

TABLE OF CONTENTS

MINIREVIEW

- Lipoteichoic Acids, Phosphate-Containing Polymers in the Envelope of Gram-Positive Bacteria** Olaf Schneewind, Dominique Missiakas 1133–1142

ARTICLES

- Genetic Evidence for the Involvement of the S-Layer Protein Gene *sap* and the Sporulation Genes *spo0A*, *spo0B*, and *spo0F* in Phage AP50c Infection of *Bacillus anthracis*** Roger D. Plaut, John W. Beaber, Jason Zemansky, Ajinder P. Kaur, Matroner George, Biswajit Biswas, Matthew Henry, Kimberly A. Bishop-Lilly, Vishwesh Mokashi, Ryan M. Hannah, Robert K. Pope, Timothy D. Read, Scott Stibitz, Richard Calendar, Shanmuga Sozhamannan 1143–1154
- Physiological Framework for the Regulation of Quorum Sensing-Dependent Public Goods in *Pseudomonas aeruginosa*** Brett Mellbye, Martin Schuster 1155–1164
- YfbA, a *Yersinia pestis* Regulator Required for Colonization and Biofilm Formation in the Gut of Cat Fleas** Christina Tam, Owen Demke, Timothy Hermanas, Anthony Mitchell, Antoni P. A. Hendrickx, Olaf Schneewind 1165–1173
- Genetic Redundancy, Proximity, and Functionality of *lspA*, the Target of Antibiotic TA, in the *Myxococcus xanthus* Producer Strain** Yao Xiao, Daniel Wall 1174–1183
- CodY-Mediated Regulation of the *Staphylococcus aureus* Agr System Integrates Nutritional and Population Density Signals** Agnès Roux, Daniel A. Todd, Jose V. Velázquez, Nadja B. Cech, Abraham L. Sonenshein 1184–1196
- SCO5745, a Bifunctional RNase J Ortholog, Affects Antibiotic Production in *Streptomyces coelicolor*** Patricia Bralley, Madiha Aseem, George H. Jones 1197–1205
- Assessment of the Requirements for Magnesium Transporters in *Bacillus subtilis*** Catherine A. Wakeman, Jonathan R. Goodson, Vineetha M. Zacharia, Wade C. Winkler 1206–1214
- Bacterial Flagellin-Specific Chaperone FliS Interacts with Anti-Sigma Factor FlgM** Anna Galeva, Natalia Moroz, Young-Ho Yoon, Kelly T. Hughes, Fadel A. Samatey, Alla S. Kostyukova 1215–1221
- An Archaeal Glutamate Decarboxylase Homolog Functions as an Aspartate Decarboxylase and Is Involved in β -Alanine and Coenzyme A Biosynthesis** Hiroya Tomita, Yuusuke Yokooji, Takuya Ishibashi, Tadayuki Imanaka, Haruyuki Atomi 1222–1230
- Calvin Cycle Mutants of Photoheterotrophic Purple Nonsulfur Bacteria Fail To Grow Due to an Electron Imbalance Rather than Toxic Metabolite Accumulation** Gina C. Gordon, James B. McKinlay 1231–1237
- Global Identification of Genes Affecting Iron-Sulfur Cluster Biogenesis and Iron Homeostasis** Ryota Hidese, Hisaaki Mihara, Tatsuo Kurihara, Nobuyoshi Esaki 1238–1249
- Role for *Mycobacterium tuberculosis* Membrane Vesicles in Iron Acquisition** Rafael Prados-Rosales, Brian C. Weinrick, Daniel G. Piqué, William R. Jacobs, Jr., Arturo Casadevall, G. Marcela Rodriguez 1250–1256
- A Signaling Pathway Involving the Diguanylate Cyclase CelR and the Response Regulator DivK Controls Cellulose Synthesis in *Agrobacterium tumefaciens*** D. Michael Barnhart, Shengchang Su, Stephen K. Farrand 1257–1274

Regulatory and Functional Diversity of Methylmercaptopropionate Coenzyme A Ligases from the Dimethylsulfoniopropionate Demethylation Pathway in *Ruegeria pomeroyi* DSS-3 and Other Proteobacteria

Hannah A. Bullock, Chris R. Reisch, 1275–1285
Andrew S. Burns, Mary Ann Moran,
William B. Whitman

Salinity-Dependent Impacts of ProQ, Prc, and Spr Deficiencies on *Escherichia coli* Cell Structure

Craig H. Kerr, Doreen E. Culham, 1286–1296
David Marom, Janet M. Wood

Cover photograph (Copyright © 2014, American Society for Microbiology. All Rights Reserved.): AP50c is a *Bacillus anthracis*-specific typing phage. In this issue, using genetic and genomic approaches, Plaut et al. provide evidence that the bacterial S-layer protein Sap is involved in AP50c infectivity, most likely acting as the phage receptor, and furthermore suggest that the genes *spo0A*, *spo0B*, and *spo0F* may regulate synthesis of Sap and/or formation of the S layer. In this scanning electron microscopy image, phage particles are shown attached to wild-type *B. anthracis* Sterne vegetative cells. Bacteria and phage were pseudocolored using Adobe Photoshop CS6. Horizontal field width is 6 μm . (See related article on page 1143.)