Bianca Davenport, Biochemistry

Year in School: Senior
Faculty Mentor: Dr. Karen L. Bennett, Molecular Microbiology & Immunology
Funding Source: Life Sciences Undergraduate Research Opportunity Program

Cross-species RNA interference: Selected Ascaris dsRNAs can sterilize Caenorhabditis

RNAinterference (RNAi) has been used in attempt sterilize Ascaris with the long-term aim of developing RNAi as an anti-parasitic agent. Cultured worms that have been injected with Ascaris iff-1 and actin dsRNA have shown that Ascaris dsRNAs can knock out gene function in the "tester" worm Caenorhabidits elegans (C. elegans). Further analysis will be done on Ascaris dsRNA. Ascaris sum is a prevalent parasite nematode of swine. The Ascaris dsRNAs that sterilize C. elegans will be tested in Ascaris sum for their ability to sterilize these parasitic worms. Also, RNAs that have proved successful in sterilizing Ascaris worms will be tested in Ascaris-infected pigs to determine whether or not they work to sterilize worms in the mammalian host.