2017 – 2019 FNIH Public Speaking Engagements on Gene Drive-Related Activities

At the following meetings, FNIH staff spoke about issues relevant to development of novel biological strategies to prevent transmission of vector-borne diseases, including consensus recommendations for the safe and ethical testing of gene drive technology on mosquitoes as tools to reduce the burden of malaria transmission in Africa that were developed by a multi-disciplinary international working group. The recommendations propose a pathway for the responsible development of gene drive products, from initial discovery research to implementation, to inform researchers, funders, regulators and other government authorities, policy makers and international organizations.

World Health Organization, Vector Control Advisory Group Open Meeting
April 27, 2017, Geneva, Switzerland
Dr. Karen Tountas*: "*Developing a Consensus Pathway for Field Testing of Modified Mosquitoes with Driving Transgenes"

Keystone Symposium: Vectors, Pathogens and Diseases: Current trends and Emerging Challenges
September 10-14, 2017, Durban, South Africa
Dr. Stephanie James: "Creating a Supportive Environment for Novel Vector Control Technologies"

22nd ICABR Conference: Disruptive Innovations, Value Chains, and Rural Development
June 12-15, 2018, The World Bank, Washington D.C., USA
Dr. Stephanie James: "Controlling Infectious Diseases by Using Gene Drive"

Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) Side-Meeting: Regulatory pathways and stakeholder engagement for responsible gene drive research
July 3, 2018, Montréal, Canada
Dr. Brinda Dass: "Recommendations for development and testing of gene drive mosquitoes"

New Tools and Technologies for Health and Agriculture
October 24-25, 2018, Bangalore, Karnataka, India
Dr. Stephanie James: "Pathway for Development of Modified Mosquitoes as a Public Health Tool"

ASTMH Annual Meeting
October 30, 2018, New Orleans, LA, USA
Dr. Stephanie James: "Symposium: Pathway to Development of Gene Drive Mosquitoes as a Potential BiocontrolTool for Elimination of Malaria in Sub-Saharan Africa"

Entomological Society of America Annual Meeting Symposium: Novel Pest Control Strategy on the Horizon: Gene Drives and Transgenic Insects
November 11-14, 2018, Vancouver, Canada
Dr. David O'Brochta: "Pathway to deployment of gene drive mosquitoes as a potential biocontrol tool for elimination of malaria in sub-Saharan Africa"

Gordon Research Conference: From Innovations in Tropical Infectious Diseases to Global Health Solutions
March 24-29, 2019, Galveston, TX, USA
Dr. Stephanie James: “Disrupting Mosquito-Borne Disease Transmission”

15th ISBR Symposium
April 1-4, 2019, Tarragona, Spain
Dr. Brinda Dass: “Pathway to Deployment of Gene Drive Mosquitoes as a Potential Biocontrol Tool for Elimination of Malaria in Sub-Saharan Africa”

University of Notre Dame, Eck Institute for Global Health Paul P. Weinstein Memorial Lecture
April 10, 2019, Notre Dame, IN, USA
Dr. Stephanie James: “Beyond the Bench: The Challenges of Introducing an Emerging Technology for Control of Vector-Borne Diseases”

University of Notre Dame, Eck Institute for Global Health
Paul P. Wienstein Memorial Lecture
April 10, 2019; Notre Dame, IN, USA
Stephanie James; Beyond the Bench: The Challenges of Introducing an Emerging Technology for Control of Vector-Borne Diseases
Having observed examples in nature of the preferential inheritance of genetic traits for many decades, scientists have now been able to use techniques of modern molecular biology to mimic this phenomenon in the laboratory. These “gene drive” systems are being proposed as powerful new tools to reduce the transmission of mosquito-borne diseases such as malaria, as well as to reduce the harms caused by insect agricultural pests and invasive rodent species. Dr. James will use the example of gene drive technologies aimed at malaria control and elimination to discuss the complex issues that factor into the development pathway for such a new technology, focusing on preparations for testing of safety and efficacy including regulatory authorization and public acceptance.