

MMI 291 Seminar Series

Current Theme: Interdisciplinary Research
Winter Quarter 2019 – CRN 43601



Friday Seminar – 12:10-1 PM “Cytomegalovirus – Fiend or Frenemy?”

Dr. Geballe's research aims to elucidate the molecular and evolutionary mechanisms by which herpesviruses overcome host cell defense systems. For example, cytomegaloviruses (CMVs) encode proteins that bind to double-stranded RNA and to (PKR) and thereby inactivate the PKR-mediated shut off of protein synthesis. In the absence of these proteins, human CMV does not replicate at all in wild type cells, but does replicate efficiently in PKR-null cells. However, the mechanisms by which different CMVs counteract PKR differ, suggesting that these viruses have evolved along with their individual host species, in an ongoing "arms race." They aim to understand the significance and molecular basis for CMV antagonism of host restriction factors by dissecting naturally occurring adaptations in both the virus and the host and by selecting for new adaptations that can reveal the potential for innovation by viruses as they face new or changing host factors.

Publication references

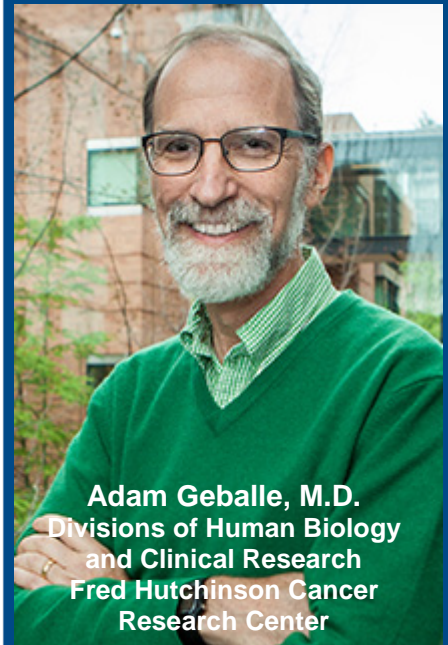
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A Single Amino Acid Dictates Protein Kinase R Susceptibility to Unrelated Viral Antagonists. Carpentier Kathryn S, Esparó Nicolle M, Child Stephanie J, Geballe Adam. *PLoS Pathogens*. 2016 Oct 25;12(10)e1005966.

Adaption by copy number variation in monopartite viruses. Bayer Avraham, Brennan Greg, Geballe Adam. *Current Opinion in Virology*. 2018 Dec;337-12.



April 5



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**April 5, 2019
12:10 – 1 PM
MedSci 180C**

Medical Microbiology
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