

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)

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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)