



UNIVERSITAT DE
BARCELONA

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JOB OFFER

Barcelona, March 13th, 2024

Single-molecule techniques have revolutionized our way of approaching biological and physical systems by **manipulating one molecule at a time**. "*Take a single DNA molecule and pull from its extremities while recording the force-extension curve until it gets fully straightened.*" This thought experiment, a dream a few decades ago, has become standard in many research institutes worldwide. Using laser beams, it is possible to generate optical traps to capture beads tethered to individual molecules and pull them to measure piconewton forces. This technique, known as **optical tweezers**, is the leading equipment of the **Small Biosystems Lab**. It is currently applied to monitor molecular and cellular reactions with unprecedented spatial and time resolution. The **Small Biosystems Lab** merges theory and experiments to investigate small systems' thermodynamics and nonequilibrium behavior using single-molecule methods.

The **Small Biosystems Lab** is seeking a young student, graduate, or researcher for the Ph.D. in one of the most exciting lines of research in the lab, **the study of RNA at cold temperatures**. Our lab recently discovered that RNA shows remarkable properties at subfreezing temperatures and novel cold RNA biophysics. The candidate will **synthesize RNA molecules to conduct force spectroscopy experiments with temperature-controlled optical tweezers**. This job offer is an excellent opportunity for a **passionate, hard-working, responsible, and independent person to start a research career**. The candidate will be assisted by senior researchers and supervised by the PI. We seek someone with **a degree in Physics, Biology, or Chemistry with teamwork skills and capacity**. The laboratory aims to develop research at the highest international level, so candidates with different backgrounds that fit into this environment are especially encouraged.

Offer details: Available at,

<https://seu.ub.edu/ofertaPublicaCategoriaPublic/listPublicacionsAmbCategoria?categoria.id=506376>

Deadline for applying: March 27th, 2024

If you are interested in applying, 1) please send your CV and a brief motivation letter to i.pastordelcampo@gmail.com and ritort@ub.edu; 2) Apply to the position at this link <https://seu.ub.edu/ofertaPublicaCategoriaPublic/listPublicacionsAmbCategoria?categoria.id=506376> before the deadline on March 27th, 2024. **Note: step 2) is compulsory to be eligible.**

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