

The **research group of Prof. Xavier Banquy at the Laboratory of Bioinspired Materials and Prof. De Crescenzo at the Laboratory of Protein Enhanced Materials** is seeking a highly motivated PhD candidate for a research project in collaboration with the University of Montreal, and the Ecole Polytechnique de Montreal.

PhD position: Hybrid smart materials for drug delivery and tissue engineering

The goal of the research project is to build a hybrid hydrogel capable of delivering bioactive molecules such as growth factors, non-steroidal anti-inflammatory drugs, anti-oxidants to promote tissue regeneration as well as mitigate oxidative stress and inflammation. These materials will be tested in two different contexts: the treatment of arthritic joints and regeneration of damaged neural tissue. The task of the candidate will be to develop suitable formulations incorporating multifunctional nanoparticles capable of transporting active compounds in a programmable fashion and to embed such nanoparticles in an injectable polymer matrix. The materials will be tested for their capacity to promote cellular proliferation and healing.

The position is full-time.

We welcome motivated applicants holding a MSc degree showing excellent academic qualifications. The ideal candidate has a strong background in materials science and specially in materials chemistry and basic knowledge in Medicinal Chemistry/biochemistry. Most importantly, however, is the high motivation to perform experiments. Knowledge of NMR spectroscopy and further analytical techniques used to characterize molecules is mandatory. Previous participation in research projects and scientific publications are additional assets. She/he is a team player, enjoys interdisciplinary work, has strong communication skills, is self-motivated and has insatiable scientific curiosity. Fluency in spoken and written English is a requirement, good knowledge in French is very welcome.

Interested candidates should contact xavier.banquy@umontreal.ca

Starting date: 09/2018 or 01/2019