

JOURNAL OF BACTERIOLOGY
VOL. 187, NO. 8, APRIL; 2005

Guest Commentaries	
Karen L. Visick Layers of Signaling in a Bacterium-Host Association	3603-3606
Minireviews	
Marc Wältermann and Alexander Steinbüchel Neutral Lipid Bodies in Prokaryotes: Recent Insights into Structure, Formation, and Relationship to Eukaryotic Lipid Depots	3607-3619
Microbial Communities and Interactions	
Claudia Lupp and Edward G. Ruby Vibrio fischeri Uses Two Quorum-Sensing Systems for the Regulation of Early and Late Colonization Factors	3620-3629
Physiology and Metabolism	
Florian Bredenbruch, Manfred Nimtz, Victor Wray, Michael Morr, Rolf Müller, and Susanne Häussler Biosynthetic Pathway of Pseudomonas aeruginosa 4-Hydroxy-2-Alkylquinolines	3630-3635
Tsuyoshi Uehara, Kyoko Suefuji, Noelia Valbuena, Brian Meehan, Michael Donegan, and James T. Park Recycling of the Anhydro-N-Acetylmuramic Acid Derived from Cell Wall Murein Involves a Two-Step Conversion to N-Acetylglucosamine-Phosphate	3643-3649
Ana Ruiz-Manzano, Luis Yuste, and Fernando Rojo Levels and Activity of the Pseudomonas putida Global Regulatory Protein Crc Vary According to Growth Conditions	3678-3686
Meng Qi, Karen E. Nelson, Sean C. Daugherty, William C. Nelson, Ioana R. Hance, Mark Morrison, and Cecil W. Forsberg Novel Molecular Features of the Fibrolytic Intestinal Bacterium Fibrobacter intestinalis Not Shared with Fibrobacter succinogenes as Determined by Suppressive Subtractive Hybridization	3739-3751
Charlotte Barrière, Maria Veiga-da-Cunha, Nicolas Pons, Eric Guédon, Sacha A. F. T. van Hijum, Jan Kok, Oscar P. Kuipers, Dusko S. Ehrlich, and Pierre Renault Fructose Utilization in Lactococcus lactis as a Model for Low-GC Gram-Positive Bacteria: Its Regulator, Signal, and DNA-Binding Site	3752-3761
Brice Sperandio, Patrice Polard, Dusko S. Ehrlich, Pierre Renault, and Eric Guédon Sulfur Amino Acid Metabolism and Its Control in Lactococcus lactis IL1403	3762-3778
Christian Trötschel, Dietrich Deutenberg, Brigitte Bathe, Andreas Burkovski, and Reinhard Krämer Characterization of Methionine Export in Corynebacterium glutamicum	3786-3794
Svetlana N. Dedysh, Ksenia V. Smirnova, Valentina N. Khmelenina, Natalia E. Suzina, Werner Liesack, and Yuri A. Trotsenko Methylotrophic Autotrophy in Beijerinckia mobilis	3884-3888
Enzymes and Proteins	
Izumi Orita, Hiroya Yurimoto, Reiko Hirai, Yutaka Kawarabayasi, Yasuyoshi Sakai, and Nobuo Kato	3636-3642

The Archaeon <i>Pyrococcus horikoshii</i> Possesses a Bifunctional Enzyme for Formaldehyde Fixation via the Ribulose Monophosphate Pathway	
Yu Zheng, Richard J. Roberts, Simon Kasif, and Chudi Guan Characterization of Two New Aminopeptidases in <i>Escherichia coli</i>	3671-3677
Nir Shapir, Michael J. Sadowsky, and Lawrence P. Wackett Purification and Characterization of Allophanate Hydrolase (AtzF) from <i>Pseudomonas</i> sp. Strain ADP	3731-3738
Yongli Li, Galina Florova, and Kevin A. Reynolds Alteration of the Fatty Acid Profile of <i>Streptomyces coelicolor</i> by Replacement of the Initiation Enzyme 3-Ketoacyl Acyl Carrier Protein Synthase III (FabH)	3795-3799
Antoine P. Maillard, Sabrina Biarrotte-Sorin, Régis Villet, Stéphane Mesnage, Ahmed Bouhss, Wladimir Sougakoff, Claudine Mayer, and Michel Arthur Structure-Based Site-Directed Mutagenesis of the UDP-MurNAc-Pentapeptide-Binding Cavity of the FemX Alanine Transferase from <i>Weissella viridescens</i>	3833-3838
