

PROBLEM SET #4 (lectures 22-23)

1. You should be knowledgeable about the following terms:

transcription factor	pheromone
co-activator	mating-type
chromatin	MAT locus
co-repressor	HO
upstream activating sequence	$\alpha$ 1, $\alpha$ 2, $\alpha$ 1
enhancer	$\alpha$ -, $\alpha$ - factors/receptors
activation domain	sporulation
recruitment	cassette model
Gal pathway	SWI genes
Nucleosome	Cell-type specific genes
Chromatin remodeling	Cooperativity
histone acetylation	Combinatorial regulation
histone deacetylation	enhanceosome
glucose repression	
Gal4, Gal80, Gal3, Mig1	

2. An  $\alpha$  strain of yeast exists that will switch but cannot mate. What mutations might it carry that would explain this?
3. What genes are regulated by an  $\alpha$ 1,  $\alpha$ 2 in an  $\alpha$  cell?