



Postdoctoral position in plant developmental biology, epigenetics and molecular biology

We have an open position for a postdoctoral scientist (contract of 2+1 years, employment 100%) to investigate the epigenetic and molecular mechanisms of cell fate specification during embryogenesis in the model organism *Arabidopsis thaliana*.

Workplace: Institute of Plant and Microbial Biology, University of Zurich, Zurich, Switzerland.

Background: Multicellular organisms are composed of different cell types that originate from the unicellular zygote during embryogenesis. All these cells possess the same genetic information, and yet they can acquire specific identities and functions. Our research group long term goal is to understand the molecular mechanisms that allow cells to acquire and maintain their identities, using the embryo of the plant *Arabidopsis thaliana* as model system.

Changes in gene expression allow genetically identical cells to begin differentiation. Epigenetic mechanisms as histone post-translational modifications, serve as molecular tool to achieve such transcriptional changes so that cells can undertake distinct developmental trajectories. The *Polycomb* repressive complex 2 (PRC2) performs the histone posttranslational modification H3K27me₃, which induces silencing of pluripotency and developmental genes, and is thus involved in key developmental decisions during cell fate establishment and maintenance. The main aim of this project is to understand the dynamics of the Polycomb mark H3K27me₃ deposition/removal along early embryonic stages and its causality towards cell fate establishment, particularly during stomata lineage specification.

The project involves various molecular techniques, such as CUT&Tag, ChIP, ATAC-Seq, cloning and advanced live imaging microscopy.

Environment: Zurich is a beautiful, vibrant and international city that offers a safe and high quality life. The IPMB is home to internationally recognized groups and offers a creative scientific environment with access to state-of-the-art technologies. Our group is young and still growing, at the moment composed by the group Leader, four PhD students, one Post-Doc and one Lab Technician. We are embedded in a dynamic and supportive research community.

Requirements: The ideal candidate has a PhD in biology, molecular biology, plant biology, genetics or similar disciplines, can master various molecular biology techniques, is proactive, curious and passionate about science, work well independently and in team, and is inclined to mentoring and to the supervision of younger students. Evidence of scientific achievement is essential.

Application: To apply for this position, please send a single pdf file including your CV with research experience and publications, a short motivation letter (max ½ page) stating your research interests, and contact details of 2 references to Sara Simonini (sara.simonini@botinst.uzh.ch). Review of applications will begin immediately until position is filled. Starting date is negotiable and intended to be by Summer 2024.