Postdoctoral position in computational morphodynamics of *Arabidopsis* sepal giant cell patterning

A postdoctoral position is available in Dr. Adrienne Roeder’s group at Cornell University. Dr. Roeder’s group studies the control of cell size and organ size, using *Arabidopsis* sepals as a model system. We employ a computational morphodynamics approach, using live imaging of the developing sepal, computational image processing and computational modeling (developed in collaboration). Please visit our laboratory website (http://roeder.wicmb.cornell.edu) for more information and a full list of publications.

Recently we have shown that the concentration of the transcription factor ATML1 fluctuates in developing sepal cells and that these fluctuations control the formation of highly enlarged, endoreduplicated giant cells in the sepal epidermis (see Meyer et al., 2017, eLife 6:e19131). An NSF-funded postdoctoral position is available to follow up on this work. There are a number of open questions that can be addressed: are the fluctuations stochastic? what downstream targets of ATML1 specify giant cells? and how does high ATML1 specify giant cell fate and promote endoreduplication, while low ATML1 allows cell division? Techniques to be used in this project will include confocal live imaging, image processing, collaboration with computational modelers, ChIP-seq, and single-cell RNA-seq.

The ideal candidate should have a strong track record and extensive lab experience in plant molecular biology, genetics, and/or confocal imaging. The starting date is flexible: it can be immediate (January 2018), or as late as August 2018. Applications will be accepted until the position is filled. Competitive salary commensurate with experience and skills, as well as a generous benefits package will be offered. Interested applicants should send a PDF including a CV, a brief description of future research interests, and contact information for three references to Dr. Adrienne Roeder (ahr75@cornell.edu). Please include “Postdoc 2018” in the subject line. Informal inquiries are welcome.

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