

SFB 960-/BZR – Kolloquium

Donnerstag, 09. Mai 2019,
14.00 Uhr, H 53



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“Prefoldins regulate mRNA metabolism through Sm-like proteins in Arabidopsis”

Prefoldins (PFDs) were originally identified in humans as the components of a heterohexameric complex, the PFD complex, which acts as a co-chaperone of the chaperonin CCT in the folding of actin and tubulins in the cytosol. In addition to their role in this cellular compartment, increasing evidence indicates that they also perform a role in the regulation of gene expression at several levels in the nucleus. For instance, PFD1 and PFD5 participate in the recruitment of co-repressors to particular transcription factors in humans, while in yeast several PFDs are required for proper transcription elongation by RNA Pol II. Besides their role as transcriptional regulators, PFDs might also influence gene expression through their participation in cellular proteostasis. Interactome analyses in humans have related the PFD complex with the activity of the chaperonin CCT in the nucleus, processing the folding of the histone deacetylase HDAC1, and PFD5 and PFD4 promote the degradation of key transcription factors such as c-Myc and HY5 in humans and in Arabidopsis, respectively.

In my talk, I will present and discuss results regarding new mechanisms by which PFDs would regulate gene expression. By harnessing the plethora of transcriptomic data in Arabidopsis, we have identified a striking co-expression between *PFD* and *LSM* genes, which encode proteins involved in pre-mRNA processing and mRNA decapping, that has prompted us to hypothesize that PFDs could influence these two aspects of mRNA metabolism.

Host: Prof. Dr. Klaus Grasser, LS Zellbiologie und Pflanzenbiochemie

