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7.343 Sophisticated Survival Skills of Simple Microorganisms
Spring 2008

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Lecture Questions for Stimulation Student Participation:

Students must provide explanation to all questions

1. Is there enough background information provided in the article for you to adequately understand the authors' reasons for conducting the study?
2. What is the overall aim and hypothesis of the study?
3. Is adequate information provided on the materials and methods used in the study for one to perform all experiments presented?
4. What information is provided in figures/tables that supports the authors' results?
5. How do the results prove or disprove the authors' hypothesis?
6. What links between their results and findings in other primary literature sources do the authors provide?
7. How does this study provide novel information that can benefit others in the field of research presented in the article?
8. What alternative experiments can you propose in this study to further support or disprove the authors' findings?

Stress Response-Specific Questions:

1. What is/are the adverse condition(s) that the bacterium is experiencing?
2. Name the stress-response mechanism(s) that the bacterium is/are using to survive the adverse environment.
3. Is there a stress signal involved in order to trigger the bacterial stress response? Explain.
4. How is/are the stress response(s) being controlled by the bacterium (e.g. transcriptional, translational, extracellular, sub-membrane)?
5. Is this stress-response strain, species or genus specific? If present in other strains, species, and genera, how is it similar? different?
6. How can we use the bacterial stress-response mechanism to the benefit of industry, medicine, ecology, etc?