Susana L. A. Andrade, Francisco Cruz, Catherine L. Drennan, Vijay Ramakrishnan, Douglas C. Rees, James G. Ferry, and Oliver Einsle Structures of the Iron-Sulfur Flavoproteins from <i>Methanosarcina thermophila</i> and <i>Archaeoglobus fulgidus</i>	3848-3854
Ilya V. Manukhov, Daria V. Mamaeva, Sergei M. Rastorguev, Nicolai G. Faleev, Elena A. Morozova, Tatyana V. Demidkina, and Gennadii B. Zavlinskii A Gene Encoding L-Methionine -Lyase Is Present in Enterobacteriaceae Family Genomes: Identification and Characterization of <i>Citrobacter freundii</i> L-Methionine -Lyase	3889-3893
Signal Transduction	
Timothy J. Brickman and Sandra K. Armstrong <i>Bordetella</i> AlcS Transporter Functions in Alcaligin Siderophore Export and Is Central to Inducer Sensing in Positive Regulation of Alcaligin System Gene Expression	3650-3661
Molecular Biology Of Pathogens	
Brian H. Raphael, Sonia Pereira, Gary A. Flom, Qijing Zhang, Julian M. Ketley, and Michael E. Konkel The <i>Campylobacter jejuni</i> Response Regulator, CbrR, Modulates Sodium Deoxycholate Resistance and Chicken Colonization	3662-3670
S. Watanabe, T. Ito, F. Takeuchi, M. Endo, E. Okuno, and K. Hiramatsu Structural Comparison of Ten Serotypes of Staphylocoagulases in <i>Staphylococcus aureus</i>	3698-3707
Jason P. Folster and William M. Shafer Regulation of mtrF Expression in <i>Neisseria gonorrhoeae</i> and Its Role in High-Level Antimicrobial Resistance	3713-3720
Shubha Gopal, Ilya Borovok, Amos Ofer, Michaela Yanku, Gerald Cohen, Werner Goebel, Jürgen Kreft, and Yair Aharonowitz A Multidomain Fusion Protein in <i>Listeria monocytogenes</i> Catalyzes the Two Primary Activities for Glutathione Biosynthesis	3839-3847
Daisuke Takamatsu, Barbara A. Bensing, and Paul M. Sullam Two Additional Components of the Accessory Sec System Mediating Export of the <i>Streptococcus gordonii</i> Platelet-Binding Protein GspB	3878-3883

Genetics and Molecular Biology	
Florian D. Ernst, Georg Homuth, Jeroen Stoof, Ulrike Mäder, Barbara Waidner, Ernst J. Kuipers, Manfred Kist, Johannes G. Kusters, Stefan Bereswill, and Arnoud H. M. van Vliet Iron-Responsive Regulation of the <i>Helicobacter pylori</i> Iron-Cofactored Superoxide Dismutase SodB Is Mediated by Fur	3687-3692
Masashi Tanaka, Issay Narumi, Tomoo Funayama, Masahiro Kikuchi, Hiroshi Watanabe, Tsukasa Matsunaga, Osamu Nikaido, and Kazuo Yamamoto Characterization of Pathways Dependent on the <i>uvrE</i> , <i>uvrA1</i> , or <i>uvrA2</i> Gene Product for UV Resistance in <i>Deinococcus radiodurans</i>	3693-3697
Lisa Nonaka, Sean R. Connell, and Diane E. Taylor 16S rRNA Mutations That Confer Tetracycline Resistance in <i>Helicobacter pylori</i> Decrease Drug Binding in <i>Escherichia coli</i> Ribosomes	3708-3712
Ekaterina Semenova, Yulia Yuzenkova, Jean Peduzzi, Sylvie Rebuffat, and Konstantin Severinov Structure-Activity Analysis of Microcin J25: Distinct Parts of the Threaded Lasso Molecule Are Responsible for Interaction with Bacterial RNA Polymerase	3859-3863
Mark T. Albrecht and Neal L. Schiller Alginate Lyase (AlgL) Activity Is Required for Alginate Biosynthesis in <i>Pseudomonas aeruginosa</i>	3869-3872
Sophie Bleves, Chantal Soscia, Patricia Nogueira-Orlandi, Andrée Lazdunski, and Alain Filloux Quorum Sensing Negatively Controls Type III Secretion Regulon Expression in <i>Pseudomonas aeruginosa</i> PAO1	3898-3902
Bacteriophages, Transposons, and Plasmids	
Louis-Charles Fortier, Julie D. Bouchard, and Sylvain Moineau Expression and Site-Directed Mutagenesis of the Lactococcal Abortive Phage Infection Protein AbiK	3721-3730
Selvi Kunnimalaiyaan, Ross B. Inman, Sheryl A. Rakowski, and Marcin Filutowicz Role of Dimers in Coupling ("Handcuffing") of Plasmid R6K's <i>ori</i> Iterons	3779-3785
