <b>2010</b> , 12, 1957-77	117
1614	Towards a systems approach in the genetic analysis of archaea: Accelerating mutant construction and phenotypic analysis in Haloferax volcanii. <b>2010</b> , 2010, 426239	27
1613	Protein aggregation profile of the bacterial cytosol. <b>2010</b> , 5, e9383	48
1612	A kinetic platform for in silico modeling of the metabolic dynamics in Escherichia coli. <b>2010</b> , 3, 97-110	9
1611	Novel Inhibitors of E. coli RecA ATPase Activity. <b>2010</b> , 4, 34-42	36
1610	Delineation of a bacterial starvation stress response network which can mediate antibiotic tolerance development. <b>2010</b> , 54, 1082-93	77

1609	Specificity and kinetics of 23S rRNA modification enzymes RlmH and RluD. <b>2010</b> , 16, 2075-84	14
1608	BB0250 of <i>Borrelia burgdorferi</i> is a conserved and essential inner membrane protein required for cell division. <b>2010</b> , 192, 6105-15	28
1607	Many chromosomal genes modulate MarA-mediated multidrug resistance in <i>Escherichia coli</i> . <b>2010</b> , 54, 2125-34	45
1606	Distribution of fitness effects caused by single-nucleotide substitutions in bacteriophage $\phi$ 1. <b>2010</b> , 185, 603-9	52
1605	RNase R is a highly unstable protein regulated by growth phase and stress. <b>2010</b> , 16, 667-72	41
1604	Quantitative cell array screening to identify regulators of gene expression. <b>2010</b> , 9, 13-23	2
1603	Moonlighting glutamate formiminotransferases can functionally replace 5-formyltetrahydrofolate cycloligase. <b>2010</b> , 285, 41557-66	22
1602	Identification of transport-critical residues in a folate transporter from the folate-biopterin transporter (FBT) family. <b>2010</b> , 285, 2867-75	18
1601	Global approaches for finding small RNA and small open reading frame functions. <b>2010</b> , 192, 26-8	4
1600	The Rut pathway for pyrimidine degradation: novel chemistry and toxicity problems. <b>2010</b> , 192, 4089-102	68
1599	Recruitment of genes and enzymes conferring resistance to the nonnatural toxin bromoacetate. <b>2010</b> , 107, 17968-73	21
1598	Characterization of a novel riboswitch-regulated lysine transporter in <i>Aggregatibacter actinomycetemcomitans</i> . <b>2010</b> , 192, 6240-50	12
1597	Small RNAs and small proteins involved in resistance to cell envelope stress and acid shock in <i>Escherichia coli</i> : analysis of a bar-coded mutant collection. <b>2010</b> , 192, 59-67	76
1596	The <i>Escherichia coli</i> CRISPR system protects from $\lambda$ lysogenization, lysogens, and prophage induction. <b>2010</b> , 192, 6291-4	131
1595	Inefficient Tat-dependent export of periplasmic amidases in an <i>Escherichia coli</i> strain with mutations in two DedA family genes. <b>2010</b> , 192, 807-18	32
1594	Mutational fitness effects in RNA and single-stranded DNA viruses: common patterns revealed by site-directed mutagenesis studies. <b>2010</b> , 365, 1975-82	124
1593	The LysR-type transcriptional regulator QseD alters type three secretion in enterohemorrhagic <i>Escherichia coli</i> and motility in K-12 <i>Escherichia coli</i> . <b>2010</b> , 192, 3699-712	26
1592	Cross-species chemogenomic profiling reveals evolutionarily conserved drug mode of action. <i>Molecular Systems Biology</i> , <b>2010</b> , 6, 451	12.2 108

1591	Escherichia coli strains engineered for homofermentative production of D-lactic acid from glycerol. <b>2010</b> , 76, 4327-36	119
1590	Novel antibiotic-free plasmid selection system based on complementation of host auxotrophy in the NAD de novo synthesis pathway. <b>2010</b> , 76, 2295-303	29
1589	Increased Pho regulon activation correlates with decreased virulence of an avian pathogenic Escherichia coli O78 strain. <b>2010</b> , 78, 5324-31	28
1588	Regulation of high-affinity iron acquisition homologues in the tsetse fly symbiont Sodalis glossinidius. <b>2010</b> , 192, 3780-7	15
1587	Imaging OmpR binding to native chromosomal loci in Escherichia coli. <b>2010</b> , 192, 4045-53	6
1586	RecA4142 causes SOS constitutive expression by loading onto reversed replication forks in Escherichia coli K-12. <b>2010</b> , 192, 2575-82	8
1585	A role for tetrahydrofolates in the metabolism of iron-sulfur clusters in all domains of life. <b>2010</b> , 107, 10412-7	63
1584	Appropriate maturation and folding of 16S rRNA during 30S subunit biogenesis are critical for translational fidelity. <b>2010</b> , 107, 4567-72	43
1583	Deciphering the catalytic domain of colicin M, a peptidoglycan lipid II-degrading enzyme. <b>2010</b> , 285, 12378-89	31
1582	A proteomic analysis reveals differential regulation of the $\beta$ -dependent yciGFE(katN) locus by YncC and H-NS in Salmonella and Escherichia coli K-12. <b>2010</b> , 9, 2601-16	16
1581	Fine-tuning of the ribosomal decoding center by conserved methyl-modifications in the Escherichia coli 16S rRNA. <b>2010</b> , 38, 1341-52	122
1580	Translational defects in a mutant deficient in YajL, the bacterial homolog of the parkinsonism-associated protein DJ-1. <b>2010</b> , 192, 6302-6	19
1579	N7-Methylguanine at position 46 (m7G46) in tRNA from Thermus thermophilus is required for cell viability at high temperatures through a tRNA modification network. <b>2010</b> , 38, 942-57	72
1578	Translational activation of rpoS mRNA by the non-coding RNA DsrA and Hfq does not require ribosome binding. <b>2010</b> , 38, 1284-93	34
1577	Different effects of transcriptional regulators MarA, SoxS and Rob on susceptibility of Escherichia coli to cationic antimicrobial peptides (CAMPs): Rob-dependent CAMP induction of the marRAB operon. <b>2010</b> , 156, 570-578	34
1576	Insights into the structure, function and evolution of the radical-SAM 23S rRNA methyltransferase Cfr that confers antibiotic resistance in bacteria. <b>2010</b> , 38, 1652-63	67
1575	FolX and FolM are essential for tetrahydromonapterin synthesis in Escherichia coli and Pseudomonas aeruginosa. <b>2010</b> , 192, 475-82	35
1574	A universal TagModule collection for parallel genetic analysis of microorganisms. <b>2010</b> , 38, e146	46

1573	Overlapping repressor binding sites result in additive regulation of Escherichia coli FadH by FadR and ArcA. <b>2010</b> , 192, 4289-99		47
1572	E. coli hypoxia-inducible factor ArcA mediates lifespan extension in a lipoic acid synthase mutant by suppressing acetyl-CoA synthetase. <b>2010</b> , 391, 1139-47		11
1571	Discovery and characterization of three new Escherichia coli septal ring proteins that contain a SPOR domain: DamX, DedD, and RlpA. <b>2010</b> , 192, 242-55		62
1570	Genome-wide screening of genes whose enhanced expression affects glycogen accumulation in Escherichia coli. <b>2010</b> , 17, 61-71		33
1569	Emergent cooperation in microbial metabolism. <i>Molecular Systems Biology</i> , <b>2010</b> , 6, 407	12.2	235
1568	Regulatory and metabolic rewiring during laboratory evolution of ethanol tolerance in E. coli. <i>Molecular Systems Biology</i> , <b>2010</b> , 6, 378	12.2	124
1567	Blueprint for antimicrobial hit discovery targeting metabolic networks. <b>2010</b> , 107, 1082-7		88
1566	Evolution, genomic analysis, and reconstruction of isobutanol tolerance in Escherichia coli. <i>Molecular Systems Biology</i> , <b>2010</b> , 6, 449	12.2	216
1565	Expanding metabolism for total biosynthesis of the nonnatural amino acid L-homoalanine. <b>2010</b> , 107, 6234-9		118
1564	Cytochrome d but not cytochrome o rescues the toluidine blue growth sensitivity of arc mutants of Escherichia coli. <b>2010</b> , 192, 391-9		17
1563	An antimicrobial peptide that targets DNA repair intermediates in vitro inhibits Salmonella growth within murine macrophages. <b>2010</b> , 54, 1888-99		27
1562	Use of amino acids as inducers for high-level protein expression in the single-protein production system. <b>2010</b> , 76, 6063-8		12
1561	The ArcBA two-component system of Escherichia coli is regulated by the redox state of both the ubiquinone and the menaquinone pool. <b>2010</b> , 192, 746-54		126
1560	Repellent taxis in response to nickel ion requires neither Ni <sup>2+</sup> transport nor the periplasmic NikA binding protein. <b>2010</b> , 192, 2633-7		28
1559	Bacterial ammeline metabolism via guanine deaminase. <b>2010</b> , 192, 1106-12		27
1558	The ferrichrome uptake pathway in Pseudomonas aeruginosa involves an iron release mechanism with acylation of the siderophore and recycling of the modified desferrichrome. <b>2010</b> , 192, 1212-20		73
1557	Dynamic polar sequestration of excess MurG may regulate enzymatic function. <b>2010</b> , 192, 4597-605		21
1556	Cooperation and Hamilton's rule in a simple synthetic microbial system. <i>Molecular Systems Biology</i> , <b>2010</b> , 6, 398	12.2	73

1555	Engineered respiro-fermentative metabolism for the production of biofuels and biochemicals from fatty acid-rich feedstocks. <b>2010</b> , 76, 5067-78	51
1554	The <i>Escherichia coli</i> <i>mqsR</i> and <i>ygiT</i> genes encode a new toxin-antitoxin pair. <b>2010</b> , 192, 2908-19	56
1553	Metabolic analysis of wild-type <i>Escherichia coli</i> and a pyruvate dehydrogenase complex (PDHC)-deficient derivative reveals the role of PDHC in the fermentative metabolism of glucose. <b>2010</b> , 285, 31548-58	25
1552	Role of transmembrane domain 8 in substrate selectivity and translocation of SteT, a member of the L-amino acid transporter (LAT) family. <b>2010</b> , 285, 28764-76	11
1551	Protein aggregation in a mutant deficient in <i>yajL</i> , the bacterial homolog of the Parkinsonism-associated protein DJ-1. <b>2010</b> , 285, 10328-36	32
1550	Polysaccharide capsule and sialic acid-mediated regulation promote biofilm-like intracellular bacterial communities during cystitis. <b>2010</b> , 78, 963-75	96
1549	Directed epitope delivery across the <i>Escherichia coli</i> outer membrane through the porin OmpF. <b>2010</b> , 107, 21412-7	73
1548	CsrA and Cra influence <i>Shigella flexneri</i> pathogenesis. <b>2010</b> , 78, 4674-82	48
1547	Analysis of RuvABC and RecG involvement in the <i>Escherichia coli</i> response to the covalent topoisomerase-DNA complex. <b>2010</b> , 192, 4445-51	11
1546	Activation of the CpxRA system by deletion of <i>cpxA</i> impairs the ability of <i>Haemophilus ducreyi</i> to infect humans. <b>2010</b> , 78, 3898-904	50
1545	Coordinated regulation of 23S rRNA maturation in <i>Escherichia coli</i> . <b>2010</b> , 192, 1405-9	13
1544	YieJ (CbrC) mediates CreBC-dependent colicin E2 tolerance in <i>Escherichia coli</i> . <b>2010</b> , 192, 3329-36	11
1543	Control of AmtB-GlnK complex formation by intracellular levels of ATP, ADP, and 2-oxoglutarate. <b>2010</b> , 285, 31037-45	59
1542	A novel mechanism for ribonuclease regulation: transfer-messenger RNA (tmRNA) and its associated protein SmpB regulate the stability of RNase R. <b>2010</b> , 285, 29054-8	32
1541	Constraint-based model of <i>Shewanella oneidensis</i> MR-1 metabolism: a tool for data analysis and hypothesis generation. <b>2010</b> , 6, e1000822	101
1540	Essential biological processes of an emerging pathogen: DNA replication, transcription, and cell division in <i>Acinetobacter</i> spp. <b>2010</b> , 74, 273-97	56
1539	Functional and molecular analysis of <i>Escherichia coli</i> strains lacking multiple DEAD-box helicases. <b>2010</b> , 16, 1386-92	42
1538	An automated phenotype-driven approach (GeneForce) for refining metabolic and regulatory models. <b>2010</b> , 6, e1000970	41

1537	A MATE-family efflux pump rescues the Escherichia coli 8-oxoguanine-repair-deficient mutator phenotype and protects against H <sub>2</sub> O <sub>2</sub> killing. <b>2010</b> , 6, e1000931	28
1536	Genetic basis of growth adaptation of Escherichia coli after deletion of <i>pgi</i> , a major metabolic gene. <b>2010</b> , 6, e1001186	99
1535	A forward-genetic screen and dynamic analysis of lambda phage host-dependencies reveals an extensive interaction network and a new anti-viral strategy. <b>2010</b> , 6, e1001017	60
1534	Ciprofloxacin causes persister formation by inducing the TisB toxin in Escherichia coli. <b>2010</b> , 8, e1000317	517
1533	Tight regulation of the <i>intS</i> gene of the KpIE1 prophage: a new paradigm for integrase gene regulation. <b>2010</b> , 6, e1001149	16
1532	Pervasive cryptic epistasis in molecular evolution. <b>2010</b> , 6, e1001162	118
1531	Statistical methods for comparative phenomics using high-throughput phenotype microarrays. <b>2010</b> , 6, Article 29	12
1530	Compensations for diminished terminal oxidase activity in Escherichia coli: cytochrome bd-II-mediated respiration and glutamate metabolism. <b>2010</b> , 285, 18464-72	33
1529	IscR regulates RNase LS activity by repressing <i>rnlA</i> transcription. <b>2010</b> , 185, 823-30	16
1528	Characterization of the branched-chain amino acid aminotransferase enzyme family in tomato. <b>2010</b> , 153, 925-36	59
1527	Rewiring of transcriptional regulatory networks: hierarchy, rather than connectivity, better reflects the importance of regulators. <b>2010</b> , 3, ra79	47
1526	A DNA-binding peroxiredoxin of <i>Coxiella burnetii</i> is involved in countering oxidative stress during exponential-phase growth. <b>2010</b> , 192, 2077-84	23
1525	Aromatic amino acid auxotrophs constructed by recombinant marker exchange in <i>Methylophilus methylotrophus</i> AS1 cells expressing the <i>aroP</i> -encoded transporter of Escherichia coli. <b>2010</b> , 76, 75-83	3
1524	Adding mRNA to the list of spatially organized components in bacteria. <b>2010</b> , 1, 66-67	
1523	Vitamin B6 is required for full motility and virulence in <i>Helicobacter pylori</i> . <b>2010</b> , 1,	30
1522	Identification, characterization, and application of a recombinant antigen for the serological investigation of feline hemotropic <i>Mycoplasma</i> infections. <b>2010</b> , 17, 1917-25	18
1521	YibK is the 2'-O-methyltransferase TrmL that modifies the wobble nucleotide in Escherichia coli tRNA(Leu) isoacceptors. <b>2010</b> , 16, 2131-43	53
1520	Modular electron transfer circuits for synthetic biology: insulation of an engineered biohydrogen pathway. <b>2010</b> , 1, 413-8	15

