Supplemental Materials
for
Using ASM Podcasts to Excite Undergraduate Students about Current Microbiological Research

Stacey E. Lettini
Gwynedd Mercy University, Gwynedd Valley, PA 19053

Table of Contents
(Total pages 5)

Appendix 1: Journal review assignments
Appendix 2: Podcast guided questions
Appendix 3: Follow-up exercises
Appendix 1: Journal review assignments.

Over the semester you will review two research articles and one review article. The nature of research articles and review articles is quite different. The purpose of a research article is to present original research conducted by the author(s) that tests a hypothesis or addresses a scientific question. A review article on the other hand uses other scientists’ research or published research of the author to present a new scientific opinion or synthesis. Your assignment will be to read and review these types of articles. The goal of this assignment is to introduce you to scientific articles that pertain to topics covered in this course and allow you to dissect the six parts of a research article (Title, Abstract, Introduction, Materials and Methods, Results, and Discussion) or a part of a review article.

Title: What information is contained in the article? Is there information from the title that you felt was missing? What is this article about in your own words based on the title alone?

Abstract: What is the purpose of this study? How was it carried out? What was the major conclusion? Are there data presented in the abstract to support it? (Based only on the abstract.)

Introduction: Is the purpose of the study discussed? If not can you infer what the purpose of the study is? What is the hypothesis or research question? What important background information is needed/provided in support of this study? Why is this background information important?

Materials and Methods: What kind of study was conducted: field survey, lab experiment, field experiment, mathematical model, or some kind of combination (if a combination be specific)? Where was it conducted (if appropriate) and why was it conducted there? What species (if appropriate)? If an experiment, what were the controls, and were they appropriate? What are the important methods to understand the study? What was the experimental design?

Results: What are the most important results of the study? Why is it the most important and how is it presented (graph, table, text, or combination)? Is the presentation of the data easy to understand? If not, how would you improve it? What other important evidence is presented?
Discussion: What are the implications of this study? Did they answer their research question or support their hypothesis? How does this study stand in the relation to other studies? In your opinion was this study important for microbiology? Why or why not? How might the study have been improved? What might their next study be?
Appendix 2: Podcast guided questions.

1. Who are the commentators and are there any guests? If so, who are they and where are they from? What are their areas of expertise and why were they asked to join this podcast?

2. This podcast is to be listened to after reading the corresponding journal article. What topics are discussed in both the podcast and the article? Was anything discussed in relation to the article that helped to clarify the journal article? If so, what was it, and how did it aid in your understanding of the research article?

3. How do the topics discussed in the podcast relate to topics covered as part of the lecture material?

4. Provide a short description of the topics discussed in 1-2 paragraphs each.

5. What did you think of the podcast? Was the topic thoroughly discussed? If not, what would you have liked the commentators to have done differently?

6. What did you learn from the podcast that you did not take away from the research article?
Appendix 3: Follow-up exercises.

1. Choose your own podcast and corresponding article to review.
2. Journal Club Presentations
3. Journal Club Discussion
4. Internet Discussion Board Prompts
5. Write your own popular science article summarizing the research article.
6. Further research on the organisms or topics discussed in the podcast—“Discover something not discussed!”