Monika Häring, Gisle Vestergaard, Kim Brügger, Reinhard Rachel, Roger A. Garrett, and David Prangishvili Structure and Genome Organization of AFV2, a Novel Archaeal Lipothrixvirus with Unusual Terminal and Core Structures	3855-3858
Gene Regulation	
Karen Bailey-Smith, Sarah J. Todd, Thomas W. Southworth, John Proctor, and Anne Moir The ExsA Protein of <i>Bacillus cereus</i> Is Required for Assembly of Coat and Exosporium onto the Spore Surface	3800-3806
Markus Obrist and Franz Narberhaus Identification of a Turnover Element in Region 2.1 of <i>Escherichia coli</i> 32 by a Bacterial One-Hybrid Approach	3807-3813
Anne Francez-Charlot, Marie-Pierre Castanié-Cornet, Claude Gutierrez, and Kaymeuang Cam Osmotic Regulation of the <i>Escherichia coli</i> <i>bdm</i> (Biofilm-Dependent	3873-3877

Modulation) Gene by the RcsCDB His-Asp Phosphorelay	
Muriel Masi, Jean-Marie Pagès, Claude Villard, and Elizabeth Pradel The eefABC Multidrug Efflux Pump Operon Is Repressed by H-NS in <i>Enterobacter aerogenes</i>	3894-3897
Microbial Cell Biology	
Jiamin Tian, Anthony J. Sinskey, and JoAnne Stubbe Kinetic Studies of Polyhydroxybutyrate Granule Formation in <i>Wautersia eutropha</i> H16 by Transmission Electron Microscopy	3814-3824
Jiamin Tian, Aimin He, Adam G. Lawrence, Pinghua Liu, Nicki Watson, Anthony J. Sinskey, and JoAnne Stubbe Analysis of Transient Polyhydroxybutyrate Production in <i>Wautersia eutropha</i> H16 by Quantitative Western Analysis and Transmission Electron Microscopy	3825-3832
Fabien Gaboriaud, Sidney Baillet, Etienne Dague, and Frédéric Jorand Surface Structure and Nanomechanical Properties of <i>Shewanella putrefaciens</i> Bacteria at Two pH values (4 and 10) Determined by Atomic Force Microscopy	3864-3868
Population Genetics and Evolution	
Kerstin Svensson, Pär Larsson, Daniel Johansson, Mona Byström, Mats Forsman, and Anders Johansson Evolution of Subspecies of <i>Francisella tularensis</i>	3903-3908
VOL. 187, NO. 12, JUNE; 2005	
Guest Commentaries	
Christopher Rensing Form and Function in Metal-Dependent Transcriptional Regulation: Dawn of the Enlightenment	3909-3912
Genetics and Molecular Biology	
Morigen, Felipe Molina, and Kirsten Skarstad Deletion of the datA Site Does Not Affect Once-per-Cell-Cycle Timing but Induces Rifampin-Resistant Replication	3913-3920
Núria Forns, Rosa C. Baños, Carlos Balsalobre, Antonio Juárez, and Cristina Madrid Temperature-Dependent Conjugative Transfer of R27: Role of Chromosome- and Plasmid-Encoded Hha and H-NS Proteins	3950-3959
Gustavo Santoyo, Jaime M. Martínez-Salazar, César Rodríguez, and David Romero Gene Conversion Tracts Associated with Crossovers in <i>Rhizobium etli</i>	4116-4126
Jennifer Loconto, Poorna Viswanathan, Scott J. Nowak, Monica Gludemans, and Lee Kroos Identification of the 4406 Regulatory Region, a Developmental Promoter of <i>Myxococcus xanthus</i> , and a DNA Segment Responsible for Chromosomal Position-Dependent Inhibition of Gene Expression	4149-4162
Åsa Fredriksson, Manuel Ballesteros, Sam Dukan, and Thomas Nyström Defense against Protein Carbonylation by DnaK/DnaJ and Proteases of the Heat Shock Regulon	4207-4213
Genomics and Proteomics	
Wiep Klaas Smits, Jean-Yves F. Dubois, Sierd Bron, Jan Maarten van Dijl, and Oscar P. Kuipers Tricksy Business: Transcriptome Analysis Reveals the Involvement of	3921-3930

Thioredoxin A in Redox Homeostasis, Oxidative Stress, Sulfur Metabolism, and Cellular Differentiation in <i>Bacillus subtilis</i>	
