

2/2/21

TME SYLLABUS SPRING 2021

Tuesdays 3-5 pm

Zoom

Jan 19-May 4 : 15 classes (no class spring break March 9, March 30)

REMINDER: Each week the students not presenting will each submit a point they want to discuss about impact/novelty/implications and/or questions they have about the data to Ellen and Sandra the night before class.

Class schedule: (3-5pm)

- Student presents background (30-40 min)
- 10-15 min ZOOM break (cameras off)
- Student presents key data from paper (45-50 min)
- Feedback from Ellen and Sandra to presenters only (10 min)

Slack channel for weekly paper questions/comments run by Hunter

Class 1 (1/19/21): Organizational meeting

- Intro to Immunology Lecture (Ellen)

Class 2 (1/26/21): Intro to stromal cells and ECs Lecture (Sandra)

BLOCK I: TUMOR INITIATION and the TME

Class 3 (2/2/21) Zahalka...Frenette (Science 2017) "Adrenergic nerves activate an angiometabolic switch in prostate cancer". Hunter will present background and paper.

Class 4 (2/9/21) "Truncating mutation in the autophagy gene UVRAG drives inflammation and tumorigenesis in mice". Quach et al. Nature Communications 2019 10:5681 Ben

Class 5 (2/16/21): Paracrine orchestration of intestinal tumorigenesis by a mesenchymal niche" Roulis et al, (Flavell lab) Nature 2020 580:524 Christian

BLOCK II: SUPPRESSION OF TUMORIGENESIS by the TME

Class 6 (2/23/21) "Meflin-Positive Cancer-Associated Fibroblasts Inhibit Pancreatic Carcinogenesis" Mizutani et al (Takahashi) Cancer Research 2019 Valerie

Class 7 (3/2/21): "Matricellular protein SPARCL1 regulates tumor microenvironment-dependent endothelial cell heterogeneity in colorectal carcinoma" Naschberger et al, (Sturzl lab) 2016 JCI Kay

3/9/21: SPRING BREAK

Class 8 (3/16/21) "Epigenetic therapy inhibits metastases by disrupting premetastatic niches". Lu et al, (Brock lab) 2020 Nature vol 579 Isaac

3/30/21 NO CLASS

2/2/21

Block III: TME REGULATION OF TUMOR PROGRESSION and METASTASIS

Class 9 (3/23/21): Platelets reduce anoikis and promote metastasis by activating YAP1 signaling” Haemmerle et al. (Anil Sood lab) Nat. Commun 2017 8:310. **Amulya**

Class 10 (4/6/21) STUDY SECTION

Mock Study Section – each student submits 1 page Specific Aims on their assigned paper from Blocks I/II

Each student will be assigned as the primary reviewer of someone else’s Aims page to present in class.

Class 11 (4/13/21) “Decellularized extracellular matrix scaffolds identify full-length collagen VI as a driver of breast cancer cell invasion in obesity and metastasis (Oudin lab) Wishart AL, et al. Sci Advances 2020; 6:eabc3175 **Ben**

Class 12 (4/20/21) “Tumoral activation of TLR3-SLIT2 axis endothelium drives metastasis” Tavora et al (Tavazoie) Nature 2020. **Kay**

BLOCK IV: THERAPY, THERAPEUTIC RESISTANCE and the TME

Class 13 (4/27/21) “Therapeutic targeting of macrophages enhances chemotherapy efficacy by unleashing type I interferon response.” Salvagno C, et al. Nat. Cell Bio. 2019; 21:511 (de Visser lab). **Valerie**

Class 14 : (5/4/21) “STING activation reprograms tumor vasculature and synergizes with VEGFR2 blockade” Yang H, et al. JCI 2019; 129:4350 (Chan Kim lab) **Issac**

Class 15: (5/11/21) Compare and Contrast: **Christian and Amulya**

“Tumor Lymphangiogenesis promotes T cell infiltration and potentiates immunotherapy in melanoma” Fankhauser et al (Swartz lab) Science Transl Med 2017 9:

“Stromal cell diversity associated with immune evasion in human TNBC” Wu et al. EMBO 2020 39:e104063