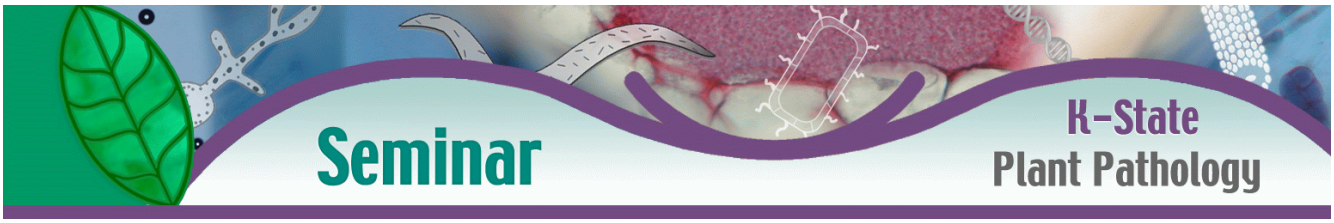

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November 8, 2018 **3:45pm** **1018 Throckmorton**

Antibodies against Arthropod Saliva and Vector Borne Disease Surveillance

The hallmark entry site for most vector-borne pathogens into their vertebrate hosts is the skin. Here, arthropods inject microorganism imbibed in their saliva while blood feeding. This saliva has potent immune-modulatory molecules able to induce antibody production.

Alternatively, the vertebrate host blood is the source of infection for the arthropod and the midgut represents the first and most important barrier for those pathogens to be transmitted. After blood-feeding antibodies, and other host factors, remain active in the arthropod midgut for hours. However, the role anti-salivary antibodies in the successful colonization of pathogens in the skin is mostly understudied.

Our preliminary studies suggest that anti-salivary protein antibodies play a key role in transmission dynamics from the vertebrate to the arthropod and vice versa. We are currently studying the role of hybrid pathogen-arthropod IgG4 antibodies as markers for vector-borne disease transmission risk of Flavivirus infection.