

# Protein Engineering

20.109 Module 2 Day 1  
Tuesday Oct 7th, 2008

---

---

---

---

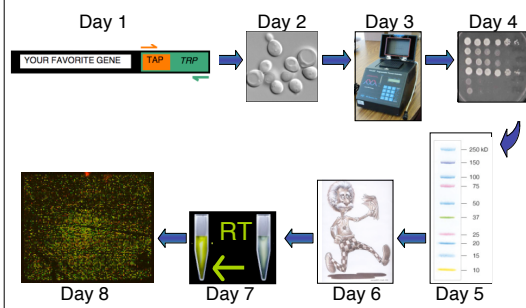
---

---

---

---

## Protein Engineering Experiment




---

---

---

---









---

---

---

---

## Protein Engineering Lectures

<p>Lecture 1 </p> <p>connecting Mod1 to Mod2 basics of eukaryotic transcription</p>	<p>Lecture 2 </p> <p>intro to SAGA complex intro to protein engineering</p>
<p>Lecture 3 </p> <p>guilt by profiling guilt by association</p>	<p>Lecture 4 </p> <p>yeast genetics protein purification techniques</p>
<p>Lecture 5 </p> <p>MS of protein complexes (guest lecture by Forest White)</p>	<p>Lecture 6 </p> <p>optional field trip to Abcam</p>
<p>Lecture 7 </p> <p>measuring gene expression</p>	<p>Lecture 8 </p> <p>microarray data analysis</p>

---

---

---

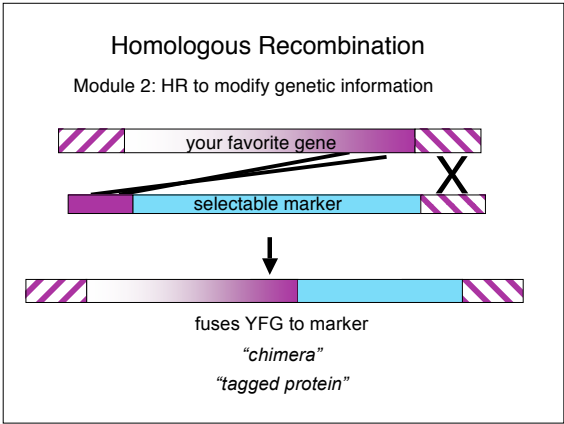
---

---

---

---

---




---

---

---

---

---

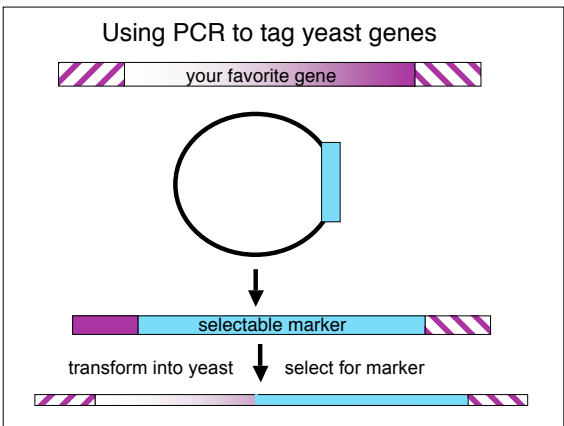
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

**Programs**

**Learning Lab: The Cell as Factory**

**Here Comes the Sun**

**In the Blink of an Eye**

**Color My World**

---

---

---

---

---

---


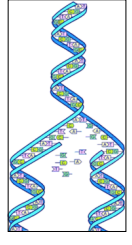
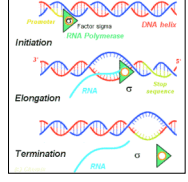
---

---

---

---

**Chromatin: obstacle to all DNA-templated processes**

[www.answers.com](http://www.answers.com)

Nature (2006) 443: 517

[www.geneticengineering.org](http://www.geneticengineering.org)

---

---

---

---

---

---

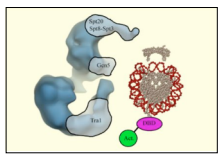
---

---

---

---

**SAGA: a chromatin remodeling complex**



19 proteins, only 6 are essential for viability

Subunit	size, chromosome, null p-type	Unknown	ORF
Possible subunits to TAP tag			
Sgf73	1.974 kb=657aa, Chr. VII, viable	1	YHR033W
Sgf29	0.779 kb=259aa, Chr. III, viable	2	YOR020W
Sgf11	0.3 kb=99aa, Chr. XVI, viable	3	YJR097W
Ubp8	1.416 kb=471aa, Chr. XIII, viable	4	YBL028C
Sus1	gene with intron, Chr. II, viable	5	YDR034W_B
		6	YGR067C
		7	YKL037W
		8	YER067W

---

---

---

---

---

---

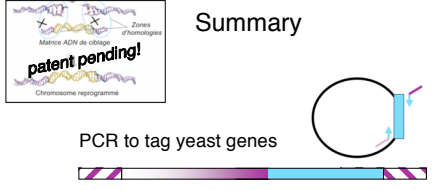
---

---

---

---

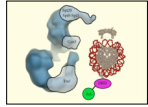
**Summary**



patent pending!

Chromatin: obstacle to DNA-templated rxns

Are you taller than your cell's DNA?




---

---

---

---

---

---

---

---

---

---