

# Society of Developmental Biologists Singapore

## SDBS Seminar Series - Seminar (Virtual)



### Biography:

Guillaume Thibault obtained his B.Sc. in biochemistry from the University of Quebec in Montreal before doing a Ph.D. under the supervision of Prof Walid Houry from the Department of Biochemistry, University of Toronto, Canada. He was then a postdoc in Dr Davis Ng's laboratory at Temasek Life Sciences Laboratory, Singapore. He joined the School of Biological Sciences at Nanyang Technological University through the Elite Nanyang Assistant Professorship Award and holds a joint appointment as co-Principal Investigator at the Mechanobiology Institute, National University of Singapore and as Adjunct Principal Investigator, Institute of Molecular and Cell Biology, A\*STAR.

**Speaker:**

**Asst. Prof.  
Guillaume  
THIBAULT**

(Nanyang Technological University)

**Date:** 20 Jan 2022  
(Thursday)

**Time:** 4:00 - 5:00pm

**Host:** Prof. Wang  
Hongyan

(Duke-NUS Medical School)

## The emerging roles of cell stress responses in lipid bilayer stress and metabolic diseases

### Abstract:

The unfolded protein response (UPR) is a complex adaptive stress response of the endoplasmic reticulum (ER) that maintains ER function for cell survival. The UPR is typically activated by the accumulation of aberrant proteins within the ER lumen, but also by aberrant lipid mixtures. Excessive accumulation of lipids causes metabolic abnormalities and cells death including loss of pancreatic insulin-producing beta cells. Recently, we identified a broad range of cellular defects that induce ER stress, presumably via aberrant lipids at the ER. From these observations, we hypothesize that communication between the ER and other cellular compartments is critical to maintain ER membrane integrity and to prevent unresolved ER stress associated with metabolic diseases. I will discuss our latest findings on the role of the UPR in different model organisms and model systems.

### Zoom Meeting ID:

<https://nus-sg.zoom.us/my/sdbsseminar>

**Meeting ID: 929 765 4321**

**Passcode: 579046**