Opportunity Title: Use of C. elegans Toxicity Testing to Fill Critical Knowledge Gaps for Safety Evaluation - FDA CFSAN
Opportunity Reference Code: FDA-CFSAN-2019-0005

Organization U.S. Food and Drug Administration (FDA)

Reference Code FDA-CFSAN-2019-0005

How to Apply 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
- Two educational or professional references

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

If you have questions, send an email to FDArpp@orau.org. Please include the reference code for this opportunity in your email.

Description An opportunity is available at the U.S. Food and Drug Administration (FDA), Center for Food Safety and Applied Nutrition (CFSAN) in Laurel, Maryland.

The Division of Toxicology (DOT) at FDA/CFSAN/OARSA establishes and conducts cohesive mission-relevant research in toxicology and molecular biology to help ensure the safety of the U.S. food supply.
In fulfilling this mission, the DOT:

- Provides Center and Agency leadership in the areas of in vitro and in vivo safety assessment of possible toxins present in the food supply.
- Recommends, develops, coordinates, and conducts research on the toxic effects of substances for which the Center has regulatory responsibilities, and may investigate mechanisms of the underlying toxicological reactions.
- Develops and/or qualifies the use of various in vivo/in vitro/ex vivo systems that may serve as adjuncts to, or replacements for, traditional animal models, and conducts research on the application of in vitro test systems, or batteries of in vitro tests, to assess the toxic effects of substances for which the Center has regulatory responsibilities.

DOT provides laboratory capabilities including: 1) the Center's laboratory facilities involved with the development and validation of alternative methods for screening food-related chemicals for toxicity, and 2) the Center's animal testing facilities when in vivo studies are necessary to answer specific questions about chemical hazards found in Foods, Cosmetics and Dietary Supplements.

The participant will be placed in a multidisciplinary team and will be trained on identifying, developing, and validating promising predictive toxicology methods so that they can be integrated into regulatory safety and risk assessments.

Under the guidance of a mentor, the participant will participate in the following areas:

- Maintenance of C. elegans axenic liquid cultures for reliable, repeatable assay data
- Maintenance of study records, laboratory equipment, and supplies used in analyses
- Correct, safe, and appropriate handling, labeling, storage, use, and disposal of toxic assay chemicals and Center compounds of concern
- Correct, safe, and appropriate use of general high-tech laboratory equipment including multiple types of microscopes, microfluidic/laser analyzers, and plate readers
- Correct, safe, and appropriate use of C. elegans-specific high-tech laboratory equipment

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including the Complex Object Parametric Analyzer and Sorter (COPAS) and the wMicroTracker infrared beam interruption detection device
- Laboratory experiment execution in compliance with quality assurance and safety guidelines developed by DOT and CFSAN
- Collection, processing, and analysis of data from C. elegans endpoints such as viability, population motility, individual activity, developmental timing, morphology, reproductive output, transgene and native gene expression
- Preparation of final reports including written summaries of results and conclusions
- Method development with attention to assay aspects that influence result consistency

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and FDA. The initial appointment is for one year, but may be renewed upon recommendation of FDA contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at FDA in the Laurel, Maryland, area. Participants do not become employees of FDA, DOE or the program administrator, and there are no employment-related benefits.

The Homeland Security Presidential Directive-12 (HSPD-12) mandates a background check be completed for both U.S. Citizens and foreign nationals. Foreign nationals must have resided in the U.S. for at least three (3) of the past five (5) years in order for FDA to be able to complete a background check.

Anticipated Appointment Start Date: March 31, 2019

Qualifications

The qualified candidate must have received a doctoral degree in one of the biological sciences. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Sterile technique
- C. elegans handling and strain maintenance
- C. elegans assays such as gene expression, larval growth, embryonic lethality, germline apoptosis, epigenetic toxicity, fertility assessments
- Rodent handling and necropsy analysis
- Project and experimental design
- Protocol development
- Appropriate statistical analysis
- Manuscript writing

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (4 👁)