4-year fully funded PhD position at the Genome Instability and Cancer Predisposition laboratory

Our lab interrogates the cellular mechanisms (DNA repair pathways) deployed to preserve genome integrity with a particular focus on the high-fidelity DNA repair mechanism homologous recombination (HR) and the breast cancer susceptibility protein BRCA2 involved in this process, as a model.

We use a combination of biochemistry, cell biology, “omics” techniques, and BRCA2 missense variants of unknown significance (VUS) identified in breast cancer patients as a genetic tool.

PROJECT TITLE
BRCAFORK: Role of BRCA2 in DNA replication stress (PID2020-115977RBI00)

PROJECT DESCRIPTION
BRCA2 has a prominent role in replication both protecting stalled replication forks from aberrant nucleolytic degradation and participating in the repair of DNA lesions at these sites. Several lines of evidence suggest that BRCA2 interacts with RNA binding proteins. Notably, we have found that BRCA2 interacts directly with the RNA helicase, DDX5 (Sessa et al., EMBOJ 2021). This project aims to determine whether and how the RBP-binding activities of BRCA2 impact replication fork dynamics. This is a collaborative project with the group of Stephan Vagner at Institut Curie (France).

Example of a DNA combing assay used to study replication fork dynamics

CANDIDATE
We are seeking a highly motivated young researcher graduated in the Biosciences field with a Master’s in Molecular or Cellular Biology or equivalent. Experience in cellular biology and/or biochemistry is required. A background studying Genome Integrity mechanisms is desired but not required. Proficiency in English is a must.

Interested candidates please send your CV, grades and references to acarreira@cbm.csic.es before November 3rd 2021

For more information about our group go to: