The main purpose of this post-doc position is to develop **liposomes-based** **nanoparticles** **modified by innovative amphiphilic copolymers that overcome the inherent limitations of pegylated products in order to deliver siRNA against cancer targets**. **The consortium will develop new amphiphilic copolymers as PEG alternatives for the formulation of liposomes carrying siRNA and will evaluated their efficacy and toxicity under both in vitro and in vivo transposable conditions.**

To achieve this ultimate goal, we built a strong interdisciplinary consortium integrating experts with different skills from chemistry, pharmacy and biology.

The three main goals of the current project are:

* AIM#1: Design and synthesis of (co)polymers with complex architectures and tunable properties via controlled polymerization methods (A. Debuigne’s group CERM UR CESAM – Partner#1 )
* AIM#2: Formulation and physicochemical characterization of liposomes and lipoplexes under biologically relevant conditions and adapted to the administration routes (G. Piel’s group LTPB – UR CIRM – Partner#2 Project coordinator)
* AIM#3: Evaluation of efficacy and toxicity both *in vitro* and *in vivo* using cellular and animal models that better mimic the complexity of tumour microenvironment (acidic environment, redox conditions,…) (D. Mottet’s group – GEC Lab UR GIGA – Partner#3 )

As stated above the Gene Expression and Cancer (GEC) lab (ULiege-GIGA) is dedicated to mainly perform the AIM#3. The lab offers a 36 months post-doctoral position, starting in early 2020 (End of January).

Required qualification is a PhD degree in biomedical sciences, biology, chemistry, nanoscience or nanotechnology. Candidates with a strong background in microscopy and image processing, and molecular and cell biology will be given preference. Expertise in 3D-spheroid cell culture would be highly appreciated. Ability to conduct animal experimentation would also be an asset.

We are looking for a highly motivated and proactive collaborator featuring culture of excellence and team play, proven analytical and creative thinking, sharp problem-solving capabilities.

We offer a top-level research and academic environment with excellent opportunities for personal development. The work is highly interdisciplinary and the atmosphere in the group as well at the research institute GIGA is collegial and collaborative.

Applications with detailed CV, letter of motivation and contact information for two references should be sent by email to dmottet@uliege.be