

Name: \_\_\_\_\_ Dr. Reichler's Bio 325 TTh 7:30-9pm Fall 2007 Quiz 10/04

- 1) What about human DNA indicates the importance of regulating gene expression?
- 2) What is a basic difference in regulation of gene expression between prokaryotic and eukaryotic cells?
- 3) After a wound, what might be a change in gene expression that takes place over hours or days? (We did not directly discuss this in class)
- 4) What is similar to a bacterial operon in eukaryotic cells?
- 5) If there were low glucose and low lactose, would the lac operon be transcribed?
- 6) What would be the effect on a eukaryotic cell that lacked the enzymes for histone acetylation?
- 7) What would the sequence of a single strand of DNA that could potentially form four-stranded DNA?
- 8) What about the distribution of putative DNA quadruplex sequences indicates that they have a specific function in cells?
- 9) How would understanding DNA quadruplexes help treat cancer?
- 10) You are interested to see if two genes, pizzagood and tacosgood, are transcribed in response to the same stimuli. What information in DNA might help you determine this?
- 11) Regarding question #10, in relation to the location of the gene, where would you expect to find this information?
- 12) We looked at data showing conservation and differences in alternative splicing. Give an example of each situation.
- 13) How can the data about conservation of alternative splicing isoforms in different individuals be useful in diagnosing disease?