

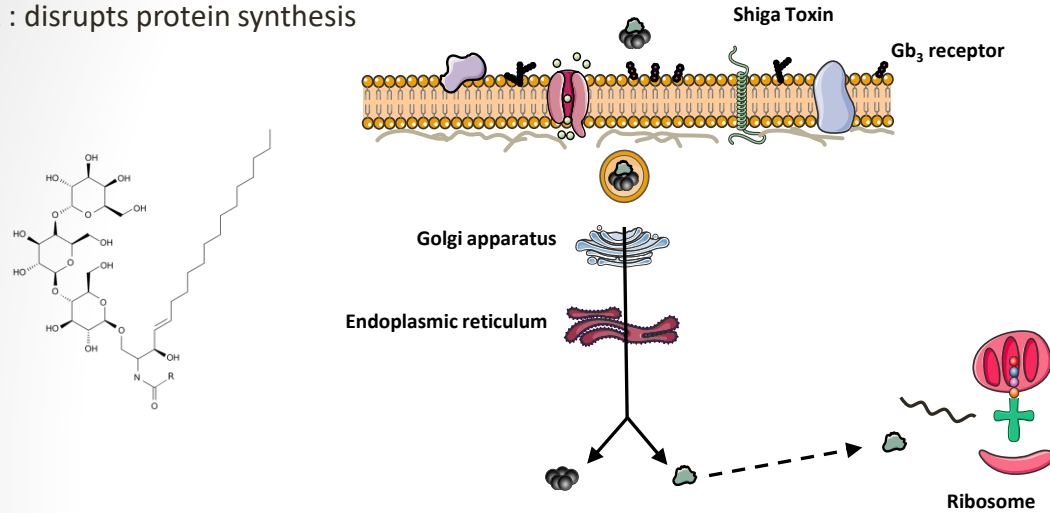
Interaction of Gb₃ derivatives with Shiga Toxin B in phase-separated membranes

➤ **Shiga Toxin (STxB)**, a toxin produced by *Shigella dysenteriae* and *E. Coli*

Two subunits:

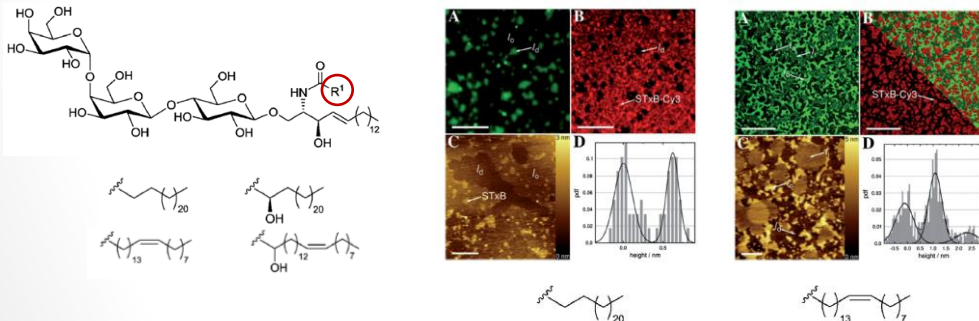
B : pentamer, binds globotriaosylceramide (Gb₃) on endothelial cells

A : disrupts protein synthesis



General formula of Gb₃ (Left). Schematic illustration of the internalization of STxB (right).

➤ **The acyl-chain influences the activity of STxB**

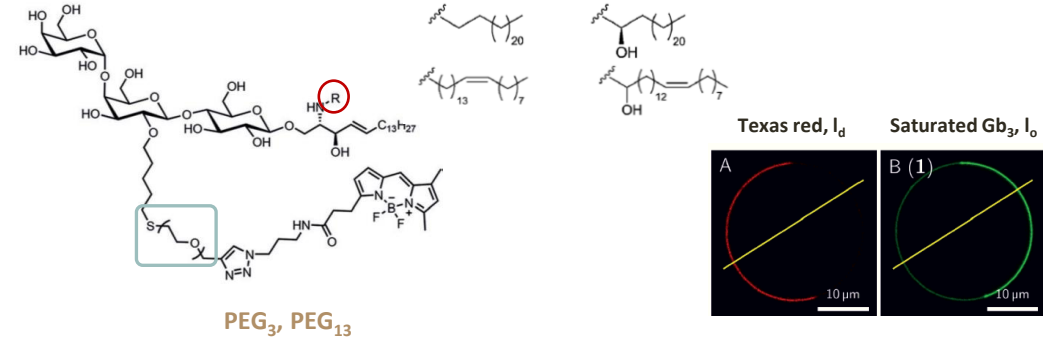


Gb₃ derivatives (left). CLSM and AFM images of phase-separated membranes with Gb₃s (right).

STxB forms clusters in presence of unsaturated Gb₃

➤ **Project: study the influence of the acyl chain on the partitioning of Gb₃**

➡ A fluorescent moiety was attached to Gb₃



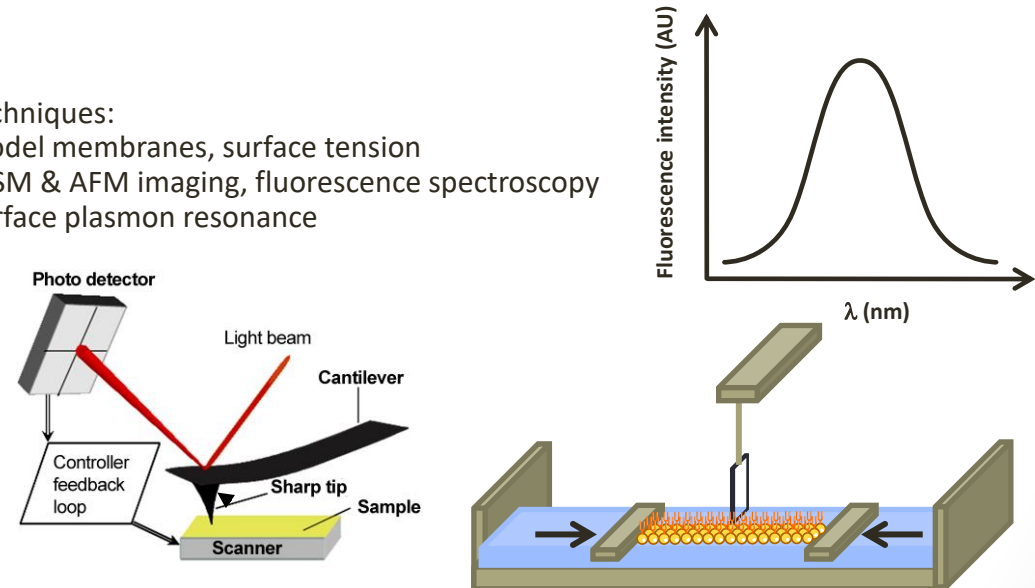
An unsaturation influences membrane partitioning

Techniques:

Model membranes, surface tension

CLSM & AFM imaging, fluorescence spectroscopy

Surface plasmon resonance



Basic principle of AFM (left). Lipid monolayer on Langmuir trough (right).



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