1125-92-1998 **Munsur Rahman*** (mmrhwb@mail.umkc.edu), 5110 Rockhill Road, 318 R.H Flarsheim Hall, Kansas City, MO 64110, and **Naveen K Vaidya** (vaidyan@umkc.edu), 5100 Rockhill Road, 205C Manheim Hall, Kansas City, MO 64110. *Mathematical Model for ZIKA virus transmission dynamics.*

Several outbreaks of the Zika virus, including the 2007 outbreak in Yap Island, the 2013-14 outbreak in French Polynesia, and the recent devastating spread of the virus across Americas, have become a big concern for public health. Currently, because of the limited studies on Zika virus, much about it remains unknown. In this talk I will present a mathematical model to investigate the Zika virus transmission dynamics between hosts. Our model agrees well with the data from French Polynesia and Yap Island. I will discuss how our model helps evaluate the key parameters that affect Zika infection and transmission, such as incubation period, infectious period, and basic reproduction number. Such estimates can provide better understanding of this less understood virus and can be used to evaluate potential treatment and prevention methods. (Received September 19, 2016)