

# AN MBG FOCUS TALK

hosted by Section for Structural Biology  
Dept. Molecular Biology & Genetics, Aarhus University



**Friday 15 November 2013 at 9:15-10:00**

"Læsesalen", Bartholin building (1241), room 211

## **Dirk J. Slotboom**

Biochemistry, University of Groningen  
The Netherlands

## **Structure and dynamics of glutamate transporters**

The glutamate transporter family is a large family of secondary transporters, present in many eukaryotes, bacteria and archaea. Archaeal members of the family catalyze the coupled uptake of aspartate and three sodium ions. After the delivery of the substrate and Na<sup>+</sup> ions in the cytoplasm the empty binding site must reorient to the outward facing state to reset the transporter. I will present a crystal structure of substrate-free archaeal aspartate transporter, which provides insight in the mechanism of this essential step in the translocation cycle. In addition I will present single molecule FRET data that probe the conformational dynamics of the transporter. Together the two studies provide unprecedented insight in the mechanism of transport.

### **Host:**

**Poul Nissen, Section for Structural Biology  
Dept. Molecular Biology & Genetics, Aarhus University**