

CAMB 605 Course Syllabus (Fall 2020)

Tuesdays 1-4pm
September 15 to December 15, 2020
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1011 BRB II/III Dermatology

Presentation 1: Faculty Chosen Papers

September 15

Paper 1: (MVP1):

Paper 2: (G&E1): Anzalone et al. (2019) Search-and-replace genome editing without double-stranded breaks or donor DNA. *Nature*, 576:149-157

September 22

Paper 3: (CPM1): Pareek V, Tian H, Winograd N, Benkovic SJ. "Metabolomics and mass spectrometry imaging reveal channeled de novo purine synthesis in cells." *Science*. 2020;368(6488):283-290. doi:10.1126/science.aaz6465

Paper 4: (GTV1): "Safety and Feasibility of CRISPR-edited T Cells in Patients With Refractory Non-Small-Cell Lung Cancer" doi: <https://pubmed.ncbi.nlm.nih.gov/32341578/>

September 29

Paper 5: (DSRB1): McDonald AI, et al. "Endothelial Regeneration of Large Vessels Is a Biphasic Process Driven by Local Cells with Distinct Proliferative Capacities." *Cell Stem Cell*. 2018 Aug 2;23(2):210-225.e6. doi: 10.1016/j.stem.2018.07.011.PMID: 30075129

Paper 6: (CB1): Han, et al. "CRISPR screens in cancer spheroids identify 3D growth-specific vulnerabilities." *Nature* 580: 136-141, 2020.
<https://www.nature.com/articles/s41586-020-2099-x?proof=trueHere>

October 6

Paper 7: (MVP2):

Paper 8: (G&E2): El-Brolosy et al. (2019) Genetic compensation triggered by mutant mRNA degradation. *Nature* 568:193-197

October 13

Paper 9: (CPM2): Fuller et al. "RNA promotes phase separation of glycolysis enzymes into yeast G bodies in hypoxia" eLife 2020;9:e48480 doi: 10.7554/eLife.48480

Paper 10: (GTV2): "ChAdOx1 nCoV-19 vaccination prevents SARS-CoV-2 pneumonia in rhesus macaques." doi: <https://doi.org/10.1101/2020.05.13.093195>

October 20

Paper 11: (DSRB2): Lisandra Vila Ellis, et al. "Epithelial Vegfa specifies a distinct endothelial population in the mouse lung" Dev Cell. Author manuscript; available in PMC 2021 Mar 9. Published in final edited form as: Dev Cell. 2020 Mar 9; 52(5): 617–630.e6. Published online 2020 Feb 13. PMID: PMC7170573

Paper 12: (CB2): Sendoel, et al. "Translation From Unconventional 5' Start Sites Drives Tumour Initiation", Nature 541:494-499, 2017.
<https://www.nature.com/articles/nature21036>

October 29

Open Date

Presentation 2: Student Chosen Papers From List of Following Topics

November 3

Topic 1: (MVP1):

Topic 2: (G&E1): Harnessing the genome to treat human disease

November 10

Topic 3: (CPM1): Higher Order Assembly of Metabolic Processes

Topic 4: (GTV1): Genome Editing/Engineering and Protein Manipulation

November 17

Topic 5: (DSRB1): Vascular Regeneration and local patterning

Topic 6: (CB1): Cancer immunotherapy

December 1

Topic 1: (MVP2):

Topic 2: (G&E2): Harnessing the genome to treat human disease

December 8

Topic 3: (CPM2): Higher Order Assembly of Metabolic Processes

Topic 4: (GTV2): Genome Editing/Engineering and Protein Manipulation

December 15

Topic 5: (DSRB2): Vascular Regeneration and local patterning

Topic 6: (CB2): Cancer immunotherapy