CAMB 704:

Stress Responses and Metabolism in Cancer Fall Term 2022

Course co-Directors: Terence Gade, Zach Schug, Zoltan Arany

Canvas: Lyndsey Ann Makinen

The course will meet in BRB 1101, Thurs 1:45-3:45 PM

| Metabolomics methods lectures | | Lecturer | Directors |
|-------------------------------|---|-------------------|-----------|
| Sept 1 | Meet and Greet | Course Directors | |
| Sep 8 | Lecture: Metabolomics and Isotope Tracing | Aalim Weljie | |
| Sep 15 | Lecture: Metabolic Enzyme Biochemistry | Ronen Marmorstein | |

| Student Presentations Faculty Lea | | Faculty Leader | Student Presenter | Directors |
|-----------------------------------|-----------------------------|----------------------|-------------------|-----------|
| Sep 22 | NAD Metabolism | Joe Baur | | |
| Sept 29 | Glucose Metabolism | Zachary Schug | | |
| Oct 6 | Hypoxia/HIF/MYC | Celeste Simon | | |
| Oct 13 | Endothelial Cell Metabolism | Zolt Arany | | |
| Oct 20 | Organismal Metabolism | Paul Titchenell | | |
| Oct 27 | Mitochondrial Metabolism | Xiaolu Yang | | |
| Nov 3 | Integrated Stress Response | Crystal Conn | | |
| Nov 10 | IDH Mutation | Nico and Sarah Skuli | | |
| Nov 17 | Metals and Metabolism | Donita Brady | | |
| Dec 1 | Metabolism and Epigenetics | Katy Wellen | | |
| Dec 8 | Immunometabolism | Will Bailis | | |
| Dec 15 | mTOR/AMPK/Autophagy | Terence Gade | | |

Presentations: We want you to put together a presentation that integrates the data of the papers, comparing and contrasting the results, the quality of the data and the technologies used. You should not only be a presenter but also a discussion leader, eliciting opinions from the group on the results and whether or not there is agreement with the conclusions. Each week of student presentations will begin with 10-15 minutes (**no more!!**) introduction by the faculty leader for that day. Not all of the data in a paper needs to be presented; and the papers do not have to be presented one after the other. Instead, you should put together a seminar that integrates the important data from all the papers in a way that makes points and builds to a conclusion or a controversy; in other word, in a way that tells a story. The papers assigned can be augmented by a papers you find that will strengthen your presentation, possibly by introducing controversy. As mentioned above you should work with the faculty member assigned to your topic to put together the presentation and discuss any additional papers you may want to discuss. After your presentations, the class will be asked to submit evaluations directly to you. You will also meet with the co-organizers to discuss the presentation.

50% of your grade will be based on your presentations.

Discussion: The success of a seminar course depends on group discussion. Each week you should come to class knowledgeable enough with the material that you could talk about it in detail. You should be ready to ask questions and enter into discussions. If you don't understand something, ask and get a discussion going. Come to class with at least **2** questions prepared from the assigned papers: these will be collected by the directors. **50%** of your grade will be based on your participation in questioning and discussions.