



# NORTHEAST REGIONAL CENTER FOR EXCELLENCE IN VECTOR- BORNE DISEASES

## Graduate Masters of Science (MS) Program in Entomology: Vector-Borne Disease Biology at Cornell

The Northeast Regional Center of Excellence for Vector-Borne Diseases (NEVBD) together with Cornell's Department of Entomology are excited to announce a new Master of Science in Entomology: Vector-Borne Disease Biology graduate program. The NEVBD is funded through the US Centers for Disease Control and Prevention, with the overarching purpose of addressing the most pressing educational and applied research needs in vector-borne disease biology for the US Northeast region.

This interdisciplinary master's program will fall under the Medical and Veterinary Entomology Concentration, combining courses offered through entomology, public health, and veterinary medicine units at Cornell University.

Graduates in the program can expect to interact with medical entomologists, virologists, epidemiologists, field ecologists, modelers, and molecular biologists not only at Cornell, but also at leading academic, state government, and public health institutions in the Northeast through our collaborative Center for Excellence, including Columbia University, the Connecticut Agricultural Experiment Station and the New York State Department of Health.

**You can access more information about this program and learn how to apply by visiting the Cornell Department of Entomology website at <https://entomology.cals.cornell.edu/>.**

**DEADLINE FOR APPLICATIONS IS DECEMBER 1, 2017**

### THREE PRIMARY GOALS OF THE NEVBD

1. Conduct applied research to develop and validate effective vector-borne disease prevention and control tools and methods necessary to anticipate and respond to disease outbreaks
2. Train a cadre of public health entomologists with the knowledge and skills required to rapidly detect, prevent, and respond to vector-borne disease threats in the USA
3. Build effective collaborations between academic communities and public health organizations at federal, state, and local levels for vector-borne disease surveillance, response, and prevention



## CORE COMPETENCIES OF THE PROGRAM

- Understanding of arthropod biology, body plan, organ systems, behavior and physiology, infection biology, and immunity
- Knowledge of arthropod behavior, host finding, and sensory systems
- Arthropod taxonomy skills, with a focus on the classification and diversity of disease vector arthropods
- Practical skills with arthropod identification, demonstration of a solid understanding of disease vector evolutionary relationships
- Understanding of the current state of knowledge regarding insecticide resistance and methods for resistance monitoring, as well as an understanding of regulation of insecticides in the US and NY, CT, and the Northeast
- Knowledge of vector-borne pathogens (viruses, bacteria, protozoa) of global and regional importance
- A deep understanding and practical experience with surveillance methods for vectors and pathogens
- An understanding of the components of rigorous experimental design and data analysis

## Program Cost and Funding

The MS in Entomology: Vector-Borne Disease Biology program is an exciting opportunity to gain advanced training in relevant and novel topics in public health entomology. This is a two-year program, which includes a mandatory 10-week summer internship with a participating academic or public/environmental health partner.

To ensure successful engagement and completion of program competencies and projects, students will receive fellowship support from the Center of Excellence, which will cover full tuition and provide academic-year and full summer internship stipends and health insurance coverage.

For program and application information, please contact:

- Emily Mader, NEVBD Program Manager, [emm367@cornell.edu](mailto:emm367@cornell.edu)
- Stephanie Westmiller, Graduate Field Administrative Assistant, [st342@cornell.edu](mailto:st342@cornell.edu)

For questions about the educational course of study, please contact:

- Dr. Laura Harrington, Professor of Entomology, NEVBD Program Director, [lch27@cornell.edu](mailto:lch27@cornell.edu)

**Please note:** You will need to reference Dr. Laura Harrington as your principal investigator, and include your interest in the Medical and Veterinary Entomology: Vector-Borne Disease Biology program in your statement of purpose when applying to the program.