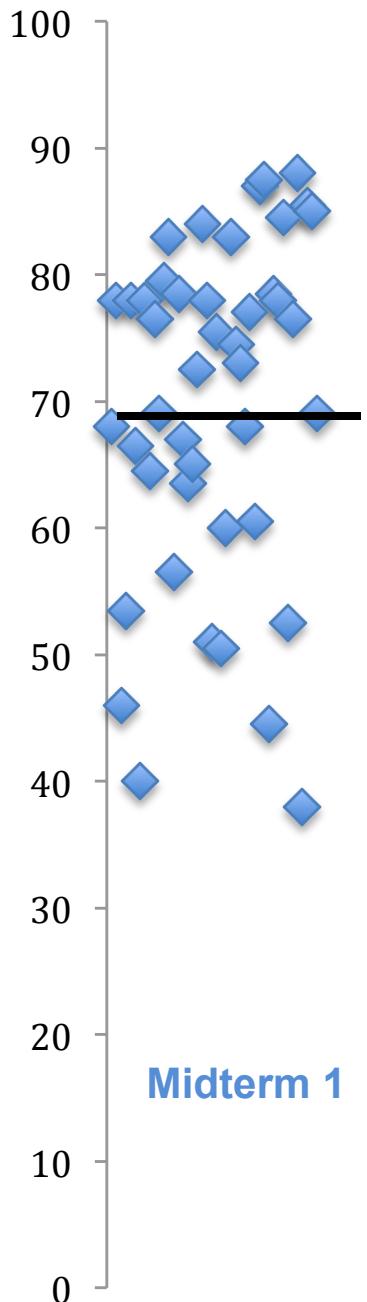


complete chapter 8
begin chapter 9
pp. 204-210



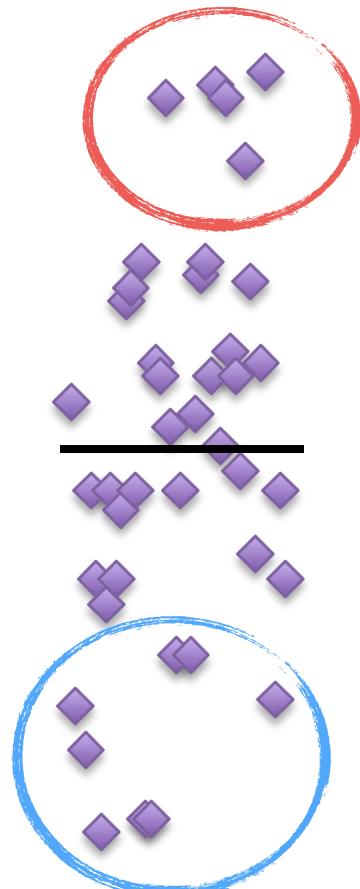
Midterm 1

Midterm 2

Midterm 3

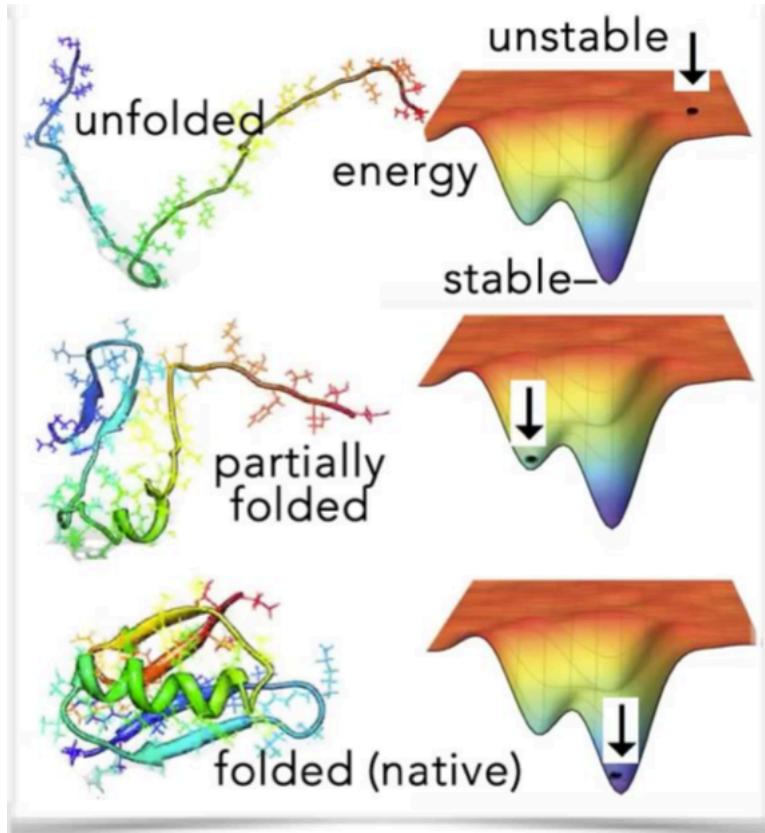


Midterm 3



Tips to (final) success:

