

## **CAMB 605 Course Syllabus (Fall 2021)**

**Tuesdays 145-445pm**  
**September 14 to December 14, 2021**  
John Seykora (Course Director)  
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1011 BRB II/III Dermatology

### **Presentation 1: Faculty Chosen Papers**

#### **September 14**

**Paper 1:** (MVP1): Bryant, AS, *et. al.* “The neural basis of temperature-driven host seeking in the human threadworm *Strongyloides stercoralis*.” bioRxiv preprint doi: <https://doi.org/10.1101/2021.06.23.449647>. Posted June 23, 2021.

**Paper 2:** (G&E1): Jonsson, H., *et. al.* “Differences between germline genomes of monozygotic twins.” *Nat Genet* **53**, 27–34 (2021). <https://doi.org/10.1038/s41588-020-00755-1>

#### **September 21**

**Paper 3:** (CPM1): Taylor SR, *et. al.*, “Dietary fructose improves intestinal cell survival and nutrient absorption.” *Nature*. 2021 Aug 18. doi: 10.1038/s41586-021-03827-2. Epub ahead of print. PMID: 34408323.

**Paper 4:** (GTV1): Weber, EW, *et. al.*, “Transient rest restores functionality in exhausted CAR-T cells through epigenetic remodeling”. *Science*. 2021 Apr 2;372(6537):eaba1786. doi: 10.1126/science.aba1786. PMID: 33795428; PMCID: PMC8049103.

#### **September 28**

**Paper 5:** (DSRB1): Huang J, *et. al.*, “SARS-CoV-2 Infection of Pluripotent Stem Cell-Derived Human Lung Alveolar Type 2 Cells Elicits a Rapid Epithelial-Intrinsic Inflammatory Response.” *Cell Stem Cell*. 2020 Dec 3;27(6):962-973.e7. doi: 10.1016/j.stem.2020.09.013. Epub 2020 Sep 18. PMID: 32979316; PMCID: PMC7500949.

**Paper 6:** (CB1): Griffin GK, *et. al.*, “Epigenetic silencing by SETDB1 suppresses tumour intrinsic immunogenicity.” *Nature*. 2021 Jul;595(7866):309-314. doi: 10.1038/s41586-021-03520-4. Epub 2021 May 5. PMID: 33953401.

**October 5**

**Paper 7:** (MVP2):

**Paper 8:** (G&E2): Sobreira D.R., *et al.* “Extensive pleiotropism and allelic heterogeneity mediate metabolic effects of *IRX3* and *IRX5*.” *Science*. 2021 Jun 4;372(6546):1085-1091. doi: 10.1126/science.abf1008. PMID: 34083488.

**October 12**

**Paper 9:** (CPM2): Kumon T, *et. al.*, “Parallel pathways for recruiting effector proteins determine centromere drive and suppression.” *Cell*. 2021 Aug 20:S0092-8674(21)00940-5. doi: 10.1016/j.cell.2021.07.037. Epub ahead of print. PMID: 34433012.

**Paper 10:** (GTV2): Turner, JS, *et. al.* “SARS-CoV-2 mRNA vaccines induce persistent human germinal centre responses” *Nature*. 2021 Aug;596(7870):109-113. doi: 10.1038/s41586-021-03738-2. Epub 2021 Jun 28. PMID: 34182569.

**October 19**

**Paper 11:** (DSRB2): Tang X, *et. al.* “SARS-CoV-2 infection induces beta cell transdifferentiation.” *Cell Metab*. 2021 Aug 3;33(8):1577-1591.e7. doi: 10.1016/j.cmet.2021.05.015. Epub 2021 May 19. PMID: 34081913; PMCID: PMC8133495.

**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. PMID: 34040258; PMCID: PMC8346229.

**Presentation 2: Student Chosen Papers From List of Following Topics**

**November 2**

**Topic 1:** (MVP): Molecular basis of host/pathogen co-evolution

**Topic 2:** (G&E): Human variation in genetics and epigenetics in development and disease

**November 9**

**Topic 3:** (CPM): How Cells Cope with Stress and Disease

**Topic 4:** (GTV): Synthetic Biology, Genome Editing and Vaccines

**November 16**

**Topic 5:** (DSRB): SARS-CoV-2 in Development and Regeneration

**Topic 6:** (CB): Cancer immunotherapy and tumor microenvironment

**November 30**

**Topic 1:** (MVP): Molecular basis of host/pathogen co-evolution

**Topic 2:** (G&E): Human variation in genetics and epigenetics in development and disease

**December 7**

**Topic 3:** (CPM): How Cells Cope with Stress and Disease

**Topic 4:** (GTV): Synthetic Biology, Genome Editing and Vaccines

**December 14**

**Topic 5:** (DSRB): SARS-CoV-2 in Development and Regeneration

**Topic 6:** (CB): Cancer immunotherapy and tumor microenvironment