Next Generation Affinity-based Proteomics

Multiplex immunoassays | DNA nanotechnology | Barcoded Microparticles | Commercialization

Start Date: Immediately or at the earliest convenience

The Juncker Lab at McGill University in Montreal, Canada, is seeking an outstanding Postdoctoral Fellow to further develop our affinity-based and DNA-nanotechnology-enhanced proteomics platform. The candidate will work closely with the lab spin-off and commercial partner “nplex biosciences” and in partnership with major pharmaceutical companies. Our proteomics platform is based on our recent work on FRET and bead barcoding (see Dagher et al. Nature Nanotechnology 13, 925–932 (2018)) and an unpublished and proprietary assay capture mechanism. The candidate will join a rapidly growing team of researchers and play a pivotal role in implementing this next-generation proteomics technology for large scale multiplex protein analysis with unprecedented throughput, performance and at a fraction of the cost of current leading technologies.

A PhD in the physical or life sciences, expertise in the main project research areas, and experience with antibody conjugation, protein purification, DNA nanotechnology, or assay development. The candidate will be expected to develop and implement appropriate methods enhance the limits of detection, develop automated reagent-manufacturing and assay-automation processes, and comprehensively optimize the platform for clinical applications. The Fellow is expected to perform independent analysis of datasets generated over the course of the project, spearhead manuscript-writing efforts (or support others as appropriate), and contribute to writing grant applications. Qualified candidates should be self-driven leaders and highly motivated researchers with an established track record.

Major Activities:
- Design and develop automated methods for protein conjugation
- Develop automated assay processes for large scale multiplex immunoassays
- Coordinate and communicate with industrial partners and collaborators
- Supervise and train graduate and undergraduate students.
- Possibly participate in grant writing and teaching upon mutual agreement.

Key Assets for Candidates:
- Expertise in proteomics, immunoassays, or high-throughput screening methods, with a PhD in a relevant field of study.
- Previous experience with biological assays: ELISA or microarrays or flow cytometry.
- Strong interest or previous experience in commercialization or technology transfer.

Please send your application package (cover letter, CV, contact info for 3 references) by email with the subject line “Next Gen Immunoassay Postdoc” to:

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Please visit our webpage for additional information
juncker.lab.mcgill.ca
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