- read the readings; comment on NB
- do the beSocratic
- come to class (with questions)
- get ready of IKIN

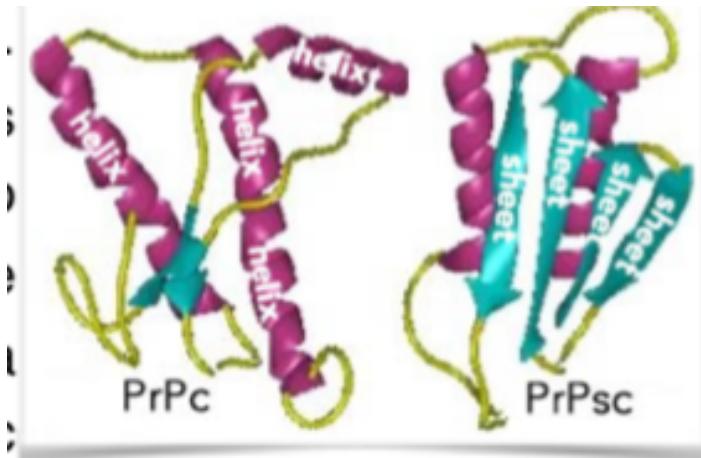


Molecular simulation
of protein folding (vid)

A protein in
motion with
water molecules

How could a “mis-folded” protein influence the correctly folded protein?

prion appregation



How does an allosteric effector or a post-translational modification influence protein activity?

How proteolytic processing of a protein/polypeptide different from the effects of an allosteric effector or a post-translational modification?

How can proteolytic processing (or allosteric effectors) influence the activity of “signals” within a polypeptide, such as those used to localize or exclude a protein from the nucleus?

8.4 read p. 196-203

Q: Pick ALL statements that are **NOT** true of chaperones...

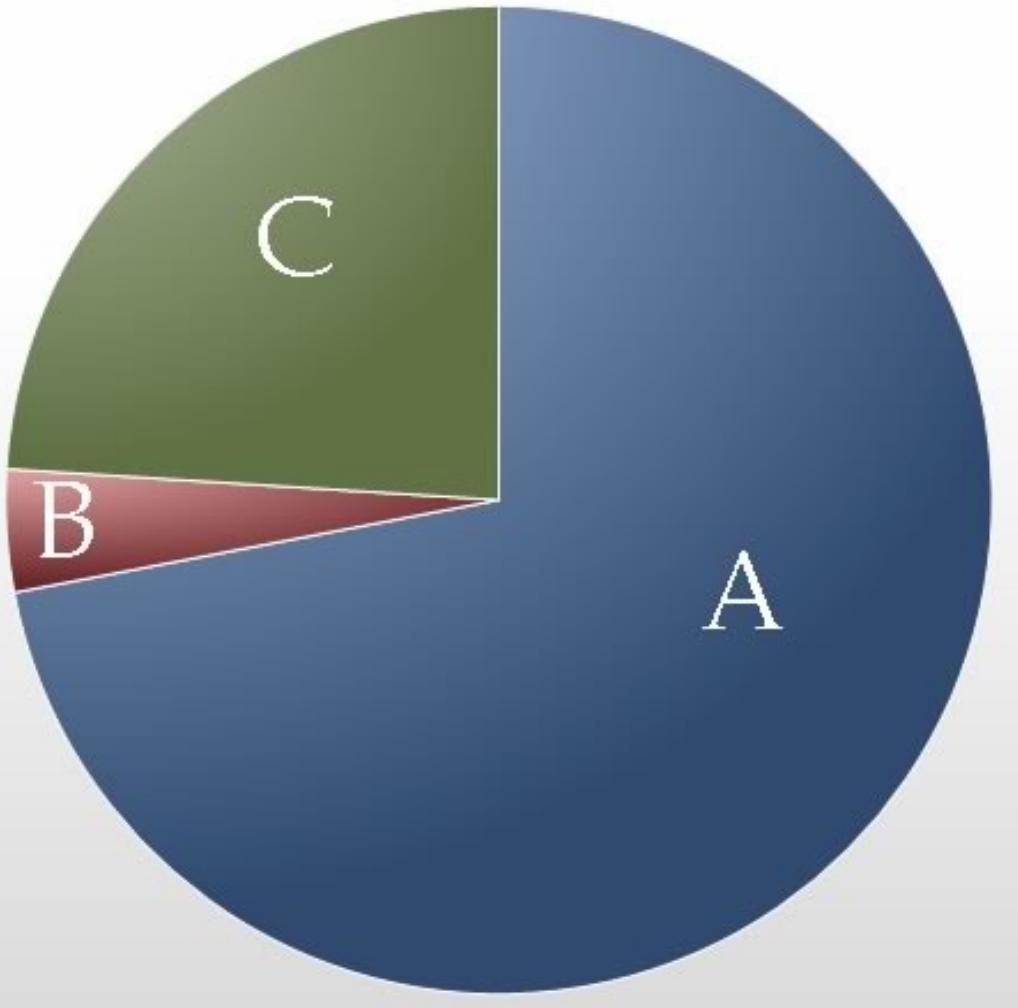
- A. they are required for polypeptide synthesis
- B. some can unfold incorrectly folded polypeptides
- C. they determine the final structure of a polypeptide (protein)
- D. They are encoded by genes and can require other chaperones to fold correctly
- no idea

