

Predocctoral researchers position at the Targeted Therapeutics & Nanodevices group

Introduction to the vacant position:

The Targeted Therapeutics and Nanodevices Group led by Prof. Silvia Muro at the Institute for Bioengineering of Catalonia (IBEC) is looking for a PhD Student to develop their research thesis on a project focused on the identification, characterization, and application of “universal” monoclonal antibodies capable of recognizing specific cell-surface receptors in a variety of species, as primary tools to then develop targeted drug delivery applications (nanoparticles and antibody-drug conjugates) for the treatment of neurodegenerative diseases.

The candidate will apply for an “Ayudas para contratos predoctorales para la formación de doctores” fellowship associated to the project “*CROSSTARGET: Development of new translational cross-species tools for therapeutic targeting with organ and subcellular precision*”, which has been recently funded by the Ministerio de Ciencia, Innovación y Universidades, under its RETOS program.

Main tasks and responsibilities of the successful candidate will be:

- Help in the design of an antibody library against a particular cell-surface receptor.
- Biopanning of said library against diverse cells to identify tissue-specific and cell-compartment specific antibodies.
- Cloning, production, and characterization of recombinant antibodies from best hits.
- Participation in studies where said antibodies will be coupled to polymer nanoparticles or drug conjugates, to characterize their binding to, uptake by, and effects in cellular and mouse models of neurodegenerative diseases.
- Contribute to regular lab keeping tasks, safety compliance, record keeping, collaborations, writing of publications, attendance to lab meetings, and other general assistance to the GL and the lab.

Requirements for candidates:

Essential:

- Grade & MS in Biomedicine, Biotechnology, Molecular Biology, Immunology, Bioengineering or any field directly related to the tasks described above.
- Research experience on (at least one task): recombinant technology, antibody modification, mammalian cell cultures, confocal microscopy, image analysis.
- Good skills on communication, teamwork, proactivity, commitment, integrity, time management, critical and analytical thinking.
- High level of English for daily use in oral and written form.

Advantageous:

- Previous experience on biolibraries, biopanning, nanoparticles, antibody-drug conjugates.
- Authorization and experience in working with laboratory animals.
- Knowledge and experience on the handling of radioisotopic samples.

Eligibility Criteria for the application for the fellowship:

- Candidates should be ready **to enter an official doctoral programme in September / October 2019** (under Spanish Law). By this time, they must have obtained a university degree and a master's degree; or must hold an official university qualification from a country of the European Higher Education Area with

a minimum of 300 ECTS of official university studies, of which at least 60 are at master's level.

- Candidates are eligible for a period of **2 years following the end of the MSc** or **5 years following the end of the BSc** at the time of deadline (October 2019). Should an applicant hold more than one MSc degree, this period will be counted from the first MSc earned or, in case of different disciplines, from the MSc in a scientific topic. Likewise, in the case of applicants who hold more than one BSc degree.
- Candidates must **not yet have been awarded a doctoral degree**.
- Candidates must **not have held a PhD contract exceeding 12 months in September/October 2019**.
- Candidates must **not have held any fellowship from the “Ministerio de Ciencia, Innovación y Universidades”** for the development of a PhD thesis at the time of deadline

We Offer:

- Number of available positions: 1
- Starting date and working conditions will be those described in the 2019 call text for these fellowships. See 2018 call for reference: <http://www.ciencia.gob.es/portal/site/MICINN/menuitem.dbc68b34d11ccb5d52ffeb801432ea0/?vgnnextoid=131955e2d5e01610VgnVCM1000001d04140aRCRD>
- Measures to reconcile work and family life (maternity and paternity leave, flexible schedule working hours, teleworking, 23 working days of paid holidays, 9 leave days for personal matters, among others).
- Professional development opportunities: IBEC has a training catalogue in technical and transferable skills and organizes seminars and PhD discussions. Mobility grants are offered. Mentoring programme for Postdoctoral researchers.
- 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:

Interested applicants should send **1 single pdf file** containing (**in this order**) a cover letter, their CV, one publication which most significantly represents their expertise, and the contact of two referees. Lists of Papers, abstract, etc. in the CV should be **numbered** and **research articles should be clearly separated** from any other publication (review articles, chapters, books, conference proceedings, etc.). The application file should be sent to: jobs@ibecbarcelona.eu (Reference: **PhD-RETOS**).

Principles of the Selection Process:

Our Recruitment and Selection Policy is based on the OTM Strategy (Open, Transparent and Merit-based recruitment) www.ibecbarcelona.eu/jobs/ and accept applications without distinction on any grounds. Candidates with disabilities are strongly encouraged to apply. Our commitment to OTM-R principles can also be found in our Gender and Diversity plan.



Protection of personal data:

IBEC ensures that applicants' personal data are processed as required by EU General Data Protection Regulation (GDPR) and Spanish Law 3/2018 on Data Protection. Personal data shall thus be processed solely for the purpose of the selection procedure.

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 Ministry of Economy and Competitiveness (in charge of research and innovation policy in Spain), 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, 21 research groups and a team of researchers and support services of 300 people from 30 different countries. www.ibecbarcelona.eu