GS04 1093: The Biology of Cancer Metastasis

Dates: August 30–December 13, 2021
Location (Hybrid Course): In-person: GSBS Large Conference Room—BSRB S3.8371; Virtual/WebEx: Meeting ID--2621 035 0501; Password: metastasis
Time: 3:30 - 5:00 PM (M, W)
Course Directors: Dr. Daniel Frigo, frigo@mdanderson.org; Dr. Wenliang Li, Wenliang.Li@uth.tmc.edu
TA: Sandi Wilkenfeld, SWilkenfeld@mdanderson.org

Tentative Schedule (subject to change):

DATE	TOPIC	SPEAKER
Monday, August 30	Introduction to Metastasis (Virtual)	Dr. Sendurai Mani
Wednesday, September 1	NO CLASS	
Monday, September 6	NO CLASS- LABOR DAY	
Wednesday, September 8	Student Seminars (in person)	
Monday, September 13	Role of Tumor Microenvironment at the Primary Site: Part 1 (in person)	Dr. Raghu Kalluri
Wednesday, September 15	CANCELLED CLASS	
Monday, September 20	NO CLASS	
Wednesday, September 22	Student Seminars (in person)	
Monday, September 27	Role of Tumor Microenvironment at the Primary Site: Part 2 (in person)	Dr. Raghu Kalluri
Wednesday, September 29	Role of Tumor Microenvironment at the Primary Site: Part 3 (in person)	Dr. Raghu Kalluri
Monday, October 4	Epithelial to Mesenchymal Transition (EMT)	Dr. Sendurai Mani
Wednesday, October 6	Double Student Seminars (in person)	
Monday, October 11	The Metastatic Niche	Dr. Dihua Yu
Wednesday, October 13	Role of the Microbiome in Metastasis	Dr. Florencia McAllister
	FIRST EXAM EMAILED: DUE BY OCT 20, 2021, 10 AM	
Monday, October 18	Role of Immune Cells in Metastasis	Dr. Xiang Zhang
Wednesday, October 20	Minimal Residual Disease & Dormancy	Dr. Jeff Rosen
Monday, October 25	Immunotherapy (Virtual)	Dr. James Allison
Wednesday, October 27	Fireside chat on metastasis research: Where are we and where are we going? (in person)	Dr. Ronald DePinho
Monday, November 1	Genetics of Metastasis	Dr. Guillermina Lozano
Wednesday, November 3	Mouse Models of Metastasis (Virtual)	Dr. Guocan Wang
Monday, November 8	Tumor Evolution and Metastasis	Dr. Nicholas Navin
	SECOND EXAM EMAILED: DUE BY NOV 15, 2021, 10 AM	
Wednesday, November 10	The Pathology of Metastasis	Dr. Anirban Maitra
Monday, November 15	microRNAs and Metastasis	Dr. Li Ma
Wednesday, November 17	lncRNAs and Metastasis	Dr. George Calin
Monday, November 22	Cancer Metastasis Metabolism (in person)	Dr. Daniel Frigo
Wednesday, November 24	NO CLASS – THANKSGIVING	
Monday, November 29	Imaging of Cancer Metastasis	Dr. David Piwnica-Worms
Wednesday, December 1	CTCs and ctDNA in cancer prognosis and treatment (Virtual)	Dr. Anthony Lucci
Monday, December 6	Treatment Options for Metastasis	Dr. John Heymach
	FINAL EXAM EMAILED: DUE BY DECEMBER 13, 2021, 10 AM	
Wednesday, December 8	Make-up class if needed	

Evaluation and Grading: This course is designed to help students build a knowledge base that allows them to develop their scientific analytical and communication skills. Students will be evaluated on the basis of a basic concept tests (60% total: 20%/test (3 exams)), a group presentation/student seminar (20%) and overall participation (20%).

A. Basic Concept Tests: Students will be tested on the principles of metastasis. These will be take-home tests based on material from the lecturers and any assigned readings.

B. Group Presentation/Student Seminar (Journal club-style format): Students will team together (~2-3 students/group) to present on a pre-selected publication. Presentations will include the background/rationale for the study, approach, conclusions and overall strengths and weaknesses of the study as well as perceived overall impact. 2 additional students will lead the follow-up discussion.

D. Class Participation/Discussion: Several periods are scheduled for group discussion of selected papers, to develop skills in analysis, crucial thinking, and oral communication. For each paper, each student should come prepared to explain the major hypothesis addressed by the paper, the strategy used to examine this hypothesis, the experiments described in each figure, and the conclusion. Students will be called upon at random to discuss each point. In addition, interactions with lecturers will also be taken into consideration.

Scale: 100-92% A; 91.9-90% A-; 89.9-87% B+; 86.9-82% B; 81.9-80% B-; 79.9-77% C+; 76.9-72% C; 71.9-70% C-; 69.9-67% D+; 66.9-62% D; 61.9-60% D-; < 60% F