1163-00-21 **Linda J. S. Allen*** (linda.j.allen@ttu.edu), Texas Tech University. *Modeling of Viral Zoonotic Infectious Diseases from Wildlife to Humans.*

Zoonotic diseases are infectious diseases transmitted from animals to humans. It is estimated that over 60% of human infectious diseases are zoonotic. Viral pathogens represent a large proportion of emerging and re-emerging infectious diseases, including coronaviruses, ebolaviruses, and orthohantaviruses. Spillover of infection from animals to humans depends on a complex transmission pathway that includes a natural wildlife reservoir and sometimes an intermediate host before transmission to humans. The natural reservoir for SARS and MERS coronaviruses and ebolaviruses is bats and for orthhantaviruses it is rodents (rats, voles, mice). In this presentation, we discuss a few of the modeling efforts to better understand the spread of infection in the natural reservoir and the spillover to humans. The impacts of demographic and seasonal variations on timing of spillover are discussed as well as public health interventions in the prevention and control of zoonotic infectious diseases. (Received July 2, 2020)