Olga L. Gurvich, Pavel V. Baranov, Raymond F. Gesteland, and John F. Atkins Expression Levels Influence Ribosomal Frameshifting at the Tandem Rare Arginine Codons AGG AGG and AGA AGA in <i>Escherichia coli</i>	4023-4032
Marianna A. Patrauchan, Christine Florizone, Manisha Dosanjh, William W. Mohn, Julian Davies, and Lindsay D. Eltis Catabolism of Benzoate and Phthalate in <i>Rhodococcus</i> sp. Strain RHA1: Redundancies and Convergence	4050-4063
Nancy A. Moran, Helen E. Dunbar, and Jennifer L. Wilcox Regulation of Transcription in a Reduced Bacterial Genome: Nutrient-Provisioning Genes of the Obligate Symbiont <i>Buchnera aphidicola</i>	4229-4237
Keli Ou, Catherine Ong, Shze Yung Koh, Fiona Rodrigues, Siew Hoon Sim, Daniel Wong, Chia Huey Ooi, Kim Chong Ng, Hiroyuki Jikuya, Chin Chin Yau, Sou Yen Soon, Djohan Kesuma, May Ann Lee, and Patrick Tan Integrative Genomic, Transcriptional, and Proteomic Diversity in Natural Isolates of the Human Pathogen <i>Burkholderia pseudomallei</i>	4276-4285
Bacteriophages, Transposons, and Plasmids	
Pascale Bourhy, Lionel Frangeul, Elisabeth Couvé, Philippe Glaser, Isabelle Saint Girons, and Mathieu Picardeau Complete Nucleotide Sequence of the LE1 Prophage from the Spirochete <i>Leptospira biflexa</i> and Characterization of Its Replication and Partition Functions	3931-3940
Shah M. Faruque, Iftekhar Bin Naser, Kazutaka Fujihara, Pornphan Diraphat, Nityananda Chowdhury, M. Kamruzzaman, Firdausi Qadri, Shinji Yamasaki, A. N. Ghosh, and John J. Mekalanos Genomic Sequence and Receptor for the <i>Vibrio cholerae</i> Phage KSF-1: Evolutionary Divergence among Filamentous Vibriophages Mediating Lateral Gene Transfer	4095-4103
Christina S. Vegge, Lone Brøndsted, Horst Neve, Stephen Mc Grath, Douwe van Sinderen, and Finn K. Vogensen Structural Characterization and Assembly of the Distal Tail Structure of the Temperate Lactococcal Bacteriophage TP901-1	4187-4197
Physiology and Metabolism	
Robert E. Feissner, Caroline S. Beckett, Jennifer A. Loughman, and Robert G. Kranz Mutations in Cytochrome Assembly and Periplasmic Redox Pathways in <i>Bordetella pertussis</i>	3941-3949
Olga Zafra, Felipe Cava, Francis Blasco, Axel Magalon, and Jose Berenguer Membrane-Associated Maturation of the Heterotetrameric Nitrate Reductase of <i>Thermus thermophilus</i>	3990-3996
M. Dilani Senadheera, Bernard Guggenheim, Grace A. Spatafora, Yi-Chen Cathy Huang, Jison Choi, David C. I. Hung, Jennifer S. Treglown, Steven D. Goodman, Richard P. Ellen, and Dennis G. Cvitkovitch A VicRK Signal Transduction System in <i>Streptococcus mutans</i> Affects gtfBCD, gbpB, and ftf Expression, Biofilm Formation, and Genetic Competence Development	4064-4076

Carsten Sanders, Meenal Deshmukh, Doniel Astor, Robert G. Kranz, and Fevzi Daldal Overproduction of CcmG and CcmFHRc Fully Suppresses the c-Type Cytochrome Biogenesis Defect of <i>Rhodobacter capsulatus</i> CcmI-Null Mutants	4245-4256
Gene Regulation	
Hiroyuki Arai, Michiko Hayashi, Azusa Kuroi, Masaharu Ishii, and Yasuo Igarashi Transcriptional Regulation of the Flavohemoglobin Gene for Aerobic Nitric Oxide Detoxification by the Second Nitric Oxide-Responsive Regulator of <i>Pseudomonas aeruginosa</i>	3960-3968
Jan R. van der Ploeg Regulation of Bacteriocin Production in <i>Streptococcus mutans</i> by the Quorum-Sensing System Required for Development of Genetic Competence	3980-3989
Kyle N. Erwin, Shunji Nakano, and Peter Zuber Sulfate-Dependent Repression of Genes That Function in Organosulfur Metabolism in <i>Bacillus subtilis</i> Requires Spx	4042-4049
