

CAMB 605 Course Syllabus (Fall 2019)

Tuesdays 1-4pm
September 10 to December 10, 2019
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1011 BRB II/III Dermatology

Presentation 1: Faculty Chosen Papers

September 10

Paper 1: (MVP1): Wang A, et. al., "Opposing Effects of Fasting Metabolism on Tissue Tolerance in Bacterial and Viral Inflammation." *Cell*. 2016 Sep 8;166(6):1512-1525.e12. doi: 10.1016/j.cell.2016.07.026. PubMed PMID: 27610573; PubMed Central PMCID: PMC5555589.

Paper 2: (G&E1): El-Brolosy MA, et. al., "Genetic compensation triggered by mutant mRNA degradation." *Nature*. 2019 Apr;568(7751):193-197. doi: 10.1038/s41586-019-1064-z. Epub 2019 Apr 3. PubMed PMID: 30944477.

September 17

Paper 3: (CPM1): Neurohr GE, et al., "Excessive Cell Growth Causes Cytoplasm Dilution And Contributes to Senescence." *Cell*. 2019 Feb 21;176(5):1083-1097.e18. doi: 10.1016/j.cell.2019.01.018. Epub 2019 Feb 7. PubMed PMID: 30739799; PubMed Central PMCID: PMC6386581.

Paper 4: (GTV1): Khan O, et. al., "TOX transcriptionally and epigenetically programs CD8(+) T cell exhaustion." *Nature*. 2019 Jul;571(7764):211-218. doi: 10.1038/s41586-019-1325-x. Epub 2019 Jun 17. PubMed PMID: 31207603

September 24

Paper 5: (DSRB1): Sharon N, et. al., "Peninsular Structure Coordinates Asynchronous Differentiation with Morphogenesis to Generate Pancreatic Islets." *Cell*. 2019 Feb 7;176(4):790-804.e13. doi:10.1016/j.cell.2018.12.003. Epub 2019 Jan 17. PubMed PMID: 30661759.

Paper 6: (CB1): Manguso RT, et. al., "In vivo CRISPR screening identifies Ptpn2 as a cancer immunotherapy target." *Nature*. 2017 Jul 27;547(7664):413-418. doi: 10.1038/nature23270. Epub 2017 Jul 19. PubMed PMID: 28723893; PubMed Central PMCID: PMC5924693.

October 1

Paper 7: (MVP2): Wolf AJ, et. al., “Hexokinase Is an Innate Immune Receptor for the Detection of Bacterial Peptidoglycan.” *Cell*. 2016 Jul 28;166(3):624-636. doi: 10.1016/j.cell.2016.05.076. Epub 2016 Jun 30. PubMed PMID: 27374331; PubMed Central PMCID: PMC5534359.

Paper 8: (G&E2): Yizhak K, et. al. “RNA sequence analysis reveals macroscopic somatic clonal expansion across normal tissues. *Science*. 2019 Jun 7;364(6444). pii: eaaw0726. doi: 10.1126/science.aaw0726. PubMed PMID: 31171663.

October 8

Paper 9: (CPM2): Zatulovskiy, E., et. al, “Cell growth dilutes the cell cycle inhibitor Rb to trigger cell division.” bioRxiv 470013; doi: <https://doi.org/10.1101/470013>

Paper 10: (GTV2): Keskin DB, et al., “Neoantigen vaccine generates intratumoral T cell responses in phase Ib glioblastoma trial.” *Nature*. 2019 Jan;565(7738):234-239. doi: 10.1038/s41586-018-0792-9. Epub 2018 Dec 19. PubMed PMID: 30568305; PubMed Central PMCID: PMC6546179.

October 15

Paper 11: (DSRB2): Stegen S, et. al., “HIF-1 α Promotes Glutamine-Mediated Redox Homeostasis and Glycogen-Dependent Bioenergetics to Support Postimplantation Bone Cell Survival.” *Cell Metab*. 2016 Feb 9;23(2):265-79. doi: 10.1016/j.cmet.2016.01.002. PubMed PMID: 26863487.

Paper 12: (CB2): Choi BD, et. al., “CAR-T cells secreting BiTEs circumvent antigen escape without detectable toxicity.” *Nat Biotechnol*. 2019 Jul 22. doi: 10.1038/s41587-019-0192-1. [Epub ahead of print] PubMed PMID: 31332324.

October 22

Open Date

Presentation 2: Student Chosen Papers From List of Following Topics

October 29

Topic 1: (MVP1): Mucosal immunity and antibiotic resistance

Topic 2: (G&E1): Mechanisms of genetic diversity generation and relevance for human health and diseases

November 5

Topic 3: (CPM1): Cell Size Homeostasis and Disease Consequences of Size Dysregulation

Topic 4: (GTV1): Precision Engineering

November 12

Topic 5: (DSRB1): Metabolism and Regeneration

Topic 6: (CB1): Immunotherapy

November 19

Topic 1: (MVP2): Mucosal immunity and antibiotic resistance

Topic 2: (G&E2): Mechanisms of genetic diversity generation and relevance for human health and diseases

December 3

Topic 3: (CPM2): Cell Size Homeostasis and Disease Consequences of Size Dysregulation

Topic 4: (GTV2): Precision Engineering

December 10

Topic 5: (DSRB2): Metabolism and Regeneration

Topic 6: (CB2): Immunotherapy