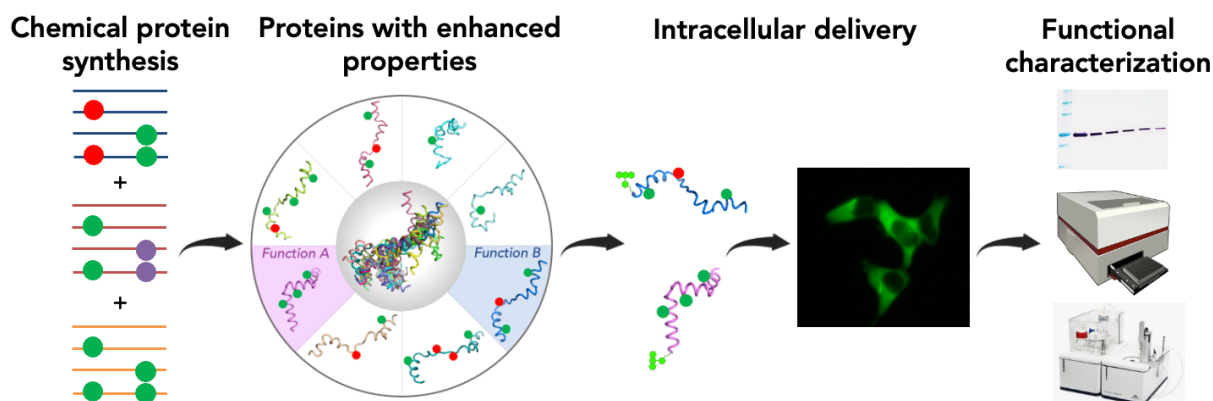


Ph.D. student position – conformational complexity and biological function of intrinsically disordered proteins

A 3-year Ph.D. student position financed by the Jean-Marie Lehn Foundation is available at the *Biosystems Chemistry group* within the interdisciplinary unit « *Biotechnology and Cellular Signalling* » (UMR 7242) directed by CNRS and University of Strasbourg and located on the premises of the Biotechnology School at the Illkirch campus (<https://bsc.unistra.fr>). The anticipated starting date: **October-November 2025**.



Keywords: chemical biology, protein structure and function, intracellular delivery, gene transcription, chemical protein synthesis, HPLC, mass-spectrometry, cell culture

Project description

The enhanced conformational dynamics distinguish intrinsically disordered proteins from well-folded proteins and confer a range of unique characteristics, such as high-sensitivity to environmental conditions or multivalent interactions leading to phase separation into membrane-less cellular organelles. The aim of this project is to make the first step towards developing the methodology for annotation of functionally relevant conformational states in unstructured activation domains of transcription factors. The experimental strategy will be based on conformational editing using non-canonical amino acids that will be incorporated by chemical protein synthesis and accompanied by relevant biophysical, proteomics and cellular studies.

How to apply and work environment

The project will be co-supervised by Prof. Vladimir Torbeev and Dr. Edwige Voisset. We are searching for a motivated candidate interested to work at the chemistry-biology interface. Fluency in English and good writing skills are required. The PhD student will be responsible for conducting the experiments (organic synthesis, peptide synthesis, biophysical characterization and cell-based assays), analysis of data, preparation of the reports and drafting the manuscripts. The necessary facilities for conducting the work will be provided such as the equipment for the chemical synthesis of peptides by solid-phase synthesis, ligation chemistries, characterization by HPLC and mass-spectrometry, an access to state-of-the-art NMR spectroscopy, instrumentation for biophysical experiments, as well as equipment for functional assays, flow cytometry, biochemistry and access to confocal microscopy facility. Our team is composed of 1 PR, 1 MCU, 1 CNRS research engineer, 1 postdoctoral researcher and 4 PhD students. The accepted candidate will be affiliated to the Doctoral School of Chemistry (ED 222) and will have to follow their educational guidelines. To apply, please send a letter containing your statement of interest, CV, grades and the names of two mentors for recommendation letters to torbeev@unistra.fr and voisset@unistra.fr.