How does activating the expression of a gene expressing a "heat-shock" chaperone help a cell adapt to a changing environment?

- by increasing the number of mutations that occur
- by helping unfolded proteins refold
- by degrading unfolded proteins
- by increasing the rate of translation
- no idea

For a chaperone to be active, do you think it have to be coupled to a thermodynamically favorable reaction?

- yes
- no
- depends upon the chaperone
- no idea



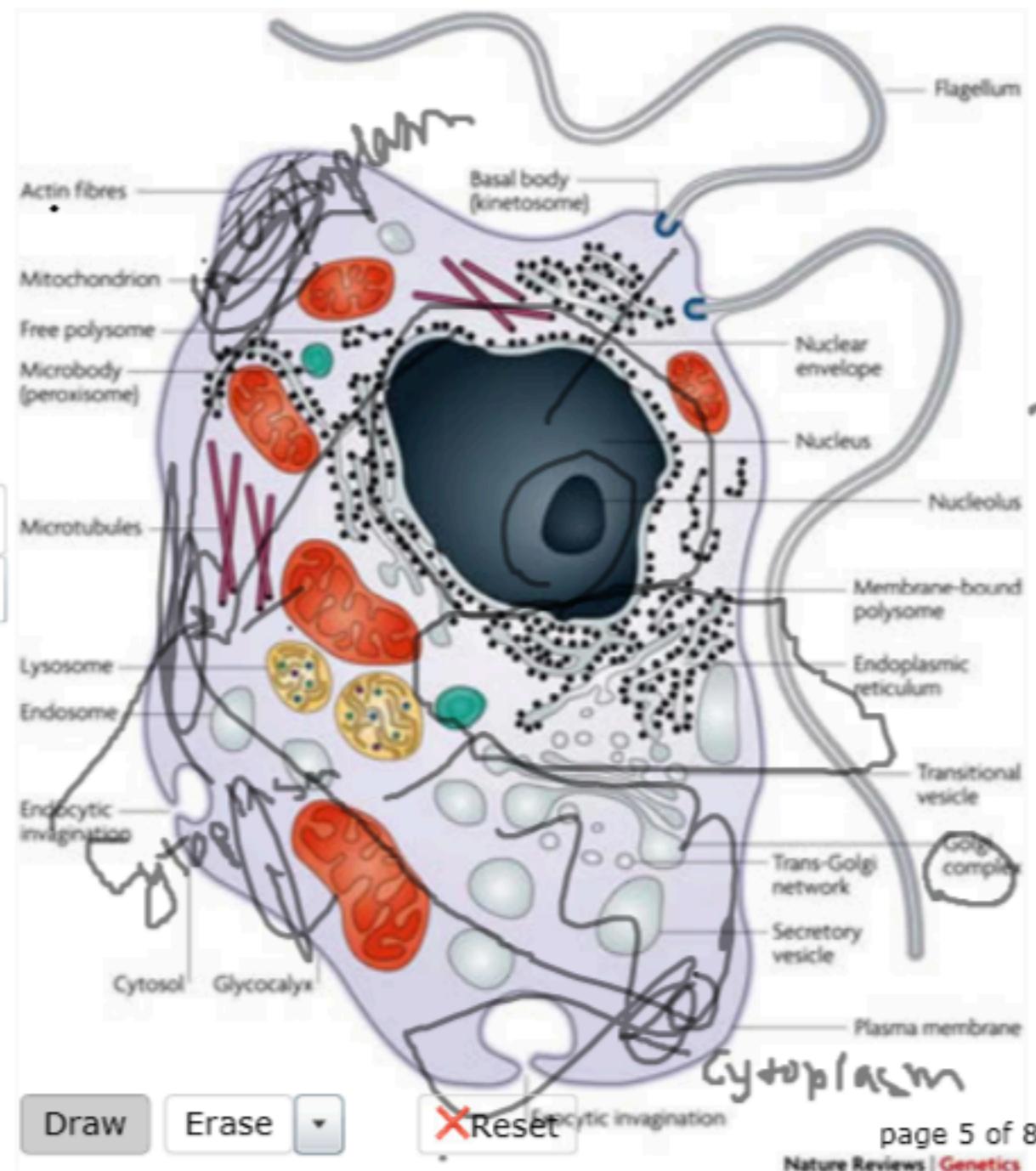
Here is a cartoon of a eukaryotic cell, indicate where a protein would be located if there were a mutation that destroyed its "signal sequence".

