



Open position: Mechanobiology of senescent fibroblasts

We invite applications for a PhD position in our team at the School of Medicine of the University of Barcelona (campus Hospital Clinic), **starting early 2024**.

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.

The PhD project will address three fundamental questions in mechanobiology. First, the candidate will examine the role of mechanical signals in the induction of cellular senescence in fibroblasts. Second, the candidate will characterize the mechanobiology and migration of senescent fibroblasts. Third, the candidate will investigate how mechanical cues modulate the efficacy of senolytic drugs.

Tasks will include:

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

By the time of signing the contract, the candidate must hold a Master's degree in the field of life sciences. Candidates with an interdisciplinary profile are also very welcome (Physics / Biology / Chemistry / Engineering). Experience in cell culture and optical microscopy 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 to start the PhD (the contract will be renewed later on).
- 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