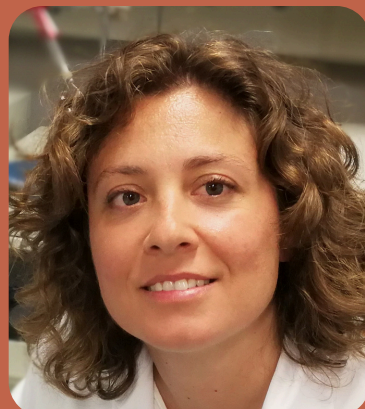




Instituto Universitario de Investigación
**Biocomputación y Física
de Sistemas Complejos**
Universidad Zaragoza

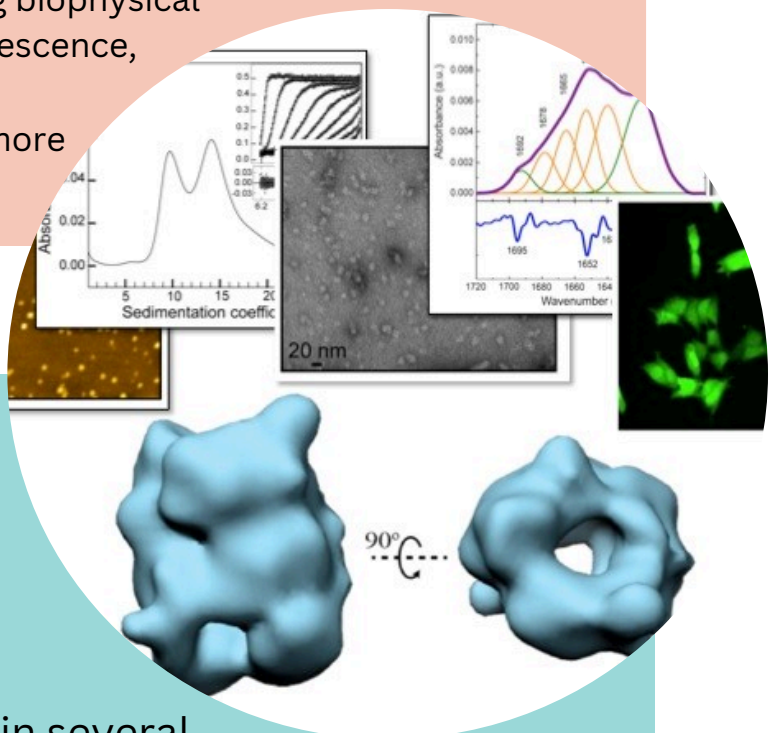
Nunilo Cremades

Since the beginning of her career, she has specialised in protein biophysics, studying the conformational landscape, ligand binding and assembly in amyloid aggregates. She completed her doctoral thesis at the University of Zaragoza, with stays at Johns Hopkins and the University of Virginia. Then, she joined Professor Christopher Dobson's group in Cambridge with a Human Frontier Science Program fellowship. In 2014, she formed her own research group at Cambridge and, subsequently, at the BIFI of the University of Zaragoza. She is currently a Senior Lecturer and Academic Secretary of the BIFI Management Team.



Researcher profile

She is an R4 researcher and leader of a group studying the assembly of proteins in amyloid aggregates and biomolecular condensates associated with neurodegenerative diseases such as Alzheimer's and Parkinson's disease. Although the accumulation of amyloid aggregates is characteristic of these diseases, the origins and mechanisms of their toxicity are unknown. Her group investigates how aberrant phase separation processes may be involved in these diseases, using biophysical techniques, such as single particle fluorescence, and cell biology. They also develop methodologies for early diagnosis and more effective treatments.



Importance of her research

Protein misfolding and amyloid aggregation are key phenomena in several scientific disciplines, linked to approximately 50 diseases including Alzheimer's, Parkinson's and type II diabetes. The formation of liquid biomolecular condensates has also been discovered, whose abnormal assembly could be linked to neurodegenerative diseases. Understanding these processes at the molecular level is essential to improve diagnosis and design more targeted and effective treatments.

