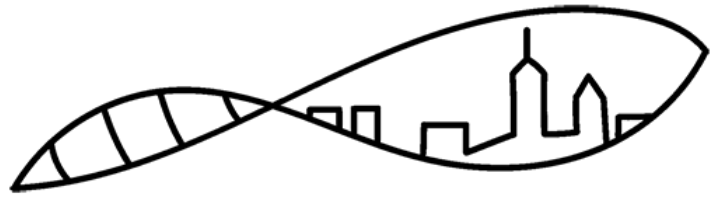


REMNET



RESEARCH EXPERIENCES IN MICROBIOMES NETWORK
NEWSLETTER



OCT. 2020, ISSUE 8

Happy Halloween from REMNet!

We hope you have fun dressing up this year for a socially distanced version of trick or treating. Some interesting papers have been published recently. Enjoy reading while chomping down on some candy!

Handwashing and Detergent Treatment Greatly Reduce SARS-CoV-2 Viral Load on Halloween Candy Handled by COVID-19 Patients

DOI: <https://doi.org/10.1128/mSystems.01074-20>

Published: 23/27/20

Published By: American Society for Microbiology Journals

History: Received October 16, 2020; Accepted October 29, 2020; Published online October 29, 2020.

Copyright & Usage: Copyright © 2020 Salido et al. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International license.

Editors and/or Reviewers: Patricia Flórez de Sessions, Editor, Oxford Nanopore Technologies

KEYWORDS: SARS-CoV-2, COVID-19, handle, surface swabs, candy, Halloween, RT-qPCR, LAMP, qPCR

UPCOMING EVENTS:

AACU: 11/5/20-11/7/20

TRANSFORMING STEM HIGHER
EDUCATION

ABRCMS: 11/9/20-11/13/20

ONLINE
REGISTRATIONS OPENS 9/8/20

ASM NGS: 12/7/20 -12/11/20

ONLINE
REGISTRATIONS OPENS 11/2/20

AACU Annual: 01/20/21 - 01/23/21

REGISTRATION OPEN NOW

Review Article | Published: 22 October 2020

Innovations to culturing the uncultured microbial majority

William H. Lewis, Guillaume Tahon, Patricia Geesink, Diana Z. Sousa & Thijs J. G. Ettema

Nature Reviews Microbiology (2020) | Cite this article

2957 Accesses | 264 Altmetric | Metrics

Abstract

Despite the surge of microbial genome data, experimental testing is important to confirm inferences about the cell biology, ecological roles and evolution of microorganisms. As the majority of archaeal and bacterial diversity remains uncultured and poorly characterized, culturing is a priority. The growing interest in and need for efficient cultivation strategies has led to many rapid methodological and technological advances. In this Review, we discuss common barriers that can hamper the isolation and culturing of novel microorganisms and review emerging, innovative methods for targeted or high-throughput cultivation. We also highlight recent examples of successful cultivation of novel archaea and bacteria, and suggest key microorganisms for future cultivation attempts.

Who ever said microbes are the only culture some folk have! What can we learn from our uncultured microbial friends!

David Smyth (She/her/hers)
@ProfSmyth

Beginning our virtual MACUB 2020 with the master Vincent Racaniello giving us a great intro to viruses - "Not all viruses are bad" - Who knew when eating cabbage you're eating plant viruses :) @profvrr @SFCNY @SENCERnet @REMNet_microbio @TinyEarthNet @AMicrobiology #COVID19

What is a virus?

An infectious, obligate intracellular parasite comprising genetic material (DNA or RNA) often surrounded by a protein coat, sometimes a membrane.

Amazingly, the vast majority of the viruses that infect us have little or no impact on our health or well being

Viroome

The number of viruses on Earth is staggering

Cell

More than 10²⁴ bacteriophage particles in the world's oceans

MACUB 2020



Keeping it real when teaching!

The Summer 2020 issue of Science Education and Civic Engagement: An International Journal included a special section on Teaching Through COVID. The 35 reflections documented experiences and lessons learned while teaching science and civic engagement during the COVID-19 pandemic. The Special Topics Section of Frontiers in Microbiology "Tools, Techniques, and Strategies for Teaching in a Real-World Context with Microbiology" also features many relevant papers including a review on teaching with microbiomes by Theo and Avrom! Check them out!



For the Summer 2020 issue of this journal, we are very excited to highlight a special section on Teaching Through COVID. These reflections document experiences and lessons learned while teaching science and civic engagement during the COVID-19 pandemic. We received a very enthusiastic response to our call for submissions, and we are publishing 35 contributions to this special section.

This issue also features two project reports and one research project that cover a range of interesting educational strategies to teach STEM through a civic framework.

