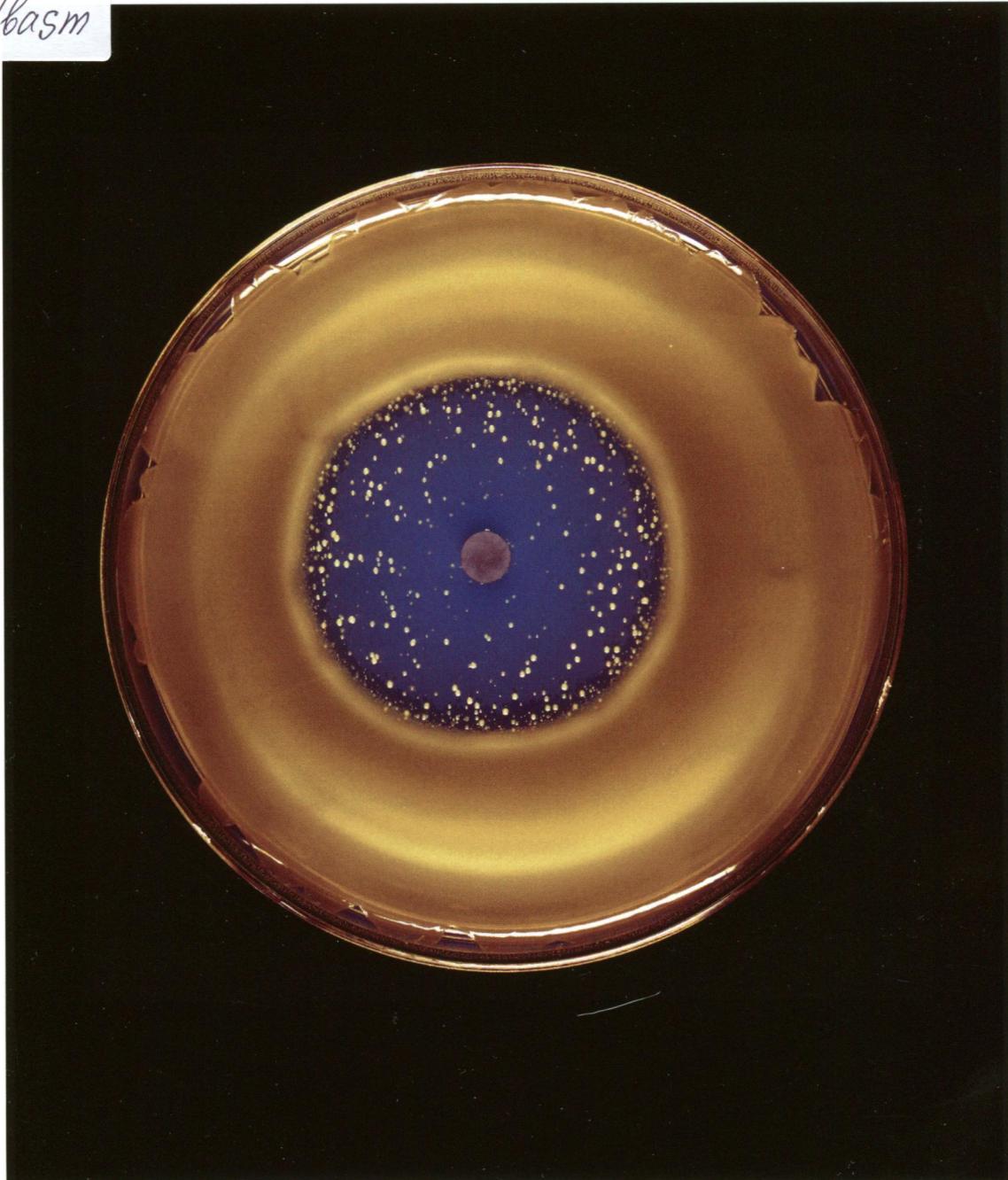


774  
980/basm



February 2014  
Volume 196  
Number 3  
Published Twice Monthly



AMERICAN  
SOCIETY FOR  
MICROBIOLOGY

# JB

Journal of Bacteriology

## TABLE OF CONTENTS

### ARTICLES

The $\gamma$ -Aminobutyrate Permease GabP Serves as the Third Proline Transporter of <i>Bacillus subtilis</i>	Adrienne Zaprasis, Tamara Hoffmann, Lorena Stannek, Katrin Gunka, Fabian M. Commichau, Erhard Bremer	515–526
PrgK, a Multidomain Peptidoglycan Hydrolase, Is Essential for Conjugative Transfer of the Pheromone-Responsive Plasmid pCF10	Jenny A. Laverde Gomez, Minny Bhatty, Peter J. Christie	527–539
Saturating Mutagenesis of an Essential Gene: a Majority of the <i>Neisseria gonorrhoeae</i> Major Outer Membrane Porin (PorB) Is Mutable	Adrienne Chen, H. Steven Seifert	540–547
Hypersensitive Photic Responses and Intact Genome-Wide Transcriptional Control without the KaiC Phosphorylation Cycle in the <i>Synechococcus</i> Circadian System	Miki Umetani, Norimune Hosokawa, Yohko Kitayama, Hideo Iwasaki	548–555
Genomic and Proteomic Studies on <i>Plesiomonas shigelloides</i> Lipopolysaccharide Core Biosynthesis	Eleonora Aquilini, Susana Merino, Miguel Regué, Juan M. Tomás	556–567
Interaction of Apurinic/Apyrimidinic Endonucleases Nfo and ExoA with the DNA Integrity Scanning Protein DisA in the Processing of Oxidative DNA Damage during <i>Bacillus subtilis</i> Spore Outgrowth	Silvia S. Campos, Juan R. Ibarra-Rodriguez, Rocío C. Barajas-Ornelas, Fernando H. Ramírez-Guadiana, Armando Obregón-Herrera, Peter Setlow, Mario Pedraza-Reyes	568–578
Actinobacterial Acyl Coenzyme A Synthetases Involved in Steroid Side-Chain Catabolism	Israël Casabon, Kendra Swain, Adam M. Crowe, Lindsay D. Eltis, William W. Mohn	579–587
Identification of New Residues Involved in Intramolecular Signal Transmission in a Prokaryotic Transcriptional Repressor	Carlos Molina-Santiago, Abdelali Daddaoua, Sandy Fillet, Tino Krell, Bertrand Morel, Estrella Duque, Juan L. Ramos	588–594
Kinetics of <i>nif</i> Gene Expression in a Nitrogen-Fixing Bacterium	César Poza-Carrión, Emilio Jiménez-Vicente, Mónica Navarro-Rodríguez, Carlos Echavarri-Erasun, Luis M. Rubio	595–603
Transcriptional Analysis of the <i>Streptococcus pyogenes</i> Salivaricin Locus	Phanramphoei Namprachan-Frantz, Hannah M. Rowe, Donna L. Runft, Melody N. Neely	604–613
Cyclic Di-AMP Impairs Potassium Uptake Mediated by a Cyclic Di-AMP Binding Protein in <i>Streptococcus pneumoniae</i>	Yinlan Bai, Jun Yang, Tiffany M. Zarrella, Yang Zhang, Dennis W. Metzger, Guangchun Bai	614–623
Biogenesis of YidC Cytoplasmic Membrane Substrates Is Required for Positioning of Autotransporter IcsA at Future Poles	Andrew N. Gray, Zaoping Li, Josephine Henderson-Frost, Marcia B. Goldberg	624–632
