

BI392 - The Cell Cycle and Cancer

THE SEVENTH SYMPOSIUM ON CANCER – Spring, 2010

The last three weeks of the course will be dedicated to student presentations on topics of your choice. The presentations will be run in a scientific symposium format. The meeting topic is *Cancer* and I am the organizer and host of the symposium. You are all cancer cell experts who have been invited to this meeting so that we might all share our own specific expertise with everyone else at the meeting. You must decide on your topic for the symposium and let me know on which topic you will be speaking. I will then organize the symposium into what seems like a reasonable order of topics and post the schedule. Each of your talks will be about 20 minutes long, followed by 5-10 minutes for questions.

Potential Presentation Topics: The very best presentations don't just provide information, but also provoke thought, stimulate discussions, and provide interesting viewpoints on available information. Do your best to meet these expectations. We will have only one expert per topic. Some topics may overlap somewhat with others... in those cases, you will need to work with the other experts to minimize overlap.

- 1) Specific Carcinogens or Types of Carcinogens - There are a great many substances that are known to cause or are thought to cause cancer. Choose a specific type of carcinogen and describe what is known about its action on the cells it affects. Are the effects widespread in the body or are only a few types of cells affected?

Viruses, smoking, other chemicals, and radiation, are just a few of the potential choices.

- 2) Specific Types of Cancer - Choose a particular cancer and describe what is known about it. What are the cellular and molecular changes that are diagnostic of the cancer (just describing how the cancer is staged by clinicians is not that interesting here), how does the disease run its course, and what is the overall prognosis for the afflicted person?

Pancreatic cancer, breast cancer, colon cancer, skin cancer, and lung cancer are some of the potential choices.

- 3) Compare Aspects of Different Cancer Types - For example: What makes basal cell carcinoma, squamous cell carcinoma, and melanoma (all skin cancers) so different in terms of prognosis? Or for example: Why are some types of cancers (like pancreatic cancer or ovarian cancer) so difficult to diagnose or to treat compared to other types of cancer?

- 4) Specific Types of Treatments - We will be talking a bit about angiogenesis and antiangiogenic therapy. There are a wide variety of other treatments for cancer and many emerging treatments that deserve attention. Choose a particular treatment type and describe what it is and how it works. For what type(s) of cancer is the treatment most appropriate? How effective is it?

Immunotherapies, vector-targeting therapies, chemotherapies, and so-called alternative therapies are all potential choices.

- 5) Societal Issues and Other Issues that Affect Cancer - How does lifestyle affect susceptibility to cancer? Are there socio-economic factors that affect susceptibility to cancer, its treatment, or survival rates? How does stress affect survival rates of cancer? How do cancer issues differ for men and women?

Deadlines related to the symposium:

Noon, Friday, February 26 - Rough topic ideas must be discussed briefly with Prof. Greenwood.

Classtime, March 4 – Tentative symposium schedule will be distributed.

Week of March 15 - Meet with Prof. Greenwood to discuss progress (bring references and resources with you).

Beginning of class, April 8 - Final symposium title, tentative outline, and preliminary list of references must be handed in to Prof. Greenwood

Classtime, April 22, April 29, and May 6 - Give your presentation at the scheduled time. A list of your references must be distributed to all symposium participants at this time or before.

Grading for this assignment will be based upon the quality of your presentation, the quality and currency of your references, the quality of your participation throughout the symposium, and your timeliness with all the deadlines.