

The Authors

Description



Nicolas Jean

Nicolas Jean obtained a Bachelor Degree in Biology and a Master Degree in Structural Biology and Biochemistry from Université Joseph Fourier, Grenoble, in June 2010 and 2012, respectively. He joined the team of Jean-Pierre Simorre at IBS in January 2012 for his master thesis, where he started to work on the structural characterization by NMR of an outer-membrane anchored lipoprotein, LpoA, that stimulate the penicillin binding protein PBP1A in facilitating the attachment of new mucopeptides to the peptidoglycan sacculus. He continued this work during his PhD and characterized structurally another lipoprotein LpoB from γ -proteobacteria and its interaction with its cognate PBP, PBP1B implicated in the bacterial cell division. At the end of his PhD, he started to work on the structure-function analysis of the protein MapZ, which positions the future cell division site in the pneumococcal bacterial cell. He defended his PhD thesis in November 2015. Fascinated by the deciphering of key molecular machines implicated at the cell surface in the bacterial cell cycle, he decided to move as a postdoctoral fellow at the MRC Laboratory of Molecular Biology in the team of Pr. Jan Löwe to study these systems by fluorescence light microscopy and electroncryotomography in January 2016.



Jean Pierre Simorre

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Jean-Pierre Simorre is a CNRS research director currently leading the « Bacterial Cell Wall » team within the Biomolecular NMR Spectroscopy group at the Institut de Biologie Structurale (IBS), Grenoble, France. He is also the director of the French Research Infrastructure for Nuclear Magnetic

Resonance at very High Fields. He was awarded the CNRS Bronze medal in 2000. After development of NMR tools for the structural and dynamical characterization of a variety of biomacromolecules, he moved towards deciphering key enzymatic activities and interactions at the bacterial cell surface using state-of-the-art liquid- and solid-state NMR methods. Among other processes, his current work focus on different steps of peptidoglycan morphogenesis and maturation along bacterial cell elongation and division. He also looks into the development of innovative strategies to fight antibiotic resistance.



Catherine Bougault

Catherine Bougault

Catherine Bougault is associate professor at Université Grenoble Alpes, Grenoble, France. After initial work in synthetic chemistry to mimic the active site of metalloenzymes through inorganic supramolecular complexes and to correlate chemical structure to magnetic properties, she decided to join the team of Jean-Pierre Simorre in 2003 to work on the chemical and dynamical characterization of the cell wall from different bacterial species and to take part in the deciphering of the mechanisms of peptidoglycan morphogenesis, among which transpeptidation.