Fill in the blank: The mutated protein would most likely be found in the ...

Check

Would it be the same or different in a prokaryotic cell?

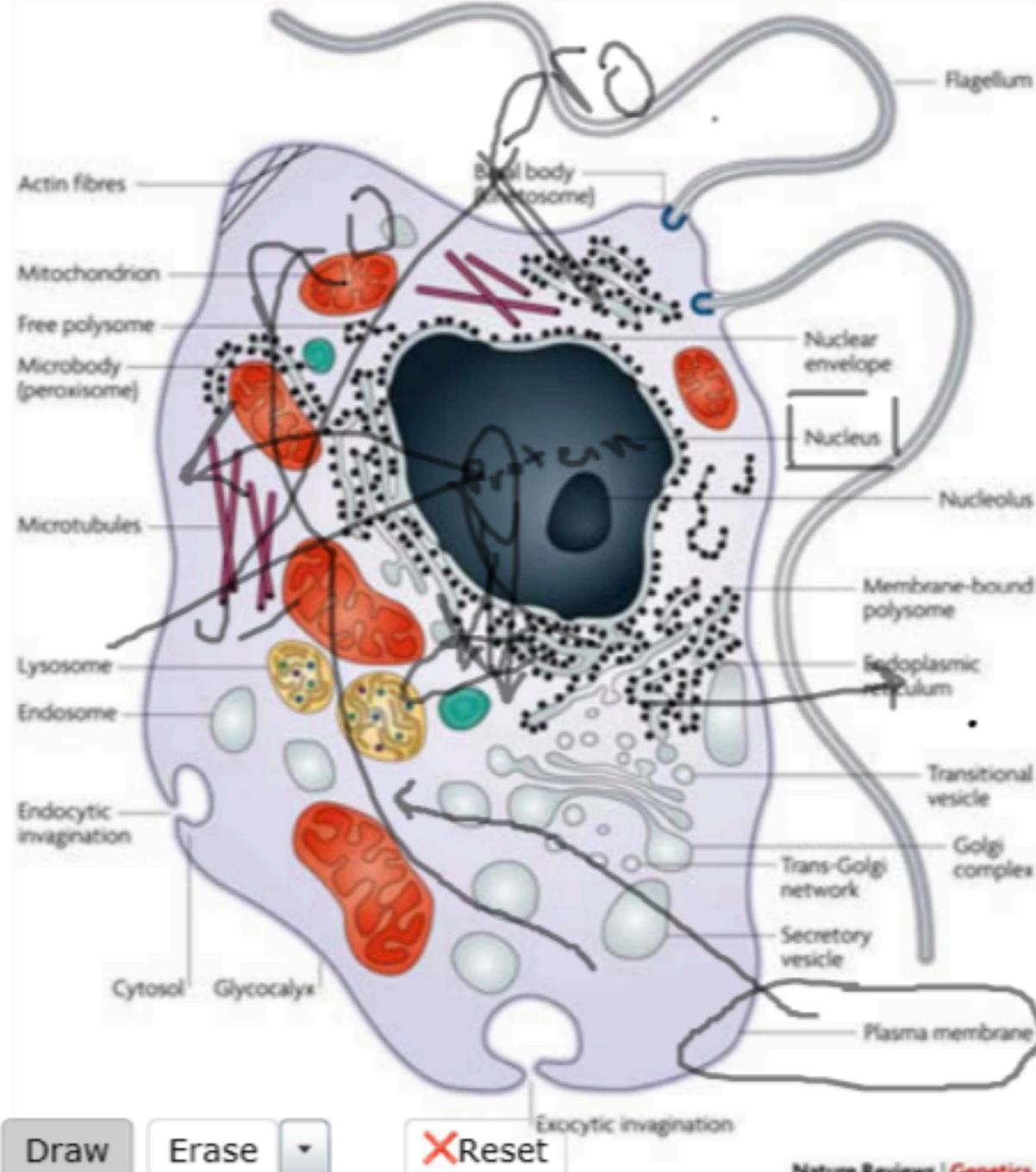
- same
- different
- question does not make sense, prokaryotic and eukaryotic cells are completely different



