## Institute colloquium

# The Institute Colloquium: Auxin: molecular glue that drives plant development

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Host:

Auxin regulates a bewildering array of processes throughout plant growth and development. This complexity contrasts with the apparent simplicity of the auxin-signaling pathway. Auxin regulates transcription through the TIR1/AFB-Aux/IAA-ARF pathway. The hormone directly binds to the F-box protein of the SCFTIR1/AFB ubiquitin protein ligase E3 and promotes an interaction with the Aux/IAA transcriptional repressors, thus stimulating their degradation and allowing ARF-dependent transcription. Emerging evidence suggests that the complexity of auxin response is determined by the combinatorial nature of the auxin-signaling pathway. Further, the core auxin signaling pathway is subject to both negative and positive feedback loops. We are currently focusing on factors that regulate TIR1/AFB and Aux/IAA levels. We find that TIR1 is a client of the chaperone HSP90 and is stabilized by both auxin and elevated temperature. Further we demonstrate that the ALF4 protein, previously shown to be required for lateral root formation, is an ortholog of the human glomulin protein, and regulates SCFTIR1 function. Finally, we are studying how other environmental and developmental signals integrate with the auxin pathway by regulating transcription of the Aux/IAA genes.

**Tuesday, June 2, 2015 11:00am - 12:00pm**
Raiffeisen Lecture Hall, Central Building

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This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.
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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.