1519	Functional genomic study of exogenous n-butanol stress in Escherichia coli. <b>2010</b> , 76, 1935-45	188
1518	The antibiotic resistome. <b>2010</b> , 5, 779-88	64
1517	A highly purified, fluorescently labeled in vitro translation system for single-molecule studies of protein synthesis. <b>2010</b> , 472, 221-59	31
1516	Molecular determinants of microbial resistance to thiopeptide antibiotics. <b>2010</b> , 132, 6973-81	52
1515	Exploring gene function and drug action using chemogenomic dosage assays. <b>2010</b> , 470, 233-55	24
1514	Cryptic prophages help bacteria cope with adverse environments. <b>2010</b> , 1, 147	370
1513	Lambda red recombineering in Escherichia coli occurs through a fully single-stranded intermediate. <b>2010</b> , 186, 791-9	126
1512	Functional characterization of alternate optimal solutions of Escherichia coli's transcriptional and translational machinery. <b>2010</b> , 98, 2072-81	46
1511	Cellular proteomes have broad distributions of protein stability. <b>2010</b> , 99, 3996-4002	69
1510	Biosynthesis of chiral 3-hydroxyvalerate from single propionate-unrelated carbon sources in metabolically engineered E. coli. <b>2010</b> , 9, 96	47
1509	Silent mischief: bacteriophage Mu insertions contaminate products of Escherichia coli random mutagenesis performed using suicidal transposon delivery plasmids mobilized by broad-host-range RP4 conjugative machinery. <b>2010</b> , 192, 6418-27	166
1508	Expression of Vibrio harveyi acyl-ACP synthetase allows efficient entry of exogenous fatty acids into the Escherichia coli fatty acid and lipid A synthetic pathways. <b>2010</b> , 49, 718-26	33
1507	Bacteriophage PhiX174's ecological niche and the flexibility of its Escherichia coli lipopolysaccharide receptor. <b>2010</b> , 76, 7310-3	35
1506	The antimicrobial compound reuterin (3-hydroxypropionaldehyde) induces oxidative stress via interaction with thiol groups. <b>2010</b> , 156, 1589-1599	170
1505	A thiolate anion buried within the hydrocarbon ruler perturbs PagP lipid acyl chain selection. <b>2010</b> , 49, 2368-79	15
1504	Antifolate-induced depletion of intracellular glycine and purines inhibits thymineless death in E. coli. <b>2010</b> , 5, 787-95	55
1503	ExbB protein in the cytoplasmic membrane of Escherichia coli forms a stable oligomer. <b>2010</b> , 49, 8721-8	19
1502	Protein localization in Escherichia coli cells: comparison of the cytoplasmic membrane proteins ProP, LacY, ProW, AqpZ, MscS, and MscL. <b>2010</b> , 192, 912-24	92



1501	The biomass objective function. <b>2010</b> , 13, 344-9	419
1500	Role of flavohemoglobin in combating nitrosative stress in uropathogenic <i>Escherichia coli</i> --implications for urinary tract infection. <b>2010</b> , 49, 59-66	36
1499	Control of catalytic cycle by a pair of analogous tRNA modification enzymes. <b>2010</b> , 400, 204-17	32
1498	Novel aspects of the acid response network of <i>E. coli</i> K-12 are revealed by a study of transcriptional dynamics. <b>2010</b> , 401, 726-42	50
1497	Reversible adenylation of glutamine synthetase is dynamically counterbalanced during steady-state growth of <i>Escherichia coli</i> . <b>2010</b> , 404, 522-36	10
1496	Translation factor LepA contributes to tellurite resistance in <i>Escherichia coli</i> but plays no apparent role in the fidelity of protein synthesis. <b>2010</b> , 92, 157-63	46
1495	Toxins Hha and CspD and small RNA regulator Hfq are involved in persister cell formation through MqsR in <i>Escherichia coli</i> . <b>2010</b> , 391, 209-13	183
1494	An evolved <i>Escherichia coli</i> strain for producing hydrogen and ethanol from glycerol. <b>2010</b> , 391, 1033-8	87
1493	Global regulator H-NS and lipoprotein Nlpl influence production of extracellular DNA in <i>Escherichia coli</i> . <b>2010</b> , 401, 197-202	20
1492	Second messenger-mediated adjustment of bacterial swimming velocity. <b>2010</b> , 141, 107-16	342
1491	The transcription factor DksA prevents conflicts between DNA replication and transcription machinery. <b>2010</b> , 141, 595-605	117
1490	Lipoprotein cofactors located in the outer membrane activate bacterial cell wall polymerases. <b>2010</b> , 143, 1110-20	235
1489	Regulation of peptidoglycan synthesis by outer-membrane proteins. <b>2010</b> , 143, 1097-109	271
1488	Comparative transcriptomics of the response of <i>Escherichia coli</i> to the disinfectant monochloramine and to growth conditions inducing monochloramine resistance. <b>2010</b> , 44, 4924-31	18
1487	A novel negative regulation mechanism of bacterial outer membrane proteins in response to antibiotic resistance. <b>2010</b> , 9, 5952-9	47
1486	The <i>Escherichia coli</i> K-12 ORFeome: a resource for comparative molecular microbiology. <b>2010</b> , 11, 470	38
1485	Integration of 'omics' data: does it lead to new insights into host-microbe interactions?. <b>2010</b> , 5, 313-28	30
1484	Persister cells. <b>2010</b> , 64, 357-72	1403

1483	Quantifying <i>E. coli</i> proteome and transcriptome with single-molecule sensitivity in single cells. <b>2010</b> , 329, 533-8	1446
1482	Establishing a quantitative definition of quorum sensing provides insight into the information content of the autoinducer signals in <i>Vibrio harveyi</i> and <i>Escherichia coli</i> . <b>2010</b> , 49, 5621-3	9
1481	Flux balance analysis accounting for metabolite dilution. <b>2010</b> , 11, R43	22
1480	The next frontier of systems biology: higher-order and interspecies interactions. <b>2010</b> , 11, 208	12
1479	Polymer-induced phase separation in <i>Escherichia coli</i> suspensions. <b>2010</b> , 6, 4540	18
1478	Predicting conserved essential genes in bacteria: in silico identification of putative drug targets. <b>2010</b> , 6, 2482-9	44
1477	Antibiotic sensitivity profiles determined with an <i>Escherichia coli</i> gene knockout collection: generating an antibiotic bar code. <b>2010</b> , 54, 1393-403	208
1476	Characterization of the <i>ars</i> gene cluster from extremely arsenic-resistant <i>Microbacterium</i> sp. strain A33. <b>2010</b> , 76, 948-55	52
1475	A multipurpose modular system for high-resolution microscopy at high hydrostatic pressure. <b>2010</b> , 81, 053710	30
1474	Dynamics in the mixed microbial concourse. <b>2010</b> , 24, 2603-14	138
1473	Isolation of a mutant auxotrophic for L-alanine and identification of three major aminotransferases that synthesize L-alanine in <i>Escherichia coli</i> . <b>2011</b> , 75, 930-8	13
1472	Characterizing criticality of proteins by system dynamics. <b>2011</b> ,	
1471	Two ATP phosphoribosyltransferase isozymes of <i>Geobacter sulfurreducens</i> contribute to growth in the presence or absence of histidine and under nitrogen fixation conditions. <b>2011</b> , 57, 547-58	3
1470	Origins of specificity and promiscuity in metabolic networks. <b>2011</b> , 286, 43994-44004	53
1469	The SMC-like protein complex SbcCD enhances DNA polymerase IV-dependent spontaneous mutation in <i>Escherichia coli</i> . <b>2011</b> , 193, 660-9	13
1468	Anaerobic obligatory xylitol production in <i>Escherichia coli</i> strains devoid of native fermentation pathways. <b>2011</b> , 77, 706-9	20
1467	The siderophore-interacting protein YqjH acts as a ferric reductase in different iron assimilation pathways of <i>Escherichia coli</i> . <b>2011</b> , 50, 10951-64	61
1466	Genetic transformation of ammonia-oxidizing bacteria. <b>2011</b> , 486, 389-402	4

1465	Subpopulation-specific metabolic pathway usage in mixed cultures as revealed by reporter protein-based <sup>13</sup> C analysis. <b>2011</b> , 77, 1816-21	29
1464	The CpxR/CpxA two-component system up-regulates two Tat-dependent peptidoglycan amidases to confer bacterial resistance to antimicrobial peptide. <b>2011</b> , 286, 5529-39	66
1463	Role of the biofilm master regulator CsgD in cross-regulation between biofilm formation and flagellar synthesis. <b>2011</b> , 193, 2587-97	124
1462	Antibiotics as probes of biological complexity. <b>2011</b> , 7, 415-23	50
1461	Kinetic and thermodynamic features reveal that <i>Escherichia coli</i> BCP is an unusually versatile peroxiredoxin. <b>2011</b> , 50, 8970-81	35
1460	Engineering <i>Escherichia coli</i> for biodiesel production utilizing a bacterial fatty acid methyltransferase. <b>2011</b> , 77, 8052-61	81
1459	Three-dimensional structure and catalytic mechanism of cytosine deaminase. <b>2011</b> , 50, 5077-85	24
1458	<i>Escherichia coli</i> class Ib ribonucleotide reductase contains a dimanganese(III)-tyrosyl radical cofactor in vivo. <b>2011</b> , 50, 1672-81	61
1457	Mechanism of <i>Vibrio cholerae</i> autoinducer-1 biosynthesis. <b>2011</b> , 6, 356-65	87
1456	Absolute SILAC-compatible expression strain allows Sumo-2 copy number determination in clinical samples. <b>2011</b> , 10, 4869-75	33
1455	Rescue of the orphan enzyme isoguanine deaminase. <b>2011</b> , 50, 5555-7	10
1454	The <i>E. coli</i> monothiol glutaredoxin GrxD forms homodimeric and heterodimeric FeS cluster containing complexes. <b>2011</b> , 50, 8957-69	57
1453	Redesigning <i>Escherichia coli</i> metabolism for anaerobic production of isobutanol. <b>2011</b> , 77, 4894-904	86
1452	Development of an automated platform for high-throughput P1-phage transduction of <i>Escherichia coli</i> . <b>2011</b> , 16, 141-7	6
1451	N-Benzyl-3-sulfonamidopyrrolidines are a New Class of Bacterial DNA Gyrase Inhibitors. <b>2011</b> , 2, 289-292	19
1450	Toxin-antitoxin systems influence biofilm and persister cell formation and the general stress response. <b>2011</b> , 77, 5577-83	308
1449	Genetic interaction maps in <i>Escherichia coli</i> reveal functional crosstalk among cell envelope biogenesis pathways. <b>2011</b> , 7, e1002377	76
1448	Large-scale <sup>13</sup> C-flux analysis reveals distinct transcriptional control of respiratory and fermentative metabolism in <i>Escherichia coli</i> . <i>Molecular Systems Biology</i> , <b>2011</b> , 7, 477	12.2 121

1447	The essential genome of a bacterium. <i>Molecular Systems Biology</i> , <b>2011</b> , 7, 528	12.2	220
1446	Synthetic RNA silencing in bacteria - antimicrobial discovery and resistance breaking. <b>2011</b> , 2, 185		32
1445	ProQ is an RNA chaperone that controls ProP levels in Escherichia coli. <b>2011</b> , 50, 3095-106		63
1444	Modifications of ribosomal RNA: From enzymes to function. <b>2011</b> , 97-110		26
1443	Array-based synthetic genetic screens to map bacterial pathways and functional networks in Escherichia coli. <b>2011</b> , 765, 125-53		4
1442	Fitness effects of mutations in bacteria. <b>2011</b> , 21, 20-35		25
1441	A nuclear magnetic resonance based approach to accurate functional annotation of putative enzymes in the methanogen Methanosarcina acetivorans. <b>2011</b> , 12 Suppl 1, S7		3
1440	Catabolic regulation analysis of Escherichia coli and its crp, mlc, mgsA, pgi and ptsG mutants. <b>2011</b> , 10, 67		54
1439	Escherichia coli BdcA controls biofilm dispersal in Pseudomonas aeruginosa and Rhizobium meliloti. <b>2011</b> , 4, 447		33
1438	Metal selectivity of the Escherichia coli nickel metallochaperone, SlyD. <b>2011</b> , 50, 10666-77		17
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1436	Integrative genome-scale metabolic analysis of Vibrio vulnificus for drug targeting and discovery. <i>Molecular Systems Biology</i> , <b>2011</b> , 7, 460	12.2	128
1435	β-Ketoglutarate coordinates carbon and nitrogen utilization via enzyme I inhibition. <b>2011</b> , 7, 894-901		174
1434	Escherichia coli knock-out mutants with altered electron transfer activity in the Microdox assay and in microbial fuel cells. <b>2011</b> , 91, 138-149		7
1433	Phenotypic landscape of a bacterial cell. <b>2011</b> , 144, 143-56		484
1432	Thermal robustness of signaling in bacterial chemotaxis. <b>2011</b> , 145, 312-21		61
1431	A primary role for release factor 3 in quality control during translation elongation in Escherichia coli. <b>2011</b> , 147, 396-408		41
1430	Escherichia coli K-12 pathogenicity in the pea aphid, Acyrthosiphon pisum, reveals reduced antibacterial defense in aphids. <b>2011</b> , 35, 1091-7		31

