

Einladung

zum

Botanischen Kolloquium

Freitag, den 01. Dezember 2017, 12 c.t.

Nussallee 4, Hörsaal Botanik

Referent: Prof. Dr. Jürgen Soll

Dept. Biologie I, Biozentrum der LMU, Planegg-Martinsried

Thema: „*Protein translocation in chloroplasts and mitochondria*”

Chloroplasts and mitochondria need to import thousands of proteins to fulfill their biological function. Due to their endosymbiotic origin the protein import machinery as well as further intraorganellar sorting and translocation pathways represents a mix of prokaryotic traits and eukaryotic inventions. Especially plant mitochondria differ in many aspects from their fungal and mammalian counterparts. The coding capacity of the plant mitochondrial genome is more than 10 times that of humans. Consequently plant mitochondria have retained a TAT- pathway of bacterial origin to translocate folded proteins across the inner mitochondrial membrane and not replaced it by the eukaryotic BCS1 like triple AAA-ATPase system. In addition the YidC/Alb/Oxa family members in plant mitochondria are more numerous and diverse in function than in other mitochondria.

The major protein import route into chloroplasts is of prokaryotic origin and was most likely essential for the endosymbiotic process to succeed. Different pathways exist to finally enter the organelle. The composition of the translocons at the inner envelope of chloroplasts is still controversial and will be discussed.

Diskussionsleitung: Prof. Dr. U. Vothknecht, IZMB, Zellbiologie der Pflanzen

Die Dozenten der Botanischen Institute

Zu diesem Vortrag und zu einer evtl. Nachsitzung sind Sie herzlich eingeladen