

*UF College of Veterinary Medicine Seminar*

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**“Microtubule-Dependent Sensing of RNA  
for Antiviral Host Defenses”**

The microtubule bound guanine nucleotide exchange factor 1 (GEF-H1), encoded by *Arhgef2*, is a key regulator of innate immune activation by DExD/H-box helicases (DDX) protein family comprised of RNA and DNA helicases that function as viral and bacterial RNA and DNA sensors. Viral targeting of dynein-based transport mechanisms on microtubules plays an important role for intracellular movements and replication of viral pathogens, although it had been unresolved how microtubule-based trafficking of viral components contributes to the induction of antiviral defenses. We propose a new conceptual framework that integrates microtubule based sequestration of signaling components with the detection of viral nucleic acids for the initiation of type I interferon responses that are critical to signal the immune system to fight a viral infection.

**Thursday, March 20, 2014**

**12:00pm to 1:00pm**

**Dental Science Bldg. Room D3-39A**