



Environmental Science Graduate Program Seminar Series

Carbapenem resistance in the environment: a OneHealth issue

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November 19th, 2021 | 2:00-3:00 PM

Smith Laboratory, Room 3150



Abstract

One of the most prominent public health risks of the 21st century is the threat of antimicrobial resistant microorganisms. While this issue has clinical significance including increased human morbidity and mortality from antibiotic resistant bacteria, it is a OneHealth concern as well, as major points of antibiotic contamination in the environment come not only from humans, but from animals and agriculture. Antibiotic contaminants allow for the selection of antibiotic resistance genes (ARGs) in a diverse set of environmental matrices. A particular antibiotic class of interest is the carbapenems, which are broad spectrum antibiotics used often as a last line of defense clinically against infections in humans. We are investigating the presence of carbapenem ARGs in environmental ecosystems as a potential threat to both animal and human health.