JOB ADVERTISEMENT

LOCATION: **Waterloo, ON**

SCHOOL/DEPARTMENT: **University of Waterloo, Faculty of Engineering, Department of Electrical and Computer Engineering**

POSITION TITLE: **Postdoctoral Fellow (PDF)**

Job Description

The prospective candidate will be working on cutting edge research on engineering hydrogel-based microneedles for different biomedical applications ranging from sensing to delivery. The developed platforms will be validated using ex vivo and in vivo models. The applicant will have access to world class facilities in micro/nanofabrication, surface characterization, fluorescence and electron microscopy, electrochemical workstation, etc. at the University of Waterloo.

Areas of Responsibility / Scope of Research

The PDF will lead designing, testing, and optimizing of bioassays. Interested applicants are encouraged to read the following paper to better understand the scope of the project.

[1]. H. Zheng*, A. GhavamiNejad*, P. GhavamiNejad, M. Samarikhalaj, A. Giacca, and M. Poudineh, "A Hydrogel Microneedle-assisted Biosensor Integrating Aptamer Probes and Fluorescence Detection for Reagentless Biomarker Quantification," https://doi.org/10.1101/2021.10.14.464448

Qualifications:

- The PDF must hold a PhD in engineering (chemical, biomedical, material, and mechanical or similar) or science (chemistry, biochemistry or similar).
- Expertise in polymer chemistry and engineering, biomaterial, surface and bio-functionalization, and biochemistry are required.
- Experience in conjugated polymer synthesis and characterization.
- In-depth experience with polymer characterization techniques (e.g. NMR, FTIR, GPC, DSC).
- Expertise in micro/nanofabrication is desired.
- Having high quality publications.
- Exceptional problem solving and critical thinking skills.
- Strong verbal and written communication skills and the ability to communicate effectively in meetings to deliver and report on project progress.
- Strong leadership, management skills, and the ability to work independently within a multidisciplinary research lab.

Application:

- Interested and qualified applicants are encouraged to send their CV and contact information for +2 referees to Professor Poudineh at mahla.poudineh@uwaterloo.ca
- Expected start date: May 2022.