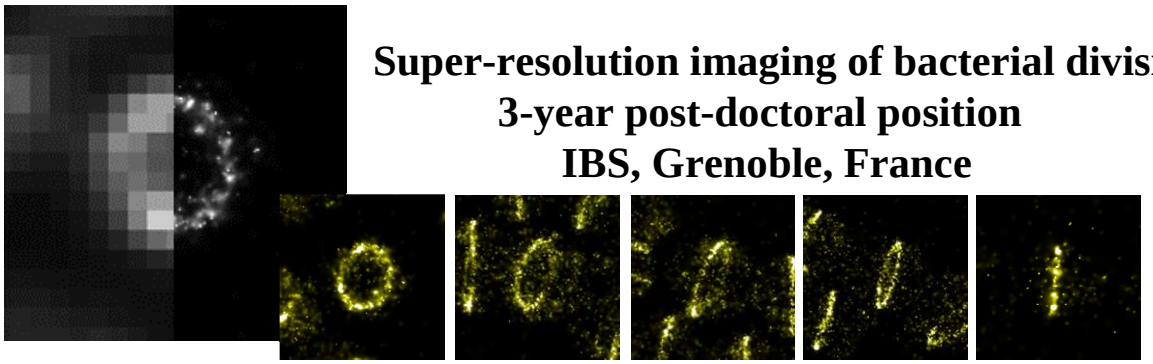

Super-resolution imaging of bacterial division
3-year post-doctoral position
IBS, Grenoble, France

Description of the offer:
Bacterial cell division, a fundamental biological process and a source of multiple therapeutic targets, results from the combination of membrane constriction with cell wall synthesis. Coordination of these processes within a large protein complex (the divisome) ensures cell integrity and cell shape maintenance. The identity, the role, the structure and the protein interaction network of many division proteins are known. However, we still do not understand how all these proteins assemble into the bacterial cell to form a functional macromolecular complex in charge of membrane constriction and cell wall synthesis. In particular, the dynamics and the regulation of the divisome assembly along the cell cycle remain obscure. We will address these questions in the human pathogen *Streptococcus pneumoniae* through a research program combining bacterial genetics and super-resolution imaging. We are searching for a motivated post-doctoral fellow to study the *in vivo* nano-architecture of division proteins using 2-color PALM/dSTORM and single-particle tracking PALM.
Under the responsibility of the project leader (C. Morlot) in the Pneumococcus group and in close collaboration with the biophysicists of the Pixel team (D. Bourgeois, V. Adam) at the Institute for Structural Biology (IBS), the post-doc will:

- Grow and prepare *S. pneumoniae* cells for PALM/dSTORM and sptPALM studies
- Acquire, process and analyze 1- and 2-color PALM/dSTORM and sptPALM data

Requirements:
- Ph.D. or post-doctoral experience in single-molecule localization microscopy (experience in 2-color PALM/dSTORM will be a plus)
- Autonomy, enthusiasm, excellent written and oral communication skills in english

Starting date: the position is open from May 2017, and will remain so until filled

Salary: depending on the experience of the candidate

Laboratory and environment:
Pneumococcus group - Institut de Biologie Structurale (IBS) - UMR5075 (CNRS/CEA/UGA)
71, avenue des martyrs - CS 10090 - 38044 GRENOBLE CEDEX 9, France
http://www.ibs.fr/research/research-groups/pneumococcus-group-t-vernet/

Grenoble is situated in the middle of the beautiful French Alps, and provides a unique environment for state-of-the-art integrated cellular and structural biology (http://www.psb- grenoble.eu/).

Contact:
Applications (CV, motivation letter and 2 reference letters) should be sent to Cécile Morlot
Email: cecile.morlot@ibs.fr Phone: +33 (0)4 57 42 86 55)