1429	Protein acetylation in prokaryotes increases stress resistance. <b>2011</b> , 410, 846-51	56
1428	A new target for an old regulator: H-NS represses transcription of <i>bolA</i> morphogene by direct binding to both promoters. <b>2011</b> , 411, 50-5	10
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1426	SOE-LRed: A simple and time-efficient method to localize genes with point mutations onto the <i>Escherichia coli</i> chromosome. <b>2011</b> , 84, 479-81	6
1425	Structure and function of the glucose PTS transporter from <i>Escherichia coli</i> . <b>2011</b> , 176, 395-403	19
1424	A novel structure of an antikinase and its inhibitor. <b>2011</b> , 405, 214-26	17
1423	Triosephosphate isomerase by consensus design: dramatic differences in physical properties and activity of related variants. <b>2011</b> , 413, 195-208	50
1422	Systematic chromosomal deletion of bacterial ribosomal protein genes. <b>2011</b> , 413, 751-61	81
1421	Cross-species Functionome analysis identifies proteins associated with DNA repair, translation and aerobic respiration as conserved modulators of UV-toxicity. <b>2011</b> , 97, 133-47	6
1420	Environmental factors affecting indole production in <i>Escherichia coli</i> . <b>2011</b> , 162, 108-16	81
1419	Negative regulation of $\sigma^{70}$ -driven promoters by $\sigma^{70}$ . <b>2011</b> , 162, 461-9	2
1418	Complex transcriptional organization regulates an <i>Escherichia coli</i> locus implicated in lipopolysaccharide biogenesis. <b>2011</b> , 162, 470-82	15
1417	Conserved, disordered C terminus of DnaK enhances cellular survival upon stress and DnaK in vitro chaperone activity. <b>2011</b> , 286, 31821-9	44
1416	Maltodextrin-based imaging probes detect bacteria in vivo with high sensitivity and specificity. <b>2011</b> , 10, 602-7	164
1415	Probing bacterial pathogenesis with genetics, genomics, and chemical biology: past, present, and future approaches. <b>2011</b> , 46, 41-66	4
1414	Computer-aided high-throughput cloning of bacteria in liquid medium. <b>2011</b> , 50, 124-7	10
1413	Identifying insertion mutations by whole-genome sequencing. <b>2011</b> , 50, 96-7	13
1412	<i>Ehrlichia chaffeensis</i> tandem repeat proteins and Ank200 are type 1 secretion system substrates related to the repeats-in-toxin exoprotein family. <b>2011</b> , 1, 22	45

1411	Using genomic sequencing for classical genetics in <i>E. coli</i> K12. <b>2011</b> , 6, e16717	41
1410	Genomic library screens for genes involved in n-butanol tolerance in <i>Escherichia coli</i> . <b>2011</b> , 6, e17678	104
1409	A requirement of TolC and MDR efflux pumps for acid adaptation and GadAB induction in <i>Escherichia coli</i> . <b>2011</b> , 6, e18960	38
1408	An active site aromatic triad in <i>Escherichia coli</i> DNA Pol IV coordinates cell survival and mutagenesis in different DNA damaging agents. <b>2011</b> , 6, e19944	17
1407	Molecular strategy for survival at a critical high temperature in <i>Escherichia coli</i> . <b>2011</b> , 6, e20063	52
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1404	Enzymes are enriched in bacterial essential genes. <b>2011</b> , 6, e21683	14
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1402	Stochastic switching induced adaptation in a starved <i>Escherichia coli</i> population. <b>2011</b> , 6, e23953	13
1401	Hypervirulent <i>K. pneumoniae</i> secretes more and more active iron-acquisition molecules than "classical" <i>K. pneumoniae</i> thereby enhancing its virulence. <b>2011</b> , 6, e26734	72
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1398	Competitive genomic screens of barcoded yeast libraries. <b>2011</b> ,	19
1397	Genome-wide essential gene identification in <i>Streptococcus sanguinis</i> . <b>2011</b> , 1, 125	96
1396	Engineering a novel c-di-GMP-binding protein for biofilm dispersal. <b>2011</b> , 13, 631-42	64
1395	Enterobactin is required for biofilm development in reduced-genome <i>Escherichia coli</i> . <b>2011</b> , 13, 3149-62	24
1394	Antimicrobial cationic surfactant, cetyltrimethylammonium bromide, induces superoxide stress in <i>Escherichia coli</i> cells. <b>2011</b> , 110, 568-79	91

1393	Assessing the microbial oxidative stress mechanism of ozone treatment through the responses of <i>Escherichia coli</i> mutants. <b>2011</b> , 111, 136-44	32
1392	A mutation of <i>ispA</i> that is involved in isoprenoid biogenesis can improve growth of <i>Escherichia coli</i> at low temperatures. <b>2011</b> , 55, 885-8	5
1391	Transcription of an antisense RNA of a <i>gadE</i> mRNA is regulated by GadE, the central activator of the acid resistance system in <i>Escherichia coli</i> . <b>2011</b> , 16, 670-80	8
1390	Antagonistic regulation of motility and transcriptome expression by RpoN and RpoS in <i>Escherichia coli</i> . <b>2011</b> , 79, 375-86	64
1389	Deletion of the RluD pseudouridine synthase promotes SsrA peptide tagging of ribosomal protein S7. <b>2011</b> , 79, 331-41	10
1388	Envelope stress is a trigger of CRISPR RNA-mediated DNA silencing in <i>Escherichia coli</i> . <b>2011</b> , 79, 584-99	90
1387	RatA (YfjG), an <i>Escherichia coli</i> toxin, inhibits 70S ribosome association to block translation initiation. <b>2011</b> , 79, 1418-29	54
1386	Assembly and stability of flagellar motor in <i>Escherichia coli</i> . <b>2011</b> , 80, 886-99	92
1385	Complex binding of the FabR repressor of bacterial unsaturated fatty acid biosynthesis to its cognate promoters. <b>2011</b> , 80, 195-218	79
1384	<i>Escherichia coli</i> Rep DNA helicase and error-prone DNA polymerase IV interact physically and functionally. <b>2011</b> , 80, 524-41	13
1383	A novel amidotransferase required for lipoic acid cofactor assembly in <i>Bacillus subtilis</i> . <b>2011</b> , 80, 350-63	40
1382	<i>Escherichia coli</i> YaeJ protein mediates a novel ribosome-rescue pathway distinct from SsrA- and ArfA-mediated pathways. <b>2011</b> , 80, 772-85	100
1381	tmRNA regulates synthesis of the ArfA ribosome rescue factor. <b>2011</b> , 80, 1204-19	68
1380	Antagonistic regulation of <i>dgkA</i> and <i>plsB</i> genes of phospholipid synthesis by multiple stress responses in <i>Escherichia coli</i> . <b>2011</b> , 80, 1260-75	32
1379	Activation of cryptic aminoglycoside resistance in <i>Salmonella enterica</i> . <b>2011</b> , 80, 1464-78	54
1378	Transcription of the plasmid-encoded toxin gene from enteroaggregative <i>Escherichia coli</i> is regulated by a novel co-activation mechanism involving CRP and Fis. <b>2011</b> , 81, 179-91	27
1377	Biogenic ammonia modifies antibiotic resistance at a distance in physically separated bacteria. <b>2011</b> , 81, 705-16	111
1376	ArsAB, a novel enzyme from <i>Sporomusa ovata</i> activates phenolic bases for adenosylcobamide biosynthesis. <b>2011</b> , 81, 952-67	40

1375	Involvement of protein acetylation in glucose-induced transcription of a stress-responsive promoter. <b>2011</b> , 81, 1190-204	79
1374	The <i>Vibrio cholerae</i> fatty acid regulatory protein, FadR, represses transcription of <i>plsB</i> , the gene encoding the first enzyme of membrane phospholipid biosynthesis. <b>2011</b> , 81, 1020-33	35
1373	The <i>Vibrio cholerae</i> VctPDGC system transports catechol siderophores and a siderophore-free iron ligand. <b>2011</b> , 81, 1446-58	24
1372	Novel roles of LeuO in transcription regulation of <i>E. coli</i> genome: antagonistic interplay with the universal silencer H-NS. <b>2011</b> , 82, 378-97	76
1371	cAMP-CRP co-ordinates the expression of the protein acetylation pathway with central metabolism in <i>Escherichia coli</i> . <b>2011</b> , 82, 1110-28	66
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1369	Two pathways for RNase E action in <i>Escherichia coli</i> in vivo and bypass of its essentiality in mutants defective for Rho-dependent transcription termination. <b>2011</b> , 82, 1330-48	44
1368	Suppression of a cold-sensitive mutant initiation factor 1 by alterations in the 23S rRNA maturation region. <b>2011</b> , 278, 1745-56	1
1367	Mutations in 16S rRNA that suppress cold-sensitive initiation factor 1 affect ribosomal subunit association. <b>2011</b> , 278, 3508-17	7
1366	Structural basis for RNA trimming by RNase T in stable RNA 3'-end maturation. <b>2011</b> , 7, 236-43	28
1365	Genetic selection designed to stabilize proteins uncovers a chaperone called Spy. <b>2011</b> , 18, 262-9	115
1364	Mg <sup>2+</sup> facilitates leader peptide translation to induce riboswitch-mediated transcription termination. <b>2011</b> , 30, 1485-96	27
1363	IS5 inserts upstream of the master motility operon <i>flhDC</i> in a quasi-Lamarckian way. <b>2011</b> , 5, 1517-25	36
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1361	Preserving the membrane barrier for small molecules during bacterial protein translocation. <b>2011</b> , 473, 239-42	78
1360	Conversion of proteins into biofuels by engineering nitrogen flux. <b>2011</b> , 29, 346-51	232
1359	Atomic resolution insights into curli fiber biogenesis. <b>2011</b> , 19, 1307-16	74
1358	Essence of life: essential genes of minimal genomes. <b>2011</b> , 21, 562-8	131



1357	Identification of bottlenecks in <i>Escherichia coli</i> engineered for the production of CoQ(10). <b>2011</b> , 13, 733-44	47
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1353	Knockout and pullout recombineering for naturally transformable <i>Burkholderia thailandensis</i> and <i>Burkholderia pseudomallei</i> . <b>2011</b> , 6, 1085-104	25
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1347	Development of L-tryptophan production strains by defined genetic modification in <i>Escherichia coli</i> . <b>2011</b> , 38, 1921-9	61
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1344	Evaluation of genetic manipulation strategies on D-lactate production by <i>Escherichia coli</i> . <b>2011</b> , 62, 981-9	58
1343	Dissipation of proton motive force is not sufficient to induce the phage shock protein response in <i>Escherichia coli</i> . <b>2011</b> , 62, 1374-85	28
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1341	Delineation of the translocation of colicin E7 across the inner membrane of <i>Escherichia coli</i> . <b>2011</b> , 193, 419-28	3
1340	Microbial genotoxicity bioreporters based on <i>sulA</i> activation. <b>2011</b> , 400, 3013-24	26

1339	Ralstonia solanacearum BGI-1 strain KZR-5 is affected in growth, response to cold stress and invasion of tomato. <b>2011</b> , 61, 101-12	7
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1337	Gene replacement techniques for Escherichia coli genome modification. <b>2011</b> , 56, 253-63	14
1336	Bacteria-based in vivo peptide library screening using biopanning approach. <b>2011</b> , 49, 847-51	0
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1332	Evolution combined with genomic study elucidates genetic bases of isobutanol tolerance in Escherichia coli. <b>2011</b> , 10, 18	139
1331	Genetic response to metabolic fluctuations: correlation between central carbon metabolism and DNA replication in Escherichia coli. <b>2011</b> , 10, 19	30
1330	Transcriptional regulation of main metabolic pathways of cyoA, cydB, fnr, and fur gene knockout Escherichia coli in C-limited and N-limited aerobic continuous cultures. <b>2011</b> , 10, 3	44
1329	Strain engineering for improved expression of recombinant proteins in bacteria. <b>2011</b> , 10, 32	121
1328	Metabolic regulation of Escherichia coli and its phoB and phoR genes knockout mutants under phosphate and nitrogen limitations as well as at acidic condition. <b>2011</b> , 10, 39	57
1327	The effects of low-impact mutations in digital organisms. <b>2011</b> , 8, 9	6
1326	Negative auto-regulation increases the input dynamic-range of the arabinose system of Escherichia coli. <b>2011</b> , 5, 111	62
1325	A computational framework for gene regulatory network inference that combines multiple methods and datasets. <b>2011</b> , 5, 52	26
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1322	Deep sequencing reveals as-yet-undiscovered small RNAs in Escherichia coli. <b>2011</b> , 12, 428	47

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1319	Effects of bacteriophage traits on plaque formation. <b>2011</b> , 11, 181	68
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1316	Contribution of bacterial outer membrane vesicles to innate bacterial defense. <b>2011</b> , 11, 258	321
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1311	Improved product-per-glucose yields in P450-dependent propane biotransformations using engineered <i>Escherichia coli</i> . <b>2011</b> , 108, 500-10	47
1310	Metabolic engineering of <i>Escherichia coli</i> for the production of 1,2-propanediol from glycerol. <b>2011</b> , 108, 867-79	96
1309	Multi-factorial engineering of heterologous polyketide production in <i>Escherichia coli</i> reveals complex pathway interactions. <b>2011</b> , 108, 1360-71	23
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1307	Gene dispensability. <b>2011</b> , 22, 547-51	11
1306	Engineering genomes in multiplex. <b>2011</b> , 22, 576-83	24
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1304	Lactate fraction dependent mechanical properties of semitransparent poly(lactate-co-3-hydroxybutyrate)s produced by control of lactyl-CoA monomer fluxes in recombinant <i>Escherichia coli</i> . <b>2011</b> , 154, 255-60	47