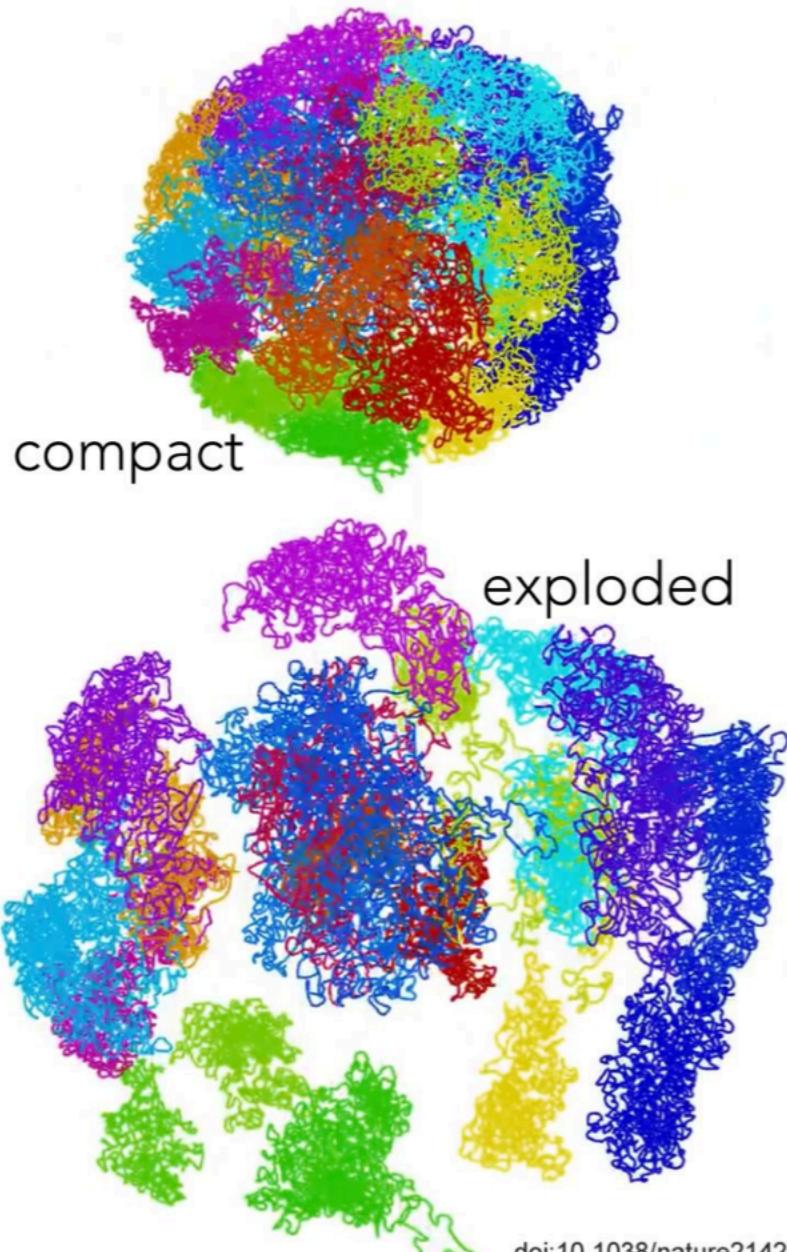
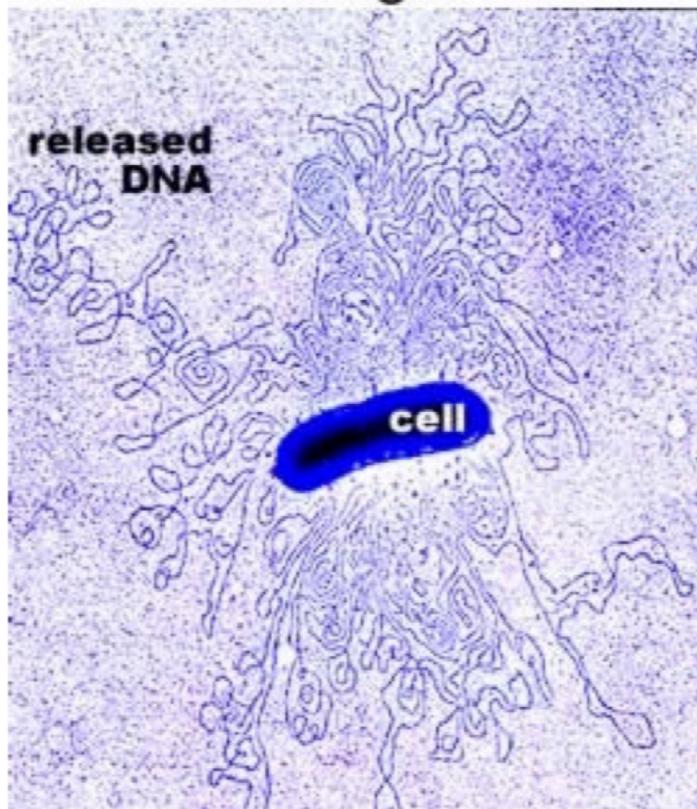
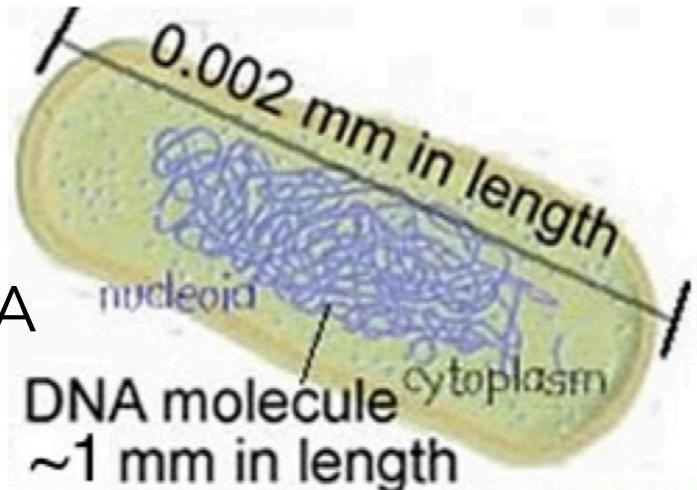
Now indicate the effect (on the drawing) of a mutation that destroys a protein's nuclear localization sequence.

