

11 PhD positions in implantable Bio-Inspired Sensors with the Marie Skłodowska-Curie Action ITN-ETN BioInspireSensing project

The Marie Skłodowska-Curie Innovative Training Network BioInspireSensing invites applications for 11 Early Stage Researchers (ESRs). The positions are full-time and funded for 36 months. Earliest starting date is September 2021. Exact starting date depends of the recruiting institution and could be negotiable after selection, always before December 31st 2021.

The BioInspireSensing project is a trans-national training network inaugurated to train PhD students, in investigating, building, and producing a new generation of bioinspired implantable sensors for pressure, temperature and acidity. New devices will apply the state-of-the-art in ion channel proteins, cell membrane transport, membrane biology and vesicles, tethered planar lipid bilayers, synthetic biochemistry and biodegradable and flexible conducting polymers to obtain novel sensors that are fully biocompatible and bioresorbable, unlike most of existing implantable sensors. The consortium aims for, a new generation of sensors that would not require posterior surgical extraction. BioInspireSensing will take advantage of a unique multi-sectorial and multi-field environment to further teach early stage researchers (ESR) to apply the gained knowledge in analyzing and designing/engineering complex biological nanosensors of medical importance. BioInspireSensing includes a unique combination of research training, industry placements, as well as courses and workshops on scientific and complementary soft skills.

We are currently looking for motivated PhD candidates with an academic background in chemistry, biochemistry, biophysics, computational biology, bioengineering and electrical engineering to join the BioInspireSensing training network!

The ESRs will join one of eleven research projects at BioInspireSensing, supported by thirteen academic and industrial institutions forming the network which are spread over seven countries.

List of available PhD / ESR positions

- **ESR01.** Modelling engineered ion channels and their modulation: an agonist and/or antagonist study; Zymvol Biomodeling SL, Spain.
- **ESR02.** Optimizing TRP channels for use as stable thermosensors; VIB-KULeuven, Belgium.
- **ESR03.** Optimization of acid-sensing ion channels for sustained pH sensing; University of Lausanne, Switzerland.
- **ESR04.** Protein purification and reconstitution into lipid bilayers; University of Teramo, Italy
- **ESR05.** Construction of vesicle systems and engineering of membrane proteins; University of Groningen, The Netherlands.
- **ESR06.** Synthesis and functionalization of biodegradable polymers supporting lipid membranes; Polytechnic University of Catalonia, Spain.
- **ESR07.** Development of new flexible and biodegradable conducting polymers in biosensors; Polytechnic University of Catalonia, Spain.
- **ESR08.** Structural and functional characterization of ion channels embedded in planar lipid bilayers; University of Warsaw, Poland.
- **ESR09.** Development of a sensors testing platform based on cell culturing and microfluidic technologies; 4DCell SAS, France.

- **ESR10.** Integration of chemical implantable sensors of acidity and cholesterol for in vitro analyses; University of Teramo, Italy.
- **ESR11.** Integration of sensor electronics and signal treatment for in vivo analyses; 4DCell SAS, France.

For more information on the 11 available research projects visit the project website www.bioinspiresensing.eu

Application period:

March 20 – May 20, 2021

Salary and benefits

- Recruited candidates will receive an attractive salary in accordance with the MSCA regulations for ESRs. Net salary is subject to country-specific deductions as well as a country correction factor attending the difference in cost of living in different EU Member States.
- The salary includes a living allowance, a mobility allowance and, if applicable, a family allowance (depending on the family situation at the recruitment time).
- In addition to their individual scientific projects, all ESRs will benefit from further continuing education, which includes internships and a minimum of two secondments, a variety of training modules, transferable skills courses and active participation in workshops and conferences.

Eligibility Requirements:

To be eligible, the candidate:

- Must be in the first four years of her/his research career. Candidates should ideally possess a Master’s degree in a relevant academic field or a degree that allows them to embark on a doctorate.
- Must not have been awarded a doctoral degree.
- Must not have resided or carried out their main activity (work, studies, etc.) in the country of the institution that recruits the student for more than 12 months in the 3 years immediately before the recruitment date. Short stays are not taken into account.
- Must be willing to spend a prolonged time in another institute/country of the network during the PhD thesis period.
- Must be proficient in written and spoken English.

For further details on eligibility criteria and additional requirements please check all the open positions information on the www.bioinspiresensing.eu webpage of the project.

How to apply:

Prepare your profile and provide the following documentation (in English) in one PDF file alone with the following order:

- Personal information
- Short priority list of the projects to which they are applying in order of preference
- At least two/three reference contacts of scientists to who we can ask for references.

- A cover letter describing your motivation for applying for a particular research
- A scanned copy of certified academic records and its translation to English.
- Any additional files/Information considered relevant to the application
- If is the case, a document detailing an English Test from an internationally recognized provider

Submit your application packed in one PDF file (named **surname_name_ESRXX.pdf**) to the contact e-mail: bioinspiresensing@upc.edu. To increase your chances of being selected, we encourage you to apply for up to 3 of the 11 positions. Please, send a different e-mail for each one of the applied positions. The mail subject has to be “**bioinspiresensing ESRXX**” (XX being the number of the research project, 01, 02, etc).

See further details on the www.bioinspiresensing.eu webpage of the project.

Selection Process:

The selection process will be in accordance with the European Charter for Researchers (<https://euraxess.ec.europa.eu/jobs/charter/european-charter>) and the European Code of Conduct for recruitment of researchers (<https://euraxess.ec.europa.eu/jobs/charter/code>).

Please find further details on the selection process at www.bioinspiresensing.eu