

Postdoc position at the Smart Nano-Bio-Devices Research Group

Introduction to the vacant position:

The **Smart Nano-Bio-Devices** group, led by **Dr. Samuel Sánchez** at the Institute for Bioengineering of Catalonia (IBEC), is looking for one Postdoctoral researcher to participate in the **ERC-funded project “Lab-in-a-patch for PKU self-assessment”**. The main scientific aim of the project is the development of low cost, integrated, and portable sensors or on-chip microfluidic sensors for the non-invasive detection of disease-related bio-analytes (proteins, amino acids, electrolytes, etc.) and help monitor the evolution of pathological conditions.

Main tasks and responsibilities / The successful candidate will develop research involving:

- **Design and fabrication** of novel biosensors
- Modify sensing surfaces by **(bio-)functionalization's** with enzymes or inorganic nanomaterials
- **Characterize** sensors by electrochemical, optical and microscopy techniques
- **Optimize** working conditions of the sensors for the **detection of disease biomarkers**
- Sensor integration with **smartphone technology**
- Optimize **design of PCB** for the control unit for flexible and wearable electronic biosensors
- **Microprocessor programming** (Eg. Arduino)
- **Smartphone App** development

Requirements for candidates:

- PhD degree on any of the following fields Chemistry, Physics, Material Science Telecommunications Engineering, Nanotechnology, Biotechnology or similar
- Experience in one or more of the following is a plus: electrochemistry, synthesis of inorganic nanoparticles, bio-functionalization's, 3D printing, microfluidics, smartphone integration, PCB and microelectronics, Java/Phyton programming.
- Competencies and skills: Communication, Teamwork, Commitment, Proactivity, Collegiality, Integrity, Critical and Analytical thinking
- Excellent team working in an international multidisciplinary group.
- High level of English

We Offer:

- Stimulating, competitive and interdisciplinary research
- Number of available positions: 1
- Starting date: As soon as possible
- Working conditions:
Full time 1-year contract. Very competitive salary

- 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 organises seminars and PhD discussions. Mobility grants are offered. Mentoring program 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 their CV, cover letter and the contact of two referees to: jobs@ibecbarcelona.eu before 28/03/2019 (Reference: **PD-SS**).

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. Thus, there are no restrictions of citizenship or gender and candidates with disabilities are strongly encouraged to apply.

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

