



Instituto Universitario de Investigación  
**Biocomputación y Física  
de Sistemas Complejos**  
**Universidad Zaragoza**

## María Martínez Monge

She began her research during her Final Degree Project (TFG) in the Department of Cell Biology, Immunology, and Physiology at the University of Barcelona, where she studied a cell line involved in epilepsy. In 2022, she undertook a Master's in Cell and Molecular Biology at the University of Zaragoza and carried out her Master's thesis (TFM) at BIFI. Afterwards, she was hired as a junior researcher, and she is currently conducting her doctoral thesis under the supervision of Dr. Cremades.



### Researcher profile

She is a researcher at the R1 level, and her research focuses on understanding the processes of liquid-liquid phase separation (LLPS) and liquid-to-solid phase transition (LSPT) in amyloidogenic proteins, such as those associated with Parkinson's and Alzheimer's diseases. These processes, involved in amyloid plaque formation, are key to the development of these neurodegenerative diseases. The primary goal of her thesis is to identify the factors and mechanisms that trigger these pathological processes in these proteins.

### Importance of her research

Her research focuses on understanding the initial events and factors that trigger the formation of amyloid plaques in neurodegenerative diseases like Parkinson's and Alzheimer's. The aim is to advance early diagnosis and the development of effective early-stage therapies. To achieve this, she uses advanced biophysical techniques in the laboratories at BIFI, which allow for detailed characterization of these molecular mechanisms. Additionally, her research emphasizes knowledge exchange through conferences, courses, and research stays at other institutions.