1303	Elucidating acetate tolerance in <i>E. coli</i> using a genome-wide approach. <b>2011</b> , 13, 214-24	50
1302	Unbalanced charge distribution as a determinant for dependence of a subset of <i>Escherichia coli</i> membrane proteins on the membrane insertase YidC. <b>2011</b> , 2,	20
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1299	Naturally resident and exogenously applied T4-like and T5-like bacteriophages can reduce <i>Escherichia coli</i> O157:H7 levels in sheep guts. <b>2011</b> , 1, 15-24	61
1298	Engineered pathways for correct disulfide bond oxidation. <b>2011</b> , 14, 2399-412	18
1297	Cardiolipin microdomains localize to negatively curved regions of <i>Escherichia coli</i> membranes. <b>2011</b> , 108, 6264-9	259
1296	Biocompatible artificial DNA linker that is read through by DNA polymerases and is functional in <i>Escherichia coli</i> . <b>2011</b> , 108, 11338-43	119
1295	Production of secretory and extracellular N-linked glycoproteins in <i>Escherichia coli</i> . <b>2011</b> , 77, 871-81	93
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1283	Constitutive expression of the maltoporin LamB in the absence of OmpR damages the cell envelope. <b>2011</b> , 193, 842-53	4
1282	Characterization of <i>Escherichia coli</i> UmuC active-site loops identifies variants that confer UV hypersensitivity. <b>2011</b> , 193, 5400-11	8
1281	Modulation of Rho-dependent transcription termination in <i>Escherichia coli</i> by the H-NS family of proteins. <b>2011</b> , 193, 3832-41	33
1280	Compromised factor-dependent transcription termination in a nusA mutant of <i>Escherichia coli</i> : spectrum of termination efficiencies generated by perturbations of Rho, NusG, NusA, and H-NS family proteins. <b>2011</b> , 193, 3842-50	15
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1277	Characteristic phenotypes associated with ptsN-null mutants in <i>Escherichia coli</i> K-12 are absent in strains with functional ilvG. <b>2011</b> , 193, 4576-81	23
1276	A systems biology approach sheds new light on <i>Escherichia coli</i> acid resistance. <b>2011</b> , 39, 7512-28	65
1275	COMODO: an adaptive coclustering strategy to identify conserved coexpression modules between organisms. <b>2011</b> , 39, e41	19
1274	The <i>Chlamydomonas reinhardtii</i> molybdenum cofactor enzyme crARC has a Zn-dependent activity and protein partners similar to those of its human homologue. <b>2011</b> , 10, 1270-82	38
1273	<i>Helicobacter pylori</i> possesses four coiled-coil-rich proteins that form extended filamentous structures and control cell shape and motility. <b>2011</b> , 193, 4523-30	29
1272	Pseudouridine at position 55 in tRNA controls the contents of other modified nucleotides for low-temperature adaptation in the extreme-thermophilic eubacterium <i>Thermus thermophilus</i> . <b>2011</b> , 39, 2304-18	63
1271	Identification and characterization of ZapC, a stabilizer of the FtsZ ring in <i>Escherichia coli</i> . <b>2011</b> , 193, 1405-13	74
1270	Inactivation of the RluD pseudouridine synthase has minimal effects on growth and ribosome function in wild-type <i>Escherichia coli</i> and <i>Salmonella enterica</i> . <b>2011</b> , 193, 154-62	26
1269	Generalized schemes for high-throughput manipulation of the <i>Desulfovibrio vulgaris</i> genome. <b>2011</b> , 77, 7595-604	13
1268	Genome-wide identification of transcription start sites yields a novel thermosensing RNA and new cyclic AMP receptor protein-regulated genes in <i>Escherichia coli</i> . <b>2011</b> , 193, 2871-4	19

1267	Selective advantage of resistant strains at trace levels of antibiotics: a simple and ultrasensitive color test for detection of antibiotics and genotoxic agents. <b>2011</b> , 55, 1204-10	110
1266	The interaction between a non-pathogenic and a pathogenic strain synergistically enhances extra-intestinal virulence in <i>Escherichia coli</i> . <b>2011</b> , 157, 774-785	11
1265	FadD is required for utilization of endogenous fatty acids released from membrane lipids. <b>2011</b> , 193, 6295-304	52
1264	A single methyltransferase YefA (RlmCD) catalyses both m5U747 and m5U1939 modifications in <i>Bacillus subtilis</i> 23S rRNA. <b>2011</b> , 39, 9368-75	28
1263	Genome-wide detection of novel regulatory RNAs in <i>E. coli</i> . <b>2011</b> , 21, 1487-97	121
1262	YaeJ is a novel ribosome-associated protein in <i>Escherichia coli</i> that can hydrolyze peptidyl-tRNA on stalled ribosomes. <b>2011</b> , 39, 1739-48	89
1261	Recognition of $\beta$ strand motifs by RseB is required for (E) activity in <i>Escherichia coli</i> . <b>2011</b> , 193, 6179-86	10
1260	Exposure to Glycolytic Carbon Sources Reveals a Novel Layer of Regulation for the MalT Regulon. <b>2011</b> , 2011, 107023	2
1259	Differentiating analogous tRNA methyltransferases by fragments of the methyl donor. <b>2011</b> , 17, 1236-46	30
1258	Overcoming fluctuation and leakage problems in the quantification of intracellular 2-oxoglutarate levels in <i>Escherichia coli</i> . <b>2011</b> , 77, 6763-71	29
1257	Coproduction of acetaldehyde and hydrogen during glucose fermentation by <i>Escherichia coli</i> . <b>2011</b> , 77, 6441-50	34
1256	Transcriptome analysis of avian pathogenic <i>Escherichia coli</i> O1 in chicken serum reveals adaptive responses to systemic infection. <b>2011</b> , 79, 1951-60	39
1255	Efficient extension of slipped DNA intermediates by DinB is required to escape primer template realignment by DnaQ. <b>2011</b> , 193, 2637-41	4
1254	Regulation and function of <i>Escherichia coli</i> sugar efflux transporter A (SetA) during glucose-phosphate stress. <b>2011</b> , 193, 143-53	32
1253	Single-gene deletion mutants of <i>Escherichia coli</i> with altered sensitivity to bicyclomycin, an inhibitor of transcription termination factor Rho. <b>2011</b> , 193, 2229-35	20
1252	Characterization of the induction and cellular role of the BaeSR two-component envelope stress response of <i>Escherichia coli</i> . <b>2011</b> , 193, 3367-75	87
1251	Tomato LeTHIC is an Fe-requiring HMP-P synthase involved in thiamine synthesis and regulated by multiple factors. <b>2011</b> , 52, 967-82	7
1250	Dispensability of <i>Escherichia coli</i> 's latent pathways. <b>2011</b> , 108, 3124-9	19

1249	Discovery of epoxyqueuosine (oQ) reductase reveals parallels between halorespiration and tRNA modification. <b>2011</b> , 108, 7368-72		65
1248	The dimeric SOS mutagenesis protein UmuD is active as a monomer. <b>2011</b> , 286, 3607-17		13
1247	Gcn1 and actin binding to Yih1: implications for activation of the eIF2 kinase GCN2. <b>2011</b> , 286, 10341-55		23
1246	A novel putrescine importer required for type 1 pili-driven surface motility induced by extracellular putrescine in <i>Escherichia coli</i> K-12. <b>2011</b> , 286, 10185-92		33
1245	Protein-protein interactions in assembly of lipoic acid on the 2-oxoacid dehydrogenases of aerobic metabolism. <b>2011</b> , 286, 8263-8276		19
1244	Monitoring surface chemical changes in the bacterial cell wall: multivariate analysis of cryo-x-ray photoelectron spectroscopy data. <b>2011</b> , 286, 12389-96		34
1243	A major portion of DNA gyrase inhibitor microcin B17 undergoes an N,O-peptidyl shift during synthesis. <b>2011</b> , 286, 26308-18		14
1242	Alternative fates of paused ribosomes during translation termination. <b>2011</b> , 286, 31105-12		14
1241	Size and conformation limits to secretion of disulfide-bonded loops in autotransporter proteins. <b>2011</b> , 286, 42283-42291		62
1240	De novo designed proteins from a library of artificial sequences function in <i>Escherichia coli</i> and enable cell growth. <b>2011</b> , 6, e15364		80
1239	Identification of <i>Escherichia coli</i> ZapC (YcbW) as a component of the division apparatus that binds and bundles FtsZ polymers. <b>2011</b> , 193, 1393-404		84
1238	Elongation factor P mediates a novel post-transcriptional regulatory pathway critical for bacterial virulence. <b>2011</b> , 2, 147-51		29
1237	Self-organized partitioning of dynamically localized proteins in bacterial cell division. <i>Molecular Systems Biology</i> , <b>2011</b> , 7, 457	12.2	31
1236	Insights into mutagenesis using <i>Escherichia coli</i> chromosomal lacZ strains that enable detection of a wide spectrum of mutational events. <b>2011</b> , 188, 247-62		23
1235	Investigating the predictability of essential genes across distantly related organisms using an integrative approach. <b>2011</b> , 39, 795-807		94
1234	Nonessential plastid-encoded ribosomal proteins in tobacco: a developmental role for plastid translation and implications for reductive genome evolution. <b>2011</b> , 23, 3137-55		111
1233	The population dynamics of bacteria in physically structured habitats and the adaptive virtue of random motility. <b>2011</b> , 108, 4047-52		41
1232	Molybdopterin dinucleotide biosynthesis in <i>Escherichia coli</i> : identification of amino acid residues of molybdopterin dinucleotide transferases that determine specificity for binding of guanine or cytosine nucleotides. <b>2011</b> , 286, 1400-8		24

1231	SlyA protein activates fimB gene expression and type 1 fimbriation in Escherichia coli K-12. <b>2011</b> , 286, 32026-35	25
1230	The pivotal twin histidines and aromatic triad of the Escherichia coli ammonium channel AmtB can be replaced. <b>2011</b> , 108, 13270-4	18
1229	Three phosphatidylglycerol-phosphate phosphatases in the inner membrane of Escherichia coli. <b>2011</b> , 286, 5506-18	71
1228	Pantethine rescues phosphopantothenoylcysteine synthetase and phosphopantothenoylcysteine decarboxylase deficiency in Escherichia coli but not in Pseudomonas aeruginosa. <b>2011</b> , 193, 3304-12	39
1227	Determining the extremes of the cellular NAD(H) level by using an Escherichia coli NAD(+)-auxotrophic mutant. <b>2011</b> , 77, 6133-40	59
1226	Regulation of acid resistance by connectors of two-component signal transduction systems in Escherichia coli. <b>2011</b> , 193, 1222-8	53
1225	The tib adherence locus of enterotoxigenic Escherichia coli is regulated by cyclic AMP receptor protein. <b>2011</b> , 193, 1369-76	9
1224	X-ray structure and site-directed mutagenesis analysis of the Escherichia coli colicin M immunity protein. <b>2011</b> , 193, 205-14	18
1223	Molecular characterization of the glycerol-oxidative pathway of Clostridium butyricum VPI 1718. <b>2011</b> , 193, 3127-34	14
1222	Simple enrichment system for hydrogen producers. <b>2011</b> , 77, 4246-8	6
1221	RcnB is a periplasmic protein essential for maintaining intracellular Ni and Co concentrations in Escherichia coli. <b>2011</b> , 193, 3785-93	44
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1219	YrdC exhibits properties expected of a subunit for a tRNA threonylcarbamoyl transferase. <b>2011</b> , 17, 1678-87	11
1218	YcdY protein of Escherichia coli, an atypical member of the TorD chaperone family. <b>2011</b> , 193, 6512-6	5
1217	Negative effect of glucose on ompA mRNA stability: a potential role of cyclic AMP in the repression of hfq in Escherichia coli. <b>2011</b> , 193, 5833-40	21
1216	Discovery of an Escherichia coli esterase with high activity and enantioselectivity toward 1,2-O-isopropylidenglycerol esters. <b>2011</b> , 77, 6094-9	27
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1214	A fail-safe mechanism in the septal ring assembly pathway generated by the sequential recruitment of cell separation amidases and their activators. <b>2011</b> , 193, 4973-83	79



1213	Membrane stresses induced by overproduction of free fatty acids in <i>Escherichia coli</i> . <b>2011</b> , 77, 8114-28	109
1212	Machine Learning Methods for Identifying Essential Genes and Proteins in Networks. <b>2011</b> , 201-214	
1211	Contributions of the peroxisome and oxidation cycle to biotin synthesis in fungi. <b>2011</b> , 286, 42133-42140	27
1210	Regulation of type VI secretion gene clusters by sigma54 and cognate enhancer binding proteins. <b>2011</b> , 193, 2158-67	62
1209	Pathways of resistance to thymineless death in <i>Escherichia coli</i> and the function of UvrD. <b>2011</b> , 189, 23-36	18
1208	Peptidoglycan hydrolases of <i>Escherichia coli</i> . <b>2011</b> , 75, 636-63	137
1207	Reactive oxygen species mediate bactericidal killing elicited by carbon monoxide-releasing molecules. <b>2011</b> , 286, 26708-17	97
1206	Genetic Engineering. <b>2011</b> , 81-91	0
1205	Novel members of the Cra regulon involved in carbon metabolism in <i>Escherichia coli</i> . <b>2011</b> , 193, 649-59	84
1204	A comprehensive genome-scale reconstruction of <i>Escherichia coli</i> metabolism--2011. <i>Molecular Systems Biology</i> , <b>2011</b> , 7, 535	12.2 726
1203	S1 ribosomal protein and the interplay between translation and mRNA decay. <b>2011</b> , 39, 7702-15	47
1202	Bacterial toxin RelE mediates frequent codon-independent mRNA cleavage from the 5' end of coding regions in vivo. <b>2011</b> , 286, 14770-8	40
1201	An epigenetic switch involving overlapping fur and DNA methylation optimizes expression of a type VI secretion gene cluster. <b>2011</b> , 7, e1002205	86
1200	The Sm-like RNA chaperone Hfq mediates transcription antitermination at Rho-dependent terminators. <b>2011</b> , 30, 2805-16	76
1199	Evidence-based annotation of gene function in <i>Shewanella oneidensis</i> MR-1 using genome-wide fitness profiling across 121 conditions. <b>2011</b> , 7, e1002385	94
1198	Insight into bacterial phosphotransferase system-mediated signaling by interspecies transplantation of a transcriptional regulator. <b>2011</b> , 193, 2013-26	17
1197	The aminoglycoside resistance methyltransferases from the ArmA/Rmt family operate late in the 30S ribosomal biogenesis pathway. <b>2011</b> , 17, 346-55	14
1196	Bacterial cells carrying synthetic dual-function operon survived starvation. <b>2011</b> , 2011, 489265	7

