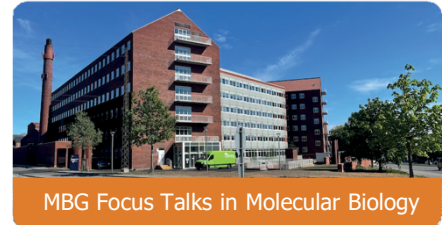


MBG FOCUS TALK

Hosted by Poul Nissen and Charlott Stock, Dept. Molecular Biology and Genetics, Aarhus University

Friday 17th January 2025 from 11:00-11:45
In Nucleus Aud. (1871-120)



Dr. Melanie McDowell

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Germany

Structural insights into ER membrane protein biogenesis by the SND pathway

Most eukaryotic integral membrane proteins (IMPs) must be targeted to and inserted into the endoplasmic reticulum (ER) membrane after their translation by cytosolic ribosomes. As IMPs display a huge diversity in the quantity, relative positioning and biochemical properties of their transmembrane domains (TMDs), they require several distinct pathways for their ER targeting and insertion. The signal recognition particle independent (SND) pathway was identified in yeast and proposed to have a broad substrate specificity. Three components of the SND pathway have been identified: the cytosolic protein Snd1 and the Snd2-Snd3 IMP complex. However, the characterisation of the SND pathway is in its infancy, with little known about the interplay between these components, and their precise roles. We structurally characterise SND protein complexes isolated from the thermophilic fungus *Chaetomium thermophilum* in order to further understand IMP biogenesis by the SND pathway.

Melanie McDowell is one of the opponents for the PhD defense by Tomás Heger, taking place 17th Jan. from 13:30 in 1324-011, on "Structural and Functional Studies of the Copper Transporter ATP7B"