



**Aquitaine –Karnataka collaboration  
Scientific Project for Pre-PhD student exchange**

**Scientific Proposal**

Project Title	<b>Structure of pathogenic protein assemblies by solid-state NMR</b>	
Scientific domain	Biochemistry, biology, biophysics	
Summary (ca. 10 lines)	<p>Self-assembly of proteins into large supramolecular assemblies plays a key role in many biological processes, notably in bacterial virulence and neurodegenerative disease propagation. 3D structures of these assemblies are still rare as they are usually non-crystalline, and therefore often not amenable to X-ray diffraction techniques.</p> <p>Our group develops and applies sophisticated solid-state NMR techniques to decipher the atomic structures of insoluble protein assemblies in biology. This project will focus on the structural investigations of pathogenic assemblies, including the production, purification, assembly and atomic characterization by solid-state NMR methods.</p>	
Student profile wished	Biochemist, chemist with interest in structural biology, engineer in biochemistry	
Supervisor Name	Dr. Antoine LOQUET	
Supervisor @ & phone	@: <a href="mailto:a.loquet@iecb.u-bordeaux.fr">a.loquet@iecb.u-bordeaux.fr</a>	Tel: +33 (0) 5 4000 2212
Institute/laboratory/industry (full address)	IECB ( <a href="http://www.iecb.u-bordeaux.fr/index.php/en">http://www.iecb.u-bordeaux.fr/index.php/en</a> ) 2 rue Robert Escarpit 33607 Pessac France	
Director Name Institute/laboratory/industry	Dr. Antoine LOQUET	
Director Institute/laboratory/industry @ & phone	@: <a href="mailto:a.loquet@iecb.u-bordeaux.fr">a.loquet@iecb.u-bordeaux.fr</a>	Tel: +33 (0) 5 4000 2212
Timing & duration for project (give approximate ranges)	3-6 months	
Representative References	Loquet et al., Nature 2012 Loquet et al., Acc. Chem. Res. 2013	

Contact Aquitaine: Erick Dufourc @: e.dufourc@cbmn.u-bordeaux.fr tél: +33 5 4000 6818	Contact Karnataka: Dipankar das Sarma @: sarma@sscu.iisc.ernet.in tél: +91 80 2293 2945
<a href="http://www.cbmn.u-bordeaux.fr/aquitaine-karnataka-exchange?lang=2">http://www.cbmn.u-bordeaux.fr/aquitaine-karnataka-exchange?lang=2</a>	