

# A KJELDGAARD LECTURE



**Wednesday 6 September 2017 at 13:15**

AIAS 1632-201 Auditorium

Same location for the PhD session



**Bil Clemons**

Caltech  
USA

## Structural Insights into the Targeting of Tail-Anchored Membrane Proteins to the ER

Tail-anchor (TA) membrane proteins are an important and diverse class that are unable to be targeted via the co-translational SRP pathway. Instead, recent discoveries have identified factors directly involved in targeting these proteins to the ER. In yeast, these proteins form the GET pathway. Our lab has focused on structural and mechanistic studies of these proteins. The pathway as we posit begins with cytoplasmic chaperones that deliver the TA-proteins to Sgt2, which routes the proteins to Get3 via a Get4/Get5 hetero-tetramer. Get3 then forms a stable complex with the TA and delivers the proteins to the ER membrane. We have characterized these complexes using structural biology and biochemistry. I will frame a discussion of the pathway from our unique structural perspective including our recent insights into the more complicated mammalian system. For the human system, we demonstrate that the unique component Bag6 is not a canonical BAG protein and its TA targeting function can be localized to a minimal complex including a C-terminal fragment, Ubl4A and TRC35. This separates the targeting and degradation functions of Bag6 providing an explanation for some of the known biological roles.

**Host:** Ditlev E. Brodersen, Structural Biology  
Department of Molecular Biology and Genetics, Aarhus University

**The lecture will be followed by a chalk-board session for PhD students**

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