



The Vall d'Hebron Research Institute (VHIR) is a public sector institution that promotes and develops the research, innovation and biosanitary teaching of the Vall d'Hebron University Hospital. Through the excellence of our research, we identify and apply new solutions to the health problems of society and we contribute to spread them around the world.



HR EXCELLENCE IN RESEARCH

In April 2015, the **Vall d'Hebron Research Institute (VHIR)** obtained the recognition of the European Commission **HR Excellence**.

This recognition proves that VHIR endorses the general principles of the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers (**Charter & Code**).

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Post-doctoral post in the development of Interpretable Pathogenicity Predictors

Clinical and Translational Bioinformatics Group

VHIR offers a position for a Post-doctoral within Clinical and Translational Bioinformatics Group to participate in the project: Hacia una mejor aplicabilidad de la Inteligencia Artificial en Medicina Genómica: Integrando capacidad predictiva e interpretabilidad en una nueva generación de herramientas para la anotación de variantes de proteínas, file number: TED2021-130342B-I00 and financed by Ministerio de Ciencia e Innovación-MICINN

JOB DESCRIPTION

Education and qualifications:

Required:

- PhD Degree in Biotechnology, or closely related fields, centered in a fully Bioinformatics project
- Master in Bioinformatics
- Bachelor's Degree in Sciences: Biochemistry or Genetics
- Fluency in Catalan, Spanish, and English

Experience and knowledge:

Required:

- At least 4-5 years of experience working in the development of predictors of the impact of protein sequence variants on protein function (continuous prediction), in BRCA1/2 proteins
- Experience in the development of online tools for the graphical analysis of binary pathogenicity predictions
- Experience in the development of cost models (with reject and no reject options) for binary pathogenicity predictors



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- High-level expertise in Python programming and Python data analysis tools (Jupyter Notebook, Biopython, Tabix, Pandas, Numpy, Scipy, Scikit-Learn, etc.)
- Experience in bioinformatics analyses for biomedical/clinical applications of the following genomics experiments: Whole Exome Sequencing (WES), RNA-seq, ChIP-seq, microRNA-seq, and Hi-C (TAD location and analysis).
- Experience in Web development (Django, HTML5, CSS3, JavaScript, etc.).
- Experience in System administration of Mac and Ubuntu computers, NAS storage, etc.

Desired:

- Experience and good knowledge on standard bioinformatics tools (sequence comparison, multiple sequence alignments, etc.)

Main responsibilities and duties:

- Take the lead of our research in the development of interpretable pathogenicity predictors based on RiskSLIM and GODST technology
- Take the lead of our research in the development and web programming of our graphical representations for the interpretation of pathogenicity predictions
- Active implementation and refinement, whenever required, of the cost models of our group
- Manage our collaboration with the Oncogenetics group (VHIO) and the Immunogenetics Area (VHIR) at the Vall d'Hebron Hospital
- Any work required for any other ongoing or new research or collaboration: analysis of epigenetic/epigenomics data, of RNAseq experiments (bulk and single-cell), of WES, etc.; structural analyses of protein systems; etc.
- All aspects related to the management of our computer systems, from backups to updates, particularly those associated to the research project
- Provide explicit support to the research in our group: development of Python scripts, database preparation and management, Web programming, etc.
- Managing equipment and software purchases associated to the research project



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Labour conditions:

- Full-time position: 40h/week.
- Starting date: May 1st, 2023.
- Gross annual salary: 40.000,00 – 43.000,00 Remuneration will depend on experience and skills
- Contract: temporary

What can we offer?

- Incorporation to Vall d'Hebron Research Institute (VHIR), a public sector institution that promotes and develops the biomedical research, innovation and teaching at Vall d'Hebron University Hospital (HUVH), the biggest hospital of Barcelona and the largest of Catalan Institute of Health (ICS).
- A scientific environment of excellence, highly dynamic, where high-end biomedical projects are continuously developed.
- Continuous learning and a wide range of responsibilities within a stimulating work environment.
- Individual training opportunities.
- Flexible working hours.
- 23 days of holidays + 9 personal days.
- Corporate Benefits: platform through which you can obtain significant discounts on travel, culture, technology, gastronomy, sports... among many others.

How to apply:

Applicants should submit a full Curriculum Vitae and a cover letter with the reference "TED_POSTDOC" to the following email addresses: xavier.delacruz@vhir.org and seleccio@vhir.org

Deadline to apply: 20-04-2023