OVERVIEW AND SYLLABUS
CAMB 512 – CONCEPTS IN CANCER BIOLOGY
Spring 2019
12:15-1:45
Wednesdays BRB 701

COURSE GOALS: There are several goals for this course. One is to introduce students to basic fundamental principles and emerging concepts in cancer biology. Another is to challenge students to think with considerable depth about how these principles and concepts were shaped through experiment, as well as their implications, limits and caveats. A third is that the lectures, readings, and exams will hone your ability to think clearly and critically about the testing of hypothesis through experimental design and data interpretation. The course aims to provide students with a foundation that will enable them to keep abreast of cancer biology topics through critical appraisal of the literature and seminars.

COURSE DESCRIPTION: Each lecture will involve faculty members lecturing from an experimental standpoint of the literature that assumes basic knowledge of the subject. There are four course directors and one of them will attend every session. During each 1.5 hour class faculty will lecture for 45 minutes followed by a 45 minute breakout discussion. During the breakout session students will be separated into two pre-assigned groups and each group will have a student leader/presenter. Each group will discuss the primary research paper and answer the assigned question using any and all available resources. Each group leader will have 10 minutes to present their question and answer.

READING ASSIGNMENTS: Two weeks prior to their lecture, faculty will assign a review that provides relevant background and two primary research papers, one for each group. The faculty will also provide a discussion question on each paper to guide student reading and discussion. Each group is responsible for reading these materials before each lecture. Student presenters are required to produce a 1-2 page written answer to the pre-assigned question/summary of their presentation and email it to the attending course director following their presentations. They have one week to email the document to the course director that attended their session. Should a student have to miss a lecture, the student needs to notify the course directors in advance.

COURSE GRADE: The course grade will be based on 40% participation, 40% presentations, and 20% 1-2 page write-up summarizing key points of the presentations (group leaders only).

CANVAS: The assigned review, primary paper, and questions should be posted two weeks prior to each class.

COURSE DIRECTORS:

Kate Hamilton, hamiltonk1@email.chop.edu
Kathrin Bernt, berntk@email.chop.edu
Karin Eisinger, karineis@pennmedicine.upenn.edu
Todd Ridky, ridky@pennmedicine.upenn.edu

CAMB 512 Concepts in Cancer Biology Spring 2019

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Wed, Jan 16	T-cell based immunotherapy	Steven Abelda
Wed, Jan 23	Single Cell Omic Approaches in Cancer Biology	Kai Tan
Wed, Jan 30	Cancer Predisposition Syndromes	Garrett Brodeur
Wed, Feb 6	Aging and Cancer	Ashi Weeratana
Wed, Feb 13	Functional Genomics- Precision Oncology	Sara Cherry
Wed, Feb 20	Special Seminar "One Health": Companion Animal Models In Cancer Biology	Guannan Wang
Wed, Feb 27	Cancer Is A Disease Of Development Gone Awry	Ben Stanger
Wed, Mar 6	**********No Class (Spring break)**********	
Wed, Mar 13		Chi Dang
Wed, Mar 20	Circulating Tumor Cells	Rumela Chakrabarti
Wed, Mar 27	Drug Discovery	Todd Ridky
Wed, Apr 3	Intro to Cancer metabolism	Katy Wellen
Wed, Apr 10	Mechanisms of Resistance	Andy Minn
Wed, Apr 17	Standard of Care: Chemotherapy	Frank Balis
Wed, Apr 24	Matrix biology and CAFS	Ellen Pure
Wed, May 1	Angiogenesis and Cancer	Sandra Ryeom
Wed, May 8	Physical Sciences of Cancer	Paul Janmey
Wed, May 15	Genomic identification of Translocations in cancer	Kris Bosse