

## Post-doctoral position in organic chemistry and DNA supported synthesis

18 months

**Workplace:** MoNALISA team, LSPCMIB (Laboratoire de Chimie et Physico-Chimie de Molécules d'Intérêt Biologique), Toulouse, France

**Funding:** ANR PRC "Protopolym" (2024-28)

**Starting date:** April 2025

**Duration/income:** 18 months

**The project:** involves three academic partners LCPO and CRPP in Bordeaux with LSPCMIB in Toulouse in the framework of a research project granted by the Agence Nationale de la Recherche (ANR, PRC "Protopolym", 2024-28).

In the context of the chemical origin of life, the emergence of longer protopolymers could benefit from the unexploited aqueous polymerization of amino acids precursors. Then, the self-sorting of protopolymers of interest relies on the set up of a protometabolism based on an equilibrium between polymerization and degradation. Prebiotic relevant models based on nucleic scaffolds could be envisaged to perform the depolymerization step. The candidate will be in charge of the synthesis of organocatalytic molecules further introduced onto oligonucleotides to develop DNA-based proteases. A particular attention will be paid to the synthesis of those functionalized oligonucleotides, whose catalytic properties will ultimately be evaluated in coacervates in a systems chemistry approach.

To this end, the candidate will benefit from the experience of the SPCMIB host lab in the (oligo)nucleotide synthesis field, along with its fully equipped chemistry lab, DNA synthesizers and full access to the chromatography platform.

**The Candidate:** is dedicated, motivated and should have a PhD (preferably defended in the last two years) in organic chemistry. Hands-on experience in oligonucleotide (or peptide) supported synthesis and skills in characterization and purification techniques of biomolecules would be appreciated. Experience in scientific communication (article writing, conference presentations) is desirable. Working language will be English or French.

**The application:** has to be sent to [beatrice.gerland@univ-tlse3.fr](mailto:beatrice.gerland@univ-tlse3.fr) and should include a cover letter, a CV (with detailed completed courses and a list of publications), a summary of research work (<3 pages), the copy of the PhD diploma and two recommendation letters.