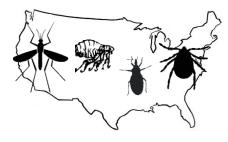
BUILDING OUR NATION'S CAPACITY TO RESPOND



The five Regional Centers of Excellence in Vector-Borne Diseases were established in 2017 to strengthen our nation's ability to prevent and rapidly respond to current and emerging vector-borne disease threats. We combine innovative applied research programs with public health expertise and practice to support the vector-borne disease workforce through workshops, resources, and networks.

We serve a catchment area of over 330 million people across 41 state and territorial jurisdictions of the United States in high-risk areas for vector-borne disease.

APPLIED RESEARCH

Conduct applied research to develop and validate innovative and effective vector-borne disease prediction, prevention, and control tools and methods.

- → Improve mosquito & tick surveillance
- → Address gaps in knowledge of vector biology & disease transmission
- → Investigate and identify effective prevention and control methods
- → Disseminate findings directly to the public health community

RESPONSIVE TRAINING

Train vector biologists, entomologists, and medical providers in the knowledge and skills required to address vectorborne disease concerns.

- → Training grants for working professionals
- → Innovative academic programs for the next generation of public health entomologists
- → Hands-on and web-based workshops to reach broad audiences in the vector surveillance & control community

COMMUNITY OF PRACTICE

Strengthen and expand collaboration between academic communities and public health organizations for surveillance, prevention, and response.

- → Targeted working groups with diverse membership from academic and public sectors
- → Guidance to state and local agencies on effective approaches for vector surveillance & control
- → Enhanced networks for communication, data sharing, and integration of research and public health practice

OUR COMBINED EFFORTS

- National survey of tick surveillance programs, addressing a gap in our knowledge of baseline \rightarrow program operations in tick surveillance and control in the US, and barriers to program success
- Aedes Challenge, an invasive mosquito forecasting challenge across the 5 CoE regions, \rightarrow engaging modelers with public health and vector control decision-makers
- Smartphone Apps allowing people living in high-risk areas for ticks and tick-borne diseases \rightarrow to receive educational materials, participate in tick exposure research, and access information for tick control & tools to protects themselves from tick bites

REGIONAL PROGRAM HIGHLIGHTS

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- Midwest Center
- Research Fellowship Program supporting 42 undergraduate and graduate students on \rightarrow research projects with academic and public health partners in the region
- \rightarrow Implementing studies to measure impact of mosquito larval control on adult populations and disease prevalence, and testing the impact of Ultra-Low-Volume spray treatments on adult mosquito populations in the Chicago area
- CoE academic and public health partners engage in rapid communication and collaboration \rightarrow in joint efforts to sample mosquitoes in areas with Jamestown Canyon Virus cases
 - \rightarrow Rapid response to the invasive Asian longhorned tick, providing open-access resources and initiating applied research projects to understand this tick's impact on human health
 - \rightarrow Over \$1 million in funding for academic trainees, supporting an innovative graduate training program in vector biology and public health in the Northeast
 - 23 applied research initiatives, measuring the impact of vector control efforts on human \rightarrow disease risk and identifying training gaps and needs for our nation's vector-borne disease workforce
 - \rightarrow CalSurv Gateway – a scalable system for rapid data reporting that services 117 US vector control and public health agencies

- PACIFIC SOUTHWEST CENTER OF \rightarrow Annual open call for training grants, providing over \$3.2 million in funding dedicated to students in the Pacific Southwest
 - \rightarrow 27 research and development projects at 10 universities examining new and existing ways to detect, characterize, and control threats from mosquito- and tick-borne diseases
 - Effective collaboration between academic and local governmental institutions through \rightarrow close working ties with 12 departments of health, vector control districts, and six academic institutes, enabling studies of new, cutting-edge vector control approaches

- \rightarrow Trained over 300 individuals through 3-month internships & existing and newly established workshops across the Southeast and Caribbean, addressing identified gaps from vector biology to leadership development
- \rightarrow Online Mosquito Training Program bringing the commercial pest management workforce into public health entomology

- Diverse projects evaluating interventions using traditional and innovative vector control \rightarrow techniques to reduce yellow fever mosquito abundance in South Texas
- Newly developed online courses in fundamentals of public health entomology, with \rightarrow inter-institutional graduate student exchange experiences among partnering universities
- Trained 2,309 individuals from vector control, animal control, and public health fields \rightarrow through 1-day workshops and 3-day Master of Vector Borne Disease Management Certification workshops throughout Texas, Louisiana, and Mississippi



Western Gulf Center of Excellence for Vector-Borne Diseases



VECTOR-BORNE DISEASES







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