



# THE PURDUE LECTURE HALL SERIES

Thursday, December 12, 2019 @ 7pm

Purdue University, MRGN 121

1201 W State Street, West Lafayette, IN 47907

**Topic:** Mechanisms of Deadly & Infectious Viruses  
**Guest Speaker:** Monica Husby, M.S., PhD candidate, College of Pharmacy

RNA viruses are a diverse group of pathogens that require a living host (animal, human, plant) to survive. As RNA viruses are made of only a handful of viral proteins, they have evolved over centuries to hijack human and animal cellular proteins and systems.

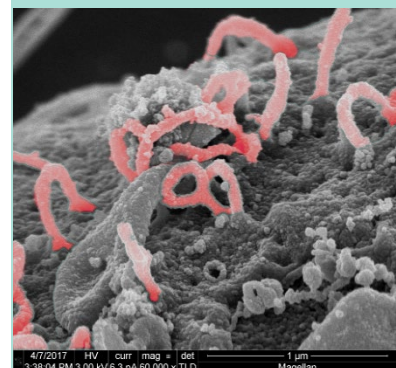
Some of the most deadly RNA viruses are **Ebola virus**, **Marburg Virus**, and **Nipah virus**. Each of these viruses can lead to mortality rates up to 90% and no approved vaccine or drug exists to combat them. **Measles virus**, another RNA virus, is the most infectious virus known to infect humans. Although a vaccine has been available since the 1960s, declines in vaccination rates has put the treat of Measles virus back on center stage.

Each of these viruses enter human cells, replicate intracellularly and then assemble into new viruses by interacting with the cell plasma membrane where they are released into the body to infect more cells. My research specifically focuses on learning how these viruses assemble within in the cell and utilizing this knowledge to understand potential drug targets. I will talk about my journey to graduate school, some of the research I am currently working on, and what I plan on doing when I graduate.

**Background:** Monica is a PhD candidate in Dr. Robert Stahelin's laboratory. In the lab, they study the molecular basis of how lethal and infectious viruses assemble within the cell and how they can be used as targets for anti-viral therapies. Monica got her B.A. in psychology & cell biology at Albion College in Albion, MI and then continue on to do a M.S. in biomedical research at Midwestern University in Downers Grove, IL.



Monica Husby, M.S.  
PhD Candidate



**PURDUE**  
UNIVERSITY®

EA/EOU

Purdue Institute of Inflammation,  
Immunology and Infectious Disease  
DISCOVERY PARK

**150** 1869 2019  
YEARS OF GIANT LEAPS