Where would the protein most likely end up?

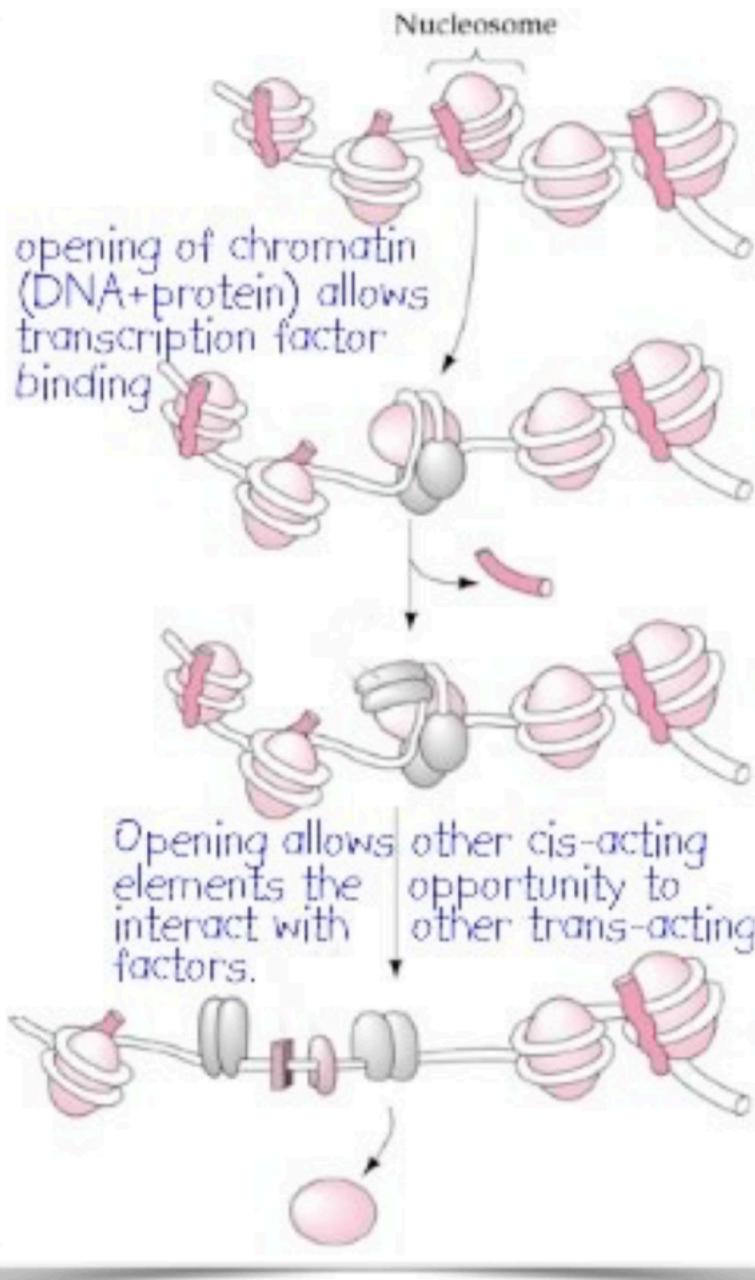
- secreted out of the cell
- in the cytoplasm
- in the nucleus
- in the plasma membrane
- in impossible to predict
- no idea

