MSc or PhD position in Biomedical/Pharmaceutical Engineering available

The position will emphasize experimental work in the area of pharmaceutical microparticle engineering. The goal of this project is to design particles that can stabilize biotherapeutics, e.g. bacteriophages, proteins or genetic material for long term room temperature storage in global health applications, among others. Funds for this position come from pharmaceutical companies, a non-profit organization and a public funding agency, providing opportunities for collaboration with industry as well as with an international team of academic researchers.

Stabilized powders will be manufactured by spray drying or spray freeze drying. Associated particle formation processes will be studied using a monodisperse atomizer in combination with a highly instrumented research dryer. The dried microparticles will be examined using Raman spectroscopy and ultramicroscopy techniques available at the National Institute for Nanotechnology. The manufactured powders will be filled into suitable delivery devices, e.g. for pulmonary drug delivery, and the performance of these dosage forms will then be tested in collaboration with the Aerosol Research Lab of Alberta.

Students with previous experience and interest in experimental work or with exceptional practical skills are encouraged to apply. Experience with or interest in Biomedical or Pharmaceutical Engineering is an advantage. Please list the instruments and techniques you are familiar with and describe your practical experience in detail.

Interested candidates should supply a one page statement of intent and a complete resume by email. The financial support level for this position is competitive. Possible start dates are September 2018 or January 2019.

Minimum GPA for these positions is 3.5 or equivalent. All students who are not native English speakers, regardless of the language of instruction in their institution, need to provide a language proficiency score that exceeds TOEFL iBT: 100, TOEFL paper based: 600, IELTS: 7.5. Applications without, or with lower, language proficiency scores will be considered only under exceptional circumstances.

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