Université de Bretagne Occidentale

Offer for a Post-doctoral researcher position

Organic chemistry & Glyco-chemistry

12 months- University of Brest

Synthesis of amphiphilic compounds for the modulation of ion channels

Laboratory CEMCA - UMR CNRS 6521 – Research group COSM – University of Brest – France
Web CEMCA: http://www.umr6521.cnrs.fr/ ; Web COSM: https://www.univ-brest.fr/cosm

Scientific context

Our group is composed of organic-chemists and physico-chemists who are involved in the conception of amphiphilic compounds that are specially designed for nucleic acid delivery,[1] as bactericidal agents[2] or as modulator of ion channels.[3] Regarding this last application, we have previously reported that Ohmline (a glycol-glycero-ether lipid designed in our group)[4] was an efficient and selective modulator of SK3 ion channel (channel involved in cancer cell migration. This compound, applied for *in vivo* experiments, demonstrated its efficacy to prevent bone metastasis. Additional *in vitro* and *in vivo* experiments demonstrated its safety profile. In the current project, which is developed jointly with our partners (biologists and electrophysiologists) localized at the University of Tours and Nantes, we will design amphiphilic structures that will be tested for the modulation of ion channels involved in pathologic situation such as bone tumors (Osteosarcoma).

Financial support: INCA (https://www.e-cancer.fr)

Starting date: January 6th, 2020 ; recruitment for 12 months

Application deadline: November 15th 2019

Profile of the candidate: We are looking for a candidate who is motivated to work on a project at the interface of chemistry and biology. The recruited person will be an organic chemist with a strong expertise in organic synthesis. A previous experience in glyco-chemistry and/or amphiphilic compounds will an additional value.

Contacts : Pr. Paul-Alain Jaffrès (pjaffres@univ-brest.fr ; 02 98 01 61 53) ; Dr Hélène Couthon (helene.couthon@univ-brest.fr ; 02 98 01 64 01). To applicate, please send us your CV with three references and a cover letter outlining your motivation.

[1] A. Bouraoui et al., *ChemPhysChem*, **2019**, *20*, 2187 ; A. Bouraoui et al., *Org. Biomol. Chem*, **2019**, *17*, 3609.
[2] A. Mottais et al., *Inter. J. Pharm*., **2019**, *567*, 118500 ; A. Mottais et al., *Inter. J. Pharm*., **2018**, *536*, 29.
[3] F. Herrera et al., *ACS Omega*, **2017**, *2*, 6361-6370 ; P.A. Jaffrès et al., *Pharm. Ther*., **2016**, *165*, 114.
[4] A. Chantôme et al., *Cancer Research*, **2013**, *73*, 4852.