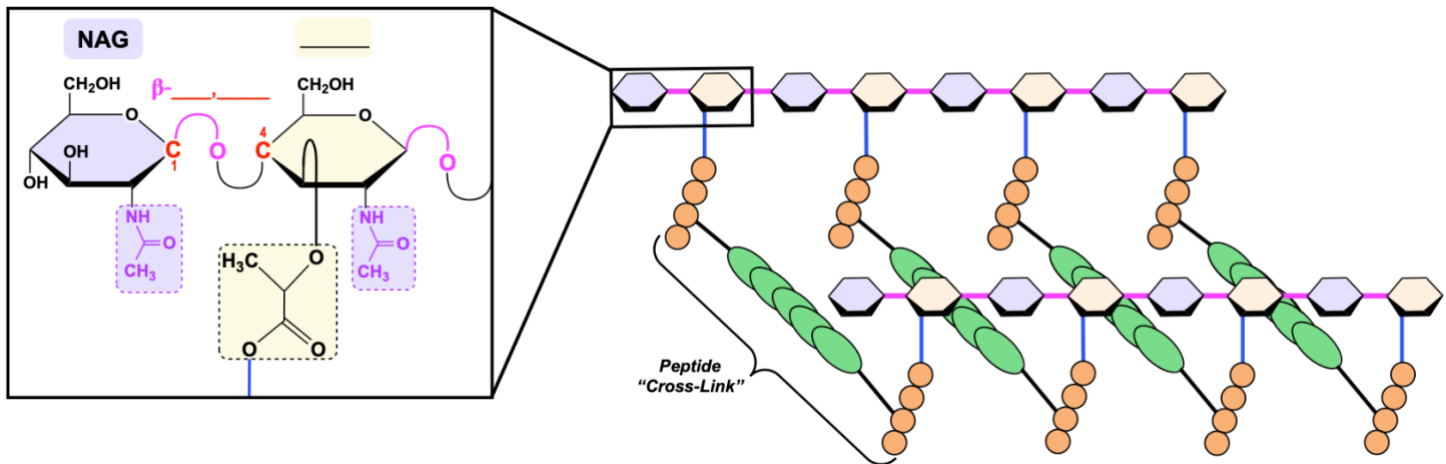


CONCEPT: PEPTIDOGLYCAN

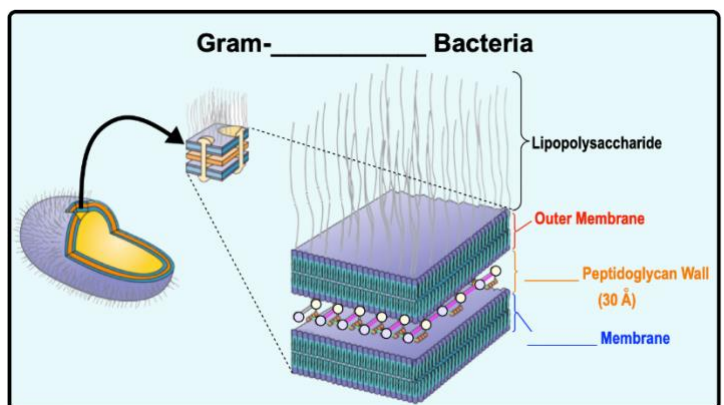
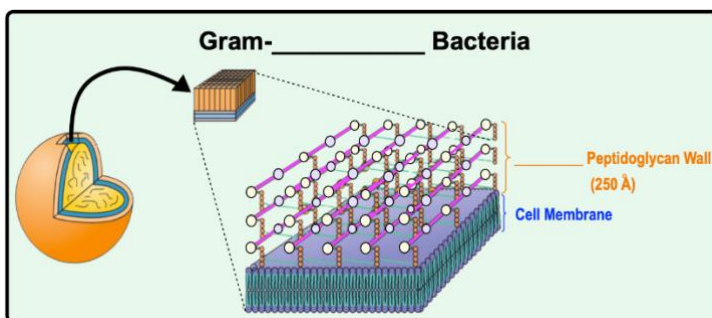
Polysaccharide	Type	Repeating Sugar(s)	Glycosidic Linkage	Function	Organism	Branched?
Peptidoglycan	_____ -	_____ & _____	_____ -1,4	_____	_____	_____

- ☐ **N-acetylglucosamine** (_____).
- ☐ **N-acetylmuramic acid** (_____).
- ☐ Short _____ cross-links these polysaccharides (thus the “peptido-” prefix).



Gram-Positive vs. Gram-Negative Bacteria

- Bacteria are categorized based on whether or not they absorb the _____ Stain.
 - ☐ Gram-positive bacteria _____ the stain; HOWEVER, gram-negative bacteria do _____ absorb the stain.
- Gram-_____ bacteria: cell membrane surrounded by just a _____ cell wall (~250 Å).
- Gram-_____ bacteria: cell membrane surrounded by _____ cell wall (~30 Å) & a complex _____ membrane.
 - ☐ Outer membrane makes gram-negative bacteria more _____ to some antibiotics.



CONCEPT: PEPTIDOGLYCAN

PRACTICE: What type of molecule provides the “cross-links” between the peptidoglycan polysaccharides?

- a) Fatty acid.
- b) Lipid.
- c) Carbohydrate.
- d) Protein.
- e) Salt bridge.

PRACTICE: Which of the following best describes the structure of the Gram-negative cell wall?

- a) A thin layer of chitin with an outer membrane on top.
- b) A thin peptidoglycan layer between two cell membranes.
- c) A thick peptidoglycan layer with an outer membrane on top.
- d) A thick peptidoglycan layer under an outer membrane.