

**Plant Molecular Biology – Spring 2014; Course No. 16:765:513 and 11:126:413**

Spring Semester January 21, 2014 – May 5, 2014;

Spring Recess March 15-March 23; Exams May 8 – May 14

Dr. Pal Maliga  
Course Coordinator  
2008A Waksman Institute  
848-445-5329  
[maliga@waksman.rutgers.edu](mailto:maliga@waksman.rutgers.edu)

Dr. Juan Dong  
1012A Waksman Institute  
848-445-7034  
[dong@waksman.rutgers.edu](mailto:dong@waksman.rutgers.edu)

Dr. Andrea Gallavotti  
Waksman Institute  
848-445-6421  
[agallavotti@waksman.rutgers.edu](mailto:agallavotti@waksman.rutgers.edu)

Dr. Eric Lam  
Plant Biology & Pathology  
Foran Hall, Rm. 216  
848-932-6351  
[Lam@aesop.rutgers.edu](mailto:Lam@aesop.rutgers.edu)

<https://ecollege.rutgers.edu/index2.jsp>

**Mondays and Thursdays 10:55 am to 12:15 pm; Foran Hall 138B**

Lecture	Date	Topic	Lecturer
1	January 23	1. Genome structure and sequencing	PM
2	January 27	2. Chromatin structure and dynamics	JD
3	January 30	3. The plant gene and transcription	PM
4	February 4	4. mRNA processing and turnover	PM
5	February 6	5. Translation	PM
6	February 10	6. Proteomics	AG
7	February 13	7. Cell-type specific analyses	JD
8	February 17	8. Protein stability and turnover	PM
	<b>February 20</b>	<b>First Hourly Exam</b>	<b>PM, JD, AG</b>
9	February 24	9. Subcellular protein targeting	PM
10	February 27	10. Regulation by small RNAs	PM
11	March 3	11. Plastid genes expression	PM
12	March 6	12. Mitochondrial gene expression	PM
13	March 10	13. Transgenic plants	PM
14	March 13	14. Genome Engineering	PM
	<b>March 15-23</b>	<b>Spring Break</b>	
15	March 24	15 Functional genomics	JD
16	March 27	16. Intercellular trafficking	JD
17	March 31	17. Stem cells & asymmetric cell division	JD
	<b>April 3</b>	<b>Second Hourly Exam</b>	<b>PM, JD, AG</b>
18	April 7	18. Meristem development	AG
19	April 10	19. Flower development	AG
20	April 14	20. Light signaling	PM
21	April 17	21. Auxin signaling	AG
22	April 21	22. Cytokinin signaling	AG
23	April 24	23. Programmed cell death	EL
24	April 28	24. Cytoskeleton	JD
25	May 1	25. Plant cell cycle and mitoses	JD
26	May 5	26. Cell-cell communication	PM
	<b>May 12</b>	<b>Final Exam</b>	<b>PM, JD, AG, EL</b>

**Textbook:** There is no required textbook. However, you may find useful the following two books as a general source of information:

Levin's Gene XI. By Lewin, B.J.E. Krebs, E.S. Goldstein and S.T. Kilpatrick. Jones and Bartlett Publishers, 2014. ISBN 978-1-4496-5985-1

Molecular Biology of the Cell 5<sup>th</sup> Edition, by Alberts et al., Garland Science, 2007, ISBN 078-0-8153-4105-5); or 4<sup>th</sup> edition

**Exams:** The exams will be short essay format and are scheduled for February 20, April 3 and May 12.

**Grading:** There will be three hourly exams, each worth one third of the final grade. The Final Exam will cover lectures during the entire semester (40% lectures in last Section, 30% each covered in Exams 1 and 2)

Classes are in Foran Hall, Rm 138B on Monday, 10:55-12:15 and Thursday, 10:55-12:15

### **ABSENCE POLICY**

Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

### **ACCOMODATIONS FOR STUDENTS WITH DISABILITIES:**

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

### **ACADEMIC INTEGRITY:**

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.

- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

## **STUDENT WELLNESS SERVICES:**

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.