1195	Role of different <i>Escherichia coli</i> hydrogenases in H <sup>+</sup> efflux and F <sub>1</sub> F <sub>0</sub> -ATPase activity during glycerol fermentation at different pH values. <b>2011</b> , 31, 179-84	20
1194	Novel mechanism for fluoroquinolone resistance in <i>Acinetobacter baumannii</i> . <b>2012</b> , 56, 4955-7	15
1193	Critical role of gut microbiota in the production of biologically active, free catecholamines in the gut lumen of mice. <b>2012</b> , 303, G1288-95	348
1192	Patterns of evolutionary conservation of essential genes correlate with their compensability. <b>2012</b> , 8, e1002803	54
1191	Structure of the bifunctional methyltransferase YcbY (RlmKL) that adds the m <sup>7</sup> G2069 and m <sup>2</sup> G2445 modifications in <i>Escherichia coli</i> 23S rRNA. <b>2012</b> , 40, 5138-48	10
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1188	A new zebrafish model of oro-intestinal pathogen colonization reveals a key role for adhesion in protection by probiotic bacteria. <b>2012</b> , 8, e1002815	87
1187	Complex physiology and compound stress responses during fermentation of alkali-pretreated corn stover hydrolysate by an <i>Escherichia coli</i> ethanologen. <b>2012</b> , 78, 3442-57	47
1186	Loss of elongation factor P disrupts bacterial outer membrane integrity. <b>2012</b> , 194, 413-25	55
1185	Role of precursor sequences in the ordered maturation of <i>E. coli</i> 23S ribosomal RNA. <b>2012</b> , 18, 345-53	13
1184	Mu insertions are repaired by the double-strand break repair pathway of <i>Escherichia coli</i> . <b>2012</b> , 8, e1002642	19
1183	The order Bacillales hosts functional homologs of the worrisome cfr antibiotic resistance gene. <b>2012</b> , 56, 3563-7	31
1182	Impact of methylations of m <sup>2</sup> G966/m <sup>5</sup> C967 in 16S rRNA on bacterial fitness and translation initiation. <b>2012</b> , 40, 7885-95	35
1181	Controlled biosynthesis of odd-chain fuels and chemicals via engineered modular metabolic pathways. <b>2012</b> , 109, 17925-30	88
1180	Genome shrinkage and loss of nutrient-providing potential in the obligate symbiont of the primitive termite <i>Mastotermes darwiniensis</i> . <b>2012</b> , 78, 204-10	53
1179	Dimerization of the bacterial biotin carboxylase subunit is required for acetyl coenzyme A carboxylase activity in vivo. <b>2012</b> , 194, 72-8	11
1178	Activation of the cryptic PhnE permease promotes rapid adaptive evolution in a population of <i>Escherichia coli</i> K-12 starved for phosphate. <b>2012</b> , 194, 253-60	15

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1176	SdhE is a conserved protein required for flavinylation of succinate dehydrogenase in bacteria. <b>2012</b> , 287, 18418-28	48
1175	Bacterial whole-cell biosensor for glutamine with applications for quantifying and visualizing glutamine in plants. <b>2012</b> , 78, 604-6	12
1174	SoxS increases the expression of the zinc uptake system ZnuACB in an Escherichia coli murine pyelonephritis model. <b>2012</b> , 194, 1177-85	15
1173	Chemotactic signaling via carbohydrate phosphotransferase systems in Escherichia coli. <b>2012</b> , 109, 12159-64	52
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1170	Differential control of the rate of 5'-end-dependent mRNA degradation in Escherichia coli. <b>2012</b> , 194, 6233-9	23
1169	OGEE: an online gene essentiality database. <b>2012</b> , 40, D901-6	140
1168	Involvement of pnp in survival of UV radiation in Escherichia coli K-12. <b>2012</b> , 158, 1196-1205	29
1167	Base methylations in the double-stranded RNA by a fused methyltransferase bearing unwinding activity. <b>2012</b> , 40, 4071-85	24
1166	Perturbation of the oxidizing environment of the periplasm stimulates the PhoQ/PhoP system in Escherichia coli. <b>2012</b> , 194, 1457-63	37
1165	Rho and NusG suppress pervasive antisense transcription in Escherichia coli. <b>2012</b> , 26, 2621-33	169
1164	Novel role for RNase PH in the degradation of structured RNA. <b>2012</b> , 194, 3883-90	16
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1162	Small multidrug resistance protein EmrE reduces host pH and osmotic tolerance to metabolic quaternary cation osmoprotectants. <b>2012</b> , 194, 5941-8	33
1161	Induction of the Pho regulon suppresses the growth defect of an Escherichia coli sgrS mutant, connecting phosphate metabolism to the glucose-phosphate stress response. <b>2012</b> , 194, 2520-30	19
1160	Fitness cost and interference of Arm/Rmt aminoglycoside resistance with the RsmF housekeeping methyltransferases. <b>2012</b> , 56, 2335-41	28

1159	EcoGene 3.0. <b>2013</b> , 41, D613-24	161
1158	Defects in purine nucleotide metabolism lead to substantial incorporation of xanthine and hypoxanthine into DNA and RNA. <b>2012</b> , 109, 2319-24	67
1157	An outer membrane porin protein modulates phage susceptibility in <i>Edwardsiella ictaluri</i> . <b>2012</b> , 158, 474-487	12
1156	Palladium-mediated cell-surface labeling. <b>2012</b> , 134, 800-3	195
1155	MPlase is a glycolipozyme essential for membrane protein integration. <b>2012</b> , 3, 1260	31
1154	The CDK5 repressor CDK5RAP1 is a methylthiotransferase acting on nuclear and mitochondrial RNA. <b>2012</b> , 40, 6235-40	50
1153	How much can we learn about the function of bacterial rRNA modification by mining large-scale experimental datasets?. <b>2012</b> , 40, 5694-705	15
1152	Global transcriptome response to ionic liquid by a tropical rain forest soil bacterium, <i>Enterobacter lignolyticus</i> . <b>2012</b> , 109, E2173-82	81
1151	A-type carrier protein ErpA is essential for formation of an active formate-nitrate respiratory pathway in <i>Escherichia coli</i> K-12. <b>2012</b> , 194, 346-53	34
1150	Post-translational modification of RNase R is regulated by stress-dependent reduction in the acetylating enzyme Pka (YfiQ). <b>2012</b> , 18, 37-41	43
1149	RNase III controls the degradation of <i>corA</i> mRNA in <i>Escherichia coli</i> . <b>2012</b> , 194, 2214-20	18
1148	The Tat system for membrane translocation of folded proteins recruits the membrane-stabilizing Psp machinery in <i>Escherichia coli</i> . <b>2012</b> , 287, 27834-42	20
1147	Inhibitory cross-talk upon introduction of a new metabolic pathway into an existing metabolic network. <b>2012</b> , 109, E2856-64	57
1146	Experimental evolution of a facultative thermophile from a mesophilic ancestor. <b>2012</b> , 78, 144-55	56
1145	Roles of long and short replication initiation proteins in the fate of IncP-1 plasmids. <b>2012</b> , 194, 1533-43	14
1144	Indole production promotes <i>Escherichia coli</i> mixed-culture growth with <i>Pseudomonas aeruginosa</i> by inhibiting quorum signaling. <b>2012</b> , 78, 411-9	85
1143	Rapid depletion of target proteins allows identification of coincident physiological responses. <b>2012</b> , 194, 5932-40	5
1142	BamE modulates the <i>Escherichia coli</i> beta-barrel assembly machine component BamA. <b>2012</b> , 194, 1002-8	63

1141	Thiosulfate reduction in <i>Salmonella enterica</i> is driven by the proton motive force. <b>2012</b> , 194, 475-85	52
1140	Synthetic quorum-sensing circuit to control consortial biofilm formation and dispersal in a microfluidic device. <b>2012</b> , 3, 613	123
1139	Diversity in the protein N-glycosylation pathways within the <i>Campylobacter</i> genus. <b>2012</b> , 11, 1203-19	63
1138	Recognition of guanosine by dissimilar tRNA methyltransferases. <b>2012</b> , 18, 1687-701	26
1137	Crystal structure of RlmM, the 2'O-ribose methyltransferase for C2498 of <i>Escherichia coli</i> 23S rRNA. <b>2012</b> , 40, 10507-20	8
1136	YqjD is an inner membrane protein associated with stationary-phase ribosomes in <i>Escherichia coli</i> . <b>2012</b> , 194, 4178-83	26
1135	YajL, prokaryotic homolog of parkinsonism-associated protein DJ-1, functions as a covalent chaperone for thiol proteome. <b>2012</b> , 287, 5861-70	34
1134	Crystal structure of DnaK protein complexed with nucleotide exchange factor GrpE in DnaK chaperone system: insight into intermolecular communication. <b>2012</b> , 287, 21461-70	33
1133	Inhibition of acetyl phosphate-dependent transcription by an acetyltable lysine on RNA polymerase. <b>2012</b> , 287, 32147-60	52
1132	The HtrA protease from <i>Streptococcus pneumoniae</i> digests both denatured proteins and the competence-stimulating peptide. <b>2012</b> , 287, 38449-59	66
1131	DegP is involved in Cpx-mediated posttranscriptional regulation of the type III secretion apparatus in enteropathogenic <i>Escherichia coli</i> . <b>2012</b> , 80, 1766-72	22
1130	Genetic analysis of 15 protein folding factors and proteases of the <i>Escherichia coli</i> cell envelope. <b>2012</b> , 194, 3225-33	23
1129	The chbG gene of the chitobiose (chb) operon of <i>Escherichia coli</i> encodes a chitooligosaccharide deacetylase. <b>2012</b> , 194, 4959-71	22
1128	Gateway role for rRNA precursors in ribosome assembly. <b>2012</b> , 194, 6875-82	8
1127	ArcA and AppY antagonize IscR repression of hydrogenase-1 expression under anaerobic conditions, revealing a novel mode of O <sub>2</sub> regulation of gene expression in <i>Escherichia coli</i> . <b>2012</b> , 194, 6892-9	14
1126	Evidence that the folate-dependent proteins YgfZ and MnmEG have opposing effects on growth and on activity of the iron-sulfur enzyme MiaB. <b>2012</b> , 194, 362-7	10
1125	Altered regulation of <i>Escherichia coli</i> biotin biosynthesis in BirA superrepressor mutant strains. <b>2012</b> , 194, 1113-26	36
1124	Multiple deletions reveal the essentiality of the DedA membrane protein family in <i>Escherichia coli</i> . <b>2012</b> , 158, 1162-1171	23

1123	Silencing of toxic gene expression by Fis. <b>2012</b> , 40, 4358-67	7
1122	Delineation of structural domains and identification of functionally important residues in DNA repair enzyme exonuclease VII. <b>2012</b> , 40, 8163-74	7
1121	DprB facilitates inter- and intragenomic recombination in <i>Helicobacter pylori</i> . <b>2012</b> , 194, 3891-903	9
1120	Defective lipoprotein sorting induces <i>lolaA</i> expression through the Rcs stress response phosphorelay system. <b>2012</b> , 194, 3643-50	25
1119	In vivo-validated essential genes identified in <i>Acinetobacter baumannii</i> by using human ascites overlap poorly with essential genes detected on laboratory media. <b>2012</b> , 3,	54
1118	<i>C7orf30</i> specifically associates with the large subunit of the mitochondrial ribosome and is involved in translation. <b>2012</b> , 40, 4040-51	42
1117	Genome-wide gene deletions in <i>Streptococcus sanguinis</i> by high throughput PCR. <b>2012</b> ,	7
1116	Architecture and conservation of the bacterial DNA replication machinery, an underexploited drug target. <b>2012</b> , 13, 352-72	82
1115	Mapping bacterial functional networks and pathways in <i>Escherichia coli</i> using synthetic genetic arrays. <b>2012</b> ,	4
1114	Overview of the genetic tools in the Archaea. <b>2012</b> , 3, 337	34
1113	Aminoacyl-tRNA Synthetases in the Bacterial World. <b>2012</b> , 5,	4
1112	Quick replication fork stop by overproduction of <i>Escherichia coli</i> DinB produces non-proliferative cells with an aberrant chromosome. <b>2012</b> , 87, 221-31	2
1111	Nitrogen metabolism in <i>Sinorhizobium meliloti</i> -alfalfa symbiosis: dissecting the role of GlnD and PII proteins. <b>2012</b> , 25, 355-62	8
1110	<i>Escherichia coli</i> DinB inhibits replication fork progression without significantly inducing the SOS response. <b>2012</b> , 87, 75-87	9
1109	Proteins and DNA elements essential for the CRISPR adaptation process in <i>Escherichia coli</i> . <b>2012</b> , 40, 5569-76	484
1108	The Assembly of Human Complex I. <b>2012</b> , 193-217	1
1107	Production of aromatic compounds by metabolically engineered <i>Escherichia coli</i> with an expanded shikimate pathway. <b>2012</b> , 78, 6203-16	117
1106	Structural insights into methyltransferase KsgA function in 30S ribosomal subunit biogenesis. <b>2012</b> , 287, 10453-10459	55

