



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**).

**VHIR embraces Equality and Diversity. As reflected in our values we work toward ensuring inclusion and equal opportunity in recruitment, hiring, training, and management for all staff within the organization, regardless of gender, civil status, family status, sexual orientation, religion, age, disability or race.**

## Predocctoral position

### Pediatric Neurology Research Group

The Pediatric Neurology Group is a research group at Vall d'Hebron Research Institute. It is formed by a multidisciplinary team, and includes pediatric neurologists, biologists and biotechnologists. We focus our research on neurodevelopmental diseases, including neurometabolic and movement disorders. We are currently working on a research project funded by Instituto de Salud Carlos III entitled "Exploring common neuroanatomical and biological substrates in pediatric hereditary dystonia" which has three main objectives:

1. To solve the genetic origin of patients with early-onset dystonia using trio whole genome sequencing analysis.
2. To identify meaningful predictors of outcome after deep brain stimulation in children and adolescents with drug-refractory dystonia.
3. To investigate disease mechanisms of epsilon-sarcoglycan (*SGCE*), the main genetic defect causing myoclonus-dystonia in children.

We are seeking for medical doctors, biologists or genetists who are interested in developing a PhD thesis in some of the fields covered by our project. We will select the students that are best candidates for the application to different competitive PhD fellows, such as PFIS, AGAUR or R o Hortega.

### JOB DESCRIPTION

#### Education, qualifications, experience and knowledge

##### Required:

- Bachelor's Degree and Master in Biology, Biotechnology, Biomedicine, Biochemistry or similar fields.
- Bachelor Degree in Medicine and FSE in Pediatrics.
- Candidates finishing their Master or FSE in July 2022 are also eligible.



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- Excellent degree record (minimum qualification of 8 out of 10 in the academic curriculum)
- Fluency in Spanish and English
- High motivation, initiative, responsibility, organization and team work abilities.
- Good communication skills

#### **Desired:**

- Previous experience in the field of pediatrics, neurology, genetics, biology or bioinformatics.
- Previous research experience.

#### **Main responsibilities and duties:**

- Lead a study on Motor and Social impact in patients with  $\epsilon$ -sarcoglycan myoclonus-dystonia treated with deep brain stimulation.
- Give support to the study that explores common anatomical and biological substrates in pediatric hereditary dystonia.
- Perform studies on clinical phenotyping and phenotype to genotype correlations.
- Perform studies on the clinical follow-up of patients treated with deep brain stimulation.
- Perform studies on neuroimaging and neuronavigation using BrainLab Elements software. To analyze the anatomic location of the electrodes within the globus pallidus internus, To quantify the precision of the neurosurgical technique.
- Processing human samples.
- Next Generation Sequencing analysis.
- Molecular biology analysis.

#### **Labour conditions:**

- Full-time position: 40h/week.
- Starting date: January 2023



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- Gross annual salary and duration: According to each fellowship holder

### 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.
- Personal training opportunities.
- Flexible working hours.
- 23 days of holidays + 9 personal days.
- Flexible Remuneration Program (including dining checks, health insurance, transportation and more).

### How to apply:

Applicants should submit a full Curriculum Vitae and a cover letter with the reference "Pediatric Neurology Group – Movement Disorders Unit" to the following email addresses: [belen.perez@vhir.org](mailto:belen.perez@vhir.org) and [seleccio@vhir.org](mailto:seleccio@vhir.org)