

## SEMINAR (informal)

Thursday September 26th, 2013

10.30am

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### **“Monitoring Mitochondrial $\beta$ -Barrel Membrane Protein Folding at the Sorting and Assembly Machinery”**

Hosts : Kristina Schoonjans and Johan Auwerx

Conference Room: **AI 1153**  
EPFL - Lausanne

#### **Abstract**

Mitochondrial  $\beta$ -barrel membrane proteins transport biological material across the mitochondrial outer membrane. However, it is unknown where the  $\beta$ -barrel conformation is obtained. I monitored  $\beta$ -barrel formation by cysteine specific crosslinking and demonstrated that the  $\beta$ -barrel was formed at the sorting and assembly machinery (SAM complex). Subsequently, it was found that the central import receptor Tom22 of the translocase of the outer membrane (TOM complex) interacted with the SAM complex via the cytosolic receptor domain and stimulated the  $\beta$ -barrel formation. These results support a new model of  $\beta$ -barrel biogenesis, where Tom22 mediates the TOM-SAM interaction to promote the  $\beta$ -barrel formation at the SAM complex.