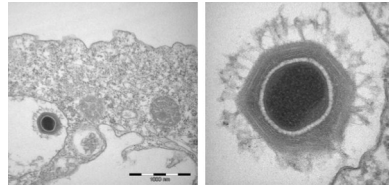


## RADIOLAB Podcast “Shrink” Assignment

Name: \_\_\_\_\_



Megavirus

Listen to the **Radiolab Podcast “Shrink”** (<http://www.radiolab.org/story/shrink>). Then completely answer all questions below. Your grade will be based on how complete and correct your answers are.

1. Based on what you have learned in class, and what David Quammen and the Radiolab discuss, what are some of the differences & similarities between cells and viruses?

CELLS

VIRUSES

2. Timothy Robotham collected a water sample from a hospital cooling tower to look at the bacteria found there. What did he find, that he thought was unusual? Why did it catch his attention? What was strange about this? What did he name it?

3. After Robotham’s lab gets shut down, he gives samples of this microbe to a French microbiologist. What does this researcher think that this microbe looks like? What led him to think this?

4. How does the French microbiologist eventually grow this microbe? What did he rename the microbe?

5. What can this virus do that other viruses don’t? In what ways is it different from other viruses? (Please give a detailed description.)

6. The researchers looked in another hospital cooling tower and found another giant virus. What did they name it? How is it different from Mimivirus?
  
  
  
  
  
  
  
  
  
  
8. Then researchers continued looking for these giant viruses around the world. What are the other giant viruses named, and how are they different than the ones found previously?
  
  
  
  
  
  
  
  
  
  
9. Where did these giant viruses come from? (i.e. What do scientists think they evolve from?)
  
  
  
  
  
  
  
  
  
  
10. What is Robert's Krulwich's "problem" with parasites?
  
  
  
  
  
  
  
  
  
  
11. Summarize Carl Zimmer's "Mansion Metaphor" of how a living cell might become an acellular parasite.
  
  
  
  
  
  
  
  
  
  
12. Most viruses have much less genetic material than cells do. How would a cell genetically "shrink" into a virus?
  
  
  
  
  
  
  
  
  
  
13. What does Robert mean by "race to the bottom"?
  
  
  
  
  
  
  
  
  
  
14. How have humans genetically "shrunk"?