2018 Summer Student Project available

High dimensional data analysis of the human microbiome

**Project summary:** Humans host hundreds of bacterial species in their intestinal tract. Interactions between these microbes and the human host influence human development, homeostasis and disease. In this project, highly-dimensional bacterial community composition data and ontologies of functional capacity are available, linked to human subjects and annotated with rich biological metadata. The student will explore correlations between microbial and host datasets, and the classification of subjects into biologically relevant groups by integrating microbial and other metadata. Applicants should have a strong statistical background, and an interest in high dimensional biological data, classification and probabilistic models.

**Relevant skills:** R and/or Python programming an asset, basic biological knowledge, statistical modelling

**Project duration:** 12 weeks, mid/ late May to mid/ late August.

**Salary** at summer student stipend rate

**Supervision:** Laboratory of Dr. Jayne Danska, Peter Gilgan Research and Learning Tower, Hospital for Sick Children. Direct supervision by a senior graduate student and a post-doctoral fellow

Applications accepted with a current CV, transcript and covering e mail to: Christopher.yau@mail.utoronto.ca, and Alexandra.paun@sickkids.ca by February 12.