

Postdoc in experimental cellular mechanics in Barcelona: adhesion remodelling under force

The research groups on “Mechanics of soft and living interfaces” and of “Cellular and molecular mechanobiology”

<https://www.lacan.upc.edu/mechanics-of-soft-and-living-interfaces/>

<http://www.ibecbarcelona.eu/ca/cellmolmech>

are looking for a highly motivated and creative postdoctoral researcher to probe the dynamics of cell-cell adhesion remodelling under force, and closely interact with mechanistic theoretical models of cell mechanobiology. The project aims to connect the molecular and cellular scales of cell-cell adhesion, in models of healthy and malignant breast cells. The successful candidate will implement a new protocol to systematically examine cell decohesion by controlling the mechanical and molecular parameters of the adhesion complex while tracking the reorganization in terms of shape and molecular localization of the cytoskeleton and the adhesion and adaptor molecules. He/she will perform the experiments in the lab of Pere Roca-Cusachs at IBEC (<http://www.ibecbarcelona.eu/member/156/Pere+Roca-Cusachs+Soulere/>) and very closely interact with the group of Marino Arroyo (<https://www.lacan.upc.edu/arroyo/>) at UPC, and will be framed within the FET Proactive project MechanoControl (<http://mechanocontrol.eu>).

The successful candidate will hold a PhD in experimental biophysics, biomechanics, or soft matter physics with a track record of significant contributions in his/her field. Previous experience in Atomic Force Microscopy, and specifically in adhesion or mechanical studies, will be highly valued.

You will work in a highly collaborative and interdisciplinary environment with a dual affiliation at IBEC and at the UPC.

Besides Skype interviews, it is possible to arrange on-site visits to the lab and the campus in Barcelona. The starting date is flexible during the fall of 2019/winter of 2020. We offer initially a one-year contract, renewable to a second year.

Interested applicants are encouraged to send as soon as possible a CV with a list of at up to 3 references and a very concise statement describing your past research experience and your interests. This and specific inquiries should be addressed to Marino Arroyo (marino.arroyo@upc.edu) and Pere Roca-Cusachs (proca@ibecbarcelona.eu) with “Postdoc applicant MechanoControl-2019” in the subject line.

Located in the city of Barcelona, the Universitat Politècnica de Catalunya -BarcelonaTech (UPC) is one of the largest technical universities of southern EU, with over 30,000 students spanning all levels from undergraduate to PhD, and employing over 2,500 faculty. Within UPC, the LaCàN research center develops new mathematical and computational models to enable quantitative and predictive

science and engineering, specifically in the field of cell and tissue mechanobiology. The Institute for Bioengineering of Catalonia (IBEC) is an interdisciplinary research center focused on Bioengineering and Nanomedicine and one of the Severo Ochoa Excellence Centers. IBEC's **mission** is to develop international high quality interdisciplinary research that, while creating knowledge, contributes to making a better quality of life, improving health and creating wealth.