

Announcement of
NEREUS COST ACTION ES1403 TRAINING SCHOOL
Methods for detecting and quantifying antibiotic-resistant bacteria and
antibiotic resistance genes in the environment

Barcelona, June 13-15, 2016

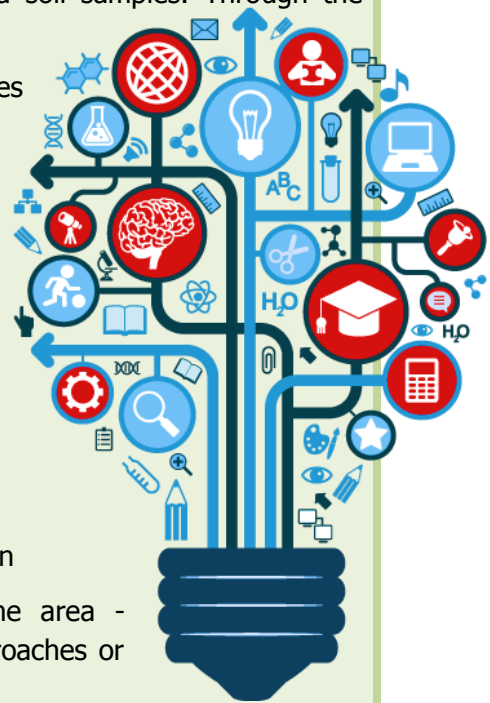
Venue: IDAEA-CSIC, Jordi Girona 18, <http://www.idaea.csic.es/>



Course overview and objectives

This will be an intensive three-day course focused on the state-of-the-art in culture-based and molecular methods for detection and quantification of antibiotic-resistant bacteria and antibiotic resistance genes (ARB&ARG) in wastewater and soil samples. Through the course the following aspects will be addressed:

- Introduction in wastewater reuse practices - case studies
- Bacterial diversity and eco-physiology in water and soil
- Biotic/abiotic factors stimulating horizontal gene transfer in aquatic microbiomes
- Overview of the problem: its implications for human health and uncertainties that need to be solved
- Methodological approaches used to diagnose and measure antibiotic resistance, emphasizing the similarities and contrasts between clinical vs. environmental settings
- Specific terminology and relevant sources of information
- Promote the development of critical thinking in the area - e.g. limitations and biases of some experimental approaches or sampling strategies



The participants will be introduced to the “tools of the trade” and discuss how these methods are applied in assessing the abundance and distribution of ARB&ARG in wastewater treatment facilities and downstream environments. During the course, the participants will get familiar with computer-based tools (bioinformatics), which are used to gather, analyze and integrate biological and genetic information for understanding antibiotic resistance.