

CAMB 605 Course Syllabus (Fall 2022)

Tuesdays 145-445pm
September 13 to December 13, 2022

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1011 BRB II/III Dermatology

Presentation 1: Faculty Chosen Papers

September 13

Paper 1: (MVP1): Wu, Se., Hashimoto-Hill, S., Woo, V. et al. Microbiota-derived metabolite promotes HDAC3 activity in the gut. *Nature* 586, 108–112 (2020).
<https://doi.org/10.1038/s41586-020-2604-2>

Paper 2: (G&E1): Gardner et al (2022) “Reduced reproductive success is associated with selective constraint on human genes” *Nature*. 2022 Mar;603(7903):858-863.

September 20

Paper 3: (CPM1): Göbel, J et. al. “Mitochondria-Endoplasmic Reticulum Contacts in Reactive Astrocytes Promote Vascular Remodeling”. *Cell Metabolism*, Volume 31, Issue 4, 2020, Pages 791-808.e8, ISSN 1550-4131, <https://doi.org/10.1016/j.cmet.2020.03.005>.

Paper 4: (GTV1): Majzner RG, et. al., “GD2-CAR T cell therapy for H3K27M-mutated diffuse midline gliomas.” *Nature*. 2022 Mar;603(7903):934-941. doi: 10.1038/s41586-022-04489-4. Epub 2022 Feb 7. PMID: 35130560; PMCID: PMC8967714.

September 27

Paper 5: (DSRB1): Chan, K.Y., Yan, CC.S., Roan, HY. et al. Skin cells undergo asymmetric fission to expand body surfaces in zebrafish. *Nature* 605, 119–125 (2022).
<https://doi.org/10.1038/s41586-022-04641-0>

Paper 6: (CB1): Reticker-Flynn NE, et. al., “Lymph node colonization induces tumor-immune tolerance to promote distant metastasis.” *Cell*. 2022 May 26;185(11):1924-1942.e23. doi: 10.1016/j.cell.2022.04.019.PMCID: PMC9149144.

October 4

Paper 7: (MVP2): Lanz, T.V., Brewer, R.C., Ho, P.P. et al. Clonally expanded B cells in multiple sclerosis bind EBV EBNA1 and GlialCAM. *Nature* 603, 321–327 (2022).
<https://doi.org/10.1038/s41586-022-04432-7>

Paper 8: (G&E): Fulco et al (2019) “Activity-by-contact model of enhancer-promoter regulation from thousands of CRISPR perturbations” Nat Genet. 2019 Dec;51(12):1664-1669.

October 11

Paper 9: (CPM2): Kleele, T., et al. “Distinct fission signatures predict mitochondrial degradation or biogenesis.” Nature 593, 435–439 (2021). <https://doi.org/10.1038/s41586-021-03510-6>

Paper 10: (GTV2): Legut, M., et al. A genome-scale screen for synthetic drivers of T cell proliferation. Nature 603, 728–735 (2022). <https://doi.org/10.1038/s41586-022-04494-7>

October 18

Paper 11: (DSRB2): Batut PJ, Bing XY, Sisco Z, Raimundo J, Levo M, Levine MS. Genome organization controls transcriptional dynamics during development. Science. 2022 Feb 4;375(6580):566-570. doi: 10.1126/science.abi7178. Epub 2022 Feb 3. PMID: 35113722.

Paper 12: (CB2): Pan Y, et. al. “NF1 mutation drives neuronal activity-dependent initiation of optic glioma.” Nature. 2021 Jun;594(7862):277-282. doi: 10.1038/s41586-021-03580-6. Epub 2021 May 26. PMCID: PMC8346229.

October 25: No CAMB 605 sessions

Presentation 2: Student Chosen Papers Related to the Following Topics

November 1

Topic 1: (MVP): Microbes modulate the balance between health and disease

Topic 2: (G&E): Epigenetic Inheritance

November 8

Topic 3: (CPM): Inter-Organelle Communication

Topic 4: (GTV): A new era of synthetic biology, vaccines, immunotherapy and genome editing

November 15

Topic 5: (DSRB): Advanced/nontraditional imaging approaches in developmental biology and regenerative medicine.

Topic 6: (CB): Immunotherapy in Cancer

November 22 No CAMB 605 sessions

November 29

Topic 1: (MVP): Microbes modulate the balance between health and disease

Topic 2: (G&E): Epigenetic Inheritance

December 6

Topic 3: (CPM): Inter-Organelle Communication

Topic 4: (GTV): A new era of synthetic biology, vaccines, immunotherapy and genome editing

December 13

Topic 5: (DSRB): Advanced/nontraditional imaging approaches in developmental biology and regenerative medicine.

Topic 6: (CB): Immunotherapy in Cancer