



The Connecticut Agricultural Experiment Station

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LOCKWOOD LECTURE

“Targeting Arbovirus Transmission Through Endectocide- and Oral Vaccine-treated Bird Feed”

In Person and on Zoom:

<https://us02web.zoom.us/j/85453010635?pwd=eIRLOStMdnpmOS81eXJPbkF2LzNUdz09>

Meeting ID: 854 5301 0635 Passcode: nj7LNV



Dr. Brian Foy

Professor, Colorado State University

Department of Microbiology, Immunology, and Pathology

Thursday, September 15, 2022

Lunch: 12:15 p.m. | Lecture: 12:30 p.m.

**Jones Auditorium, The Connecticut Agricultural Experiment Station
123 Huntington Street, New Haven, CT**

Our lab has long focused on developing endectocidal drugs for treating hosts bitten by mosquitoes to control mosquito borne diseases. The idea is to reduce pathogen transmission via the mosquito-killing action of the drug taken up in mosquito blood meals. In the United States, we are focusing this effort to develop a novel control method for West Nile virus (WNV), which is the leading cause of domestically acquired arboviral disease and concentrated in the Great Plains and Mountain West where *Culex tarsalis*-driven WNV transmission predominates. We have been developing endectocide-treated bird feed, primarily with the drug ivermectin, placed in bird feeder stations as a way to limit local WNV transmission. Our efforts include laboratory studies testing various bird feed formulations for safety, mosquitocidal efficacy, and optimal drug stability and pharmacokinetics in different bird species, modeling studies to assess the key variables that will define the success of the strategy, and field studies to evaluate the overall approach. Furthermore, we are expanding our research to include novel orally-delivered vaccine constructs on our treated bird feed formulations to enhance the approach by simultaneously immunizing local birds against WNV.

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