

1. A signaling molecule used in bacterial quorum sensing that regulates the transcription of quorum sensing genes best describes:

- A. an autoinducer
- B. an injectosome
- C. a type 3 secretion system
- D. A PAMP

2. Using motility to contact host cells and keep bacteria in an optimum environment via taxis, using pili and/or cell wall adhesins to attach to host cells, and using a glycocalyx to form microcolonies are all advantages of:

- A. multicellular bacterial behavior.
- B. injectosomes
- C. quorum sensing genes.
- D. individual cell bacterial behavior.

3. Interspecies communication refers to bacteria using quorum sensing to:

- A. communicate with members of their own species.
- B. communicate with members of another genus or species.
- C. communicate with their animal or plant host cells.

4. Some bacteria can directly inject bacterial effector molecules into the cytoplasm of the host cell in order to alter its cellular machinery or cellular communication to the benefit of the bacteria. This is done using:

- A. type 3 secretion systems.
- B. type 6 secretion systems.
- C. type IV pili
- D. A and B
- E. A, B, and C

5. Genes coding for virulence factors such as molecules expressed and secreted by bacteria that enable them to colonize the host, evade or inhibit the immune responses of the host, enter into or out of a host cell, and/or obtain nutrition from the host are located in:

- A. transposons
- B. injectosomes
- C. pathogenicity islands
- D. plasmids only