Pascale Joseph, Manoja Ratnayake-Lecamwasam, and Abraham L. Sonenshein A Region of <i>Bacillus subtilis</i> CodY Protein Required for Interaction with DNA	4127-4139
Valéria C. S. Italiani and Marilis V. Marques The Transcription Termination Factor Rho Is Essential and Autoregulated in <i>Caulobacter crescentus</i>	4290-4294
Signal Transduction	
M. E. Sebert, K. P. Patel, M. Plotnick, and J. N. Weiser Pneumococcal HtrA Protease Mediates Inhibition of Competence by the CiaRH Two-Component Signaling System	3969-3979
Microbial Cell Biology	
Nobuyuki Shimohata, Yoshinori Akiyama, and Koreaki Ito Peculiar Properties of DsbA in Its Export across the <i>Escherichia coli</i> Cytoplasmic Membrane	3997-4004
Alex Haddad, R. Wesley Rose, and Mechthild Pohlschröder The <i>Haloferax volcanii</i> FtsY Homolog Is Critical for Haloarchaeal Growth but Does Not Require the A Domain	4015-4022
Miguel Regué, Luis Izquierdo, Sandra Fresno, Núria Piqué, Maria Michela Corsaro, Teresa Naldi, Cristina De Castro, Dietmar Waidelich, Susana Merino, and Juan M. Tomás A Second Outer-Core Region in <i>Klebsiella pneumoniae</i> Lipopolysaccharide	4198-4206
Molecular Biology Of Pathogens	
Brigid M. Davis, Mariam Quinones, Jason Pratt, Yanpeng Ding, and Matthew K. Waldor Characterization of the Small Untranslated RNA RyhB and Its Regulon in <i>Vibrio cholerae</i>	4005-4014
Sunao Iyoda and Haruo Watanabe ClpXP Protease Controls Expression of the Type III Protein Secretion System through Regulation of RpoS and GrIR Levels in Enterohemorrhagic <i>Escherichia coli</i>	4086-4094

Amit Singh, Radhika Gupta, R. A. Vishwakarma, P. R. Narayanan, C. N. Paramasivan, V. D. Ramanathan, and Anil K. Tyagi Requirement of the mymA Operon for Appropriate Cell Wall Ultrastructure and Persistence of Mycobacterium tuberculosis in the Spleens of Guinea Pigs	4173-4186
Plant Microbiology	
María Isabel Ramos-González, María Jesús Campos, and Juan L. Ramos Analysis of Pseudomonas putida KT2440 Gene Expression in the Maize Rhizosphere: In Vitro Expression Technology Capture and Identification of Root-Activated Promoters	4033-4041
Ming Guo, Scott T. Chancey, Fang Tian, Zhengxiang Ge, Yashitola Jamir, and James R. Alfano Pseudomonas syringae Type III Chaperones ShcO1, ShcS1, and ShcS2 Facilitate Translocation of Their Cognate Effectors and Can Substitute for Each Other in the Secretion of HopO1-1	4257-4269
Enzymes and Proteins	
Peter S. Choi, Vladimir M. Grigoryants, Hector D. Abruña, Charles P. Scholes, and James P. Shapleigh Regulation and Function of Cytochrome c' in Rhodobacter sphaeroides 2.4.3	4077-4085
Emilisa Fridrich and Chris Whitfield Characterization of GlaKP, a UDP-Galacturonic Acid C4-Epimerase from Klebsiella pneumoniae with Extended Substrate Specificity	4104-4115
Ryoma Miyake, Yasushi Shigeri, Yoshiro Tatsu, Noboru Yumoto, Midori Umekawa, Yoshiyuki Tsujimoto, Hiroshi Matsui, and Kunihiko Watanabe Two Thimet Oligopeptidase-Like Pz Peptidases Produced by a Collagen- Degrading Thermophile, Geobacillus collagenovorans MO-1	4140-4148
Yehouda Marcus, Hagit Altman-Gueta, Aliza Finkler, and Michael Gurevitz Mutagenesis at Two Distinct Phosphate-Binding Sites Unravels Their Differential Roles in Regulation of Rubisco Activation and Catalysis	4222-4228
W. Keith Ray, Sabrina M. Keith, Andrea M. DeSantis, Jeremy P. Hunt, Timothy J. Larson, Richard F. Helm, and Peter J. Kennelly A Phosphohexamutase from the Archaeon Sulfolobus solfataricus Is Covalently Modified by Phosphorylation on Serine	4270-4275
