

Predocctoral Researcher at the Spatial Biotechnology Research Group

Introduction to the vacant position:

The Spatial Biotechnology Group is looking for a talented and highly motivated **Early Stage Researcher (PhD student)** to develop his/her PhD thesis project on the development of computational tools to study clonal behaviours in the native tumor microenvironment. The contract will be within the framework of the project **SpaceClones**, whose objective is to develop high-throughput and spatial perturbation assays to understand on how cancer cell clones spatially organize to drive solid tumour development. SpaceClones will take advantage of cutting-edge multiplexed tissue technologies, *in vitro* co-culture systems, engineered 3D tumours, super-resolution imaging, assay automation, and computational tools for deconstruction of molecular and cellular spatial patterns in cells and tissues.

This project is financed by the ERC-2023-StG project “Integrative profiling and engineering of clonal cancer cell behaviours: from the tissue level down to the molecular scale” from the EU Horizon Europe programme, with grant agreement number 101117905.

Main tasks and responsibilities:

- Processing of raw fluorescence, mass spectrometry, and sequencing data to multiparametric tissue images.
- Implement pipelines for single-cell and spatial tissue analysis.
- Development of algorithms for integrative spatial analysis of subcellular domains, cellular neighborhoods, and higher-order tissue structures.

Requirements for candidates:

Essential:

- BSc and MSc in bioinformatics, data science, bioscience, or related fields.
- Experience programming and scripting in Python and/or R.
- A strong commitment to scientific research and an excellent academic record.
- Good working knowledge of English.
- The candidates must not yet have been awarded a doctoral degree. The candidates must not have held a PhD contract exceeding twelve months by the beginning of the fellowship.
- Good skills in communication, teamwork, proactivity, commitment, integrity, time management, critical and analytical thinking, precision, and focus.
- Willingness to work in a highly multidisciplinary environment.

Advantageous:

- Previous experience in image analysis.

We Offer:

- Number of available positions: 1
- Starting date: May 2024
- Working conditions:
 - Full time 4-year contract.
 - Measures to reconcile work and family life (parental leave, flexible schedule working hours, 23 working days of paid holidays, 9 leave days for personal matters, among others).

- IBEC ensures equality of access to professional development opportunities irrespective of employment status, length at IBEC or other factors. The IBEC's yearly training catalogue offers a wide range of training in technical and transferable skills including mobility grants and a Mentoring programme for predoctoral and postdoctoral researchers.
- Stimulating, interdisciplinary research and high-quality international scientific environment.
- Induction programme to facilitate incorporation at IBEC and additional support is provided for foreigners to obtain Visa-working permit and to install in Barcelona.

How to apply:

Until March 22th an online application form is available through IBEC dedicated site:
<https://careers.ibecbarcelona.eu/>

Only those applications submitted before the deadline will be evaluated.

Reference: PHD-XR.

If you have any further question regarding your application, please contact us at
jobs@ibecbarcelona.eu

Principles of the selection process:

IBEC is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission and the Open, Transparent and Merit based Recruitment principles (OTM-R) <https://ibecbarcelona.eu/careers-at-ibec/jobs/>

IBEC's Commitment on equal opportunity:

Our strength and excellence as an international transdisciplinary Research Institute are based on diversity. Being an equal opportunity employer, we are committed to diversity and inclusion, so that we support employees irrespective of their gender, nationality, religion, disabilities, age, sexual identity, or cultural and socioeconomic background.

IBEC actively looks for female candidates for Senior positions ensuring that at least 40% of shortlisted applicants invited to interview have to be women with comparable level of CVs as the male candidates. At the end of the evaluation process, in case of equal merit, priority will be given to female candidates.

For candidates with children that come from outside Barcelona, we offer babysitting services during the interview, so you don't have to worry about anything else than doing a good interview. Contact us if you are interested in this service.

IBEC, as a signatory of the San Francisco Declaration on Research Assessment (DORA), will consider, especially for early-stage investigators, much more the scientific content of research outputs, than publication metrics or the identity of the journal in which it were published.

Protection of personal data:

IBEC guarantees that candidates' personal data are processed in accordance with the requirements of the EU General Data Protection Regulation (GDPR) and Law 3/2018 on Data Protection.

Personal data will be processed solely for the purposes of the selection process.

Who we are?

The Institute for Bioengineering of Catalonia, IBEC is an interdisciplinary research center focused on Bioengineering and Nanomedicine based in Barcelona. IBEC is one of the top research institutions named as a Severo Ochoa Research Centre by the Ministry of Science, Universities, and Innovation, which recognizes excellence at the highest international level in terms of research, training, human resources, outreach and technology transfer.

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. A close link with key universities, reference hospitals and corporations, are assets that facilitate achieving the mission.

IBEC was established in 2005 by the Generalitat de Catalunya (Autonomous Government of Catalonia), the University of Barcelona (UB) and the Technical University of Catalonia (UPC).

IBEC is located within the Barcelona Science Park and is managing 3.800 square meters facilities, with an annual budget of 22 Mio€ 4.150 square meters of facilities; 21 research groups and a team of researchers and support services of 400 people from 35 different countries.
www.ibecbarcelona.eu