



Open position: Mechanobiology of cells across tissues

We invite applications for a PhD position in our team at the School of Medicine of the University of Barcelona (campus Hospital Clinic), **starting May/June 2025**.

Our team is a multidisciplinary group that explores cell mechanobiology to better understand normal and pathologic processes. We investigate how cells generate and respond to mechanical forces during various cellular functions, such as adhesion and migration.

We seek a highly motivated PhD candidate to investigate how mechanical environments influence fibroblast migration. The project combines advanced traction force microscopy, microrheology, and biomimetic hydrogels. Ideal candidates have experience in cell biology, biophysics, or bioengineering.

Tasks will include:

- Tissue culture techniques
- Fluorescent optical microscopy
- Use of mechanobiology techniques such as traction force microscopy and Atomic Force Microscopy
- Image quantification with Fiji, Python and Matlab
- Data analysis with R and Matlab

The candidate must have a Master's degree or be currently enrolled in a Master's program in Biophysics, Physics, Biomedical Engineering, or a related field. We are looking for highly multidisciplinary candidates who are eager to learn a range of skills, from cell biology techniques to programming. Strong academic performance, which will help in securing a fellowship, is a plus.

The candidate will get her/his PhD degree and expectedly publish scientific articles in prestigious international journals.

We offer:

- An initial contract from May/June to December 2025. After this period, the candidate will need to obtain a PhD scholarship.
- A highly multidisciplinary research team (biology, physics and biomedical engineering) with access to state-of-the-art microscopy equipment and core facilities.
- A large set of training opportunities to broaden your skills.
- Possibility to do internships in laboratories abroad.

Application

Please send your CV to rsunyer@ub.edu with the subject: "Open Position"

Further information:

Brief introduction to mechanobiology:

(English) <http://biofisica.info/articles-7/mechanobiology-of-collective-cell-systems/>

(Spanish) https://rsunyer.com/uploads/NIYC0618_40-47.pdf