

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 adhesives

The goal of the research project is to develop a bioadhesive material able to bound and debound remotely or upon application of a stimuli. Such material will be used as wet adhesive in microtissue engineering, drug delivery systems, and tissue repair. The project contemplates both fundamental and applied aspects of the development of the technology. At the fundamental level, characterization and rationalization of the structure-properties of the fabricated materials will be established using cell mimicking membranes and surface sensitive techniques. At the applied level, the bioadhesive materials will be used to produce multifunctional delivery systems able to release multiple active compounds and simultaneously to perform sensing tasks for imaging and diagnostic purposes. Depending on the qualifications of the candidate, certain aspects of the project could be more emphasized.

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 engineering and basic knowledge in biochemistry. Most importantly, however, is the high motivation to perform experiments. Knowledge of spectroscopic techniques to characterize macromolecules is an important asset. 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.

This position comes with a scholarship from the PrEEmium program in Engineering of emerging pharmaceutical forms funded by NSERC CREATE. Depending on the candidate profile, applicants will be oriented either to Polytechnique (engineering) or Université de Montréal (biopharmaceutical) for application.

Interested candidates should contact xavier.banquy@umontreal.ca

Starting date: 09/2018 or 01/2019