1105	Functional and structural studies of the disulfide isomerase DsbC from the plant pathogen <i>Xylella fastidiosa</i> reveals a redox-dependent oligomeric modulation in vitro. <b>2012</b> , 279, 3828-43	3
1104	Protein aggregation caused by aminoglycoside action is prevented by a hydrogen peroxide scavenger. <b>2012</b> , 48, 713-22	75
1103	In the fast lane: large-scale bacterial genome engineering. <b>2012</b> , 160, 72-9	22
1102	The bacteriophage HK97 gp15 moron element encodes a novel superinfection exclusion protein. <b>2012</b> , 194, 5012-9	71
1101	Fine-tuning gene networks using simple sequence repeats. <b>2012</b> , 109, 16817-22	72
1100	Gene expression profiling of <i>Escherichia coli</i> in response to interactions with the lettuce rhizosphere. <b>2012</b> , 113, 1076-86	18
1099	Molecular organization, biochemical function, cellular role and evolution of NfuA, an atypical Fe-S carrier. <b>2012</b> , 86, 155-71	71
1098	ArfA recruits release factor 2 to rescue stalled ribosomes by peptidyl-tRNA hydrolysis in <i>Escherichia coli</i> . <b>2012</b> , 86, 37-50	65
1097	Tagaturonate-fructuronate epimerase UxaE, a novel enzyme in the hexuronate catabolic network in <i>Thermotoga maritima</i> . <b>2012</b> , 14, 2920-34	33
1096	A synthetic biology approach to engineer a functional reversal of the Exidation cycle. <b>2012</b> , 1, 541-54	78
1095	Click nucleic acid ligation: applications in biology and nanotechnology. <b>2012</b> , 45, 1258-67	155
1094	The molecular diversity of adaptive convergence. <b>2012</b> , 335, 457-61	511
1093	The <i>Escherichia coli</i> RlmN methyltransferase is a dual-specificity enzyme that modifies both rRNA and tRNA and controls translational accuracy. <b>2012</b> , 18, 1783-95	63
1092	Persister eradication: lessons from the world of natural products. <b>2012</b> , 517, 387-406	21
1091	Coumarin-based inhibitors of <i>Bacillus anthracis</i> and <i>Staphylococcus aureus</i> replicative DNA helicase: chemical optimization, biological evaluation, and antibacterial activities. <b>2012</b> , 55, 10896-908	47
1090	Regulation of expression and catalytic activity of <i>Escherichia coli</i> RsmG methyltransferase. <b>2012</b> , 18, 795-806	12
1089	Cloning large gene clusters from <i>E. coli</i> using in vitro single-strand overlapping annealing. <b>2012</b> , 1, 291-5	7
1088	AhpC is required for optimal production of enterobactin by <i>Escherichia coli</i> . <b>2012</b> , 194, 6748-57	17

1087	Biosynthesis of 4-thiouridine in tRNA in the methanogenic archaeon <i>Methanococcus maripaludis</i> . <b>2012</b> , 287, 36683-92	43
1086	Analysis of in vivo function of predicted isoenzymes:a metabolomic approach. <b>2012</b> , 16, 668-80	4
1085	Repeatability and contingency in the evolution of a key innovation in phage lambda. <b>2012</b> , 335, 428-32	290
1084	Mutational analysis of sulfite reductase hemoprotein reveals the mechanism for coordinated electron and proton transfer. <b>2012</b> , 51, 9857-68	24
1083	Metabolic regulation analysis of wild-type and arcA mutant <i>Escherichia coli</i> under nitrate conditions using different levels of omics data. <b>2012</b> , 8, 2593-604	37
1082	B12 cofactors directly stabilize an mRNA regulatory switch. <b>2012</b> , 492, 133-7	130
1081	Identity and function of a large gene network underlying mutagenic repair of DNA breaks. <b>2012</b> , 338, 1344-8	150
1080	Metabolic network analysis revealed distinct routes of deletion effects between essential and non-essential genes. <b>2012</b> , 8, 1179-86	5
1079	A novel regulator RcdA of the csgD gene encoding the master regulator of biofilm formation in <i>Escherichia coli</i> . <b>2012</b> , 1, 381-94	22
1078	Inhibition of acetate accumulation leads to enhanced production of (R,R)-2,3-butanediol from glycerol in <i>Escherichia coli</i> . <b>2012</b> , 39, 1725-9	27
1077	A bacterial bioreporter panel to assay the cytotoxicity of atmospheric particulate matter. <b>2012</b> , 63, 94-101	21
1076	Two mechanisms produce mutation hotspots at DNA breaks in <i>Escherichia coli</i> . <b>2012</b> , 2, 714-21	54
1075	Enhanced phosphoserine insertion during <i>Escherichia coli</i> protein synthesis via partial UAG codon reassignment and release factor 1 deletion. <b>2012</b> , 586, 3716-22	80
1074	A new hybrid bacteriocin, Ent35-MccV, displays antimicrobial activity against pathogenic Gram-positive and Gram-negative bacteria. <b>2012</b> , 2, 12-9	46
1073	Motility behavior of rpoS-deficient <i>Escherichia coli</i> analyzed by individual cell tracking. <b>2012</b> , 114, 652-6	5
1072	Detection of toxic lignin hydrolysate-related compounds using an inaA::luxCDABE fusion strain. <b>2012</b> , 157, 598-604	12
1071	Synthetic <i>Escherichia coli</i> consortia engineered for syntrophy demonstrate enhanced biomass productivity. <b>2012</b> , 157, 159-66	96
1070	lac operon induction in <i>Escherichia coli</i> : Systematic comparison of IPTG and TMG induction and influence of the transacetylase LacA. <b>2012</b> , 157, 82-8	77



1069	Evidencing the role of lactose permease in IPTG uptake by Escherichia coli in fed-batch high cell density cultures. <b>2012</b> , 157, 391-8	37
1068	Autodisplay of enzymes--molecular basis and perspectives. <b>2012</b> , 161, 92-103	53
1067	Differential regulation of OmpC and OmpF by AtpB in Escherichia coli exposed to nalidixic acid and chlortetracycline. <b>2012</b> , 75, 5898-910	30
1066	Genetically switched D-lactate production in Escherichia coli. <b>2012</b> , 14, 560-8	74
1065	Enhanced co-production of hydrogen and poly-(R)-3-hydroxybutyrate by recombinant PHB producing E. coli over-expressing hydrogenase 3 and acetyl-CoA synthetase. <b>2012</b> , 14, 496-503	28
1064	Harnessing recombination to speed adaptive evolution in Escherichia coli. <b>2012</b> , 14, 487-95	20
1063	Engineering of L-tyrosine oxidation in Escherichia coli and microbial production of hydroxytyrosol. <b>2012</b> , 14, 603-10	54
1062	Engineering Escherichia coli for production of C <sub>12</sub> polyhydroxyalkanoate from glucose. <b>2012</b> , 14, 705-13	50
1061	Bacterial resistance to antisense peptide phosphorodiamidate morpholino oligomers. <b>2012</b> , 56, 6147-53	37
1060	The single-cell chemostat: an agarose-based, microfluidic device for high-throughput, single-cell studies of bacteria and bacterial communities. <b>2012</b> , 12, 1487-94	111
1059	E. coli LoiP (YggG), a metalloprotease hydrolyzing Phe-Phe bonds. <b>2012</b> , 8, 1775-82	14
1058	Alterations of protein complexes and pathways in genetic information flow and response to stimulus contribute to Escherichia coli resistance to balofloxacin. <b>2012</b> , 8, 2303-11	6
1057	Engineering of bacterial methyl ketone synthesis for biofuels. <b>2012</b> , 78, 70-80	113
1056	Genomic analysis of DNA binding and gene regulation by homologous nucleoid-associated proteins IHF and HU in Escherichia coli K12. <b>2012</b> , 40, 3524-37	102
1055	Nanodiscs and SILAC-based mass spectrometry to identify a membrane protein interactome. <b>2012</b> , 11, 1454-9	24
1054	Nonspecific interactions between Escherichia coli NikR and DNA are critical for nickel-activated DNA binding. <b>2012</b> , 51, 7873-9	8
1053	Biological Lactate-Polymers Synthesized by One-Pot Microbial Factory: Enzyme and Metabolic Engineering. <b>2012</b> , 213-235	6
1052	Functional promiscuity of the COG0720 family. <b>2012</b> , 7, 197-209	24

1051	Combinatorial approaches for inverse metabolic engineering applications. <b>2012</b> , 3, e201210021	13
1050	Control of substrate specificity by a single active site residue of the KsgA methyltransferase. <b>2012</b> , 51, 466-74	8
1049	Peptide vaccination is superior to genetic vaccination using a recombiner bacteriophage $\phi$ subunit vaccine. <b>2012</b> , 30, 998-1008	10
1048	Network context and selection in the evolution to enzyme specificity. <b>2012</b> , 337, 1101-4	204
1047	Identification of a target cell permissive factor required for contact-dependent growth inhibition (CDI). <b>2012</b> , 26, 515-25	76
1046	Oxidation of the guanine nucleotide pool underlies cell death by bactericidal antibiotics. <b>2012</b> , 336, 315-9	316
1045	Inactivation of ribosomal protein genes in <i>Bacillus subtilis</i> reveals importance of each ribosomal protein for cell proliferation and cell differentiation. <b>2012</b> , 194, 6282-91	74
1044	Polynucleotide phosphorylase plays an important role in the generation of spontaneous mutations in <i>Escherichia coli</i> . <b>2012</b> , 194, 5613-20	25
1043	A fine scale phenotype-genotype virulence map of a bacterial pathogen. <b>2012</b> , 22, 2541-51	155
1042	Regulation of cell size in response to nutrient availability by fatty acid biosynthesis in <i>Escherichia coli</i> . <b>2012</b> , 109, E2561-8	102
1041	Stoichiometry of MutS and MutL at unrepaired mismatches in vivo suggests a mechanism of repair. <b>2012</b> , 40, 3929-38	38
1040	The costimulatory immunogen LPS induces the B-Cell clones that infiltrate transplanted human kidneys. <b>2012</b> , 109, 6036-41	17
1039	Identification of ZapD as a cell division factor that promotes the assembly of FtsZ in <i>Escherichia coli</i> . <b>2012</b> , 194, 3189-98	84
1038	Transfer-messenger RNA-SmpB protein regulates ribonuclease R turnover by promoting binding of HslUV and Lon proteases. <b>2012</b> , 287, 33472-9	31
1037	ZntR-mediated transcription of <i>zntA</i> responds to nanomolar intracellular free zinc. <b>2012</b> , 111, 173-81	74
1036	YhiQ is RsmJ, the methyltransferase responsible for methylation of G1516 in 16S rRNA of <i>E. coli</i> . <b>2012</b> , 415, 16-21	25
1035	Energy complexes are apparently associated with the switch-motor complex of bacterial flagella. <b>2012</b> , 416, 192-207	19
1034	YajL, the prokaryotic homolog of the Parkinsonism-associated protein DJ-1, protects cells against protein sulfenylation. <b>2012</b> , 421, 662-70	24

1033	Genomic organization of evolutionarily correlated genes in bacteria: limits and strategies. <b>2012</b> , 419, 369-86	26
1032	Dynamic association of BAM complex modules includes surface exposure of the lipoprotein BamC. <b>2012</b> , 422, 545-55	63
1031	The C-terminal repeating units of CsgB direct bacterial functional amyloid nucleation. <b>2012</b> , 422, 376-89	55
1030	A PCR-free cloning method for the targeted $\Phi$ Int-mediated integration of any long DNA fragment, bracketed with meganuclease recognition sites, into the Escherichia coli chromosome. <b>2012</b> , 89, 167-73	18
1029	Mode of regulation and the insulation of bacterial gene expression. <b>2012</b> , 46, 399-407	26
1028	Proteome response of an extraintestinal pathogenic Escherichia coli strain with zoonotic potential to human and chicken sera. <b>2012</b> , 75, 4853-62	15
1027	Indole prevents Escherichia coli cell division by modulating membrane potential. <b>2012</b> , 1818, 1590-4	97
1026	Genome-wide screening of Escherichia coli genes involved in execution and promotion of cell-to-cell transfer of non-conjugative plasmids: rodZ (yfgA) is essential for plasmid acceptance in recipient cells. <b>2012</b> , 421, 119-23	11
1025	Tellurite-exposed Escherichia coli exhibits increased intracellular $\beta$ -ketoglutarate. <b>2012</b> , 421, 721-6	19
1024	Suppression of error prone pathway is responsible for antimutagenic activity of honey. <b>2012</b> , 50, 625-33	22
1023	Functional and biochemical characterisation of the Escherichia coli major facilitator superfamily multidrug transporter MdtM. <b>2012</b> , 94, 1334-46	30
1022	Limonin 7-methoxime interferes with Escherichia coli biofilm formation and attachment in type 1 pili and antigen 43 dependent manner. <b>2012</b> , 26, 427-438	8
1021	An improved counterselection cassette for use in Haemophilus influenzae. <b>2012</b> , 492, 325-8	2
1020	DNA adenine methyltransferase (Dam) controls the expression of the cytotoxic enterotoxin (act) gene of Aeromonas hydrophila via tRNA modifying enzyme-glucose-inhibited division protein (GidA). <b>2012</b> , 498, 280-7	13
1019	Selective protein synthesis by ribosomes with a drug-obstructed exit tunnel. <b>2012</b> , 151, 508-20	108
1018	Autodisplay of functional CYP106A2 in Escherichia coli. <b>2012</b> , 161, 104-12	32
1017	Second-site suppression of RNase E essentiality by mutation of the deaD RNA helicase in Escherichia coli. <b>2012</b> , 194, 1919-26	20
1016	An activator for pyruvoyl-dependent l-aspartate $\beta$ -decarboxylase is conserved in a small group of the $\beta$ proteobacteria including Escherichia coli. <b>2012</b> , 1, 298-310	30

