

**M1-Molecular and Cellular Biology (MCB)
Internship Proposal Form
Chemistry-Biology Department**

(Deadline Friday 1st November 2018)

Laboratory Address and Affiliation:

Institut de Biologie Structurale CNRS(UMR5075)/CEA/UGA - Pneumococcus group
71, avenue des Martyrs
CS10090
38044 Grenoble Cedex 9, France

Laboratory/Team Research area (Keyword)

Institut de Biologie Structurale - Pneumococcus group (Headed by T. Vernet)
Bacterial division and morphogenesis. Cell imaging. Fluorescence microscopy (including super-resolution microscopy). Molecular biology.

Summary of the Proposed Internship Project (10 lines)

Title: Cellular study of cell wall synthesis in *Streptococcus pneumoniae*

DESCRIPTION:

The cell wall is an essential component of the bacterial cell, providing shape and mechanical resistance. The proteins in charge of cell wall synthesis form large membrane complexes which include cell wall synthases, cell wall hydrolases, regulatory and structural proteins. Our laboratory study the assembly mechanism and enzymatic activity of those complexes in *Streptococcus pneumoniae*, using *in vitro* and *in vivo* methods. The student will be proposed a project related to cell imaging of the enzymatic activity of the cell wall synthesis complexes.

Methodologies and/or Techniques to be used

Bacterial division. Bacterial morphogenesis. Molecular biology. Cell imaging. Fluorescence microscopy (including super-resolution microscopy).

Person to contact:

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Additional information