Postdoctoral position in microfluidics / organic chemistry

Subject: Development of microfluidic-based strategies for the synthesis of labeled biologics (\(^2\text{H}, \, ^3\text{H}\))

Domains: Microfluidics / Organic chemistry / Isotopic Labeling / Flow Chemistry / Photochemistry

Job description: The RaMM project (radiolabeling in microfluidics) is based on a radically new concept for the isotopic labeling of high added-value molecules with stable and radioactive hydrogen isotopes (deuterium and tritium). It combines two complementary expertises: isotopic labeling & microfluidic-based technologies. The main objectives of the post-doctoral researcher will be to design and implement new miniaturized radiolabeling strategies on-chip for the labeling of complex and fragile biologics molecules (e.g. peptides) that are of great interest in pharmacokinetic studies and therapeutic applications. He/She will work on the hydrogen direct isotope exchange using flow chemistries (in meso- (mL) & microfluidics (µL)).

This position will involve a close interaction between two teams from the Medicines and Healthcare Technologies Department (DMTS) at CEA:

1) Microfluidic developments will be carried out at the Immunoanalysis Studies and Research Laboratory (LERI), focused on the development of diagnostic and detection tools. Frédéric Joliot Institute for Life Sciences - Immunoanalysis Studies and Research Laboratory (cea.fr)

2) Isotopic labelling will then be performed at the Tritium labeling laboratory (http://joliot.cea.fr/drjoliot/en/Pages/research_entities/medicines_healthcare_technologies/cbm/lmt/tritium-labeling.aspx).

Candidate profile: We are looking for outstanding candidates with the following skills:
- A PhD in organic chemistry or microfluidics or related fields (physics, engineering, flow chemistry)
- Excellent knowledge in microfluidics with experience in microfabrication/imaging/instrumentation
- Strong skills in organic chemistry, knowledge in photochemistry will be appreciated
- Fluent English, both written and spoken, is mandatory
- Real motivation and ability to work in collaboration across disciplines and autonomously
- Strong interpersonal, organizational and communication skills are a must.

Starting date: Autumn 2021 (18-months position)

Location: CEA-Saclay, 91191 Gif sur Yvette – France, within the Paris-Saclay University.
(20 km from Paris via public transportation, private bus shuttle service - Paris and Ile de France Region)

How to apply: Applicants should send their CV, a cover letter motivating their interest for the position, a list of current publications and the names and addresses of two referees to Karla PEREZ-TORRALLA (karla.pereztoralla@cea.fr) & Sophie FEUILLASTRE (sophie feuillastre@cea.fr).

Selected publications: