



# Department of Biochemistry and Molecular Biology

## 2018 Seminar Series



**Tuesday 5<sup>th</sup> of June**

**12-1pm**

**Bio21 Institute Auditorium  
30 Flemington Road, Parkville**

**A/Prof Andrés Finzi**  
*Université de Montréal*

### ***Measuring ADCC against infected cells: role of Env conformation, accessory proteins and impact of gp120 shedding***

**Short Bio** - Dr Andrés Finzi is an Associate Professor at Université de Montréal and a Canada Research Chair on Retroviral Entry. Dr Finzi did his postdoctoral training at the Dana-Farber Cancer Institute in the laboratory of Dr Joseph Sodroski. He was recruited on September 2011 by Université de Montréal and the CRCHUM Institute to expand his research program on HIV-1 envelope glycoproteins conformational changes. By combining his PhD background on HIV-1 assembly and accessory proteins with his expertise on Env conformational changes and HIV-1 entry, Dr Finzi developed a unique research program aimed at developing next-generation HIV-1 entry inhibitors, new immunogens as well as new strategies to eliminate HIV-1-infected cells. Dr Finzi is funded by the Canadian Institutes of Health Research and the National Institute of Health research.

**Abstract** - HIV-1 envelope glycoproteins (Env) represent the only virus-specific antigen exposed at the surface of infected cells. In its unliganded form, Env samples a “closed” conformation which has been referred as State 1. Broadly neutralizing antibodies (bNAbs) preferentially recognize this particular conformation. CD4 engagement drives Env into an intermediate “partially open” State 2 conformation and then into State 3, the prehairpin intermediate required for fusion. Emerging evidence suggest a link between Env conformations and antibody-dependent cellular cytotoxicity (ADCC). For example, HIV-1-infected cells exposing Env States 2 and 3 conformations appear to be more susceptible to ADCC responses mediated by some CD4-induced antibodies (CD4i) and HIV+ sera. On the other hand, cells exposing State 1 Env are more susceptible to ADCC mediated by bNAbs. The impact of Env conformation, accessory proteins and gp120 shedding on ADCC responses will be discussed.

*ALL WELCOME. Please join us for a light lunch after the seminar!*  
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