



Post-doctoral position in organic chemistry/medicinal chemistry

Title: Photochemical synthesis of anticancer compounds
Location: Université de Lorraine, Vandœuvre-lès-Nancy, France Laboratoire Lorrain de Chimie Moléculaire (L2CM, UMR CNRS 7053)
Contact: Michel Boisbrun, michel.boisbrun@univ-lorraine.fr , +33(0)3 72 74 52 64
Contract period: 18 months; Salary: approx. 3000 euros/month before tax. Starting date: January 2027
Keywords: Organic synthesis, Photoactive derivatives, Antiproliferative activity
Project description: In the frame of cancer treatment, chemotherapy is widely used, but it is impaired by resistance development and by toxicity on healthy cells. New targeted therapies (tyrosine-kinase inhibitors, ADC...) have led to the improvement of patient's survival rates, but oncogenic targets are not always well defined, and resistance may also occur, as do side-effects. We recently developed a straightforward synthesis of new fused quinoline derivatives by means of a photoactivation step. These compounds exhibit antiproliferative activity through an innovative bioactivation pathway we have just patented. Thanks to a grant from Inserm, we intend to exemplify these preliminary results through numerous new promising chemical targets, some of which being patentable too. Collaborations with two partners strongly support this project: 1) Computational chemistry (LPCT UMR CNRS 7019, same location as L2CM) and 2) Biologic evaluation (CRCLille, UMR 1366 INSERM). References: Cortelazzo-Polisini, E. et al. <i>J. Org. Chem.</i> 2022, 87, 9699-9713. Bruneau, V. et al. <i>Chem. Eur. J.</i> 2026, corrected proofs: https://doi.org/10.1002/chem.71696
Laboratory: The L2CM laboratory holds all necessary equipment enabling high-level organic chemistry: inert medium reactors, automated chromatographic purification devices, HPLC, HR LC-MS, 400 MHz NMR... A recently recruited PhD student will work in parallel on the same project on another family of compounds. Strong interactions are expected between both the recruited candidate and the PhD student. L2CM is committed to fostering a supportive and inclusive research environment.
Candidate profile: ✓ Ph.D. in organic chemistry (obtained less than 2 years ago) with documented experience in organic synthesis and proficiency in purification and analytical techniques. ✓ Experience in photochemistry would be a valuable asset but is not mandatory; ✓ Independent and proactive individual open to work in a dynamic and interdisciplinary environment; ✓ Good communication skills (written and oral) and willingness to prepare manuscripts; ✓ Ability to mentor students.
Application: Please send: ✓ A cover letter describing relevant experiences and motivation; ✓ A detailed CV including list of internships or projects and list of publications and communications; ✓ The names and email addresses of one or more referees.