Seminar/Talk

Auxin Response Factor phase transitions to drive hormone response and development in plants

Lucia Strader
Washington University in St. Louis

Host: Jiri Friml

The phytohormone auxin plays crucial roles in nearly every aspect of plant growth and development. The AUXIN RESPONSE FACTOR (ARF) family of transcription factors regulates auxin-responsive gene expression and exhibit nuclear localization in regions of high auxin responsiveness. Here we show that activating ARF7 and ARF19 proteins accumulate in micron-sized assemblies within the cytoplasm of tissues with attenuated auxin responsiveness. The intrinsically disordered middle region and the folded PB1 interaction domain of ARFs drive protein assembly formation. Mutation of a single lysine within the PB1 domain abrogates cytoplasmic assemblies, promotes ARF nuclear localization, and results in an altered transcriptome and morphological defects. Our data suggest a model in which ARF nucleo-cytoplasmic partitioning regulates auxin responsiveness, thus providing a mechanism for cellular competence for auxin signaling.

Monday, December 3, 2018 03:00pm - 04:00pm
Big Seminar room Ground floor / Office Bldg West (I21.EG.101)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.
Please find a schedule of the ISTA Shuttle on our webpage:
https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.