

Goldrath-BIMM 194/BGGN283, Winter Quarter 2022

Title: Immunotherapy

Instructor: Ananda Goldrath

Date/Time: Fridays 11:00 AM-12:20 PM

As per campus guidelines, we will have the first 2 classes via Zoom.

Subsequently, starting January 21st if all goes to plan the class will be in TATA Hall room 3201.

The class will be synchronous.

Zoom Instructions: To join the class on Friday January 7th at 11am, open Zoom, click on "Join" and enter Meeting ID: 994 1983 1880. Alternately, you can click on the link for current week under the "Course Summary" section below.

Course Summary: Immunology is generally thought of as the mechanisms that organisms use to defend their bodies from invasion by other organisms. However, the immune system is also a central player in many diseases that do not involve infection including: autoimmunity, allergy, cancers. Furthermore, inflammation contributes to the development of cardiovascular and metabolic diseases. In the present course we will learn about strategies to influence the immune system in a variety of human diseases to improve health outcome—collectively termed Immunotherapy. Immunotherapy can be designed to induce, enhance, or suppress an immune response. The goal of the course is not only to provide a big picture of immune responses involved in host protection and in disease, but also to learn how to interpret and present primary literature in this fast-moving field.

Lectures: I will present the first lecture reviewing general principles of immune responses the second week of class, the next week we will finish the overview and discuss Immunodeficiencies. The rest of the classes will consist of a presentation in preparation for the next class and discussion of one or two papers related to immunotherapy from the prior class, ie we will discuss a topic in preparation for the reading and presentation of the next class. Selected papers will be available 1-2 weeks in advance and need to be read before class by all students. The first portion of each class will be the discussion of the papers that were introduced in the prior class. The second half of class will be the lecture for the next week's topic.

Each class you will be placed into a discussion group of ~3-5 students that will be assigned a figure from the papers. The group will have 20 minutes to discuss the figure and make a plan to discuss it with the class. The presenters will identify the major question/s addressed by the paper, describe each part of the figure and the correspondent conclusion and come up with a simple take-home message for the figure. This will be typed up by each person for themselves during the discussion and submitted via Canvas at the end of class, end of day at the latest.

Your grade will be calculated based on your top 7 quiz scores and your top 6 figure presentations/write ups.

All lectures and discussions presented via Zoom and will be recorded, which means anything you say or ask will be recorded. I highly recommend that you join the class for the live lecture.

I suggest the following template for the presentation

- General question
- Specific question 1, Figure 1a, Conclusion from Figure 1a. What approach/technique did they use? Is this a good approach, is there a better one?
- Specific question 2, Figure 1b, Conclusion from Figure 1b
- etc
- TAKE-HOME MESSAGE from the figure and how this fits into the overall message/conclusions of the paper.

Quizzes: There will be nine quizzes, one every week. Quizzes will be posted on the day of the lecture in which the topic is introduced, and due by the end of the day. They will consist of T/F questions regarding the material. Questions will be related to conclusions or concepts emphasized during the presentation. Each quiz will be worth 10 points.

Participation: Questions, comments, suggestions are encouraged at any time during the lecture and can be typed into the zoom chat or raise your hand. Please mute your zoom otherwise. I ask that you please leave your camera on for the majority of the class if we are on zoom.

Grading: Grading will reflect presentation of the assigned paper (50%), quizzes (50%). The grading will be normalized to the highest score. 60-70% of that score will be a D, 70-80% will be a C, 80-90% will be a B and 90-100% of that an A.

Email Communication: Questions that can be asked after lecture or in office hours should not be asked by email and will not be answered by e-mail.

Office hours: My office hours will be on Fridays—1-145pm Via Zoom for the first two weeks, then in person as possible, ie these may need to be rescheduled and I will announce this via the Canvas class page.