



INSTITUT DES SCIENCES DU VIVANT FREDERIC JOLIOT

DEPARTEMENT MEDICAMENTS ET TECHNOLOGIES POUR LA SANTE (DMTS)

SERVICE D'INGENIERIE MOLECULAIRE POUR LA SANTE (SIMoS)

The French Atomic Energy and Alternative Energies Commission (CEA) is a public research organization. As a major player in research, development and innovation, the strategic positioning of the CEA's civil activities is based on the energy and digital transitions and technologies for the medicine of the future, as well as basic research that irrigates these three pillars. In the context of its activities in the field of health, the CEA aims to contribute to the medicine of the future through the most modern technologies, while developing platforms to ensure the mastery of these technologies and their integration into industrial projects. The priority areas of research in this field are medical imaging, detection and diagnostic technologies, large-scale analysis of health data and therapeutic innovations.

Job Description

Within the CEA, the Molecular Engineering for Health Unit (SIMoS) conducts research focused on the identification and preclinical development of bioactive molecules. In the Laboratory of Experimental and Molecular Pharmacology (LPEM : 15-20 researchers, technicians, Postdocs, PhD, students), numerous peptides/mini-proteins of natural origin are identified, pharmacologically characterized *in vitro* and evaluated *in vivo* in a pathological context in order to consider their therapeutic development. Several molecules resulting from these approaches are patented and their preclinical studies are underway. A key step in this process consists in producing large quantities of these peptides by solid phase synthesis (Gyros Protein Technologies : Prelude® X and PurePep® Chorus Peptide Synthesizers) in order to allow their functional study. In addition, during structure/function or *in vivo* efficacy studies, a large number of variants are synthesized to optimize the affinity, selectivity, immunogenicity, stability or pharmacokinetic properties of the original compound. Finally, the development of imaging agents based on these peptide-target interactions (GPCR or ion channels) will require the functionalization of these compounds by original chemical approaches, such as click chemistry, allowing the grafting of fluorescent or radioactive tags.

SIMoS is recruiting a researcher in chemistry on a permanent position who will have to carry out these tasks for the numerous natural peptides studied at LPEM. In addition, the researcher will be expected to develop his own research project at the chemistry-biology interface with potential therapeutic applications.

Candidate profile

- PhD in Chemistry with 3 to 5 years of post-doctoral experience in a laboratory with expertise in the synthesis/engineering/development of therapeutic peptides/proteins. Interest in research projects at the chemistry-biology interface
- Skills in mass spectrometry and structural biology/modeling would be a plus
- Enjoy working in a team, be able to report regularly on the progress of the work
- Have already been involved in funding research

Please send your application including CV, cover letter, letters of recommendation to denis.servent@cea.fr
<https://joliot.cea.fr/drf/joliot/recherche/DMTS/SIMOS>