

HELICAL Vacancy details

Job Summary

The post is a PhD studentship to be appointed to the Instituto de Parasitología y Biomedicina López-Neyra, CSIC, as part of the “HEalth data LInkage for ClinicAl benefit (HELICAL)“ H2020-MSCA-ITN-2018 Innovative Training Network.

European researchers have made leading contributions to the large genomic, transcriptomic and clinical datasets from patients with chronic diseases. Advances in information science provide unprecedented opportunities for using these datasets to elucidate the complex biology of these disorders, its influence by environmental triggers, and to personalise their management. Currently, exploitation of these opportunities is limited by a shortage of researchers with the required informatics skills and knowledge of requisite data protection principles. HELICAL addresses this unmet need by developing a trans-sectoral and interdisciplinary training programme that provides 15 early stage researchers with training in **analysis of large datasets**, using autoimmune vasculitis as a paradigm, as comprehensive biological and clinical datasets are already available. The programme will be delivered through a multidisciplinary, trans-sectoral partnership of Academic and Industry researchers with expertise in **basic biomedical research, epidemiology, statistics, machine learning, health data governance and ethics**. Therefore, HELICAL exploits recent advances in data science to link research datasets with longitudinal healthcare records, based on the robust ethical foundation required for linkage studies using near-patient data, to address key experimental questions.

Job Description

The post is for 1 stage researcher (ESR) who will undertake a three year PhD studentship as part of the H2020-MSCA-ITN-2018 HELICAL (Co-ordinator: Professor Mark Little, Trinity College Dublin, TCD). HELICAL is an EU funded Marie Curie Innovative Training Network (ITN) with 17 Academic Partners (TCD (IRL); MedUni Vienna (A); University of Glasgow, Farr Institute, University of Leeds, Leeds Institute for Data Analytics (UK); Universite Paris Diderot (F); Kungliga Tekniska Hoegskolan, Uppsala Universitet (S); Consorci Institut d’Investigacions Biomediques, Consejo Superior De Investigaciones Cientificas, Instituto de Salud Global de Barcelona, Instituto de Investigaciones Marques de Valdecilla, Universitat de Barcelona, Universitat Autònoma de Barcelona (E); Charles University (CZ); Ghent University (B)) and nine Non-Academic Partners (Tissuegnostics (A); IBM Zurich (CH), patientMpower (IRL); Anaxomics Biotech (E); Firalis (F); European Institute for Innovation in Health Data (B); RITA European Reference Network, Laser Analytica, Eagle Genomics (UK)). The HELICAL training program focuses on three complementary areas: **application of informatics** to such datasets to gain new biological insights; **translation of these into practical clinical outputs** and management of **ethical constraints** imposed on such studies.

The appointee will be trained in advanced data science, machine learning, systems biology and clinical applications and to enhance their awareness of FAIR and GDPR data principles. The HELICAL ITN is highly integrated and so the appointee will also have the opportunity to acquire additional skills through regular meetings, workshops and seminars, and through secondments to other partners in the HELICAL network.

The post is for 1 early stage researcher[(ESR) who will undertake a three year PhD student-ship as part of the H2020-MSCA-ITN-2018-HELICAL (Coordinator: Professor MarkLittle, Trinity College Dublin,TCD). HELICAL is an EU funded Marie Curie InnovativeTraining Network (ITN) with17 Academic Partners and 9 Non-Academic Partners.

The present post is to be based in Institute of de Parasitology and Biomedicine López-Neyra, CSIC and supervised by Javier Martin MD, PhD. The project is entitled “**Deciphering the genetic basis of**

systemic vasculitis". The ESR will perform a meta-analysis of giant cell arteritis GWAS data to define variants related to discrete clinical phenotypes, fine mapping of giant cell arteritis GWAS hits previously identified by our group (Carmona et al., AJHG, 2017) to identify causal variants and integration of genetic, epigenetic and gene expression data of giant cell arteritis samples data to further explore functional significance of GWAS results.

