

Expressions of Interest for hosting MSCA fellows

SPANISH HOSTING OFFERS - IF 2021

[EURAXESS](#)

TITLE

Marie Curie Post Doc position at “**Perinatal Brain Damage**” research group in **Hospital Puerta del Mar (Cadiz)**. Expression of Interest for Hosting a Marie Curie Postdoctoral Fellowship.

HOSTING SUMMARY

The group “Perinatal Brain Damage” leading by Dr Simon Lubian-López and Dr Isabel Benavente-Fernández at the Hospital Puerta del Mar in Cádiz (Spain) is interested in hosting a Marie Curie Postdoctoral Fellowship offered to be supervised by Dr Isabel Benavente-Fernández.

Dr Isabel Benavente-Fernández has been working in research in tridimensional brain ultrasonography and magnetic resonance imaging of the preterm infant. It has led to innovative approaches to challenging pathologies in Neonatal Neurology such as post hemorrhagic ventricular dilatation where she proposed and published a volumetric method of assessment versus the conventional lineal measurements through 2D ultrasonography. She is PI for FCADIZ in the European consortium for the H2020-MSCA-ITN-2020 (Marie Skłodowska-Curie Innovative Training Networks (ITN)). The project named PARENT (PremAtuRe nEwborn motor and cogNitive impairmentTs: Early diagnosis) combines the efforts of a multidisciplinary network of 10 leading European research groups together with industry partners, pediatric hospitals, and parents’ associations to train 15 early-stage researchers in early diagnostics of brain injury. She has successfully participated and promoted research not only as regional PI but also being part of national and international randomized trials and cohort studies. She has authored 60 indexed research papers and has 10 book chapters.

HOSTING DETAILS

Description of the center: FCADIZ is a private non-profit organization which aims to stimulate, develop and harmoniously integrate basic, clinical and public health research, and to potentiate transnational research to encourage better sharing of the scientific advances in the areas of the prevention and treatment of the most common health problems. The Foundation manages the activity of the Cadiz Institute of Biomedical Research and Innovation, hereafter referred to as INiBICA. INiBICA offers coverage for every healthcare area in the province of Cadiz, with a population of more than 1.2 million people who are potential beneficiaries of the activities carried out by the Institute. INiBICA principally consists of the University Hospital Puerta del Mar (Cadiz) and the University of Cadiz, which form its basic nucleus, together with the group of Public Health Centres of the province of Cadiz. In total, it manages more than 780 researchers and an annual budget of some three million euros, a

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figure which increases yearly.

Description of the group:

Simon Lubian-López, MD PhD, is the academic and clinical leader as Chief of the Pediatric/Neonatology Department at University Hospital Puerta del Mar. Clinical researcher, he has participated in national and international research projects and has more than 36 indexed papers published and 9 book chapters. Neonatal neurology expert he has contributed to research projects on hypoxic ischemic encephalopathy and preterm neuroimaging and outcome. He has a strong collaboration with University of Cadiz basic and experimental research groups with whom he has developed a murine model of intraventricular hemorrhage and is now research on neuroprotective strategies that will soon evolve into translational and clinical research. He is an expert in clinical neuroimaging and has been co-Principal Investigator (co-PI) with Dra. Benavente-Fernández in many research projects involving 3D ultrasonography and brain magnetic resonance in the newborn.

Description of the project: A medical imaging engineer postdoctoral position is available to work on fetal and neonatal neuroimaging projects at the Hospital Puerta del Mar, Cadiz, Spain. The project involves the longitudinal study of critically-ill children multimodal MRI methods.

The successful applicant will be responsible for developing advanced image processing methods for structural analysis of MRI datasets of the brain for computer-aided diagnosis support and clinical research.

The EurUSbrain group aims to reach the highest possible level of expertise in brain ultrasound across neonatal intensive care units and to develop a network for training in practical and theoretical aspects of neonatal brain ultrasound.

Description Principal Investigator Isabel Benavente-Fernández, a neonatologist at University Hospital Puerta del Mar dedicated to Neonatal Neurology as a clinician and researcher. Associate Professor at University of Cadiz from 2015. She obtained her PhD degree in 2016 at University of Cadiz and she obtained a Master's degree in research methodology and statistics applied to health science by the University of Barcelona in 2017. From June 2017 to June 2018 she spent a year as a postdoctoral research-clinical fellow in Neonatal Neurology at the Hospital for Sick Children (Sickkids, Toronto, ON, Canada). PI of the research group "Perinatal Brain Damage" at FCADIZ/INiBICA.

She has successfully recruited three long-term follow-up preterm infants cohorts where advanced neuroimaging techniques (3D ultrasonography and advanced MRI sequences) have helped deepen the current knowledge of brain maturation and growth in the extra uterine life of the preterm infant. With a successful network of collaborating experts in Neonatal Neurology (Canadá, The Netherlands...) her research is increasing in quality and impact. She has supervised 2 PhD and is currently supervising 4 PhD thesis. She is member of the EurUSbrain group, a leading group of European neonatologists, part of the Brain, Development and Imaging section of the European Society for Paediatric Research.

More information:

- Number of positions available: 1
- Type of contract: Full time
- Status: Postdoctoral researcher
- Working hours (hour per week or free text): 37.5 hours/week (Flexible)
- State / province: Cádiz
- City: Cádiz

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- Postal code: 11009
- Street: Avda. Ana de Viya, 21
- Organisation: Hospital Puerta del Mar
- Faculty / department:
- Country: Spain
- Website: <http://inibica.es/en/>
- Phone mobile phone: (+34) 636 174 993

APPLICATION DETAILS

- **Envisaged job starting date:** within 3 months after receiving the offer
- **Application deadline:** 15/08/2021
- **How to apply:** The application must be submitted electronically to rrhh@inibica.es and shall include: Cover letter (1 page) explaining your motivation, research interests and how you scientifically can contribute to the project. To include a progress plan would be valued. CV (mas 3 pages, including publications if any), Diplomas, diploma supplements and transcripts, Contact information to 1-3 references, Documentation on English language proficiency.
- **Application e-mail :** rrhh@inibica.es

REQUIRED EDUCATION LEVEL

- **Required education level 1:** a PhD degree in biomedical engineering, computer science, medical physics or a related field.
- **Degree:** Candidates need to a strong background in Computer Science, Software Engineering, or Medical Physics, or related field, preferably with an emphasis on image processing and analysis.

REQUIRED EXPERIENCE LEVEL

- **Main research field:** Computer programming proficiency (MATLAB, Python, C/C++) and excellent written communication skills are essential.
- **Sub research field:** Prior experience in medical imaging would be ideal.
- **Years of research experience:** Experience and knowledge in advance statistics and data management is mandatory

REQUIRED LANGUAGES

- **Language:** English
- **Language level:** Professional

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ADDITIONAL REQUIREMENTS

Skills: familiarity with advanced MRI acquisition and processing is required. Programming skills with at least 2 years of experience in Linux, Python, and another major language.

Expertise in C/C++, open source toolkits such as VTK and ITK would be a plus, as is experience in Linux shell scripting.

At the deadline for the submission of proposals (**October, 2021**), researchers:

- shall be in possession of a doctoral degree
- must not have resided or carried out their main activities in the country of Spain for more than 12 months in the 3 years immediately prior to the abovementioned deadline.