



CBS - Centre de Biochimie Structurale
CNRS INSERM UM, Montpellier, France.
Dept. of Biophysics and Bioengineering
www.cbs.cnrs.fr

Postdoc or PhD position

Mechanisms and Dynamics of the Bacterial Flagellar Motor



Our project, funded by the French ANR (*Agence Nationale de la Recherche*), aims at understanding the *mechanisms driving the activity and complex dynamics of the Bacterial Flagellar Motor in its cellular context*. The motor is a large and powerful protein complex found in the membrane of many motile bacteria. Consuming the energy of the Ion Motive Force (the trans-membrane potential built by the cell during respiration), it is responsible for rotation of flagella and propulsion of the cell.

The successful candidate will work in the *Single-molecule angular dynamics* group at CBS Montpellier (France). CBS is a strong interdisciplinary lab with a rich spectrum of expertise ranging from biophysics to synthetic and structural biology. Our group develops and employs novel single-molecule biophysics techniques such as optical and magnetic manipulation and single-molecule fluorescence microscopy, as well as theoretical analysis and modeling.

We are looking for a strong and motivated candidate to fill either a postdoc (1 year renewable) or a PhD (3 years) position.

The ideal postdoc candidate should hold or be close to the completion of a PhD in biophysics or a related discipline, and will have extensive experience in a significant subset of the following:

- single-molecule biophysics
- microscopy and fluorescence microscopy
- programming, quantitative image and data analysis
- theoretical modeling
- wetlab techniques and cell/molecular biology (bacterial genetic manipulations, protein purification)
- demonstrated ability to work both independently and within a team
- good oral and written communication skills (French is not a requirement)

The ideal PhD candidate will have a Master (or equivalent) degree in the life sciences with a strong quantitative background, experience in one or more of the above-mentioned points, and an interest in interdisciplinary projects.

The application, including CV, cover letter, and the names of 2-3 references, should be sent to Francesco Pedaci (francesco.pedaci@cbs.cnrs.fr).