Progress and Outlook of the CDC Southeastern Center of Excellence in Vector Borne Diseases

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GOALS OF THE CENTER

(1) Develop novel control interventions and discover insecticide-resistance-breaking compounds

(2) Expand the level of inter-institute/inter-agency coordination and partnership in the exchange of research and operational information in the Southeast

(3) Establish a comprehensive, three-tiered training program for public health entomologists and students throughout the Southeast

(4) Provide an evidence-based set of recommendations for a locally-tailored surveillance-response program in the form of a decision-making tool
PROGRAM PROJECTS

GATEWAY PROGRAM PROJECTS

- PROJECT 1: Understanding vector ecology, arbovirus infectious rates & insecticide resistance to optimize mosquito control [Beier, Bloomquist, DeGennaro]
- PROJECT 2: Breaking the transmission of zoonotic arboviruses by mosquitoes [Unnasch]
- PROJECT 3: Ecological and acaricide-resistance models of tick vectors in the Southeast US [Glass]
- PROJECT 4: Multi-scale, modular models for Vector-Borne Disease [Cummings]
PROGRAM PROJECT OUTCOMES

- A unified mathematical model to understand the biocomplexity of mosquito borne arbovirus transmission
- Suites of study designs for evaluation and recommendation of mosquito and vector control technologies
- Identification of new chemical actives for insecticide-resistant *Aedes*
- Recommendations for approaches to break winter-time zoonosis transmission
- High-resolution spatial map of tick vector distributions and recommendations for management of acaricide-resistant ticks
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HYPOTHESIS:
- To train a cadre of public health entomologists with the knowledge and skills required to rapidly detect and respond to VBD threats in the United States we must lower the barriers to access.
Dodd Short Course Training Fellowship 2018-2019
Florida Mosquito Control Association

- February 3 – 8, 2019
- 13 Awardees (2018) and 12 Awardees (2019) from FL, SC, TX, NC
- Targeting smaller programs throughout the Southeast region
- Staff → Managers/Directors

Total number of awardees to date: 25
Mosquito University 3.0
Tennessee Department of Health

- May 1 – 2, 2019
- 25 Attendees
- Public health and vector control professionals from AL, AR, KY, MO, MS, SC, TN
- Staff → Managers/Directors
- Speakers/instructors from local and national agencies
SUMMER INTERNSHIP PROGRAM

- Hypothesis: Attracting younger generation of students to the profession will instill excitement in this career trajectory.
- Supports the placement of interns in mosquito control districts, CMAVE, FDACS, and FDOH in Florida.
- Facilitates Program Project Milestones.
- Interns are from entire Southeast region.
- Provided a 2-3 month stipend.

2017 INTERNSHIP PROGRAM = 6
2018 INTERNSHIP PROGRAM = 5

AL
FL (2)
KY
LA
SC
TN

2019 INTERNSHIP PROGRAM = 7

TOTAL # OF INTERNS TO DATE: 18
Hypothesis: The Pest Management Industry can be brought into the community of practice

Dr. Faith Oi (UF/ENTO; Pest Management University) & Dr. Phil Koehler (UF/ENTO; Urban Entomology)

In collaboration with FDACS, IFAS, UF Health CLLT

CEU credits can be earned through FDACS and transitioned into other states

Live on Canvas Catalog as of June 1, 2018

FREE for first 1,000 trainees
Hypothesis: Increasing the number of public health entomologists with expertise in tick ID, biology and ecology viz. disease transmission requires a hands-on course

- May 20-31, 2019
- US National Tick Collection (Georgia Southern)
- Fully covered costs for training/accommodations for 2018 (N = 20) and 2019 (N = 16) participants
- Includes instructors from the CDC, as well as US and European Academic Institutions

Total # of trainees to date: 36
LEADERSHIP TRAINING

- Hypothesis: Identifying future leaders among the current staff of the mosquito control districts will assure a seamless transition and commitment to public health entomology.
- Fully covered costs for training participants (N = 24).
- Tentative training in 2020.
Mosquito control toolkit developed by the UF/IFAS PIE Center
Toolkit materials

- Social media schedule and customizable posts available for a four-week campaign in Facebook and Twitter
- Infographics, info sheets
PREVENT & PROTECT
MOSQUITO CONTROL MESSAGES FOR YOUR COMMUNITY

LEARN MORE
https://preventmosquitoes.org/
Thank you!

CDC Southeastern Center of Excellence in Vector Borne Diseases
The Gateway Program