

The Secret Life of Bacteria  
By Dr. Bonnie Bassler

1. What is the oldest living organism on Earth?
2. How many more bacterial cells are there either on or within our bodies than human our cells?
3. What are four examples of things that bacteria do for humans?
4. What bacteria did Dr. Bassler studied?
5. When do Dr. Bassler's bacteria produce bioluminous?
6. What is the benefit to Hawaii Bobtail Squid for having glands full of *Vibrio fischeri*?
7. What happens to the squid's bacteria when the squid is sleeping during the day?
8. What is the bacterial quorum sensing mechanism discovered by Dr. Bassler? (Illustrate)
9. Is this mechanism unique only to *Vibrio fischeri*?
10. What term describes bacterial group behavior?
11. What is the one bacterial group behavior with the most importance to humans?
12. What is intra-species communication?
13. What is the mechanism used to talk to other bacteria? see illustration
14. What is the practical application of this knowledge?
15. How would you stop pathogenicity in a specific bacterial species?
16. How would you make a broad-spectrum antibiotic using this knowledge?
17. What was the rule invented by bacteria?
18. What does Dr. Bassler want you to learn from her lecture?