

Announcement of Training Event G

on "Microbiology in wastewater treatment - Design criteria for wastewater treatment plants - Horizontal resistance gene transfer in soil"

April 23-27, 2018, Vienna, Austria

The Technische Universität Wien (TU-Wien), the Austrian Agency for Health and Food Safety (AGES) and the VA TECH WABAG GmbH (WABAG) organize a Training Event (TE) on "**Microbiology in wastewater treatment - Design criteria for wastewater treatment plants - Horizontal resistance gene transfer in soil**" in the framework of ANSWER/H2020-MSCA-ITN-2015/675530 project, which will be held in **Vienna, Austria on the 23rd to 27th of April, 2018**. This event will be hosted by Dr. Norbert Kreuzinger (TU-Wien, Vienna, Austria).

The aim of the TE-G is to provide ANSWER ESRs with professional and personal development opportunities beyond what they are generally exposed to in the course of their Ph.D. training. During TE-G the first aspect that will be addressed is the "**Microbiology in wastewater treatment**", in which the wastewater matrix and its fluctuations (i.e. quantity, quality), the biological processes and growth kinetics in dependence of abiotic eco-factors (e.g. substrates, nutrients, temperature, etc.), the microbial ecology of wastewater treatment plants and the sequential retention times, removal performance and the microbial diversity will be presented (both lectures and simple lab-demonstrations). The second aspect that will be discussed in this TE is the "**Design criteria for wastewater treatment plants**", which include the basic process options, the hydrology, the solid separation, the treatment goals and sludge age, the process control options, the demonstration of a simple design tool and other aspects in design (e.g. safety, solid waste, cost of plants, monitoring, etc.). To provide a greater insight into understanding of biological part of wastewater treatment, the next part of training will focus on "**Bacterial fingerprinting in wastewater by Next – Generation Sequencing (NGS)**". Participants will get familiar with use of bioinformatics tools to analyze results of 16S NGS, to ask specific research question and understand the answer they obtain from data analysis. Finally, the "**Mechanisms of horizontal resistance gene transfer (HGT) in soil**" will be presented, and specifically the naturally competent cells in soil, their frequencies and the model systems for accessing HGT.

The programme will also cover the **complementary/soft skill trainings** on:

(i) "**Moderation of project meetings**":

Meetings are central organizational tools for administrative issues and scientific advances. This course will convey basic principles in moderation, application of different moderation techniques, proper organization/management of meetings, tools for efficient group work and decision finding and handling of problematic participants.

(ii) "**Gender balance in the research and science arena and multicultural awareness**":

A workshop organized together with the Office for Gender Competence and the Vice Rector for Human Resources and Gender installed at TU-Wien will be offered to discuss gender-specific aspects in research and committed incorporation into TU-Wien curricula. Diversity (religious/ethnicity/socioeconomic status) and gender balance are vital factors for successful science because this relied on talent, collaboration and interdisciplinary research. Issues related to gender equality in research, innovation and management will be elaborated.

Other information:

- ✓ A number of vacancies (10) is available in this training event for **Ph.D. students in the field of Chemists, Chemical/Environmental Engineering and Environmental Sciences**, not integrated in the ANSWER project.
- ✓ Applicants for the vacancies should submit their application to Dr. Norbert Kreuzinger by email (norbkreu@iwag.tuwien.ac.at). If admitted they are expected to cover their travel and stay costs. The participation to the event is free of charge. **All applications should be submitted no later than 3.04.2018.**
- ✓ Successful applicants will be contacted directly by e-mail by **4.04.2018.**
- ✓ **Travel and accommodation must be arranged and covered by each participant after the receipt of the acceptance email.**



In addition to studying, the students will have the opportunity to explore the city of Vienna in their free time.