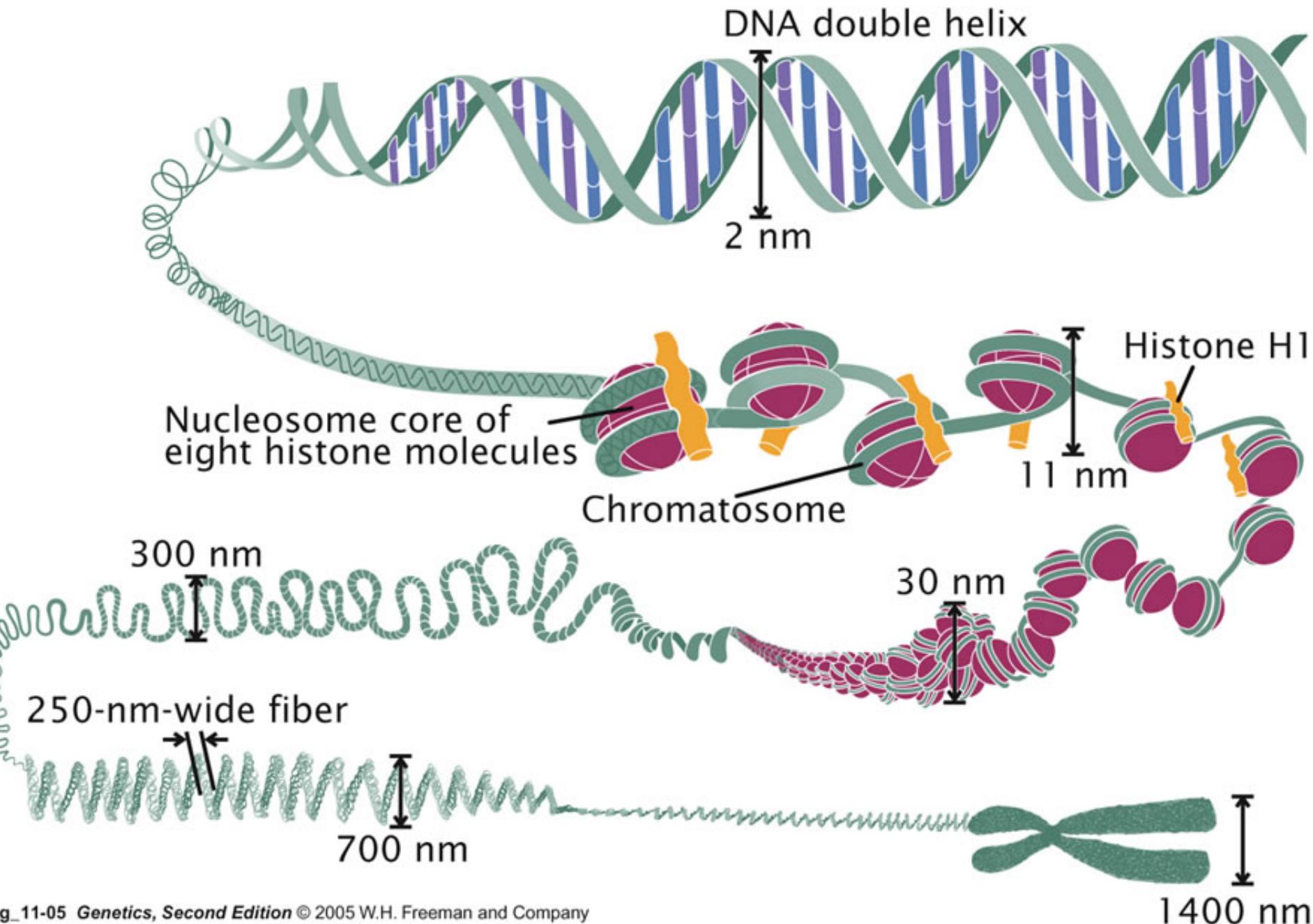


chapter 9 folding DNA



How to pack DNA (so it can be used) and how is it used?





X-inactivation (just in passing):

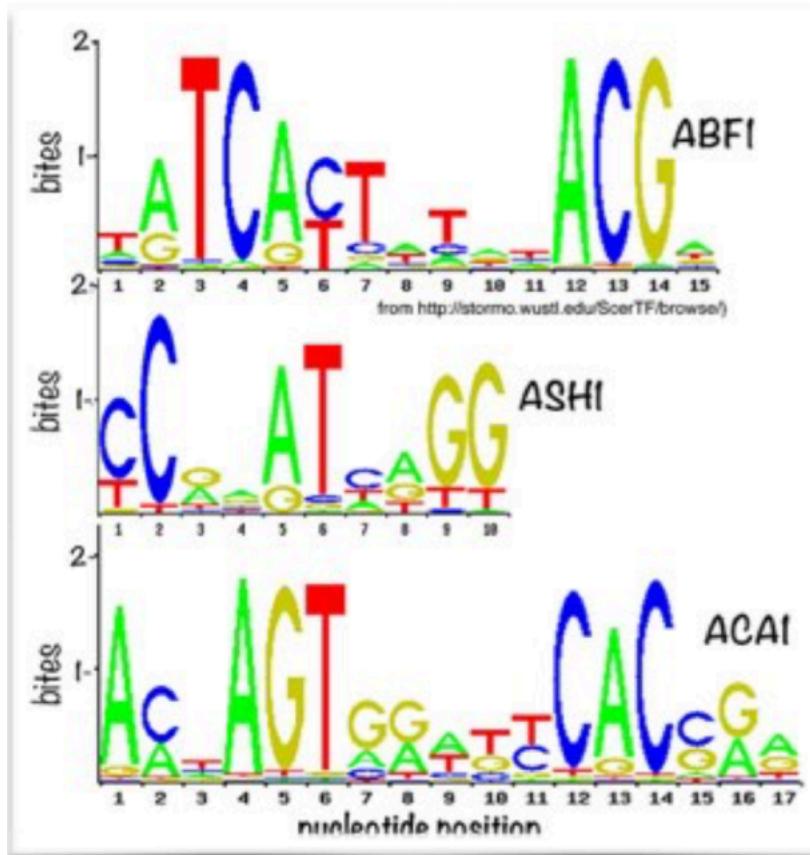
count / choice (stochastic) / inactivate

Finding genes, deciding whether and where to start transcription

sets of transcription factors

Finding genes, deciding whether and where to start transcription

sets of transcription factors



Molecular simulation of protein folding

A protein in motion with water molecules

ligand release from protein