CALL FOR APPLICATIONS

POSTDOCTORAL POSITION

2 YEARS POSTDOCTORAL POSITION AT CENTER FOR STRUCTURAL BIOCHEMISTRY (CBS) IN MONTPELLIER, FRANCE

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Structure and Dynamics of Membrane Assemblies Team
Biophysics and Bioengineering Department
http://www.cbs.cnrs.fr/index.php/en/home-equipeb3

SCIENTIFIC PROJECT AND JOB DESCRIPTION:

The project is focused on the development of a novel Atomic Force Microscope imaging mode based on tip-sample energy transfer at nanoscale to image living cells membranes with high spatial and temporal resolution. The project is clearly at the frontier between **Physics** and **Biology/Biochemistry**. At first, the proposed development will permit the characterization of forces at nanoscale avoiding the use of linear/non-linear harmonic oscillators as in the case of AFM, SFA and optical tweezer. Indeed, short range interactions will be quantified by means of advanced single-molecule fluorescence techniques improving by orders of magnitude the force resolution of conventional AFM modes.

The PostDoc will work in close collaboration with Dr. Pierre-Emmanuel Milhiet and Dr. Emmanuel Margeat and is expected to build/develop this unique instrument participating in ongoing in-house R&D programs of the team, mainly focused on biological membranes remodeling projects. The position is supported by a CNRS MOMENTUM 2017 grant (http://www.cnrs.fr/fr/cnrsinfo/les-laureats-de-lappel-projets-cnrs-momentum).

SCIENTIFIC ENVIRONMENT:

CBS (http://www.cbs.cnrs.fr) is an Institute dedicated to research at the forefront of structural biology and biophysics. It also proposes facilities in these fields. Montpellier is a stunning city on the French Riviera with a significant international community. The research of our group is focused on the development and use of advanced microscopies (AFM and single molecule fluorescence microscopy) to decipher the molecular mechanisms associated to the organization and remodeling of biological membranes. The group includes 10 people with 5 permanent researchers.
The team has a longstanding record in the training of young apprentices and the activity of mentoring young people is part of the position.

More info on http://www.cbs.cnrs.fr/index.php/en/home-equipeb3

1. L. Costa et al. NanoLetters, 16 (9), 2016. - **2**. B. Gumi-Audenis et al. Journal of Synchrotron Radiation, 22, 1364-1371, 2015. - **3**. B. Gumi-Audenis et al. Nanoscale, 10(1), 2017. - **4**. C.

Chevalier et al. Nature Communication, 10765, 2016. - **5**. P.E. Milhiet et al. PlosOne, 5(10), 2010.

REQUIREMENTS:

Highly motivated and ambitious candidates are encouraged to apply. We require:

- **Excellent teamwork skills.**
- A PhD degree in physics, biophysics or related scientific disciplines.
- **A high level of interest in instrumentation** and in the development of non-conventional protocols and techniques.
- Relevant scientific experience supported by publication record.
- Excellent English communication skills.

Previous experience in Atomic Force Microscopy, Fluorescence imaging, Optics, Cell Culture, Electronics and Wet Lab experience as well as computational (i.e. Labview, Python, Matlab) skills will be positively considered.

TERMS OF SALARY AND EMPLOYMENT:

Successful applicants will receive a salary according to CNRS rules and experience starting from January, 1st 2019.

APPLICATION PROCEDURE:

The application must be submitted in English to costa@cbs.cnrs.fr, pem@cbs.cnrs.fr and emmanuel.margeat@inserm.fr. They must include the following:

- Curriculum vitae with a list of publications, a report on previous research and the names, addresses and contact details of 2 referees.
- All relevant diplomas, including grades.

Deadline for application is October 15th, 2018. All applicants will be notified whether their application has been selected for an interview (seminar + personal visit or skype chat).