

8/23/19

**TME SYLLABUS  
FALL 2019  
Tuesdays 2-4 pm  
BRB 1201**

**9/3/19-12/17/19**

Drs. Puré and Ryeom will be present at every class except where noted on Syllabus.

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.

**9/3/19:** Organizational meeting

**9/10/19:** Intro to immunology (Puré)

**9/17/19:** Intro to matrix and stromal cells (Puré and Ryeom)

**9/24/19:** Intro to ECs (Ryeom)

**BLOCK I: TUMOR INITIATION and the TME**

**10/1/19** "Myeloid Cell-Derived Reactive Oxygen Species Induce Epithelial Mutagenesis". Canli et al, Cancer Cell 2017 32: 869

**10/8/19** "GLI1-expressing mesenchymal cells form the essential Wnt-secreting niche for colon stem cells". Degirmenci et al, Nature 558: 449 (Konrad Basler lab)

**10/15/19** "The perivascular niche regulates breast tumour dormancy", Ghajar CM, et al. Nat Cell Bio 2013; 15:807 (Bissell lab)

**BLOCK II: SUPPRESSION OF TUMORIGENESIS by the TME**

**10/22/18 (PURE & EISINGER)** 11"ATRA mechanically reprograms Pancreatic stellate cells to repress matrix remodeling and inhibit cancer cell invasion" Chronopoulos A, et al, Nature Comm. 2016; 7:12630 (del Rio Hernandez Lab)

**10/29/18** "Tumour-cell induced endothelial cell necroptosis via death receptor 6 promotes metastasis." Strilic B, et al. Nature 2016; 536:215 (Offermanns lab)

**Block III: TME REGULATION OF TUMOR PROGRESSION and METASTASIS**

**11/5/19 (PURÉ only)** "Neutrophils escort circulating tumour cells to enable cell cycle progression". Szczerba BM, et al. Nature 2019; 566:553 (Aceto lab)

**11/12/19 (PURE & CHAKRABARTI)** "Pancreatic cancer exosomes initiate pre-metastatic niche formation in the liver", Costa-Silva B et al, Nat Cell Bio 2015; 17:816 (Lyden lab)

8/23/19

**11/19/19** “Tumour vascularization via endothelial differentiation of glioblastoma stem-like cells”, Ricci-Vitiani L, et al. Nature 2010 468:824, (De Maria lab)

“Glioblastoma stem-like cells give rise to tumour endothelium”, Wang R, et al. Nature 2010 468:829 (Tabar lab)

“Transdifferentiation of glioblastoma cells into vascular endothelial cells”, Soda Y et al. PNAS 2011; 108:4274. (Verma lab)

**11/26/19 NO CLASS THANKSGIVING WEEK**

### **BLOCK IV: THERAPY, THERAPEUTIC RESISTANCE and the TME**

**12/3/19** “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).

**12/10/19 (RYEOM & KOUMENIS)** “Combined antiangiogenic and anti-PD-L1 therapy stimulates tumor immunity through HEV formation”, Allen E, et al. Sci Transl Med 2017; 9:385 (Bergers lab).

“Dual angiopoietin-2 and VEGFA inhibition elicits antitumor immunity that is enhanced by PD-1 checkpoint blockade”. Schmittnaegel, M. et al. Sci Transl Med. 2017;9: (de Palma lab)

### **STUDY SECTION**

**12/17/18** Mock Study Section (2-3 hours over food and beer)