

Bio8300: IPG-Genetics/Molecular Biology Class
Fall Semester, Annually
10-11:30 am Tuesday and Thursdays, Room 322 Tucker Hall

Organized by K. Newton and J. Walker for Fall 2008

LECTURE	SUBJECT	LECTURER
1	Review of Mendel's laws, meiosis, double fertilization	
2	Probability/genetic ratios/recombination	KN
3	Creating mutants, How to identify genetic interactions	JCW
4	Mapping and genetic Interactions: Arabidopsis focus	JCW
5	Mapping - Maize focus	Georgia Davis
6	Association analysis, Maize diversity project	Sherry Flint-Garcia
7	Transposable elements - discovery and genetic aspects	KN
8	Transposable elements - molecular aspects	KN
9	Transformation - Agrobacterium & Arabidopsis	JCW
10	Transformation, cloning vectors - maize and soybean	Zhang
	Exam 1	
11	Maternal inheritance: Plastid & mitochondrial genomes	KN
12	Nuclear-cytoplasmic interactions, retrograde regulation	KN
13	Nuclear gene expression	JCW
14	MicroRNAs	JCW
15	VIGS	Jim Schoelz
16	Epigenetics, co-suppression, gene silencing	KN
17	Gene Imprinting and paramutation	KN
	Exam 2	
18	Aneuploidy and Polyploidy	Chris Pires
19	Cytogenetics: Duplications and deficiencies, B chromosomes	KN
20	Cytogenetics: Translocations and inversions	KN
21	Genome Evolution	Perry Gustafson
22	Self-incompatibility	Bruce McClure

23	Heterosis & Inbreeding Depression	KN
24	Genetic Interactions between Plants and Pathogens	Walter Gassman
	Thanksgiving Break	
25	Genetics & Plant Breeding	Dave Sleper
26	Genetics & Plant Breeding	Dave Sleper
27	Special Topic	
	Exam #3	