Longkuan Xiang and Bradley S. Moore Biochemical Characterization of a Prokaryotic Phenylalanine Ammonia Lyase	4286-4289
Population Genetics and Evolution	
Debra E. Bessen, Anand Manoharan, Feng Luo, John E. Wertz, and D. Ashley Robinson Evolution of Transcription Regulatory Genes Is Linked to Niche Specialization in the Bacterial Pathogen Streptococcus pyogenes	4163-4172
Akira Tominaga, Ruiting Lan, and Peter R. Reeves Evolutionary Changes of the flhDC Flagellar Master Operon in Shigella Strains	4295-4302
Structural Biology	
Jun Ye, Ashoka Kandegedara, Philip Martin, and Barry P. Rosen Crystal Structure of the Staphylococcus aureus pI258 CadC	4214-4221

Cd(II)/Pb(II)/Zn(II)-Responsive Repressor	
Vaheh Oganessian, Natalia Oganessian, Paul D. Adams, Jaru Jancarik, Hisao A. Yokota, Rosalind Kim, and Sung-Hou Kim Crystal Structure of the "PhoU-Like" Phosphate Uptake Regulator from <i>Aquifex aeolicus</i>	4238-4244
VOL. 187, NO. 13, JULY; 2005	
Guest Commentaries	
Andreas R. Theisen and J. Colin Murrell Facultative Methanotrophs Revisited	4303-4305
Minireviews	
Maria Kostakioti, Cheryl L. Newman, David G. Thanassi, and Christos Stathopoulos Mechanisms of Protein Export across the Bacterial Outer Membrane	4306-4314
Bacteriophages, Transposons, and Plasmids	
Teruo Tanaka, Hirofumi Ishida, and Tomoko Maehara Characterization of the Replication Region of Plasmid pLS32 from the Natto Strain of <i>Bacillus subtilis</i>	4315-4326
Hans J. W. De Haard, Sandra Bezemer, Aat M. Ledebøer, Wally H. Müller, Piet J. Boender, Sylvain Moineau, Marie-Cecile Coppelmans, Arie J. Verkleij, Leon G. J. Frenken, and C. Theo Verrips Llama Antibodies against a Lactococcal Protein Located at the Tip of the Phage Tail Prevent Phage Infection	4531-4541
Abbie M. Coros, Erin Twiss, Norma P. Tavakoli, and Keith M. Derbyshire Genetic Evidence that GTP Is Required for Transposition of IS903 and Tn552 in <i>Escherichia coli</i>	4598-4606
Molecular Biology Of Pathogens	
S. Sarkisova, M. A. Patrauchan, D. Berglund, D. E. Nivens, and M. J. Franklin Calcium-Induced Virulence Factors Associated with the Extracellular Matrix of <i>Mucoid Pseudomonas aeruginosa</i> Biofilms	4327-4337
Sigrid C. J. De Keersmaecker, Kathleen Marchal, Tine L. A. Verhoeven, Kristof Engelen, Jos Vanderleyden, and Corrella S. Detweiler Microarray Analysis and Motif Detection Reveal New Targets of the <i>Salmonella enterica</i> Serovar Typhimurium HilA Regulatory Protein, Including hilA Itself	4381-4391
Deborah M. Ramsey, Patricia J. Baynham, and Daniel J. Wozniak Binding of <i>Pseudomonas aeruginosa</i> AlgZ to Sites Upstream of the algZ Promoter Leads to Repression of Transcription	4430-4443
Indranil Chatterjee, Petra Becker, Matthias Grundmeier, Markus Bischoff, Greg A. Somerville, Georg Peters, Bhanu Sinha, Niamh Harraghy, Richard A. Proctor, and Mathias Herrmann <i>Staphylococcus aureus</i> ClpC Is Required for Stress Resistance, Aconitase Activity, Growth Recovery, and Death	4488-4496
D. O. Chaffin, L. M. Mentele, and C. E. Rubens Sialylation of Group B Streptococcal Capsular Polysaccharide Is Mediated by cpsK and Is Required for Optimal Capsule Polymerization and Expression	4615-4626
Andrew H. Gaspar, Luciano A. Marraffini, Elizabeth M. Glass, Kristin	4646-4655

L. DeBord, Hung Ton-That, and Olaf Schneewind Bacillus anthracis Sortase A (SrtA) Anchors LPXTG Motif-Containing Surface Proteins to the Cell Wall Envelope	
Shane E. Cotter, Hye-Jeong Yeo, Twyla Juehne, and Joseph W. St. Geme, III Architecture and Adhesive Activity of the Haemophilus influenzae Hsf Adhesin	4656-4664