Coordinated Expression of <i>fdxD</i> and Molybdenum Nitrogenase Genes Promotes Nitrogen Fixation by <i>Rhodobacter capsulatus</i> in the Presence of Oxygen	Marie-Christine Hoffmann, Alexandra Müller, Maria Fehringer, Yvonne Pfänder, Franz Narberhaus, Bernd Masepohl	633–640
An Unorthodox Sensory Adaptation Site in the <i>Escherichia coli</i> Serine Chemoreceptor	Xue-Sheng Han, John S. Parkinson	641–649

**The FtsZ-Like Protein FtsZm of *Magnetospirillum gryphiswaldense* Likely Interacts with Its Generic Homolog and Is Required for Biomineralization under Nitrate Deprivation**

**Genome-Scale Analyses of *Escherichia coli* and *Salmonella enterica* AraC Reveal Noncanonical Targets and an Expanded Core Regulon**

**Identification of FkpA as a Key Quality Control Factor for the Biogenesis of Outer Membrane Proteins under Heat Shock Conditions**

**Identification of *Legionella pneumophila* Effectors Regulated by the LetAS-RsmYZ-CsrA Regulatory Cascade, Many of Which Modulate Vesicular Trafficking**

**SP10 Infectivity Is Aborted after Bacteriophage SP10 Infection Induces *nonA* Transcription on the Prophage SP $\beta$  Region of the *Bacillus subtilis* Genome**

**Repression of Flagellar Genes in Exponential Phase by CsgD and CpxR, Two Crucial Modulators of *Escherichia coli* Biofilm Formation**

Frank D. Müller, Oliver Raschdorf, Hila Nudelman, Maxim Messerer, Emanuel Katzmann, Jürgen M. Plitzko, Raz Zarivach, Dirk Schüler

650–659

Anne M. Stringer, Salvatore Currenti, Richard P. Bonocora, Catherine Baranowski, Brianna L. Petrone, Michael J. Palumbo, Andrew A. Reilly, Zhen Zhang, Ivan Erill, Joseph T. Wade

660–671

Xi Ge, Zhi-Xin Lyu, Yang Liu, Rui Wang, Xin Sheng Zhao, Xinmiao Fu, Zengyi Chang

672–680

Oded Nevo, Tal Zusman, Michal Rasis, Ziv Lifshitz, Gil Segal

681–692

Tatsuya Yamamoto, Nozomu Obana, Lii Mien Yee, Kei Asai, Nobuhiko Nomura, Kouji Nakamura

693–706

Omaya Dudin, Johannes Geiselmann, Hiroshi Ogasawara, Akira Ishihama, Stéphan Lacour

707–715

Ricardo Jasso-Chávez, Ethel E. Apolinario, Kevin R. Sowers, James G. Ferry

716

**AUTHOR CORRECTION**

**MrpA Functions in Energy Conversion during Acetate-Dependent Growth of *Methanosarcina acetivorans***

*Cover photograph* (Copyright © 2014, American Society for Microbiology. All Rights Reserved.): The PutP and OpuE transporters of *Bacillus subtilis* serve to import proline when it is used either as a nutrient or as an osmostress protectant, respectively. In a putP opuE double mutant, proline can still be used as a nutrient, and such a strain is still sensitive to toxic proline analogs (e.g., 3,4-dehydro-DL-proline [DHP]). The image shows a putP opuE double deletion strain that was plated on a minimal agar plate in whose center a filter disc soaked with DHP was placed. Colonies resistant to DHP that were defective in the GabP transporter and that no longer could use proline as a nutrient appeared. The photo of the agar plate was artificially colored. (See related article on page 515.)