GENETIC AND TRANSCRIPTIONAL MECHANISMS DRIVING DEVELOPMENT

Students will use laboratory and computational approaches to help understand how genes that are important for development are controlled, using a plant model. This is a paid research internship for Spring '15 semester that can also be taken for credit.

Proper development of plants or people requires precise control of key regulatory genes, such that tissues and organs form at the proper time and place. The loss of such control underlies many common genetic diseases. In plants, development is plastic, and the influence of the environment (growth conditions) is superimposed on basic control mechanisms. The research uses genetic, molecular biology and computational approaches to define developmental control. Techniques may include but are not limited to DNA and RNA isolation, PCR, quantitative PCR, gel electrophoresis, basic operations in Unix and Python.

Qualifications

Applicants with majors in the College of ANR will be given preference. Students should be genuinely interested in genetics and/or molecular biology and have exceptional creativity and problem-solving skills. No previous lab or computer experience needed; experience with MacOSx helpful. Must have a couple afternoons a week open. $10 hour, 10 h/wk.

Steve van Nocker
Professor
MSU Department of Horticulture
517-775-5218
vannocke@msu.edu