Adventures in Chromatin and Gene Expression (BIMM 108)

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Winter 2010

Date	Topic
Jan. 5	1. Overview of Chromatin; Scientific Knowledge; Basic Techniques in Molecular Biology
Jan. 7	2. Basal Transcription by RNA Polymerase II Simple Kinetics and Thermodynamics
Jan. 12	3. The RNA Polymerase II Core Promoter
Jan. 14	4. Sequence-specific DNA-binding Transcription Factors
Jan. 19	5. Annealing Helicases
Jan. 21	6. Transcriptional Enhancers
Jan. 26	7. Chromatin Structure
Jan. 28	8. Histone H1, Histone Variants, and HMG Proteins
Feb. 2	9. Covalent Modifications of the Histones
Feb. 4	**Midterm #1** (through Lecture 8)
Feb. 9	10. CpG Methylation; Heterochromatin; Epigenetics; Position-effect Variegation
Feb. 11	11. Topoisomerases and other Key DNA-directed Enzymes
Feb. 16	12. Chromatin Assembly: Methods and Factors
Feb. 18	13. Mechanisms of Chromatin Assembly
Feb. 23	14. Chromatin Remodeling Factors and Mechanisms
Feb. 25	15. Chromatin Remodeling in Different Biological Processes
Mar. 2	**Midterm #2** (through Lecture 14)
Mar. 4	16. Genome-wide Analyses of Chromatin and Transcription
Mar. 9	17. Future Perspectives in Gene Expression and Chromatin
Mar. 11	18. Synthesis and Review
Mar. 16 (Tuesday)	**Final Exam** (11:30 am to 2:30 pm)