

FUNDACIÓN BIOFÍSICA BIZKAIA / BIOFISIKA BIZKAIA FUNDAZIOA

OFFER – PhD Candidate

Publication date: August 20, 2020

We look for a highly motivated PhD candidate to join the “Molecular Chaperones and Protein Folding Lab” in Instituto Biofísica (UPV/EHU, CSIC), <http://biofisika.org/>.

The candidate must commit, in her/his own benefit, to reach a high level of excellence.

We offer an initial one-year contract, which can be extended an additional year, to familiarize the candidate with our research project and to adequately prepare the application to national and regional PhD fellowships.

Description of the project

Remodeling of protein aggregates by molecular chaperones

Molecular chaperones play an essential role in the cellular protein homeostasis network, as they are dedicated to ensure that proteins acquire and retain their native structure and function. Acute and prolonged stress situations, mutation and aging can overcome the buffering effect of the proteostasis network, resulting in the increase of unfolded protein concentration which in turn derives in aggregation. Protein aggregation represents a major burden for the cell due to the loss-of-function of the aggregated protein and the toxicity associated with the oligomers and aggregates formed during this process. In humans, various devastating neurodegenerative pathologies (Parkinson, Alzheimer, dementia, etc.) are linked to the aggregation of different proteins as Tau, and α -synuclein. An essential route to clear protein aggregates in human cells is their solubilization and reactivation by molecular chaperones belonging to the Hsp70, Hsp40 and Hsp110 families. The aim of the present project is to understand how these chaperones build a functional complex to eliminate the toxic oligomeric species of Tau and α -synuclein. Gaining a greater knowledge of how these complex folding machines function at both structural and mechanistic levels is of substantial importance in the Biotechnology and Biomedicine fields.

Fundación Biofísica Bizkaia (FBB) is a centre of excellence which focuses on fundamental and translational biophysics research and offers a highly collaborative culture. Accredited as a Basque Excellence Research Centre (BERC), it provides outstanding shared facilities for advanced biophysical and structural biology approaches in a new research building in the main Leioa campus of the UPV/EHU. All its resources are focused on the Basque Centre for Biophysics, a joint research centre of the UPV/EHU and the Spanish National Research Council (CSIC).

Education and Experience Required

A Master’s degree in Biochemistry, Molecular Biology, Biotechnology, Chemistry, Biomedicine or related disciplines is required. Individuals with a background in protein function and protein-protein interactions are particularly encouraged to apply. Graduate students are also offered to join the lab.

Contact: Applicants are encouraged to send cover letter, CV, academic qualifications and 3 references through Biofísica website contact page (<http://biofisika.org/contact/>), adding the following subject: [**Job Application: 66PhDCandidate_AM_FM**]

Deadline: September 30, 2020

*Please note that due to the large number of applicants expected, it will not be possible to communicate the evaluation results to all the candidates.