Invitation to Submit to an “Organic Compounds in the Environment” Special Section of JEQ

Antibiotics in Agroecosystems: State of the Science

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Invitation to submit short abstracts for consideration before January 30, 2015

We invite authors provide abstracts of papers they intend to submit for the Special Section before January 30, 2015. These abstracts should include a list of contributory authors, an appropriate title, and a brief abstract of <300 words.

Suitable abstracts invited to submit full manuscripts by May 31, 2015

Submitted abstracts will be considered by the Guest and Technical Editors and JEQ Sub-editor. Those deemed suitable will be invited to submit full manuscripts to the Journal of Environmental Quality before May 31, 2015. Abstracts must reflect original research related to objectives in Special Section Rationale, below. All full manuscript submissions will be subject to the standard Journal of Environmental Quality peer review process: https://dl.sciencesocieties.org/publications/jeq/author-instructions

Special Section Rationale

In order to facilitate the goal of reducing the transfer of antibiotic resistance from agroecosystems to human clinical settings, it is essential to better understand the natural levels, and the fate and transport of specific types of resistance. Currently, consensus does not exist on which antibiotics, which types of resistance, or which specific antibiotic resistance genes are most relevant to the scientific study of how agricultural antibiotic use impacts human health, either directly through the presence of residual antibiotics in meat consumed by humans, or indirectly though antibiotics and genes in biosolids used for soil amendment or recycled wastewater used for irrigation.

In light of the need expressed by the World Health Organization for “internationally recognized principles for risk assessment…related to antimicrobial resistance owing to non-human use of antimicrobials”, there is a yet unaddressed need among the research community involved in environmental tracking of antibiotics, resistant bacteria, and resistance genes to develop a standardized and rigorously validated suite of methods that can be used across the farm-to-fork continuum to inform public health risk assessment models.

This special section will be led by a group of five review papers that define the current state of knowledge to address potential connections between antibiotic use and the development of resistance that will be critical in defining risks. We invite original articles that address high-quality research involving antibiotic and antibiotic resistance detection in environmental samples.