



PhD Candidate in the Molecular Biology of Huntington's Disease group at the University of Barcelona

[The University of Barcelona \(UB\)](#) offers a vacant position for a **PhD Candidate** within the Mechanistic and therapeutic approaches in Neurodegenerative disorders research area of the [Institute of Neurosciences \(UBneuro\)](#).

Principal Investigator: Verónica Inés Brito (<https://www.ub.edu/portal/web/dp-biomedicina-es/grupo-1>)
<https://www.neurociencias.ub.edu/mechanistic-and-therapeutic-approaches-in-neurodegenerative-disorders/>

ABOUT THE PROJECT

We invite enthusiastic and dedicated individuals to join our dynamic research team to develop his/her PhD thesis within a project focused on the role of m6A modifications in huntingtin RNA metabolism in Huntington's disease (HD). It has been described that the *HTT* gene with a CAG repeat expansion may undergo abnormal RNA processing during transcription, in a process known as incomplete splicing, leading to the generation of small polyadenylated transcripts called *HTT1a*. While previous studies have identified the necessary intronic regions and proposed an underlying mechanism that contributes to this process, the factors influencing this aberrant splicing remain to be elucidated. Recent evidence advocates for the development of agents that target *HTT1a*. Our findings suggest that m6A RNA modifications represent a new RNA post-transcriptional signature contributing to the production of the *Htt* transcripts that generates the highly pathogenic exon 1 huntingtin protein. Our project aims to investigate whether targeting m6A RNA modification in *Htt* intron 1 using a dCas13-CRISPR strategy can prevent or halt the progression of neurodegenerative phenotype in a HD mouse model.

JOB DESCRIPTION

Requirements

We are seeking a highly motivated and hard-working candidate with a strong academic background and a passion for molecular biology and neurodegenerative disorders. Ideal candidates will have:

- A degree in Biology, Neuroscience, Biomedicine, or related fields with high academic marks (GPA of 8.2/10 or higher).
- High motivation and commitment.
- A strong interest in RNA biology, neurobiology and neurodegenerative diseases
- Experience in lab work, particularly in molecular biology and animal models. Experience in mouse handling (behavior and stereotaxically surgeries) is desirable
- Official accreditation to work with experimentation animals (**mandatory**)
- High level of spoken and written English (B2 or higher). Knowledge of Spanish or Catalan is useful but not essential.



- Familiarity with lab software such as GraphPad, Microsoft Office, R, Fiji. Programming skills are a plus.

Main responsibilities and duties

- Collaborate in the design of the experiments, their performance, as well as the subsequent statistical analysis and interpretation of the data.
- Ability to work both independently and within a team.
- Manuscript writing.
- Supervise staff or students as needed.

Employment conditions

We offer a one year-contract (possibility to extent to three years) but we expect candidates to have a competitive academic record that qualifies them to apply for predoctoral scholarships (e.g., FI, FPU) within their first year.

HOW TO APPLY

If you are excited about this opportunity and believe you are the right fit, we encourage you to apply! Please send your CV, cover letter, academic transcripts, and any other relevant documents to veronica.brito@ub.edu. With the reference "PhD position HD2024"

DEADLINE

Applications are open until November 15th, 2024.