HELICAL is funded under the H2020-MSCA-ITN-2018 designed to promote movement of researchers in Europe and so is open to researchers from any country in the world provided they have not carried out their main activity (work, studies, etc.) in Spain for more than 12 months in the 3 years immediately before the recruitment date. HELICAL pursues a policy of equal opportunities on matters of gender and disability and will seek to recruit an equal proportion of male and female applicants and will provide employment opportunities for candidates with disabilities. Where applications of equal quality are received, preference will be given to female candidates as part of a strategy designed to recruit equal numbers of men and women to the HELICAL posts. Employment procedures and contracts will conform to the European Charter for Researchers / Code of Conduct for the Recruitment of Researchers.

Benefits

The per annum Marie Skłodowska-Curie Early Stage Researcher living and mobility allowance (plus family allowance if applicable) is in line with Marie Skłodowska-Curie Innovative Training Network requirements. This amount will be subject to tax and employee's National Insurance deductions, and will be paid in (local currency).

The appointment is with Institute of Parasitology and Biomedicine López-Neyra, Consejo Superior de Investigaciones Científicas, Granada, Spain. Candidates will be appointed as fulltime PhD for 40 hours per week.

Institute of Parasitology and Biomedicine López-Neyra, Consejo Superior de Investigaciones Científicas, Granada, Spain

The Institute of Parasitology and Biomedicine "López-Neyra" (IPBLN) forms part of the Spanish National Research Council (CSIC) and its activity is devoted to research in the area of biomedical sciences. The fields of research cover a wide range of issues concerning immunology, cell biology, molecular biology and pharmacology of important world-wide biomedical problems. Since the foundation nearly forty years ago of the centre as the National Institute of Parasitology, the IPBLN has broadened its spectrum of research projects and now constitutes a modern, well-equipped institute involved in both basic and applied biomedical research. The research staff is on continuous growth, increasing in number of group leaders and expanding its capabilities for resource acquisition and scientific production. It is organized in three departments: Biochemistry and Molecular Pharmacology, Cell Biology and Immunology and Molecular Biology. The institute is located at the Technological Park of Health Sciences of Granada (PTS; www.ptsgranada.com); this privileged location provides an appropriate environment to stimulate the interaction among different institutions and private entities interested in Health Sciences, including basic and applied research, health care, University education and transferring of knowledge to the productive sector.

The objectives of the research activity are aimed to the understanding of processes and the study of organisms of biomedical interest with a special emphasis in molecular parasitology, immunology and the development of new therapeutic strategies and procedures for diagnostic of diseases of world-wide impact. The development of new compounds and tools for the treatment of infectious diseases, the design of new procedures for diagnostic and the

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understanding of the molecular bases of infectious diseases, immune or neurodegenerative diseases or cancer are all important goals of the institute. All the pathologies studied at the IPBLN constitute important health problems, e.g. autoimmune diseases like systemic vasculitis, scleroderma, rheumatoid arthritis, systemic lupus erythematosus or Crohn disease; neurodegenerative diseases like Parkinson or multiple sclerosis; and infectious diseases like tropical diseases, AIDS or hepatitis C, among others.

The IPBLN offers a great potential in the field of biomedical sciences, in its allocation at the PTS is prepared for significant interaction with private enterprises, and other public research institutes. An atmosphere of mutual collaboration and interaction with other countries is reflected by the participation of the IPBLN scientists in international networks and projects. The relationship with Latin-American and European countries is especially relevant.

The Institute also develops an important teaching role participating in postgraduate courses and accommodating many PhD students. In addition the institute promotes different activities for the development and dissemination of scientific culture.

The services provided by the core facilities are available not only to the personnel of the Institute but also to the general scientific community. The facilities include, among others: DNA sequencing, oligonucleotide synthesis, proteomic, and the library.

