

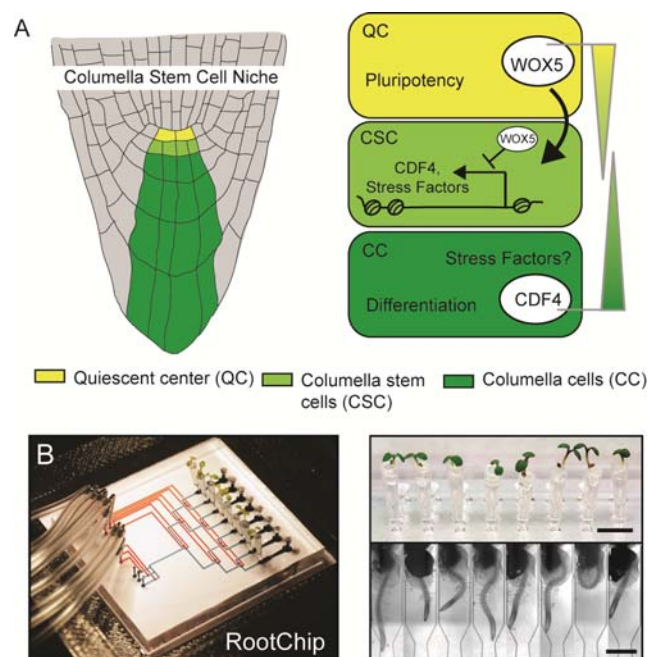
A Postdoctoral and a PhD position in Epigenetic Adaptation of Plant Stem Cells to Environment

We are seeking highly motivated candidates with a strong interest in plant biology. Goal of this project is to investigate how stem cells in the root meristem sense and adapt to environmental changes. A specific focus will be on the epigenetic regulation of stem cells during this process (A). In addition to standard genetic and molecular tools, the project utilizes a novel microfluidic technology that is developed together with our engineering partners (B). This set up allows to simulate environment conditions with simultaneous 3-dimensional live imaging of cells and of fluorescent reporter proteins. Transcriptome, chromatin, and live imaging data will be combined to create models of how regulatory networks of stem cells cope with changing environmental conditions. Results will be used to formulate breeding concepts to improve root growth under adverse conditions, such as drought or compromised soil.

The postdoctoral position is initially available for three years, with the possibility of extension. The PhD position covers the entire length of the PhD. The lab language is English. German is not required. For further information, also on our publications, please visit our homepage (www.biologie.uni-freiburg.de/LauxLab).

The University of Freiburg with a strong and international scientific community is routinely among the best German Universities in international rankings, and advanced facilities for systems biology, protein analysis, and imaging are available. The city of Freiburg is located in the black forest, next to France, Switzerland, and the Alps.

To apply, please send your CV including your research experiences and your future interests to Thomas Laux (laux@biologie.uni-freiburg.de).



(A) Diagram of the root stem cell niche (left). Stem cells are epigenetically regulated by the mobile transcription factor WOX5. For details see: Pi et al., 2015, *Dev Cell* 33, 576; Sarkar et al., 2007, *Nature* 446, 811. (B) Microfluidic system to study adaptation of stem cell regulation to environmental conditions.