



Infectious  
Diseases Labs

ID LABS



# Prof Claudio Bussi

School of Biological Sciences  
Nanyang Technological University  
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**Monday 29<sup>th</sup> April 2024**  
11:00 AM to 12:00 PM (SGT)

**Venue:** Codon A/B@L5 Matrix Building

## How Lysosome Damage Drives Human Macrophage Responses

Endomembrane damage constitutes a significant stressor detrimental to eukaryotic cells. To counter this threat, cells have evolved mechanisms to repair such damage and restore cellular homeostasis. Yet, the processes through which cells stabilize damaged endomembranes to facilitate membrane repair remain poorly characterized. In this seminar, I will delve into the effects of lysosomal damage on human macrophage metabolism and elucidate the role of stress granules. These membraneless cytoplasmic ribonucleoprotein assemblies are pivotal in providing membrane stabilization and supporting the host defense against *Mycobacterium tuberculosis*, a human pathogen that exploits endomembrane damage to sustain its survival within the host. This scenario poses a unique challenge to cellular integrity and the immune response. Through a closer examination of the emerging understanding of condensates and lysosomal functions in both normal and aberrant cellular states, we aim to uncover novel insights into human diseases and identify potential therapeutic strategies

**Claudio Bussi** recently is appointed Assistant Professor at the School of Biological Sciences, Nanyang Technological University, Singapore. He earned his PhD in Immune Cell Biology from the National University of Córdoba, Argentina, and completed postdoctoral training at the Host Pathogen Interactions in Tuberculosis Laboratory, The Francis Crick Institute, London, UK. His current research focuses on the molecular mechanisms that define the role of lysosomes and their interactions with other membrane-bound organelles and biomolecular condensates. He is particularly interested in exploring how stress granule-endomembrane dynamics function during neurodegeneration.

**Hosted by: Dr Amit Singhal**

**Webinar is open to all. No registration required**

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