

Junior Research Group Leader position (Ref.: JGL NTT)

IBEC is seeking outstanding, highly motivated candidates for a new Junior Group Leader position

The Institute for Bioengineering of Catalonia (IBEC) is a cutting-edge research centre based in Barcelona. IBEC develops interdisciplinary research of excellence, from basic research to medical applications, in the fields of biomedical engineering and nanomedicine.

IBEC was founded in 2005 by the Generalitat de Catalunya, the University of Barcelona and the Universitat Politècnica de Catalunya–BarcelonaTech with the mission to develop international high quality interdisciplinary research that, while creating knowledge, contributes to a better quality of life, improving health and creating wealth. IBEC aims to consolidate a strong international position in the fields of nanomedicine and bioengineering, as well as to increase the portfolio of technology transfer services available to the industrial sector and the healthcare system.

In this regard, IBEC is one of top research centres in Spain that currently holds accreditation of the Severo Ochoa Excellence programme, an initiative of the Spanish Ministry for Economy and Competitiveness to identify and boost research institutes that stand out as international references in their specialized fields.

IBEC is located within the Barcelona Science Park, with premises of 2.500 square meters, 19 research groups and a team of researchers and support services of 250 people from 20 different countries with diverse backgrounds in physics, engineering, computer science, chemistry and other fields. The location of IBEC in the Barcelona Science Park offers a highly stimulating biomedical environment in which the institute can work closely with organisations from the public and private sector.

The novel vision promoted at IBEC is to exploit and connect the multidisciplinary of the institute's groups, aligning their complementary capacities through three broad areas of expertise:

- **Nanomedicine:** nanobiosensing; microfluidics; nanofabrication using soft lithographies and related techniques; beyond-AFM/ST microscopy tools to characterize biological samples at the nanoscale; drug delivery; nano-scale characterization of bacterial-host interactions; organ/lab-on-chip technologies; nanorobotics; nanoscopy.
- **Cell Engineering:** biomaterials for regenerative medicine; reprogramming stem cells; control differentiation of stem cells; rapid prototyping for biomaterials; cell-material interaction; biomimetics; mechanobiology protocols and their translation to clinical purposes; cellular and molecular biology; antibacterial strategies.
- **ICT for Health:** application of advanced information and communication technologies to healthcare, such as modelling; signalling processing; automatics/control software for robotics; imaging; robotics for minimally invasive surgery.

To this end, our institute, on the basis of the generation of knowledge in bioengineering and nanomedicine, focuses the continuation of its scientific and technological work around three core application areas:

- **Bioengineering for future medicine**, with the aim of developing technology that goes beyond the existing paradigm of medical care in hospital to incorporate new areas such as photopharmacology, organs on chips and diagnosis based on the mechanical behaviour of cells and tissues. The future of medicine will mean personalised medicine, hand-held diagnostic

platforms, wearable monitoring devices, and other technological advances to make healthcare more effective, cheaper and more convenient.

- **Bioengineering for active ageing**, with the aim of developing care and technology to meet the needs of an increasingly ageing population. Biomedical engineering can contribute greatly to improving the quality of life of older people.
- **Bioengineering for regenerative therapies**, with the aim of developing regeneration technology to allow the creation of implants able to bring about the regeneration of damaged tissues or organs and to develop cell therapies.

IBEC's Junior Group Leader programme aims to identify and incorporate new group leaders, as well as to support young researchers in establishing their own independent research lines in a stimulating, interdisciplinary, collaborative and high quality international scientific environment.

Postdoctoral and senior researchers with excellent scientific record in the following topics (but not limited to): **Synthetic Biology, Computational Bioengineering, Diagnostic Technologies, Systems Biology, Neuroengineering, 3D Bioprinting, and Regenerative Medicine** are invited to apply for Junior Group Leader position in IBEC's non-tenure-track open call for 2017. Applicants are expected to develop an ambitious project for their future group and to contribute to one or more IBEC's core applications areas.

Candidates will be evaluated by IBEC's International Scientific Committee (ISC) based on their scientific quality, the feasibility of the proposed scientific approach, potential impact of their research, added value to the current IBEC research programme and structure, and their ability to carry out efficient leadership and management.

Apart from outstanding scientific output, the candidates must prove that they are active in the application of competitive proposals as principal investigators. Any mobility experience, e.g. a stay in another country/region, will be considered as a valuable contribution.

Desirable competencies and skills are: Leadership; critical judgment in the identification and execution of research activities; strategic vision for the future of the research field; proven record in securing research funding/budgets/resources; team building and collaboration; excellent communication and networking skills.

Candidatures will be first evaluated remotely. Shortlisted candidates will be invited to Barcelona at the beginning of June 2017 for an interview with the ISC. This will include presenting their work and future research plans, and interviews with members of the ISC.

The successful candidate will be appointed for an initial 4-year period. At the end of the fourth year, the Junior Group Leader will be evaluated by the ISC. A positive evaluation will allow the candidate to extend their appointment for another 4 years. They also have the possibility to apply to IBEC calls for permanent group leaders.

Junior Group Leaders at IBEC are offered a start-up package and provided with suitable laboratory space, access to the state-of-the-art core facilities at IBEC and access to outstanding predoctoral students and postdoc researchers. Moreover, they are assigned a project manager to support their participation in competitive calls and the management of their projects, as well as their interaction with IBEC's friendly and researcher-oriented administrative staff.

Alongside this programme, Junior Group Leaders have the opportunity to improve their career development through a wide range of professional training and coaching, and access to IBEC's international network of world-class research centres, universities, hospitals and industry.

IBEC values diversity and aims for a representative gender balance at all levels of staff. We seek to increase the percentage of female group leaders, so qualified women are therefore

strongly encouraged to apply. IBEC is committed to actively looking for female candidates to ensure that at least 40% of shortlisted applicants invited to interview are women. At the end of the evaluation process, in case of equal merit, priority will be given to female candidates.

Required information to be included includes references, a research proposal for the initial 4-year appointment period, and a self-assessment of his/her leadership potential and added value.

All personal data requested by IBEC from applicants will be treated in accordance with the principals of Personal Data Protection Act (LOPD, 15/1999).

Applications should be submitted online no later than **15th March 2017** at:
<https://careers.ibecbarcelona.eu/>

For further questions, please don't hesitate to contact us at gl.application@ibecbarcelona.eu