Barbara Waidner, Klaus Melchers, Frank Nils Stähler, Manfred Kist, and Stefan Bereswill The Helicobacter pylori CrdRS Two-Component Regulation System (HP1364/HP1365) Is Required for Copper-Mediated Induction of the Copper Resistance Determinant CrdA	4683-4688
Genetics and Molecular Biology	
Louise Kausmally, Ola Johnsborg, Merete Lunde, Eivind Knutsen, and Leiv Sigve Håvarstein Choline-Binding Protein D (CbpD) in Streptococcus pneumoniae Is Essential for Competence-Induced Cell Lysis	4338-4345
Dana S. Wade, M. Worth Calfee, Edson R. Rocha, Elizabeth A. Ling, Elana Engstrom, James P. Coleman, and Everett C. Pesci Regulation of Pseudomonas Quinolone Signal Synthesis in Pseudomonas aeruginosa	4372-4380
Renee S. Levings, Diane Lightfoot, Sally R. Partridge, Ruth M. Hall, and Steven P. Djordjevic The Genomic Island SGI1, Containing the Multiple Antibiotic Resistance Region of Salmonella enterica Serovar Typhimurium DT104 or Variants of It, Is Widely Distributed in Other S. enterica Serovars	4401-4409
J. McCarren and B. Brahmsha Transposon Mutagenesis in a Marine Synechococcus Strain: Isolation of Swimming Motility Mutants	4457-4462
Lara Pereira and Timothy R. Hoover Stable Accumulation of 54 in Helicobacter pylori Requires the Novel Protein HP0958	4463-4469
Marina G. Kalyuzhnaya, Natalia Korotkova, Gregory Crowther, Christopher J. Marx, Mary E. Lidstrom, and Ludmila Chistoserdova Analysis of Gene Islands Involved in Methanopterin-Linked C1 Transfer Reactions Reveals New Functions and Provides Evolutionary Insights	4607-4614
Physiology and Metabolism	
Kazunobu Matsushita, Taketo Inoue, Osao Adachi, and Hirohide Toyama Acetobacter aceti Possesses a Proton Motive Force-Dependent Efflux System for Acetic Acid	4346-4352
Nina L. Tuite, Katy R. Fraser, and Conor P. O'Byrne Homocysteine Toxicity in Escherichia coli Is Caused by a Perturbation of Branched-Chain Amino Acid Biosynthesis	4362-4371
Bryan Korithoski, Kirsten Krastel, and Dennis G. Cvitkovitch Transport and Metabolism of Citrate by Streptococcus mutans	4451-4456
Jonathan D. Awaya, Paul M. Fox, and Dulal Borthakur pyd Genes of Rhizobium sp. Strain TAL1145 Are Required for Degradation of 3-Hydroxy-4-Pyridone, an Aromatic Intermediate in	4480-4487

Mimosine Metabolism	
Juana María Navarro-Llorens, Marianna A. Patrauchan, Gordon R. Stewart, Julian E. Davies, Lindsay D. Eltis, and William W. Mohn Phenylacetate Catabolism in <i>Rhodococcus</i> sp. Strain RHA1: a Central Pathway for Degradation of Aromatic Compounds	4497-4504
Byoung-Chan Kim, Ching Leang, Yan-Huai R. Ding, Richard H. Glaven, Maddalena V. Coppi, and Derek R. Lovley OmcF, a Putative c-Type Monoheme Outer Membrane Cytochrome Required for the Expression of Other Outer Membrane Cytochromes in <i>Geobacter sulfurreducens</i>	4505-4513
Julianne H. Grose, Ulfar Bergthorsson, Yaping Xu, Jared Sternecker, Behzad Khodaverdian, and John R. Roth Assimilation of Nicotinamide Mononucleotide Requires Periplasmic AphA Phosphatase in <i>Salmonella enterica</i>	4521-4530
Svetlana N. Dedysh, Claudia Knief, and Peter F. Dunfield Methylocella Species Are Facultatively Methanotrophic	4665-4670
Gene Regulation	
Cristina Bongiorno, Shu Ishikawa, Sophie Stephenson, Naotake Ogasawara, and Marta Perego Synergistic Regulation of Competence Development in <i>Bacillus subtilis</i> by Two Rap-Phr Systems	4353-4361
Gwynedd A. Benders, Bradford C. Powell, and Clyde A. Hutchison, III Transcriptional Analysis of the Conserved <i>ftsZ</i> Gene Cluster in <i>Mycoplasma genitalium</i> and <i>Mycoplasma pneumoniae</i>	4542-4551
