

Summer Research Fellowship Proposal for 2020

FACULTY INFORMATION:

NAME: Karl Boehme

DEPARTMENT: Microbiology & Immunology

LOCATION: UAMS Biomed Building 1, 506G

PROJECT INFORMATION:

TITLE: Defining the function of the RNaseL during reovirus replication

LOCATION OF THE PROJECT: UAMS Biomed Building 1, 503/504

BRIEF DESCRIPTION OF THE PROJECT:

The 2'-5' oligoadenylate synthetase (OAS)/RNaseL pathway is a key component of the cellular innate immune response that degrades viral RNAs to block viral replication. Our data indicate that non-structural protein $\sigma 1s$ facilitates reovirus replication by promoting viral RNA stability. The project will focus on defining the function of the OAS/RNaseL pathway during reovirus infection and explore how non-structural protein allows reovirus to evade this critical antiviral response.

STUDENT'S RESPONSIBILITIES-DUTIES IN THE PROPOSED PROJECT:

The student will be responsible for maintaining cultured mammalian cells, performing reovirus infections and standard laboratory procedures such as RT-qPCR and immunoblotting. Animal experiments also may be performed.

ESTIMATED TIME FOR PROJECT COMPLETION: ___8___ weeks

DOES THE WORK INVOLVE ANIMAL RESEARCH? YES ----X---
NO -----