DISCUSSION QUESTIONS

Part II

During the film answer the following questions:

1. How do you decide who to hire to be a part of your research team?
2. Why is curiosity so important to Dr. Allison?
3. What does "Dedication with a purpose" mean?
4. What is CTLA-4?
5. Explain Dr. Allison's observation—"The only way to do science is not to do experiments to give you an answer to what you think you ought to be. Instead, do the "killer experiment!"
6. What did Dr. Allison's research suggest about how the antibody binding to CTLA-4 affects the Tcell?
7. Explain the statement that "Science is Childlike!"
8. What is an autoimmune disease?
9. How does cancer manipulate CTLA-4 in T-cells?
10. What was Dr. Allison's hypothesis regarding his newly made antibody?
11. What was Dr. Allison's CTLA-4 "a-ha moment" in regards to the cancer study?
12. Explain how an understanding of the role of the CTLA-4 receptor can help to produce a drug for fighting cancer.
13. Metastatic melanoma was Sharon's diagnosis. What does metastatic mean? (You may need to google this.)
14. Previous immunotherapy drugs, circa 1980s, had poor results, why did this cause problems for Dr. Allison's team?
15. What were some of the roadblocks Dr. Allison's group had as they were trying to get drug companies to make their drug?
16. Ipilimumab was the name of the initial CTLA-4 antibody drug, how is a drug developed?
17. What is involved in a phase 1 drug trial and what is the main goal?
18. How is a phase 2 and phase 3 drug trial different from a phase 1?

After the film, answer the following questions:

19. Create a hypothesis regarding the CTLA-4 receptor, antibodies, and cancer cells.
20. Design an experiment that would give you enough data to support or refute this hypothesis.
21. Why is communication important in the scientific process? Relate this to the development of a drug.