Open research positions in lab of Allen Ehrlicher, Department of Bioengineering, McGill University, Montreal, QC
http://bam.lab.mcgill.ca

Postdoctoral research position – cell mechanics or synthetic chemistry
Postdoctoral research position – cancer cell mechanics and forces
2 PhD Candidates – cell mechanics/biophysics
PhD Candidate – molecular/cell biology
PhD Candidate – biomimetic composite materials
Masters candidate – biomedical engineering

Start date: immediate/until filled
Disciplines: Physical sciences, biophysics, life sciences, cell biology, materials science

Description: Animal cells are some of the most complex machines in the natural world, as biological systems are able to convert chemical energy into controlled work, which allows cells to move and change their mechanical properties. Understanding this interface of physics and biology will resolve how many pathologies mechanically disrupt our bodies, and also inspire new smart materials. Specific questions include: what are the mechanical moduli of mammalian cells, how much force do these cells generate, and how do these physical properties change in diseases such as cancer? How do cells react to forces in their environment? Can we translate these active viscoelastic properties into synthetic composite materials? We pursue these kinds of questions in the Ehrlicher lab, however, a broad degree of creative freedom within these topics is possible and encouraged.

Requirements: We seek applicants with strong core backgrounds in physics, physical sciences, chemistry, and engineering with experience/interest in fields including: quantitative fluorescence microscopy (confocal, FRET, FRAP); biophysics (rheology, optical/magnetic tweezers, cell-level mechanics); materials science/engineering (composite smart materials); and cell biology experience (cloning, cell culture, transfections, protein purification). Applicants will be expected to work with a diverse interdisciplinary team and publish their results in top-tier journals.

How to apply: Interested applicants should email the following items as a single pdf to ehrlicher.lab@gmail.com with the subject “position title – research application”: (1) CV, (2) contact info for two references (3) a sample publication, and (4) a research statement briefly describing scientific questions you would like to pursue during your research in our group, and a brief research statement outlining potential experiments to answer those questions (1-2 pages). Incomplete applications may not be considered.

For postdoctoral researchers, preference will be given to applicants who completed their PhD degrees within the past two years. Masters and PhD applicants should also include a transcript (unofficial is ok). After an initial review, applicants will be recommended to apply to a McGill Graduate Program.

Montreal is a culturally vibrant city, and consistently ranked as one of the best places in the world to live. We hope you can join us here.