Seminar in Plant Molecular and Cell Biology  
BIOL 639, Fall 2015  
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Time and Location: possibly Wednesdays 2:00-3:00 in 133 Wilson Hall

This course is intended for graduate students and advanced undergraduates with an interest in plant molecular and cell biology. Post-docs are also welcome and encouraged to attend and participate.

The course will meet weekly in an interactive seminar format. Each week, we will discuss the background, methods, and results of a paper from the recent scientific literature, and interpret these in the light of current knowledge. Students will practice reading and interpreting scientific papers, and present information to the group. Each week, one participant will have primary responsibility for presenting to the group the background needed to understand the paper, and the main points presented in the paper figures. All students should read the assigned paper before class, and be prepared to discuss it.

We will also have a couple of guest speakers from nearby institutions. In preparation for those classes, we will read one of their papers. Those meetings will be held in 215 Coker Hall.

For students taking the course for credit (1 hr.), grades will be based on attendance and class participation (45%); preparation and presentation of a topic (45%), and a short take-home exam (10%) to be handed in by 12:00 on Friday, Dec. 11th. This will be handed out in the last class, and will consist of a written analysis and interpretation of a paper chosen from the literature.

Topics will include plant development, meristem function, responses to pathogens or symbionts, genetic basis of agronomic traits, and/or others to be chosen. During the organizational meeting, we will assign students to lead the discussion on particular dates. Each discussion leader should select a paper for the group to read, either from among the list of interesting papers below, or from elsewhere in consultation with the instructor.
Schedule

August 19 – organizational meeting

August 26 – Erin Sparks, Duke (guest speaker) – 215 Coker Hall

September 2 – paper discussion

September 9 – paper discussion

September 16 – paper discussion

September 23 – Bob Franks, NCSU (guest speaker) – 215 Coker Hall

September 30 - paper discussion

October 7 – Rosangela Sozzani, NCSU (guest speaker) – 215 Coker Hall

October 14 – paper discussion

October 21 – paper discussion

October 28 – paper discussion

November 4 – paper discussion

November 11 – paper discussion

November 18 – paper discussion

December 2 – paper discussion

(Exam, hand in by Friday December 13th, 12:00)
Readings to consider:

Development


Meristems


Cell division


Symbiosis


Pathogen response, immunity


Agronomic traits


Hormones


Cell biology