Translation in Yeast Cells Begins and Ends with Translation Initiation Factors eIF3 and HCR1

Eukaryotic translation is complex and relies besides on ribosomes also on the combined activity of a plethora of proteins that regulate all individual aspects of the process. During translation initiation, recruitment of small ribosomal subunits to the messenger RNA relies on formation of a ribonucleoprotein complex that assembles on characteristic features of the RNA. Subsequently a suitable initiation codon on the mRNA has to be identified, a process that requires utmost precision. A number of proteins (so called eukaryotic initiation factors, eIFs) participate in and regulate initiation codon choice and hence production of the correct peptides. Despite decades of research we do not yet fully understand the individual functions and roles of all eIFs during initiation. Moreover recent data suggests that some eIFs do not only regulate initiation but also participate in translation termination.

Leoš will present exciting data from elegant studies in yeast that allow novel, deep and detailed insights into the function of core initiation factors.