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EBNet Travel Bursary Support
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Environmental Dimension of Antimicrobial Resistance (EDAR7) conference 26-31 May 2024 Montréal, Canada

Presentation:
**Exploring AMR in conventional and advanced wastewater treatment processes:
A cross study along the oxygen gradient**
Stella Christou, University of Surrey

Antimicrobial resistance (AMR) is a global concern and wastewater treatment plants (WWTPs) are scrutinized for impacting AMR determinants, including antibiotic-resistance genes (ARGs) and mobile genetic elements (MGEs). WWTPs strive for minimisation of energy consumption, introducing new technologies like aerobic granular sludge (AGS), membrane aerated biofilm reactors (MABR) and anaerobic ammonium oxidation (Anammox) as alternative for conventional activated sludge (CAS) systems. Processes and conditions influence microbial communities and AMR.

The study presented at the EDAR7 (Environmental Dimension of Antimicrobial Resistance) conference in Montréal, Canada, aimed to shed light on the relationship between WWTPs process type and AMR in the most novel treatment technologies. Recognizing AMR neglect in conventional WWTP designs, it is imperative to assess AMR profiles, dissemination, and risks for future designs and extensions of WWTPs; without compromising water quality. This study on AMR in various processes triggers more hypothesis tests and practical considerations on pollution control.



Dr Bing Guo (left) and Stella Christou (right) at EDAR7

For a video version of the presentation see <https://youtu.be/XoJo521nwic>



Stella Christou presenting at the EDAR 7 conference