## KEY WORDS AND PHRASES FOR BACTERIAL PILI CONCEPT MAP

- 1. Extension and retraction of these pili allows the bacterium to drag itself along the solid surface.
- 2. Long conjugation pili ("F" or sex pili)
- 3. Short attachment pili (fimbriae)
- 4. Thin, protein tubes originating from the cytoplasmic membrane; found in virtually all gram-negative bacteria but not in many gram-positive bacteria
- 5. Usually quite numerous; organelles of adhesion allowing bacteria to colonize environmental surfaces or cells and resist flushing