

**Projet MSCA ITN-ETN MAMI : Magnetics and Microhydrodynamics - from guided transport to delivery**

**Coordination :** CNRS

9 partenaires

**Porteur scientifique / Laboratoire UNISTRA :** Thomas HERMANS, ISIS - Institut de Science et d'Ingénierie Supramoléculaires, UMR 7006

This multidisciplinary network entitled: “Magnetics and Microhydrodynamics - from guided transport to delivery” (MaMi) bridges the research fields of fluidics and magnetism, by taking advantage of magnetic forces to control local flows and cargo transport inspired by biomimetic systems. Using magnetic sources, as well as high magnetic susceptibility liquids or nanostructures, devices with unique anti-fouling properties and non-slip boundary conditions can be realized. Our scientific aim is to take advantage of such unique wall-less properties to create new applications of microfluidic technology for life sciences. The network assembles and interdisciplinary team of seven academic and five non-academic partners, exposes all students to industrial environments, and ensures training at the frontiers of two well-established research fields, which are not commonly associated. Over the course of their projects, early stage researchers based in academic institutions will experience working environments in at least 3 different countries. Training a new generation of researchers will bring new cutting-edge knowledge, and will ensure a high potential for industrial applications to promote EU leadership.