



AMERICAN  
SOCIETY FOR  
MICROBIOLOGY

Applied and Environmental  
Microbiology®

## CONTENTS • NOVEMBER 2018 • VOLUME 84, NO. 21

### COVER IMAGE



*Cover photograph:* In a microbial community, maintaining a favorable proton concentration is key. While protons may move from one member of the community to the other like a stack of poker chips, a well-balanced distribution will keep the game running, as a stable pH can maintain community growth for extended periods. (See related article at e01450-18.) (Copyright © 2018 American Society for Microbiology. All Rights Reserved.)

### SPOTLIGHT

#### Articles of Significant Interest in This Issue

e02160-18

### BIODEGRADATION

#### Polycyclic Aromatic Hydrocarbon (PAH) Degradation Pathways of the Obligate Marine PAH Degradator *Cycloclasticus* sp. Strain P1

e01261-18

Wanpeng Wang, Lin Wang, Zongze Shao

#### Enantioselective Dechlorination of Polychlorinated Biphenyls in *Dehalococcoides mccartyi* CG1

e01300-18

Ling Yu, Qihong Lu, Lan Qiu, Guofang Xu, Yanhong Zeng, Xiaojun Luo, Shanquan Wang, Bixian Mai

### BIOTECHNOLOGY

#### Transposase-Mediated Chromosomal Integration of Exogenous Genes in *Acidithiobacillus ferrooxidans*

e01381-18

Yuta Inaba, Indrani Banerjee, Timothy Kernan, Scott Banta

### ENVIRONMENTAL MICROBIOLOGY

#### A High-Resolution Time Series Reveals Distinct Seasonal Patterns of Planktonic Fungi at a Temperate Coastal Ocean Site (Beaufort, North Carolina, USA)

e00967-18

Yingbo Duan, Ningdong Xie, Zhiquan Song, Christopher S. Ward, Cheuk-Man Yung, Dana E. Hunt, Zackary I. Johnson, Guangyi Wang

#### Nonthermal Plasma Jet Treatment Negatively Affects the Viability and Structure of *Candida albicans* SC5314 Biofilms

e01163-18

O. Handorf, T. Weihe, S. Bekeschus, A. C. Graf, U. Schnabel, K. Riedel, J. Ehlbeck

#### Metabolic Capability and Phylogenetic Diversity of Mono Lake during a Bloom of the Eukaryotic Phototroph *Picocystis* sp. Strain ML

e01171-18

Blake W. Stamps, Heather S. Nunn, Victoria A. Petryshyn, Ronald S. Oremland, Laurence G. Miller, Michael R. Rosen, Kohen W. Bauer, Katharine J. Thompson, Elise M. Tookmanian, Anna R. Waldeck, Sean J. Loyd, Hope A. Johnson, Bradley S. Stevenson, William M. Berelson, Frank A. Corsetti, John R. Spear

#### Reduced-Particle-Size Wheat Bran Is Efficiently Colonized by a Lactic Acid-Producing Community and Reduces Levels of *Enterobacteriaceae* in the Cecal Microbiota of Broilers

e01343-18

Karen Vermeulen, Joran Verspreet, Christophe M. Courtin, Freddy Haesebrouck, Steve Baeyen, Annelies Haegeman, Richard Ducatelle, Filip Van Immerseel

- A Smooth-Type, Phage-Resistant *Klebsiella pneumoniae* Mutant Strain Reveals that OmpC Is Indispensable for Infection by Phage GH-K3** e01585-18  
*Ruopeng Cai, Mei Wu, Hao Zhang, Yufeng Zhang, Mengjun Cheng, Zhimin Guo, Yalu Ji, Hengyu Xi, Xinwu Wang, Yibing Xue, Changjiang Sun, Xin Feng, Liancheng Lei, Yigang Tong, Xiaoyun Liu, Wenyu Han, Jingmin Gu*
- Evidence for Multidrug Resistance in Nonpathogenic *Mycoplasma* Species Isolated from South African Poultry** e01660-18  
*Amanda Beylefeld, Pamela Wambulawaye, Dauda Garba Bwala, Johannes Jacobus Gouws, Obed Mooki Lukhele, Daniel Barend Rudolph Wandrag, Celia Abolnik*
- FOOD MICROBIOLOGY**
- Probiotic Product Enhances Susceptibility of Mice to Cryptosporidiosis** e01408-18  
*Bruno C. M. Oliveira, Giovanni Widmer*
- Daqu Fermentation Selects for Heat-Resistant *Enterobacteriaceae* and Bacilli** e01483-18  
*Zhiying Wang, Pan Li, Lixin Luo, David J. Simpson, Michael G. Gänzle*
- High-Resolution Identification of Multiple *Salmonella* Serovars in a Single Sample by Using CRISPR-SeroSeq** e01859-18  
*Cameron P. Thompson, Alexandra N. Doak, Naufa Amirani, Erin A. Schroeder, Justin Wright, Subhashinie Kariyawasam, Regina Lamendella, Nikki W. Shariat*
- GENETICS AND MOLECULAR BIOLOGY**
- A Putative Acetylation System in *Vibrio cholerae* Modulates Virulence in Arthropod Hosts** e01113-18  
*Kalle Liimatta, Emily Flaherty, Gabby Ro, Duy K. Nguyen, Cecilia Prado, Alexandra E. Purdy*
- INVERTEBRATE MICROBIOLOGY**
- Vector Competence of Geographical Populations of *Ornithodoros turicata* for the Tick-Borne Relapsing Fever Spirochete *Borrelia turicatae*** e01505-18  
*Aparna Krishnavajhala, Brittany A. Armstrong, Job E. Lopez*
- MICROBIAL ECOLOGY**
- In Vitro* Community Synergy between Bacterial Soil Isolates Can Be Facilitated by pH Stabilization of the Environment** e01450-18  
*Jakob Herschend, Klaus Koren, Henriette L. Røder, Asker Brejnrod, Michael Kühl, Mette Burmølle*
- Dietary Fatty Acids Sustain the Growth of the Human Gut Microbiota** e01525-18  
*Richard Agans, Alex Gordon, Denise Lynette Kramer, Sergio Perez-Burillo, José A. Rufián-Henares, Oleg Paliy*
- Cross-Feeding among Probiotic Bacterial Strains on Prebiotic Inulin Involves the Extracellular *exo*-Inulinase of *Lactobacillus paracasei* Strain W20** e01539-18  
*Markus C. L. Boger, Alicia Lammerts van Bueren, Lubbert Dijkhuizen*

**PHYSIOLOGY**

- Poisoning with Soman, an Organophosphorus Nerve Agent, Alters Fecal Bacterial Biota and Urine Metabolites: a Case for Novel Signatures for Asymptomatic Nerve Agent Exposure** e00978-18

*Derese Getnet, Aarti Gautam, Raina Kumar, Allison Hoke, Amrita K. Cheema, Franco Rossetti, Caroline R. Schultz, Rasha Hammamieh, Lucille A. Lumley, Marti Jett*

**PUBLIC AND ENVIRONMENTAL HEALTH MICROBIOLOGY**

- Antibiotic-Resistant *Escherichia coli* and Class 1 Integrons in Humans, Domestic Animals, and Wild Primates in Rural Uganda** e01632-18

*Debora Weiss, Ryan M. Wallace, Innocent B. Rwego, Thomas R. Gillespie, Colin A. Chapman, Randall S. Singer, Tony L. Goldberg*