Challenges and Solutions related to Xenobiotics and Antimicrobial Resistance in the Framework of Urban Wastewater Reuse: Towards a Blue Circle Society

About XENOWAC II

The Conference embraces the work performed in the framework of NEREUS COST Action ES1403 and H2020-MSCA-ITN-2015/675530 ANSWER, both coordinated by Nireas International Water Research Center of the University of Cyprus.

**Sessions**

**Session 1: Fate of contaminants of emerging concern and antimicrobial resistance in urban wastewater treatment plants**

- "New" organic contaminants of emerging concern in wastewater
- Transformation products of organic contaminants
- Microbiome and resistome in wastewater
- Known and emerging pathogens in wastewater effluents
- Fate of non-cell associated antibiotic resistance genes (ARGs) in wastewater
- Assessment of antibiotic effects on ARGs persistence and dissemination at WWTP-relevant concentrations

**Session 2: Contaminants of emerging concern and antimicrobial resistance: From urban wastewater treatment plants to the environment**

- Behaviour, transmission and fate in receiving environments
- Uptake, translocation and metabolisation in crops
- Fate prediction using modeling approaches

**Session 3: Bioassays/tests to support urban treated wastewater quality management**

- Effect-based bioassays as a component of reuse schemes
- Whole Effluent Toxicity testing
- Standardization of sampling, analytical protocols, and use of different bioassays for common endpoints
- Stress measurements and effects related to ARGs dissemination
- Phytoxic effects on crops irrigated with treated wastewater
- Effects on the nutritional value of crops irrigated with treated wastewater
- Human health aspects

**Session 4: Technologies to meet urban treated wastewater reuse characteristics**

- Impact of WWTP technologies to address reuse challenges
- Disinfection processes and technologies to address reuse challenges
- Emerging technologies to address reuse challenges
- Large (real-scale) wastewater reuse project

**Session 5: Risk assessment and policy development**

- Data management and prioritisation
- Risk assessment: approaches, frameworks and sensitivity analysis
- Human- and environmental-based trigger values
- Determination of targets and cut-off values for qPCR-based diagnostic evaluation of ARGs in effluents
- Inclusion of molecular biological tools and bioassays in legislation
- International and national policy developments

**Highlights**

**Big Blue Talks (Plenary talks):**
http://www.xenowac2018.com/speakers/

**Keynote talks:**
http://www.xenowac2018.com/

**Round table Discussions:**
http://www.xenowac2018.com/roundtables/

**Panel Discussions:**
http://www.xenowac2018.com/

**Water JPI Satellite Event:**

**XENOWAC II Science Slam:**

10-12 October 2018,
LIMASSOL, CYPRUS
GrandResort Hotel
www.xenowac2018.com

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