

**Speaker:** **Prof. Dr. Sebastian Soyk**  
Department of Plant Molecular Biology,  
University of Lausanne, Switzerland



**Title:** **Decoding the genetic control of  
meristem transitions for crop  
engineering**

**Time:** **Tuesday, June 24, 2025, 2 pm**  
[https://ipk-gatersleben-de.zoom-  
x.de/j/69381347985?pwd=yk1p8HZYJ9KgTGnBUyhQbudyOQyTnv.1](https://ipk-gatersleben-de.zoom-<br/>x.de/j/69381347985?pwd=yk1p8HZYJ9KgTGnBUyhQbudyOQyTnv.1)  
Meeting-ID: 693 8134 7985 Kenncode: 281918

**Place:** **IPK Lecture Hall and via Zoom,**  
Corrensstr. 3, 06466 Seeland OT Gatersleben

### **Abstract:**

Plant breeding relies on reshuffling beneficial mutations in genetic networks that underlie agricultural traits. However, introducing identical mutations into disparate genetic backgrounds often leads to variable phenotypic outcomes. Such unpredictable background effects can be explained by genetic interactions between breeding mutations and standing variants that accumulate during domestication and breeding. However, only few genetic interactions have been characterized in crops at the molecular level. In this seminar, I will present strategies that involve approaches in genomics and genome editing to uncover, understand, and utilize genetic interactions among floral regulator genes in the model crop tomato. Our findings in tomato suggest that genetic background effects are widespread among flowering traits and that genetic interactions can be engineered by genome editing for targeted trait improvement.

### **Short CV**

#### **Education**

04/2009 – 07/2013 **ETH Zürich, Switzerland**; Ph.D.; Plant Biochemistry; Prof. Samuel C. Zeeman.  
(date of Ph.D. defense: 11.07.2013)

10/2003 – 10/2008 **University of Heidelberg, Germany**; B.Sc. & M.Sc. in Biology (Diplom); Majors in Molecular Biology, Cellular Biology, and Botany (passed with distinction).

#### **Employment**

02/2023 – present **University of Lausanne, Switzerland**; Tenure-track Assistant Professor at the Department of Plant Molecular Biology.

08/2019 – 01/2023 **University of Lausanne, Switzerland**; Assistant Professor (SNF) at the Center for Integrative Genomics.

10/2014 – 07/2019 **Cold Spring Harbor Laboratory, USA**; Postdoctoral Fellow; Plant Developmental Genetics; Prof. Zachary B. Lippman.

07/2013 – 09/2014 **ETH Zürich, Switzerland**; Postdoctoral Scientist; Plant Biochemistry; Prof. Samuel C. Zeeman.

04/2009 – 07/2013 **ETH Zürich, Switzerland**; Doctoral student; Plant Biochemistry; Prof. Samuel C. Zeeman.

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