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1014	Identification of essential genes of the periodontal pathogen <i>Porphyromonas gingivalis</i> . <b>2012</b> , 13, 578	106
1013	Zymographic differentiation of [NiFe]-hydrogenases 1, 2 and 3 of <i>Escherichia coli</i> K-12. <b>2012</b> , 12, 134	30
1012	A genetic replacement system for selection-based engineering of essential proteins. <b>2012</b> , 11, 110	6
1011	Modulation of endogenous pathways enhances bioethanol yield and productivity in <i>Escherichia coli</i> . <b>2012</b> , 11, 145	27
1010	New insights into <i>Escherichia coli</i> metabolism: carbon scavenging, acetate metabolism and carbon recycling responses during growth on glycerol. <b>2012</b> , 11, 46	107
1009	Enhancement of thioredoxin/glutaredoxin-mediated L-cysteine synthesis from S-sulfocysteine increases L-cysteine production in <i>Escherichia coli</i> . <b>2012</b> , 11, 62	39
1008	Simultaneous utilization of glucose, xylose and arabinose in the presence of acetate by a consortium of <i>Escherichia coli</i> strains. <b>2012</b> , 11, 77	57
1007	Investigating the effects of perturbations to <i>pgi</i> and <i>eno</i> gene expression on central carbon metabolism in <i>Escherichia coli</i> using (13)C metabolic flux analysis. <b>2012</b> , 11, 87	40
1006	Isobutyraldehyde production from <i>Escherichia coli</i> by removing aldehyde reductase activity. <b>2012</b> , 11, 90	79
1005	Excessive folate synthesis limits lifespan in the <i>C. elegans</i> : <i>E. coli</i> aging model. <b>2012</b> , 10, 67	81
1004	Gap-filling analysis of the iJO1366 <i>Escherichia coli</i> metabolic network reconstruction for discovery of metabolic functions. <b>2012</b> , 6, 30	43
1003	Trade-offs between drug toxicity and benefit in the multi-antibiotic resistance system underlie optimal growth of <i>E. coli</i> . <b>2012</b> , 6, 48	30
1002	Contributions of mutations in <i>acrR</i> and <i>marR</i> genes to organic solvent tolerance in <i>Escherichia coli</i> . <b>2012</b> , 2, 58	27
1001	The phosphotransferase protein EIIA(Ntr) modulates the phosphate starvation response through interaction with histidine kinase PhoR in <i>Escherichia coli</i> . <b>2012</b> , 86, 96-110	47
1000	Measuring the dynamics of <i>E. coli</i> ribosome biogenesis using pulse-labeling and quantitative mass spectrometry. <b>2012</b> , 8, 3325-34	37
999	Genome-scale genetic manipulation methods for exploring bacterial molecular biology. <b>2012</b> , 8, 1626-38	24
998	Functional and expressional analyses of the anti-FlhD4C2 factor gene <i>ydiV</i> in <i>Escherichia coli</i> . <b>2012</b> , 158, 1533-1542	30

997	Mutations in the essential <i>Escherichia coli</i> gene, <i>yqgF</i> , and their effects on transcription. <b>2012</b> , 22, 17-23	12
996	A new type V toxin-antitoxin system where mRNA for toxin <i>GhoT</i> is cleaved by antitoxin <i>GhoS</i> . <b>2012</b> , 8, 855-61	221
995	Aggregation by depletion attraction in cultures of bacteria producing exopolysaccharide. <b>2012</b> , 9, 3490-502	44
994	Novel system for efficient isolation of <i>Clostridium</i> double-crossover allelic exchange mutants enabling markerless chromosomal gene deletions and DNA integration. <b>2012</b> , 78, 8112-21	105
993	Influence of translation on RppH-dependent mRNA degradation in <i>Escherichia coli</i> . <b>2012</b> , 86, 1063-72	30
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990	Persister cells: molecular mechanisms related to antibiotic tolerance. <b>2012</b> , 121-33	132
989	The origins of antibiotic resistance. <b>2012</b> , 13-30	27
988	Ultrasensitive regulation of anapleurosis via allosteric activation of PEP carboxylase. <b>2012</b> , 8, 562-8	61
987	Phage recombinases and their applications. <b>2012</b> , 83, 367-414	44
986	Two plant bacteria, <i>S. meliloti</i> and <i>Ca. Liberibacter asiaticus</i> , share functional <i>znuABC</i> homologues that encode for a high affinity zinc uptake system. <b>2012</b> , 7, e37340	30
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983	Uncharacterized <i>Escherichia coli</i> proteins YdjA and YhjY are related to biohydrogen production. <b>2012</b> , 37, 17778-17787	24
982	Lipid A 3'-O-deacylation by <i>Salmonella</i> outer membrane enzyme LpxR modulates the ability of lipid A to stimulate Toll-like receptor 4. <b>2012</b> , 428, 343-7	15
981	Genome-wide screen for <i>Escherichia coli</i> genes involved in repressing cell-to-cell transfer of non-conjugative plasmids. <b>2012</b> , 428, 445-50	14
980	Biosynthesis of pyrrolopyrimidines. <b>2012</b> , 43, 15-25	55

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978	Essential genes as antimicrobial targets and cornerstones of synthetic biology. <b>2012</b> , 30, 601-7	72
977	Production of C5 carboxylic acids in engineered <i>Escherichia coli</i> . <b>2012</b> , 47, 1965-1971	11
976	Genomic engineering of <i>Escherichia coli</i> by the phage attachment site-based integration system with mutant loxP sites. <b>2012</b> , 47, 2246-2254	16
975	Enhanced resistance to nanoparticle toxicity is conferred by overproduction of extracellular polymeric substances. <b>2012</b> , 241-242, 363-70	128
974	<i>Proteus mirabilis</i> interkingdom swarming signals attract blow flies. <b>2012</b> , 6, 1356-66	78
973	Oxygenase-catalyzed ribosome hydroxylation occurs in prokaryotes and humans. <b>2012</b> , 8, 960-962	112
972	Engineering of a tyrosol-producing pathway, utilizing simple sugar and the central metabolic tyrosine, in <i>Escherichia coli</i> . <b>2012</b> , 60, 979-84	34
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970	Characterization of ligand response properties of the CRP protein from <i>Pseudomonas putida</i> . <b>2012</b> , 57, 3878-3885	1
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968	Bacterial amyloids. <b>2012</b> , 849, 303-20	35
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966	FOCAL: an experimental design tool for systematizing metabolic discoveries and model development. <b>2012</b> , 13, R116	13
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964	Interaction between hydrogenase maturation factors HypA and HypB is required for [NiFe]-hydrogenase maturation. <b>2012</b> , 7, e32592	30
963	Complexity of the <i>Mycoplasma fermentans</i> M64 genome and metabolic essentiality and diversity among mycoplasmas. <b>2012</b> , 7, e32940	5
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958	High confidence prediction of essential genes in <i>Burkholderia cenocepacia</i> . <b>2012</b> , 7, e40064	48
957	Design and characterization of auxotrophy-based amino acid biosensors. <b>2012</b> , 7, e41349	35
956	Improving lambda red genome engineering in <i>Escherichia coli</i> via rational removal of endogenous nucleases. <b>2012</b> , 7, e44638	64
955	FRUIT, a scar-free system for targeted chromosomal mutagenesis, epitope tagging, and promoter replacement in <i>Escherichia coli</i> and <i>Salmonella enterica</i> . <b>2012</b> , 7, e44841	46
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950	Aberrant community architecture and attenuated persistence of uropathogenic <i>Escherichia coli</i> in the absence of individual IHF subunits. <b>2012</b> , 7, e48349	20
949	The ability to enhance the solubility of its fusion partners is an intrinsic property of maltose-binding protein but their folding is either spontaneous or chaperone-mediated. <b>2012</b> , 7, e49589	72
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947	mMaple: a photoconvertible fluorescent protein for use in multiple imaging modalities. <b>2012</b> , 7, e51314	98
946	Exploring the optimal strategy to predict essential genes in microbes. <b>2011</b> , 2, 1-22	4
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944	Design of <i>Escherichia coli</i> Cell Culture for Regulating Alanine Production under Aerobic Conditions. <b>2012</b> , 45, 604-608	3

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940	Properties of small rRNA methyltransferase RsmD: mutational and kinetic study. <b>2012</b> , 18, 1178-85	11
939	Contingency and statistical laws in replicate microbial closed ecosystems. <b>2012</b> , 149, 1164-73	72
938	Attenuation-based dual-fluorescent-protein reporter for screening translation inhibitors. <b>2012</b> , 56, 1774-83	28
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932	YeiR: a metal-binding GTPase from Escherichia coli involved in metal homeostasis. <b>2012</b> , 4, 488-97	33
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930	Mechanism-independent method for predicting response to multidrug combinations in bacteria. <b>2012</b> , 109, 12254-9	97
929	Design of Superior Cell Factories Based on Systems Wide Omics Analysis. <b>2012</b> , 57-81	3
928	Technologies for Biosystems Engineering. <b>2012</b> , 83-115	2
927	Uncoupling of substrate-level phosphorylation in Escherichia coli during glucose-limited growth. <b>2012</b> , 78, 6908-13	17
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924	The aminoglycoside antibiotic kanamycin damages DNA bases in <i>Escherichia coli</i> : caffeine potentiates the DNA-damaging effects of kanamycin while suppressing cell killing by ciprofloxacin in <i>Escherichia coli</i> and <i>Bacillus anthracis</i> . <b>2012</b> , 56, 3216-23	24
923	Superessential reactions in metabolic networks. <b>2012</b> , 109, E1121-30	38
922	Endogenous protein S-Nitrosylation in <i>E. coli</i> : regulation by OxyR. <b>2012</b> , 336, 470-3	130
921	Metabolic engineering for acetate control in large scale fermentation. <b>2012</b> , 834, 283-303	6
920	Slow fitness recovery in a codon-modified viral genome. <b>2012</b> , 29, 2997-3004	49
919	Robustness and accuracy of cell division in <i>Escherichia coli</i> in diverse cell shapes. <b>2012</b> , 109, 6957-62	82
918	Structural perspective of peptidoglycan biosynthesis and assembly. <b>2012</b> , 81, 451-78	223
917	Role of oxidative stress in persister tolerance. <b>2012</b> , 56, 4922-6	182
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909	Isolation and identification of new inner membrane-associated proteins that localize to cell poles in <i>Escherichia coli</i> . <b>2012</b> , 84, 276-95	35
908	Improvement in organic solvent tolerance by double disruptions of <i>proV</i> and <i>marR</i> genes in <i>Escherichia coli</i> . <b>2012</b> , 112, 464-74	25

907	Novel pathway directed by $\lambda$ E to cause cell lysis in Escherichia coli. <b>2012</b> , 17, 234-47	23
906	A novel family of toxin/antitoxin proteins in Bacillus species. <b>2012</b> , 586, 132-6	55
905	Esre: a novel essential non-coding RNA in Escherichia coli. <b>2012</b> , 586, 1195-200	7
904	RecF recombination pathway in Escherichia coli cells lacking RecQ, UvrD and HelD helicases. <b>2012</b> , 11, 419-30	7
903	Polyhydroxyalkanoates production from cellulose hydrolysate in Escherichia coli LS5218 with superior resistance to 5-hydroxymethylfurfural. <b>2012</b> , 113, 70-2	41
902	Growth inhibitory effects of anthranilic acid and its derivatives against Legionella pneumophila. <b>2012</b> , 113, 726-9	9
901	Thiol redox requirements and substrate specificities of recombinant cytochrome c assembly systems II and III. <b>2012</b> , 1817, 911-9	10
900	Disruption of individual nuo-genes leads to the formation of partially assembled NADH:ubiquinone oxidoreductase (complex I) in Escherichia coli. <b>2012</b> , 1817, 863-71	32
899	LHON/MELAS overlap mutation in ND1 subunit of mitochondrial complex I affects ubiquinone binding as revealed by modeling in Escherichia coli NDH-1. <b>2012</b> , 1817, 312-8	16
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897	On the function of the various quinone species in Escherichia coli. <b>2012</b> , 279, 3364-73	54
896	Hydrogen production by recombinant Escherichia coli strains. <b>2012</b> , 5, 214-25	50
895	Bacterial persistence increases as environmental fitness decreases. <b>2012</b> , 5, 509-22	101
894	A bacterial reporter panel for the detection and classification of antibiotic substances. <b>2012</b> , 5, 536-48	35
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890	A protein export pathway involving Escherichia coli porins. <b>2012</b> , 20, 1154-66	37

889	Effect of gene knockouts of l-tryptophan uptake system on the production of l-tryptophan in <i>Escherichia coli</i> . <b>2012</b> , 47, 340-344	13
888	Development of metal-chelating inhibitors for the Class II fructose 1,6-bisphosphate (FBP) aldolase. <b>2012</b> , 112, 49-58	23
887	Structural evolution of the P22-like phages: comparison of Sf6 and P22 procapsid and virion architectures. <b>2012</b> , 427, 177-88	47
886	The connector SafA interacts with the multi-sensing domain of PhoQ in <i>Escherichia coli</i> . <b>2012</b> , 85, 299-313	32
885	The small protein MbiA interacts with MreB and modulates cell shape in <i>Caulobacter crescentus</i> . <b>2012</b> , 85, 1090-104	9
884	Antitoxin DinJ influences the general stress response through transcript stabilizer CspE. <b>2012</b> , 14, 669-79	62
883	The eroded genome of a <i>Psychotria</i> leaf symbiont: hypotheses about lifestyle and interactions with its plant host. <b>2012</b> , 14, 2757-69	46
882	The bacterial thiopurine methyltransferase tellurite resistance process is highly dependent upon aggregation properties and oxidative stress response. <b>2012</b> , 14, 2645-60	15
881	Ribosomal proteins: structure, function, and evolution. <b>2012</b> , 77, 562-74	48
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878	Isolation of improved free fatty acid overproducing strains of via Nile red based high-throughput screening. <b>2012</b> , 31, 17-23	15
877	Effect of purine limitation caused by an amidophosphoribosyl transferase (purF) mutation on polyphosphate kinase 1 (ppk1) gene expression. <b>2012</b> , 34, 27-34	2
876	Specific lipid recognition is a general feature of CD300 and TREM molecules. <b>2012</b> , 64, 39-47	107
875	Acetate scavenging activity in <i>Escherichia coli</i> : interplay of acetyl-CoA synthetase and the PEP-glyoxylate cycle in chemostat cultures. <b>2012</b> , 93, 2109-24	52
874	A convenient method for multiple insertions of desired genes into target loci on the <i>Escherichia coli</i> chromosome. <b>2012</b> , 93, 815-29	19
873	The ChrA homologue from a sulfur-regulated gene cluster in cyanobacterial plasmid pANL confers chromate resistance. <b>2012</b> , 28, 865-9	9
872	Effect of tellurite-mediated oxidative stress on the <i>Escherichia coli</i> glycolytic pathway. <b>2012</b> , 25, 451-8	26

