



Thibault Duteil

From Sweden to France



Project: **AFM survey of effects of biocide molecules on environmental bacteria**

Research topic: **Environmental Microbiology**

Swedish Institution: **Department of Chemistry (KBC), Umeå University**

French Institution: **Laboratoire de Chimie Physique et Microbiologie pour les Matériaux et l'Environnement (LCPME), Université de Lorraine**

Dates of mobility: **from 30-09-2024 to 17-10-2024**

Program: **SFVE-A**



PRESENTATION

Thibault Duteil is a post-doctoral researcher at the [Department of Chemistry](#) of Umeå University (Sweden). He is interested in the extraction and characterization of EPS (the organic matter secreted by biofilm producer microorganisms) and more recently, in the impacts of antibiotics on river bacterial biofilms. This knowledge can be applicable to among others, microbiology, vibrational spectroscopy and biochemistry. He obtained his PhD in biogeomicrobiology in 2022 in France at [EPOC laboratory](#). For more information, you can find his publications [here](#).

ACTIVITIES IN FRANCE

Thibault's main objective at the Laboratoire de Chimie Physique et Microbiologie pour les Matériaux et l'Environnement ([LCPME](#)) in Nancy was to use Atomic Force Microscope (AFM) to image, characterize and test physico chemical properties of river bacterial strains in the presence or absence of antibiotics. Four bacterial strains were imaged and their chemical properties analysed using chemically modified AFM tips. He was hosted by [Fabienne Quiles](#) and [Gregory Francius](#) in the [SIMAVI](#) research team. During his mobility, in addition to using AFM, he worked on two co-authored manuscript which should be submitted by the end of the year on the characterization of river bacterial isolates and how they are affected by environmental stress factors (e.g., antibiotics). He also held a seminar entitled "Composition, properties and preservation of exopolymeric substances (EPS) in estuarine sediments" in front of researchers and students of [Chimie et Electrochimie Analytiques](#), [Microbiologie Environnementale](#) and [Spectroscopies Interfaces MATériaux et Vlvant](#) teams. The positive results of the AFM experiments could lead to another potential trip during 2025 to finalize the work and perpetuate exchanges between the KBC and the LCPME.