



Séminaire / Seminar

20 janvier / January 20 (12:00)

Connectez-vous à / Join the webinar at: idigh.ca/webinars



Alexandre P.

Cheng BEng, MSc, PhD Candidate

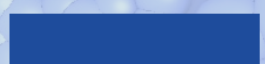
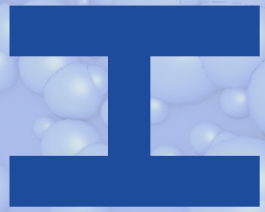
Meinig School of Biomedical Engineering, Cornell University,
Ithaca, NY, USA

Liquid biopsies for infectious and immune diseases

I obtained my bachelors of engineering at Polytechnique Montreal University and am completing my Ph.D. at Cornell University. At Cornell, I developed a minimally invasive metagenomic sequencing assay for the hypothesis-free monitoring of microbes and host-associated damage. This assay leverages cell-free DNA, short sequences of nucleotides that circulate freely in biofluids. cfDNA is often part of the detritus of the cell as a result of apoptosis. Here, we used this assay to screen for infection and tissue damage in three clinical settings:

- i) Viral and bacterial infection of the kidneys and urinary tract;
- ii) Graft-versus-Host disease and opportunistic infection in hematopoietic cell transplant patients;
- iii) Damage from COVID-19.

Our studies demonstrate the utility of cfDNA assays as liquid biopsies to detect a wide variety of pathogens and injured tissues in a myriad of clinical settings.



idigh.ca



@IDIGHProgram