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Washington, D.C. (May 11, 2016) — The American Society for Microbiology (ASM) is pleased to announce the arrival of volume 17, issue 2, of the scholarly, peer-reviewed Journal of Microbiology & Biology Education (JMBE). The freely available, internationally indexed JMBE features broad coverage of science education via six main sections: Letters to and from the Editor, Research (articles about science education research), Perspectives (discussions of current societal or educational concerns as related to teaching and learning), Curriculum (classroom and laboratory exercises that are innovative, field-tested, and assessed), Tips and Tools (innovative teaching guidance), and Reviews (appraisals of biology-related books and media).

JMBE publishes one volume per calendar year, which includes two standard issues (May and December) and may also include a special themed issue focused on a broad, inter-disciplinary topic (March). All aspects of the publication process are completely online.

“JMBE is a premier biology education journal where readers can explore cutting edge research, find resources to immediately implement best practices in the classroom, and discover new ways to approach teaching,” says Samantha L. Elliott, Ph.D., an associate professor of biology at St. Mary’s College of Maryland and the editor-in-chief of the journal. “Pedagogical scholarship is critical to best equip our students for future success in an ever-changing world.”

An editorial from Dr. Elliott introduces the 29-article May issue and highlights research on gender equality in undergraduate biology, the disparity between men and women in the scientific workforce, and asks readers to think about how they can address these issues at the classroom level. Within the issue, readers can expect a novel program to engage elementary students, an investigation of the barriers teaching assistants face in inquiry-based teaching, an essay on the undergraduate research experience, assessments of ASM Education’s fellowship and professional development programs, and much more. The issue also includes the accepted poster abstracts for the upcoming ASM Conference for Undergraduate Educators (ASMCUE), held July 21-24, 2016.

All JMBE content is available on ASMscience, which provides a robust and interactive reader venue. Readers can search for and browse JMBE’s education articles alongside related science content from other ASM publications. Figures are available for download as PowerPoint slides, allowing adopters to insert material easily into lectures and presentations. Finally, each article reports metrics, such as full text views and PDF downloads, so authors and readers can determine the article's impact. Visit JMBE at asmscience.org/jmbe for author guidelines, helpful resources, and the following articles:

Editorial(s)
From the Editor-in-Chief: Questions of Gender Equity in the Undergraduate Biology Classroom
Samantha L. Elliott
Inside ASM Education
A Retrospective Examination of Two Professional Society–Sponsored Fellowships for Predoctoral Microbiology Students
Amy L. Chang

The ASM-NSF Biology Scholars Program: An Evidence-Based Model for Faculty Development
Amy L. Chang, Christine M. Pribbenow

Research
Increasing Student Metacognition and Learning through Classroom-Based Learning Communities and Self-Assessment
Amy Siegesmund

Uncovering Barriers to Teaching Assistants (TAs) Implementing Inquiry Teaching: Inconsistent Facilitation Techniques, Student Resistance, and Reluctance to Share Control over Learning with Students
Cara Gormally, Carol Subiño Sullivan, Nadia Szeinbaum

Evaluation to Improve a High School Summer Science Outreach Program
Katherine Bakshian Chiappinelli, Britney L. Moss, Devjanee Swain Lenz, Natasha A. Tonge, Adam Joyce, Glen E. Holt, Leslie Edmonds Holt, Thomas A. Woolsey

ImmuneQuest: Assessment of a Video Game as a Supplement to an Undergraduate Immunology Course
Stacey L. Raimondi

Perspectives
Professional Practices in Undergraduate Research Programs
Joni M. Seeling, Madhusudan Choudhary

Evolution across the Curriculum: Microbiology
Alita R. Burmeister, James J. Smith

Curriculum
Battle of the Bacteria: Characterizing the Evolutionary Advantage of Stationary Phase Growth
Karin E. Kram, Kristina M. Yim, Aaron B. Coleman, Brian K. Sato

Species-Recognition Program: A Computer-Assisted Approach to Recognizing Species
Steven Kelsch, Jeffrey Carmichael

Science Alive!: Connecting with Elementary Students through Science Exploration
Aarti Raja, Emily Schmitt Lavin, Tamara Gali, Kaitlin Donovan

Tips and Tools
Microbe Motels: An Interactive Method to Introduce the Human Microbiome
Senga Robertson-Albertyn, Erin Hardee, Nicola R. Stanley-Wall
Classroom Activities to Engage Students and Promote Critical Thinking about Genetic Regulation of Bacterial Quorum Sensing
Kimberly Aebli, Elizabeth Hutchison

Science Sound Bites, a Podcast for STEM Curriculum Supplementation
Michael David Leslie Johnson, Kate A. Ayers

Using Magnets and Classroom Flipping to Promote Student Engagement and Learning about Protein Translation in a Large Microbiology Class
Jennifer Lynn McLean, Erica L. Suchman

Use of Shadowing-Based Learning in an Allied Health Microbiology Course
Alex A. Lowrey

Use of Computer Models and Animations to Teach about B Cell (antibody) and T Cell Recombination (TCR)
Fran Norflus, Neil Charles Allen

Brewing Bokashi: Strengthening Student Skills in Dilution Theory through Fermentation Analysis
Robert E. Zdor

Role-Playing in a Vaccination Debate Strengthens Student Scientific Debate Skills for Various Audiences
Gianne Souza, Philip F. Mixter

Modeling Influenza Antigenic Shift and Drift with LEGO Bricks
Boriana Marintcheva

Sexual Health—Get Involved: A Kinesthetic Learning Experience of STI Transmission and Prevention
Selina Patel, Anne Marie Krachler

Reviews

Journal Watch
Jennifer A. Herzog

OpenStax: Microbiology Provides a Cost-Effective and Accessible Resource for Undergraduate Microbiology Students
Amanda Lyn Gunn

Pandemics—A Scientific Guide for Use in Varied Classes
Christian T. K.-H. Stadtländer

Ebola Virus’ Zoonotic Roots and Horrific Path
Brinda Govindan

Beautiful Images and Practical Examples Found in Idaho Microbes
Andrea M. Rediske
Erratum
Correction Notice: Tools for Citizen-Science Recruitment and Student Engagement in Your Research and in Your Classroom

ASM is the world’s largest scientific society of individuals interested in the microbiological sciences. Its mission is to advance the microbiological sciences as a vehicle for understanding life processes and to apply and communicate this knowledge for the improvement of health and environmental and economic well-being worldwide.

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