



Contribution ID: 92

Type: **Poster Presentations**

Neutron Scattering analysis of the bacterial holotranslocon

Tuesday, 17 November 2015 18:38 (2 minutes)

In bacteria, up to 30% of all proteins are translocated into or through the bacterial membrane. This mechanism relies on the trimeric SecYEG (translocon) complex, which forms a pore through the membrane and can open laterally in order to integrate trans-membrane protein into the lipid bilayer¹. The energy required to perform the translocation is provided either by the ribosome (co-translational pathway) or the secA ATPase (post-translational pathway)².

Four additional subunits can join the core translocon :

- Sec D and Sec F favor the translocation by using the proton-motive force³
- YidC, a conserved membrane protein insertase
- YajC, a small protein whose function remains unknown.

This seven-subunit membrane complex is called the holotranslocon (HTL). It is thought to interact with the ribosome and secA and is more efficient for membrane protein integration.

A flexible lipid cavity has been described at the center of the holotranslocon (Botte et al., in revision). We are now investigating its function and dynamic.

Primary author: Mr BROCCO, Benjamin (UJF)

Presenter: Mr BROCCO, Benjamin (UJF)

Session Classification: Poster Session

Track Classification: Main