Jo Hardin (Pomona College), together with Karl Haushalter and Darryl Young (Harvey Mudd College), describe their participation in the Inside-Outside Prison Exchange Program that creates a shared community of campus-based college students and incarcerated students who take a college course taught in a correctional facility. Because STEM is often lacking in the prison curriculum, the authors taught courses in statistics, number theory, and biochemistry. This article provides a reflection on the unique opportunities of teaching STEM within a prison education program.

Research Topic
Tools, Techniques, and Strategies for Teaching in a Real-World Context with Microbiology

Manage topic Submission closed

Overview 1 Article 75 Authors Impact

About this Research Topic

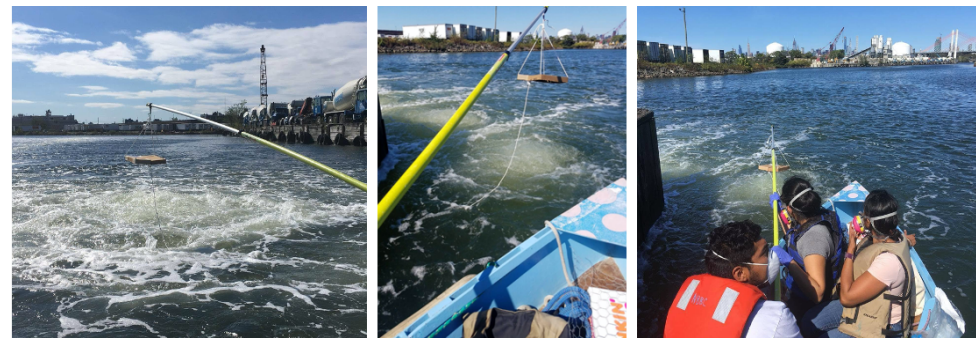
Making connections to the real world with you are teaching, and connecting the classroom experience to pressing and capacious problems and issues relevant to students is a strategy that has long been shown to increase student engagement with science. There are many ways that microbiology and teaching through...

Show more

Recent Articles

Evaluation of the impact of the Tiny Earth project on the knowledge about antibiotics of pre-university students in the province of Valencia on three different school years (2017-2020)
 José Manuel Borrás, Patricia Saver García, Carolina Galera Borrás, Elia María Crippa and María Teresa Pérez-Grieco

Original Research According to the World Health Organization (WHO), antibiobacterial resistance is a serious problem worldwide. In Spain, knowledge about the use of antibiotics is scarce, being the third country with the highest consumption of antibiotics in the world...
 Accepted on 27 October 2020
 Front. Microbiol. doi: 10.3389/fmicb.2020.574215



Prof. Olga Calderon of LaGuardia Community College is busy working on the microbial communities of Newtown Creek in NYC. Her team includes: Holly-Porter Morgan (Env. Sci), Joby Jacob (Biology) and Ingrid Veras (Biology) and students Harry Aguilar and Veronica Martinez. Attached are some pictures of Newtown Creek Aerators and different sites where we collect specimens. Her team are currently looking at the impact of aeration systems installed in the creek to pump oxygen into the water and remediate dissolved oxygen levels.

They've done metagenomic analysis in the past of the creek's water and found over a thousand species of bacterial!

Microbe Hunters

Does water = microbes?

NASA's SOFIA Discovers Water on Sunlit Surface of Moon



Microbiologists voting from Space

This American astronaut voted from space. Here's how she did it

By Marika Gerken, Melissa Alonso and Scottie Andrew, CNN
 © Updated 3:04 PM ET, Sun October 25, 2020



NASA astronaut Kate Rubins voted from the International Space Station last week.

(CNN) — NASA astronaut Kate Rubins casting her vote from some 200 miles above Earth should be all the motivation you need to make a plan to vote this year.

Will they find microbes on Bennu?

Scientists study the rugged surface of near-Earth asteroid Bennu

Date: October 8, 2020

Source: Southwest Research Institute

Summary: As the days count down to NASA's OSIRIS-REx spacecraft's Touch-And-Go asteroid sample collection attempt, scientists have determined what the spacecraft can expect to return from the near-Earth asteroid Bennu's surface. Three papers discuss the color, reflectivity, age, composition, origin and distribution of materials that make up the asteroid's rough surface.

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- > Solar System
- > Space Exploration
- > Space Missions
- > Solar Flare

As the days count down to NASA's OSIRIS-REx spacecraft's Touch-And-Go asteroid sample collection attempt, Southwest Research Institute scientists have helped determine what the spacecraft can expect to return from the near-Earth asteroid Bennu's surface. Three papers published online by Science on Oct. 8 discuss the color, reflectivity, age, composition, origin and distribution of materials that make up the asteroid's rough surface.



REMNet is supported by NSF RCN-UBE grant # 1827035

