

William Wilson is a Research Microbiologist at the Arthropod-Borne Animal Diseases Research Unit, ABADRU, Adjunct Professor in the KSU Department of Diagnostic Medicine/Pathobiology and the Texas A&M Department of Pathobiology.

His laboratory uses whole viral genome deep sequencing and other molecular approaches to understand the arbovirus evolution and virus-vector-host interactions. The overall research is focused on understanding these interactions in relation to virus transmission and pathogenesis. The current emphasis is on Rift Valley fever (RVF) virus that is transmitted by mosquitoes and causes febrile to lethal (primarily neonates) hemorrhagic disease and abortion in cattle, sheep and goats. This virus is zoonotic, causing febrile, sometimes hemorrhagic and/or encephalitic disease that can lead to death in humans. The research includes both laboratory and experimental infection studies in target livestock. His research also addresses other arboviruses including the recently discovered bunyavirus, Schmallenberg virus, which causes abortions in cattle and sheep. The team uses a collaborative “One World – One Health” approach to these important vector-borne viruses to reduce their impact on animals and humans.