

REMNet Introduction To Instructors Transcript

By Jimiane Ashe and Theodore Muth

Hello. My name is Jimiane Ashe, and I am one of the many researchers of the City University of New York associated with the Research Experiences in Microbiomes Network (or REMNet) funded by the National Science Foundation and the New York State Open Educational Resources Initiative.

I would like to introduce you to the Authentic Research Experience in Microbiology (or AREM) microbiome project.

AREM is an innovative research experience that allows our undergraduate students to conduct experiments that reveal the diversity and complexity of their local environmental microbiomes.

And AREM was developed using a course-based undergraduate research experience model.

The AREM microbiome project has been incorporated into undergraduate biology curricula across 28 CUNY campuses, and now under the guidance of the REMNet network, we are reaching out on a national scale to provide support to faculty and campuses across the country interested in incorporating the exploration of microbiomes into their biology courses.

The opportunity for significant impact of a microbiome course like this has been made possible by the confluence of three emerging forces

- the culture-independent study of microbial systems,
- the power and accessibility of next generation DNA sequencing and analysis tools,
- and the push to provide courses like these to more students.

This is the perfect time to implement a scientific course dedicated to microbiome research.

The tools for both culture-independent study of microbial communities and for DNA sequencing and quantitative data analysis are accessible and affordable.

There is currently a national movement to emphasize microbiome research, and this presents a great opportunity to bring undergraduates into designing and carrying out this important work.

REMNet has been building on our experiences of introducing AREM across the CUNY system, and our network coordinates with professional societies, such as the American Society for Microbiology.

Our central goals are to

- attract a diverse group of participants
- disseminate resources
- and provide professional development and faculty support for instructors who want integrate microbiome research into undergraduate biology courses.

As the involvement of students and faculty in the AREM microbiome project has grown, and as the field of microbiome research continues to advance, there is an urgent need to

- set community standards,
- adapt new technologies for use in microbiome undergraduate courses,
- provide training resources, and
- to make available the growing microbiome datasets and analysis tools to students and the broader research community

Please consider joining our network and explore the tools and resources we want to share with your faculty and institution. I hope you'll agree that this is an impactful opportunity for your undergraduate students and a valuable resource to enhance your current biology course curriculum.

On behalf of the REMNet community, thank you for your interest.