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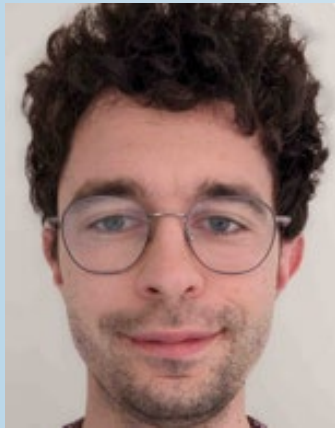
# External Seminar Series

Friday May 17, 2024  
01:00 PM, CRCM Library

Hosted by OHIO Department & Cibi Platform



zoom



**Léonard Hérault**

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## “Analysis of single-cell multiomics atlases using metacells to decipher the tumor immune microenvironment”

**Abstract:** Single-cell multiomics combines measurements of different types of molecules (e.g. chromatin accessibility, RNA, proteins) in individual cells, promising deeper insights into cell-specific transcriptional regulation and its alterations during complex diseases such as cancer. New computational tools are needed to analyze these complex and sparse data, and to manage the growing number of samples and cells in large multiomics atlases. To meet these needs, metacells, defined as groups of disjointed and highly similar cells corresponding to highly granular cellular states, can be identified in single-cell omics data and used for efficient and robust downstream analyses.

In this talk, I will present a new approach to metacell construction from single-cell multiomics data that we are developing and its application to the study of the tumor immune microenvironment.

**Short bio:** After a double master's degree in biotechnology (Polytech) and bioinformatics and genomics at Aix Marseille University (AMU), Leonard obtained a PhD in bioinformatics as part of AMU's inter-doctoral program. He then joined the Gfeller lab at the University of Lausanne (UNIL) as a post-doctoral fellow to develop computational methods for analyzing multiomics data from single cells with the aim of studying cell-type-specific transcriptional regulation in the tumor microenvironment.



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