

## **Sivalingam Periyasamy**

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Research of Sivalingam Periyasamy focused on environmental antibiotic resistome, specifically in carbapenem-resistant Enterobacteriaceae (CRE) and their resistance determinants in different environmental compartments. Besides, he is also interested in studying the relative contribution of abiotic factors such as heavy metals in marine and freshwater ecosystems to the human-associated health risks and how they co-select with antibiotic resistance genes in the environment.

Research interests: Microbial Ecology, Molecular Microbiology, Persistent Organic Pollutants, and environmental antibiotic resistome. His research aims to address 1) the occurrence of a neglected genetic vector called extracellular DNA (eDNA) in aquatic ecosystems and 2) to understand the factors driving the extracellular ARGs propagation in natural environments using microcosm studies and shotgun metagenomic approaches.

In MEG, CNR-IRSA, research of Sivalingam Periyasamy focuses on “The Role of free Extracellular DNA in determining the Environmental Antibiotic Resistome” (REDTEAR), funded by EU Horizon 2020. This project will clarify the role of free extracellular DNA in the spread and the persistence of ARGs in open waters in central Europe, offering a unique opportunity for the correct management of this problem.

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