

Position announcement: Laboratory Biologist

The Collier Mosquito Control District is seeking an innovative and motivated laboratory/vector biologist to execute a district-wide vector-borne disease surveillance program. The successful candidate will work closely with the field biologist and research entomologist to ensure that mosquito specimens are trapped, identified, processed and tested for the presence of mosquito-borne diseases using RT-qPCR, PCR and other biochemical and molecular tests as appropriate. The successful candidate will also be responsible for administering mosquito resistance assays, maintaining appropriate insect colonies, and maintaining laboratory inventories of reagents and materials. This position involves opportunities to research and develop new arboviral surveillance methodologies and techniques as well as opportunities to present original research at meetings and symposia. The successful candidate will be able to demonstrate experience with nucleic acid extractions, RT-qPCR methodologies, viral surveillance/detection and molecular biology laboratory techniques. This position begins no earlier than October 1st, 2016.

To apply please email (mclifton@cmcd.org):

- 1) A cover letter that demonstrates how your experience matches the job requirements.
- 2) A CV or resume that outlines your experience as it pertains to the position description.
- 3) A completed CMCD application (<http://www.cmcd.org/wp-content/uploads/2014/11/Employment-Application.pdf>)

Laboratory Biologist

PURPOSE OF JOB: Position exists to aid the Research Entomologist in the vector-borne disease surveillance program and participate in a wide range of operational and research activities.

ESSENTIAL DUTIES & RESPONSIBILITIES:

- 1) Participates in the design and execution of the vector-borne disease surveillance program for the District under the guidance of the CMCD Research Entomologist.
- 2) Conducts diagnostic tests for the presence of vector-borne diseases in mosquitoes including RNA/DNA extractions, PCR, RT-qPCR, and other biochemical and molecular tests as appropriate.

- 3) Prepares and maintains an inventory of laboratory reagents, chemicals and testing materials for disease surveillance.
- 4) Assists in the field collection of adult and larval mosquitoes for disease surveillance purposes.
- 5) Prepares pools of mosquitoes for testing and maintains an accurate inventory of processed specimens.
- 6) Responsible for maintenance of appropriate laboratory equipment and the research laboratory.
- 7) Maintains insectary and rears various species of mosquitoes for resistance testing.
- 8) Conducts routine bioassay and molecular resistance testing on various species of field-caught and laboratory-reared mosquitoes.
- 9) Gives presentations related to District research and operations, and may train mosquito control personnel in-house or at FMCA short courses.
- 10) Assists the Public Information Department when appropriate.
- 11) Prepares timely reports and updates to CMCD staff about the status of insecticide resistance and disease surveillance in the District.
- 12) Participate in the maintenance of the District's website and social media.

The above statements describe the general nature and level of work performed and is not intended to be a complete list of duties—additional responsibilities may be assigned by management.

EDUCATION/EXPERIENCE/TRAINING REQUIRED: Must have at least a B.S. degree (M.S. preferred) in Entomology, Biology or a related natural science from an accredited college or university. Must be certified in Public Health Pest Control within 12 months of employment. Must have a valid Florida driver's license. Knowledge of basic mosquito identification, biology and control is preferred. Experience with molecular biology techniques including RT-qPCR and nucleic acid extractions.

KNOWLEDGE/SKILLS REQUIRED: General mechanical ability and operating knowledge of basic hand held and power operated tools. Should be computer literate and familiarity with word processing, database and spreadsheet use is preferred. Ability to use microscopes, micropipettes, thermocyclers, fluorimeters and other laboratory equipment. Ability to accurately and completely follow instructions.

WORK ENVIRONMENT: Research is performed in the laboratory and in the field. The incumbent must often endure and tolerate hundreds of insect bites without the use of

repellents. The work requires the ability to work in a variety of outdoor environments to include, but not limited to, forests, swamps, marshes, open fields and roadsides. The position requires the ability to carry heavy loads over rough terrain, considerable bending and stooping and possible eye strain from prolonged use of microscopes and computers. The work also requires above average agility and dexterity in order to perform intricate operations in the field and the laboratory. The incumbent will be exposed to potentially toxic compounds such as insecticides, solvents and oils as well as biological hazards appropriate to a biosafety level 2 facility. While most work will be performed within a normal work day, occasional weekend, evening and early morning work will be required. The following machines are likely to be operated: pickup truck, SUV, small boat with outboard motor, ATV, drill, drill press, circular saw, jig saw, table saw, band saw, grinder, metal shear and metal break. The successful candidate must also be willing to interact in an educational capacity with wide-ranging types of audiences within the community and beyond.