# Antibiotic Resistance in Agroecosystems: State of the Science

## WHO

Scientists and students focused on environmental antibiotic resistance (AR).

## WHAT

A workshop to discuss and debate best available methods to measure antibiotics, track AR bacteria and AR genes, and determining background/baseline levels of resistance.

## HOW

Participants will meet and then break out in three working groups each focused on the following themes:

1) challenges of measuring background and natural levels of resistance,

2) accurate quantification of trace concentrations of antibiotics in environmental samples,

3) microbiological methods for tracking resistant bacteria and genes.

## August 5-8, 2014

International researcher-oriented workshop focused on AR in soil and water

Meeting Facilities:
Biosphere2 Conference Center, Oracle, Arizona



**Support**
Funded through AFRI Food Safety Program Area 2, "Effective Mitigation Strategies for Antimicrobial Resistance" (A4171) grant "Antibiotics in Agroecosystems: State of the Science". Additional support provided through …...

**Organizers**
**Jean E. McLain, Ph.D.**
Associate Director, Water Resources Research Center, Associate Research Scientist, Soil, Water and Environmental Science, University of Arizona, Phoenix, AZ

**Lisa Durso, Ph.D.**
Research Microbiologist, United States Department of Agriculture
Agricultural Research Service, Agroecosystm Management Research Unit, Lincoln, NE

**Daniel D. Snow, Ph.D.**
Laboratory Director, Nebraska Water Center, and Research Associate Professor School of Natural Resources, University of Nebraska, Lincoln, NE

## Invited Experts:

**Diana Aga, Ph.D.** develops analytical techniques to study the environmental fate and transport of veterinary antibiotics and estrogens.

**Alistair Boxall, Ph.D.** is an environmental chemist with research interests including risk assessment, fate and monitoring studies, and the use of molecular modeling techniques to predict toxicity,

**Eddie Cytryn, Ph.D.** has research expertise in AR and wastewater microbiology, and the microbial ecology of soil and surface waters. His work demonstrates the importance of control sites.

**Amy Pruden, Ph.D.** was the first to propose AR genes be considered emerging contaminants. She is expert in quantitative PCR of AR genes in water, soils, and feces.

## Workshop Location:

Located in the beautiful Catalina Mountains foothills, the B2 Conference Center comprises a fully networked Campus Village of 28 Santa Fe-style casitas. A limited number

of scholarships are available to help with registration and on-site housing costs. Registration preference given to participants who are willing to contribute to written meeting outcomes (white paper and/or review article) and graduate students are especially encouraged to attend.

Registration information: LINK