

**CURRENT TOPICS IN BIOCHEMISTRY: 302-48100
SPRING 2004**

INSTRUCTOR: Vicki Cameron
OFFICE: 157 Center for Natural Sciences
OFFICE HOURS: 10 am Monday and Wednesday
TEXT: **Genes and Signals**, Ptashne and Gann, 2002

Date	Topic	Assignment	
Jan 20	Course Introduction		
Jan 22	Intro, Polymerase Recruitment, Lac Genes	G & S pp 1-26	Quiz 1
Jan 27	<i>“Structural Basis of Transcription Activation: The CAP-α-CTD-DNA Complex”</i> . Benoff et al, (2002) Science, 297 : 1562-1566		Quiz2
Jan 29	Lambda, Polymerase and Promoter Activation	G & S pp 26-55	Quiz 3
Feb 3	<i>“Octomerization of λ CI Repressor is Needed for Effective Repression of P_{RM} and Efficient Switching from Lysogeny.”</i> Dodd, I.B., Perkins, A.J., Tsemitsidis, D., and Egan, J.B. (2001). Genes and Development, 15 : 3013-3022.		Quiz 4
Feb 5	<i>“The ATP Hydrolyzing Transcription Activator Phage Shock Protein F of Escherichia coli: Identifying a surface that Binds σ^{54}.”</i> Bordes, P. et al. (2003). PNAS, 100 : 2278-2283. and <i>“Characterisation of CadR from Pseudomonas aeruginosa: a Cd(II)-Responsive MerR Homologue.”</i> Brocklehurst, K.R., Megit, S.J., and Morby, A.P. BBRC, 308 : 234-239.		Quiz 5.
Feb 10	Yeast Gal Genes	G & S pp 59-83	Quiz 6
Feb 12	<i>“Gal3p and Gal1p Interact with the Transcriptional Repressor Gal80p to form a Complex of 1:1 Stoichiometry.”</i> Timson, D.J., Ross, H.C., and Reece, R.J. (2002). Biochem. J. 363 : 515-520 and <i>“Gene Activation by Interaction of an Inhibitor with a Cytoplasmic Signaling Protein.”</i> Peng, G. and Hopper, J.E. PNAS, 99 : 8548-8553.		Quiz 7
Feb 17	Nucleosomes and Signal Integration	G & S pp83-109	Quiz 8
Feb 19	<i>“The Swi5 Activator Recruits the Mediator Complex to the HO Promoter Without RNA Polymerase II.”</i> Bhoite, L.T., Yu, Y., and Stillman, D.J. (2001) Genes and Dev. , 15 : 2457-2469.		Quiz 9
Feb 24	Higher Eukaryotes	G & S pp 115-139	Quiz 10
Feb 26	<i>“Transgenic RNAi Reveals Essential Function for CTCF in H19 Gene Imprinting .”</i> AM. Fedoriw, P Stein, P Svoboda, R M. Schultz, M S. Bartolomei. (2004). Science, 303 : 238-241.		Quiz 11

Mar 2	Enzyme Specificity and Regulation	G & S pp 143-170	Quiz 12
Mar 4	<i>“Copper Modulates the Degradation of Copper Chaperone for Cu,Zn Superoxide Dismutase by the 26S Proteasome.”</i> Bertinato, J and L’Abbe, MR. (2003). J. Biol. Chem. 278 : 35071-35078.		Quiz 13