

Projet MEHTA

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Laboratoire de rattachement : UMR Agroécologie

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Partenariat/projet dans le cadre duquel s'inscrit le post-doctorat :
Managing Environmental Hotspots and Transmission of AMR (MEHTA)

Financement : Agence nationale de la recherche (ANR)

Résumé: Antimicrobial resistance is a crucially important public health challenge. Climate change is going to reduce the availability of water for crop growth in many parts of the world, including in France. Recognizing this, the Government of France's Priority Research Program on antimicrobial resistance under the France 2030 program has, through the Agence National de Recherche, funded the MEHTA project. This project aims to assess the dynamics of antimicrobial resistance in crop production systems irrigated with reused municipal wastewater, or fertilized with biosolids or animal manures. Specific objectives of the project include 1. Evaluate the burden of microbial and chemical (eg. antibiotic) contaminants in food crops, and how these vary with exposure to fecal contaminants; 2. Evaluate the impact of various tertiary treatment methods on the microbial and chemical composition of wastewater effluent; 3. Evaluate the potential selection of antimicrobial resistance in environmental bacteria by chemicals entrained into crop production systems; 4. Evaluate the potential transfer of antimicrobial resistant bacteria or genes carried in crop-based foods into the human gut microbiome using an ex vivo gut model.

Axe(s)/Domaine(s) d'applications(s) du réseau/TRL : risque (antibiorésistance, diffusion de la résistance aux antimicrobiens) / reuse en milieu rural / recherche