

# Cologne Evolution Colloquium

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## **Cape Verde Arabidopsis: an island model of adaptive radiation**

A single Arabidopsis sample was collected 30 years ago in the Cape Verde Islands, a climatic extreme in the Arabidopsis species distribution. Due to its surprising location and phenotypic divergence, the resulting line (Cvi-0) has been an enigma to the Arabidopsis community. Over the years, Cvi-0 has been the subject of extensive QTL mapping efforts and functional follow-up analyses, so that we have a wealth of information about the genetic basis of the intriguing phenotypic divergence for this single line.

This backdrop provides an ideal opportunity to access the specific events that led to local adaptation in this population. To this end, we collected and sequenced population samples from Cape Verde. Our results reveal a signature of strong positive selection on pleiotropic functional variants as well as parallel adaptation across islands. Our study design provides a framework for combining knowledge from trait mapping, population genetics, functional variant identification, and field studies of natural populations to characterize the details of adaptive dynamics in nature.

Wednesday, June 29, 2016, 17:00

University of Cologne, Institute for Genetics

Seminar Room 0.46

Hosted by Michael Lässig

Molecular Basis of  
Evolutionary Innovations

SFB 680