871	Bacterial lipids: metabolism and membrane homeostasis. <b>2013</b> , 52, 249-76	266
870	A component of gamma-radiation-induced cell death in <i>E. coli</i> is programmed and interlinked with activation of caspase-3 and SOS response. <b>2013</b> , 195, 545-57	9
869	The influence of CsgD on the expression of genes of folate metabolism and hmp in <i>Escherichia coli</i> K-12. <b>2013</b> , 195, 559-69	
868	Effect of acidic condition on the metabolic regulation of <i>Escherichia coli</i> and its phoB mutant. <b>2013</b> , 195, 161-71	12
867	Flux analysis and metabolomics for systematic metabolic engineering of microorganisms. <b>2013</b> , 31, 818-26	84
866	Microbial production of the aromatic building-blocks (S)-styrene oxide and (R)-1,2-phenylethanol from renewable resources. <b>2013</b> , 8, 1465-75	34
865	Pyrimidine homeostasis is accomplished by directed overflow metabolism. <b>2013</b> , 500, 237-41	66
864	High-throughput approaches to understanding gene function and mapping network architecture in bacteria. <b>2013</b> , 16, 199-206	31
863	Catabolite regulation analysis of <i>Escherichia coli</i> for acetate overflow mechanism and co-consumption of multiple sugars based on systems biology approach using computer simulation. <b>2013</b> , 168, 155-73	29
862	RecA-mediated SOS response provides a geraniol tolerance in <i>Escherichia coli</i> . <b>2013</b> , 167, 357-64	12
861	Prospecting hydrogen production of <i>Escherichia coli</i> by metabolic network modeling. <b>2013</b> , 38, 11780-11789	10
860	budC knockout in <i>Klebsiella pneumoniae</i> for bioconversion from glycerol to 1,3-propanediol. <b>2013</b> , 60, 557-63	12
859	A new site-specific recombinase-mediated system for targeted multiple genomic deletions employing chimeric loxP and mrrS sites. <b>2013</b> , 97, 6845-56	4
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856	Interspecific bacterial sensing through airborne signals modulates locomotion and drug resistance. <b>2013</b> , 4, 1809	80
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850	Modification of glucose import capacity in Escherichia coli: physiologic consequences and utility for improving DNA vaccine production. <b>2013</b> , 12, 42	20
849	Efficient synthesis of L-lactic acid from glycerol by metabolically engineered Escherichia coli. <b>2013</b> , 12, 7	73
848	Revenge of the phages: defeating bacterial defences. <b>2013</b> , 11, 675-87	421
847	A reverse glyoxylate shunt to build a non-native route from C4 to C2 in Escherichia coli. <b>2013</b> , 19, 116-27	46
846	Two paralogous yefM-yoeB loci from Staphylococcus equorum encode functional toxin-antitoxin systems. <b>2013</b> , 159, 1575-1585	24
845	Functional characterization of the twin ZIP/SLC39 metal transporters, NpunF3111 and NpunF2202 in Nostoc punctiforme. <b>2013</b> , 97, 8649-62	12
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843	Novel CAD-like enzymes from Escherichia coli K-12 as additional tools in chemical production. <b>2013</b> , 97, 5815-24	29
842	Enhanced production of N-acetyl-D-neuraminic acid by multi-approach whole-cell biocatalyst. <b>2013</b> , 97, 4775-84	33
841	Optimizing Cofactor Specificity of Oxidoreductase Enzymes for the Generation of Microbial Production Strains. <b>2013</b> , 9, 236-246	27
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839	Construction of synthetic gene circuits in the Escherichia coli genome. <b>2013</b> , 1073, 157-68	1
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836	Effectiveness of xylose utilization for high yield production of lactate-enriched P(lactate-co-3-hydroxybutyrate) using a lactate-overproducing strain of Escherichia coli and an evolved lactate-polymerizing enzyme. <b>2013</b> , 15, 159-66	46

835	Production of medium chain length fatty alcohols from glucose in <i>Escherichia coli</i> . <b>2013</b> , 20, 177-86	76
834	From essential to persistent genes: a functional approach to constructing synthetic life. <b>2013</b> , 29, 273-9	78
833	Lysine succinylation is a frequently occurring modification in prokaryotes and eukaryotes and extensively overlaps with acetylation. <b>2013</b> , 4, 842-51	452
832	Genetic characterization of moaB mutants of <i>Escherichia coli</i> . <b>2013</b> , 164, 689-94	7
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830	Expression dynamics of RpoS/Crl-dependent genes in <i>Escherichia coli</i> . <b>2013</b> , 164, 838-47	13
829	The contribution of systematic approaches to characterizing the proteins and functions of the endoplasmic reticulum. <b>2013</b> , 5, a013284	11
828	Four products from <i>Escherichia coli</i> pseudogenes increase hydrogen production. <b>2013</b> , 439, 576-9	9
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826	The good of two worlds: increasing complexity in cell-free systems. <b>2013</b> , 24, 1037-43	35
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824	High saturated fatty acids proportion in <i>Escherichia coli</i> enhances the activity of ice-nucleation protein from <i>Pantoea ananatis</i> . <b>2013</b> , 345, 141-6	2
823	Rescuing auxotrophic microorganisms with nonenzymatic chemistry. <b>2013</b> , 52, 11800-3	26
822	Molecular evolution of the nicotinic acid requirement within the <i>Shigella</i> /EIEC pathotype. <b>2013</b> , 303, 651-61	17
821	Genome-wide identification of the targets for genetic manipulation to improve L-lactate production by <i>Saccharomyces cerevisiae</i> by using a single-gene deletion strain collection. <b>2013</b> , 168, 185-93	3
820	A role for EIIA(Ntr) in controlling fluxes in the central metabolism of <i>E. coli</i> K12. <b>2013</b> , 1833, 2879-2889	20
819	Cell division, one-carbon metabolism and methionine synthesis in a metK-deficient <i>Escherichia coli</i> mutant, and a role for MmuM. <b>2013</b> , 159, 2036-2048	9
818	Diverse plant extracts and trans-resveratrol inhibit biofilm formation and swarming of <i>Escherichia coli</i> O157:H7. <b>2013</b> , 29, 1189-203	63

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816	Host range diversification within the IncP-1 plasmid group. <b>2013</b> , 159, 2303-2315	21
815	The protein interaction network of bacteriophage lambda with its host, Escherichia coli. <b>2013</b> , 87, 12745-55	17
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812	Redox proteomics uncovers peroxyxynitrite-sensitive proteins that help Escherichia coli to overcome nitrosative stress. <b>2013</b> , 288, 19698-714	26
811	Characterization of the nucleoid-associated protein YejK. <b>2013</b> , 288, 31503-16	9
810	Analysis of the proteome of intracellular Shigella flexneri reveals pathways important for intracellular growth. <b>2013</b> , 81, 4635-48	34
809	Engineering a synthetic pathway in cyanobacteria for isopropanol production directly from carbon dioxide and light. <b>2013</b> , 20, 101-8	115
808	Metabolic suppression identifies new antibacterial inhibitors under nutrient limitation. <b>2013</b> , 9, 796-804	85
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806	Synthetic effect between envelope stress and lack of outer membrane vesicle production in Escherichia coli. <b>2013</b> , 195, 4161-73	62
805	Bacterial evolution of antibiotic hypersensitivity. <i>Molecular Systems Biology</i> , <b>2013</b> , 9, 700	12.2 204
804	Metabolic and transcriptional response of Escherichia coli with a NADP(+)-dependent glyceraldehyde 3-phosphate dehydrogenase from Streptococcus mutans. <b>2013</b> , 104, 913-24	12
803	The Sinorhizobium meliloti essential porin RopA1 is a target for numerous bacteriophages. <b>2013</b> , 195, 3663-71	11
802	Inactivation of the bacterial RNA polymerase due to acquisition of secondary structure by the $\sigma$ subunit. <b>2013</b> , 288, 25076-25087	17
801	Polyamines are critical for the induction of the glutamate decarboxylase-dependent acid resistance system in Escherichia coli. <b>2013</b> , 288, 33559-33570	21
800	Antitoxin MqsA represses curli formation through the master biofilm regulator CsgD. <b>2013</b> , 3, 3186	65

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797	Why are chlorinated pollutants so difficult to degrade aerobically? Redox stress limits 1,3-dichloroprop-1-ene metabolism by <i>Pseudomonas pavonaceae</i> . <b>2013</b> , 368, 20120377	44
796	Gene-silencing antisense oligomers inhibit acinetobacter growth in vitro and in vivo. <b>2013</b> , 208, 1553-60	45
795	Reductive amination by recombinant <i>Escherichia coli</i> : whole cell biotransformation of 2-keto-3-methylvalerate to L-isoleucine. <b>2013</b> , 168, 289-94	9
794	Antibacterial activity of CTBT (7-chlorotetrazolo[5,1-c]benzo[1,2,4]triazine) generating reactive oxygen species. <b>2013</b> , 168, 147-52	8
793	Quality control of a molybdoenzyme by the Lon protease. <b>2013</b> , 587, 3935-42	6
792	Phenotypic analysis of <i>Escherichia coli</i> mutants lacking L,D-transpeptidases. <b>2013</b> , 159, 1842-1852	42
791	An objective function exploiting suboptimal solutions in metabolic networks. <b>2013</b> , 7, 98	17
790	Manipulating the sleeping beauty mutase operon for the production of 1-propanol in engineered <i>Escherichia coli</i> . <b>2013</b> , 6, 139	26
789	Release of extracellular ATP by bacteria during growth. <b>2013</b> , 13, 301	126
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785	Synthetic non-oxidative glycolysis enables complete carbon conservation. <b>2013</b> , 502, 693-7	233
784	Directed modification of <i>Escherichia coli</i> metabolism for the design of threonine-producing strains. <b>2013</b> , 49, 723-742	21
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779	Deep coverage of the Escherichia coli proteome enables the assessment of false discovery rates in simple proteogenomic experiments. <b>2013</b> , 12, 3420-30	60
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776	Dissociation and re-association of RNA polymerase with DNA during osmotic stress response in Escherichia coli. <b>2013</b> , 41, 315-26	37
775	A cyclic form of N6-threonylcarbamoyladenine as a widely distributed tRNA hypermodification. <b>2013</b> , 9, 105-11	124
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773	Translation elongation factor EF-P alleviates ribosome stalling at polyproline stretches. <b>2013</b> , 339, 82-5	300
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768	Enhancement of geraniol resistance of Escherichia coli by MarA overexpression. <b>2013</b> , 115, 253-8	33
767	Metabolite damage and its repair or pre-emption. <b>2013</b> , 9, 72-80	207
766	Genotype to phenotype: lessons from model organisms for human genetics. <b>2013</b> , 14, 168-78	164
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763	Biosynthesis of ethylene glycol in <i>Escherichia coli</i> . <b>2013</b> , 97, 3409-17	76
762	Potentiating antibacterial activity by predictably enhancing endogenous microbial ROS production. <b>2013</b> , 31, 160-5	259
761	Influence of <i>Escherichia coli</i> hydrogenases on hydrogen fermentation from glycerol. <b>2013</b> , 38, 3905-3912	32
760	Exploring intermolecular interactions of a substrate binding protein using a riboswitch-based sensor. <b>2013</b> , 20, 1502-12	15
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747	Production of acetol from glycerol using engineered <i>Escherichia coli</i> . <b>2013</b> , 149, 238-43	13
746	Genetic manipulations restored the growth fitness of reduced-genome <i>Escherichia coli</i> . <b>2013</b> , 116, 52-8	49

745	Escherichia coli glutathionylspermidine synthetase/amidase: phylogeny and effect on regulation of gene expression. <b>2013</b> , 338, 132-40	15
744	Reconstruction of Genome-Scale Metabolic Networks. <b>2013</b> , 229-250	
743	Systematic identification of allosteric protein-metabolite interactions that control enzyme activity in vivo. <b>2013</b> , 31, 357-61	176
742	Analysis of the bacterial response to Ru(CO) <sub>3</sub> Cl(Glycinate) (CORM-3) and the inactivated compound identifies the role played by the ruthenium compound and reveals sulfur-containing species as a major target of CORM-3 action. <b>2013</b> , 19, 1999-2012	33
741	Recombineering to homogeneity: extension of multiplex recombineering to large-scale genome editing. <b>2013</b> , 8, 515-22	22
740	Systems-level antimicrobial drug and drug synergy discovery. <b>2013</b> , 9, 222-31	117
739	Combined effect of sodium nitrite with high-pressure treatments on the inactivation of Escherichia coli BW25113 and Listeria monocytogenes NCTC 11994. <b>2013</b> , 56, 155-60	9
738	The Escherichia coli SLC26 homologue YchM (DauA) is a C(4)-dicarboxylic acid transporter. <b>2013</b> , 87, 623-40	37
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736	Viable screening targets related to the bacterial cell wall. <b>2013</b> , 1277, 29-53	44
735	Rewriting the bacterial glycocalyx via Suzuki-Miyaura cross-coupling. <b>2013</b> , 49, 2747-9	57
734	Dose-dependent reduction of replication elongation rate by (p)ppGpp in Escherichia coli and Bacillus subtilis. <b>2013</b> , 88, 93-104	48
733	De novo creation of MG1655-derived E. coli strains specifically designed for plasmid DNA production. <b>2013</b> , 97, 611-20	30
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731	Quantitative estimation of activity and quality for collections of functional genetic elements. <b>2013</b> , 10, 347-53	150
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728	Genome-scale engineering for systems and synthetic biology. <i>Molecular Systems Biology</i> , <b>2013</b> , 9, 641	12.2 231

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725	The directed modification of Escherichia coli MG1655 to obtain histidine-producing mutants. <b>2013</b> , 49, 130-135	5
724	Expression of the sub-pathways of the Chloroflexus aurantiacus 3-hydroxypropionate carbon fixation bicycle in E. coli: Toward horizontal transfer of autotrophic growth. <b>2013</b> , 16, 130-9	60
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721	Linking genome-scale metabolic modeling and genome annotation. <b>2013</b> , 985, 61-83	6
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