



# 1 PhD and 1 postdoc position in structural biology of functional amyloids

IECB, CNRS, Bordeaux



**Keywords:** Structural biology, solid-state NMR, amyloids

**Laboratory:** <http://www.loquetlab.org/>

Our laboratory is fully equipped for molecular biology, protein expression and purification. We manage the NMR platform of the IECB/CBMN, including **300, 500, 600 and 800MHz NMR spectrometers** equipped with solid-state NMR probes.

**Description:** The IECB (Bordeaux, France) is an international research center at the interface between biology and chemistry, outstandingly equipped for structural biology with NMR, mass spectrometry, X-ray crystallography and cryo-EM platforms. Our laboratory “**NMR of Molecular Assemblies**” is interested in structures and molecular interactions in large biological assemblies and aims at understanding the assembly mechanisms and the structure-function interplay of complex macromolecular assemblies. We develop and apply state-of-the-art **solid-state NMR spectroscopy** to decipher the atomic architectures and interactions of insoluble and non-crystalline protein assemblies.

This **ERC-funded project** is focused on exploring the role and the assembly mechanism of several **functional amyloids** involved in complex biological processes such as programmed cell death or bacterial infection. We will use solid-state NMR spectroscopy to decipher the architecture, ultimately at atomic resolution, of challenging functional amyloid assemblies. This work will be done in close collaboration with experts on the biology of these amyloids to fully understand the functional aspects of amyloids by integrating in vivo information in such complex biological processes.

Advantageous expertise includes: interest in structural biology, experience in production and purification of proteins and / or experience in solid-state or solution NMR.

Highly motivated candidates should send applications including CV and names of two references to Antoine Loquet ([a.loquet@iecb.u-bordeaux.fr](mailto:a.loquet@iecb.u-bordeaux.fr)) and Birgit Habenstein ([b.habenstein@iecb.u-bordeaux.fr](mailto:b.habenstein@iecb.u-bordeaux.fr)).

## **Selected publications:**

Stanek et al., *Angew Chem Int Ed Engl.* **2016**  
Daskalov et al., *Proc Natl Acad Sci U S A.* **2016**  
Daskalov et al., *PLoS Biol.* **2015**  
Habenstein et al., *Angew Chem Int Ed Engl.* **2015**  
Habenstein, Loquet. *Biophys Chem.* **2016**  
Loquet et al., *Nature* **2012**