

# Opportunity Title: CDC Vector-Borne Bacterial Diseases Entomology and

Ecology Internship

Opportunity Reference Code: CDC-NCEZID-DVBD-2024-0097

Organization Centers for Disease Control and Prevention (CDC)

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A complete application consists of:

- An application
- Transcripts Click here for detailed information about acceptable transcripts
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- One educational or professional recommendation. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted.

All documents must be in English or include an official English translation.

### Description \*Applications will be reviewed on a rolling-basis.

**CDC Office and Location:** able with the Entomology and Ecology team in the Bacterial Diseases Branch within the Division of Vector-Borne Diseases (DVBD) of the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC) in Fort Collins, Colorado.

The Centers for Disease Control and Prevention (CDC) is one of the major operation components of the Department of Health and Human Services. CDC works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

**Research Project:** The Entomology and Ecology Team is responsible for public health and research activities aimed at diagnosis and characterization of vector-borne bacterial diseases, including Lyme disease, relapsing fever, plague, tularemia, and bartonellosis. The selected participant will participate in laboratory and field studies related to tick and tick-borne pathogen biology, surveillance and control. There may also be opportunities to participate in assay development, research on tick/pathogen control methods, enzootic maintenance of Lyme disease spirochetes, laboratory-based vector competency/transmission efficiency studies, and/or flea identification and associated field research.

**Learning Objectives:** Under the guidance of a mentor (Entomology and Ecology Team personnel), the selected participant will gain experience in one or more of the following: Pathogen detection in ticks using established protocols (DNA extraction, real-time PCR, next generation sequencing) Tick identification using published taxonomic keys and molecular assays designed to differential morphologically similar species Field collection of ticks Maintaining records in electronic databases, and Mapping and modeling tick distributions within a GIS framework.

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The learning objectives of the selected participant's appointment will be the ability to conduct predefined research independently, summarize results in tabular or text formats, prepare draft manuscripts in a publishable quality to enhance the participant's professional experience and career path, and comply with laboratory quality control policies. The participant will have opportunities to attend CDC seminars and training courses to enhance existing knowledge in microbiology/biological sciences, epidemiology and public health.

**Mentor(s):** The mentor for this opportunity is Sarah Maes (<u>hyn8@cdc.gov</u>). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: June 1, 2024. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for one year, but may be renewed upon recommendation of CDC and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

**Participant Stipend:** Stipend rates may vary based on numerous factors, including opportunity, location, education, and experience. If you are interviewed, you can inquire about the exact stipend rate at that time and if selected, your appointment offer will include the monthly stipend rate.

**Citizenship Requirements:** This opportunity is available to U.S. citizens only.

**ORISE Information:** This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and CDC. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

**Questions:** Please visit our <u>Program Website</u>. After reading, if you have additional questions about the application process please email <u>ORISE.CDC.NCEZID@orau.org</u> and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a bachelor's degree in one of the relevant fields. Degree must have been received within the past five years.



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Requirements

### Preferred skills:

- Microbiological and diagnostic techniques, molecular biological techniques
- Experience with arthropods (ticks, mosquitoes, or fleas)
- Experience with laboratory animals
- Effectively document and communicate testing results verbally and in writing
- Proficient in laboratory skills, such as PCR, DNA extraction
- Research collaboratively with colleagues

Eligibility • Citizenship: U.S. Citizen Only

- Degree: Bachelor's Degree received within the last 60 month(s).
- Discipline(s):
  - Environmental and Marine Sciences (3\_)
  - $\circ~$  Life Health and Medical Sciences (20 20
- Affirmation I certify that I have not previously been employed by CDC or by a contractor working directly for CDC. I understand that CDC does not permit individuals with a prior employment relationship with CDC or its contractors to participate as trainees in the ORISE program. (Exceptions may be granted for individuals who, since the previous CDC employment, have obtained a new STEM degree which necessitates training in a new field.)