



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

## Milagros Medina Trullenque

She started her research doing her PhD at the Department of Biochemistry and Molecular and Cell Biology at the University of Zaragoza. She did postdoctoral stays at the University of Arizona (USA) and King's College London (UK), performing fast kinetic measurements and studying flavoproteins and metalloproteins respectively. She returned to UNIZAR and was promoted to Full Professor, and afterwards, she became Professor and Coordinator of the Biotechnology Degree. Since 2001 she is Senior Researcher at BIFI in the area of Biophysics. She has been deputy director of the institute and is currently a member of the FEBS Advanced Courses Committee.



### Researcher profile

For more than 20 years, she has been an R4 researcher, investigating the functioning of diverse cellular systems dependent on oxido-reduction reactions measured by redox proteins, enzymes and coenzymes. Her interest focuses on flavoenzymes, enzymes that regulate cellular processes such as photosynthesis, detoxification and cell signaling. She studies how changes in their three-dimensional structure influence their function, especially in disease-causing mutations. To do so, she uses biochemical and biophysical tools, such as fast reaction kinetics and computational simulation.

### Importance of her research

The knowledge generated in her research on flavoenzymes is crucial for their application in biotechnology and therapeutics. The diversity and specific characteristics of these proteins, together with their interaction with other proteins and metabolites, show that their potential is not yet fully understood. In particular, she studies bacterial flavoenzymes, some of which could be effective biocatalysts or serve as therapeutic targets to treat infectious diseases and pathological disorders in mammals.

