

Ph. D. position in electrochemical DNA sensors

Laboratory of Biosensors & Nanomachines (LBN)
Research group of Prof. Alexis Vallée-Bélisle
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Rapid molecular detection using electrochemical DNA sensors

Starting date: Fall 2022

Salary: \$19,000/year (+ supplement for teaching assistant program)

Duration: 4 years

Project's description

The Laboratory of Biosensors & Nanomachines is looking for a highly motivated student to pursue research on rapid molecular detection using electrochemical DNA sensors. The project mainly involves the chemical synthesis and purification of modified DNA probes, electrode DNA functionalization as well as the development and optimization of new electrochemical DNA sensors. For more information, see our published work, such as *J. Am. Chem. Soc.* 2015, 137, 15596, *ACS Sensors* 2017, 2, 718 and *Anal. Chem.* 2019, 91, 4943.

Qualifications

The candidate must hold a master's degree in chemistry or biochemistry (or any related discipline) with good experience in biosensors and electrochemistry. Experience in DNA synthesis and amplification will also be valued.

Personal skills

- Creativity and capacity to think outside of the box
- Ability to work within a team and to collaborate with other research partners
- Proactive in problem-solving and troubleshooting
- Good aptitude in scientific communication (oral presentations and publications)
- Good mentoring skills (i.e. the candidate is expected to supervise master and undergrad students)
- Highly motivated and organized
- Fluent in English (spoken and written)

How to apply

Interested candidates are invited to read any of our electrochemical sensor publications and submit: 1) a cover letter highlighting their background, any relevant expertise, and their interest towards the proposed project, such as ideas on relevant new targets, ways to improve assay design or any other assay features; 2) a resume; and 3) the contact information of two referees. Please send your candidature to Prof. Alexis Vallée-Bélisle (a.vallee-belisle@umontreal.ca) with the title "Ph.D. candidate - Electrochemical Sensors 2022".