Li Luo, Shi-Yi Yao, Anke Becker, Silvia Rüberg, Guan-Qiao Yu, Jia-Bi Zhu, and Hai-Ping Cheng Two New <i>Sinorhizobium meliloti</i> LysR-Type Transcriptional Regulators Required for Nodulation	4562-4572
Microbial Communities and Interactions	
Fernanda C. Petersen, Lin Tao, and Anne A. Scheie DNA Binding-Uptake System: a Link between Cell-to-Cell Communication and Biofilm Formation	4392-4400
Enzymes and Proteins	
Melisa Merdanovic, Elizabeta Sauer, and Joachim Reidl Coupling of NAD ⁺ Biosynthesis and Nicotinamide Ribosyl Transport: Characterization of NadR Ribonucleotide Kinase Mutants of <i>Haemophilus influenzae</i>	4410-4420
C. Kooi, C. R. Corbett, and P. A. Sokol Functional Analysis of the <i>Burkholderia cenocepacia</i> ZmpA Metalloprotease	4421-4429
Alaka Srivastava and Samuel I. Beale Glutamyl-tRNA Reductase of <i>Chlorobium vibrioforme</i> Is a Dissociable Homodimer That Contains One Tightly Bound Heme per Subunit	4444-4450
Stephanie A. Douthit, Mensur Dlakic, Dennis E. Ohman, and Michael J. Franklin Epimerase Active Domain of <i>Pseudomonas aeruginosa</i> AlgG, a Protein That Contains a Right-Handed β -Helix	4573-4583
Microbial Cell Biology	
Robert T. Cartee, W. Thomas Forsee, and Janet Yother Initiation and Synthesis of the <i>Streptococcus pneumoniae</i> Type 3	4470-4479

Capsule on a Phosphatidylglycerol Membrane Anchor	
H. Ellen James, Paul A. Beare, Lois W. Martin, and Iain L. Lamont Mutational Analysis of a Bifunctional Ferrisiderophore Receptor and Signal-Transducing Protein from <i>Pseudomonas aeruginosa</i>	4514-4520
Christina Onufryk, Marie-Laure Crouch, Ferric C. Fang, and Carol A. Gross Characterization of Six Lipoproteins in the E Regulon	4552-4561
Lashanda N. Waller, Michael J. Stump, Karen F. Fox, William M. Harley, Alvin Fox, George C. Stewart, and Mona Shahgholi Identification of a Second Collagen-Like Glycoprotein Produced by <i>Bacillus anthracis</i> and Demonstration of Associated Spore-Specific Sugars	4592-4597
Sylvie Létoffé, Karine Wecker, Muriel Delepierre, Philippe Delepelaire, and Cécile Wandersman Activities of the <i>Serratia marcescens</i> Heme Receptor HasR and Isolated Plug and β -Barrel Domains: the β -Barrel Forms a Heme-Specific Channel	4637-4645
Population Genetics and Evolution	
Willem B. van Leeuwen, Damian C. Melles, Alwaleed Alaidan, Mohammed Al-Ahdal, Hélène A. M. Boelens, Susan V. Snijders, Heiman Wertheim, Engeline van Duijkeren, Justine K. Peeters, Peter J. van der Spek, Roy Gorkink, Guus Simons, Henri A. Verbrugh, and Alex van Belkum Host- and Tissue-Specific Pathogenic Traits of <i>Staphylococcus aureus</i>	4584-4591
Genomics and Proteomics	
Alistair Harrison, David W. Dyer, Allison Gillaspay, William C. Ray, Rachna Mungur, Matthew B. Carson, Huachun Zhong, Jenny Gipson, Mandy Gipson, Linda S. Johnson, Lisa Lewis, Lauren O. Bakaletz, and Robert S. Munson, Jr. Genomic Sequence of an Otitis Media Isolate of Nontypeable <i>Haemophilus influenzae</i> : Comparative Study with <i>H. influenzae</i> Serotype d, Strain KW20	4627-4636
Andreas Tauch, Olaf Kaiser, Torsten Hain, Alexander Goesmann, Bernd Weisshaar, Andreas Albersmeier, Thomas Bekel, Nicole Bischoff, Iris Brune, Trinad Chakraborty, Jörn Kalinowski, Folker Meyer, Oliver Rupp, Susanne Schneiker, Prisca Viehoveer, and Alfred Pühler Complete Genome Sequence and Analysis of the Multiresistant Nosocomial Pathogen <i>Corynebacterium jeikeium</i> K411, a Lipid-Requiring Bacterium of the Human Skin Flora	4671-4682