



MSCA

Marie Skłodowska-Curie Actions

*Developing talents,
advancing research*

Postdoctoral Fellowships



CALL FOR APPLICATIONS 2025 – FELLOWS

Supervisor	Candice Botuha
Supervisor page	https://ipcm.fr/recherche/presentation-equipe-chembio/composition-de-lequipe-chembio/candice-botuha/
Host Institution	Sorbonne Université https://www.sorbonne-universite.fr/en
Research Lab	Paris Institute of Molecular Chemistry https://ipcm.fr/en/en-the-institute/
Research Team	Chemical biology https://ipcm.fr/en/en-research/en-presentation-chembio-group/

Project Title

Designing next-generation ESIPT fluorophores by integrated genetic algorithms and ab-initio calculations

Project Description

Fluorescent molecules enabling the excitation-assisted intramolecular proton transfer (ESIPT) mechanism, known for their large Stokes shifts and dual emission, are ideal for cell imaging. This project combines artificial intelligence tools and quantum calculations to design biocompatible ESIPT molecules with enhanced properties. Pre-selected candidates will be synthesized, validated, and used as ratiometric probes to study lysosomal pH variations.

Keywords

in silico rational design, photophysical properties, organic synthesis

Description of the Host Research Lab

The IPCM (Institut Parisien de Chimie Moléculaire/Parisian Institute for Molecular Chemistry) is a joint research unit between Sorbonne Université and CNRS (Centre National de la Recherche Scientifique). The expertise in molecular chemistry in the broadest sense, the great diversity of the teams and the laboratory's high-performance technical platforms lead to research ranging from the structuring of matter on a molecular scale to materials, involving know-how in inorganic and organic chemistry, polymer science, nanoscience, and even the interfaces with biology. The scientific results of the IPCM, in relation to the major societal challenges, have an impact on fields ranging from health, the environment and new energies to information technologies.

To submit your application, please send an email with the required documents to
msca-pf@sorbonne-universite.fr