

Chapter 7: Organ Transplantation

Biol 194 Seminar Questions

This is a stamped assignment to be completed *before* attending seminar. Pay attention to the following discussion questions as you read chapter 7. Write responses to each question on *separate paper* along with the page number(s) where you found that info.

1. What is allografting? When allografting is done properly allografts are never rejected by the immune system. Why?
2. What are histocompatibility antigens, *HLA*? What are the chances of someone having the same *HLA*'s as you? How do the *HLA*'s of twins compare?
3. The recipient of a skin graft from a nonidentical individual produces graft specific antibodies. What effect do these antibodies have on graft survival?
4. Which is rejected faster, the first or second skin graft from another individual? Why?
5. Suppose you receive a skin graft from a friend and it is rejected in a couple of weeks. Now another friend supplies skin for a second graft and it too is rejected. How will the times needed for rejection compare? Why? What types of cells are *directly* responsible for rejecting the graft in each case?
6. Why is cyclosporin used during organ transplant operations? How does cyclosporin work? Why is cyclosporin preferred over 6-MP and Imuran? What are the major side effects of cyclosporin?
7. Why might the use of cyclosporin and rapamycin in combination be advantageous?
8. FACT: A shortage of organs is the major reason for the stagnation in the frequency of organ transplantations in the U.S and around the world: There are many more patients in need than there are donors. Do you agree with the following statement on page 194? Why or why not: “*Few would argue any longer that organ transplantation per se crosses any ethical boundaries. Its benefits, balanced against an almost certain fatal outcome in its absence, are simply too compelling. The discussion now centers around what society can or should do to increase the supply of donor organs.*”
9. What are the Pros and Cons of an international trade in organs? How could/should the trade be regulated? Do *you* believe there should an international trade in organs?
10. What are the Pros and Cons of using the following methods to increase the supply of organs?
 - Living Donors
 - Cadaver Donors
 - Xenotransplantation
 - Molecular Biology
 - Artificial Organs