

Opportunity Title: Gas Chromatography-Mass Spectrometry Fellowship - CDC

Opportunity Reference Code: CDC-NIOSH-2018-0088

Organization Centers for Disease Control and Prevention (CDC)

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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

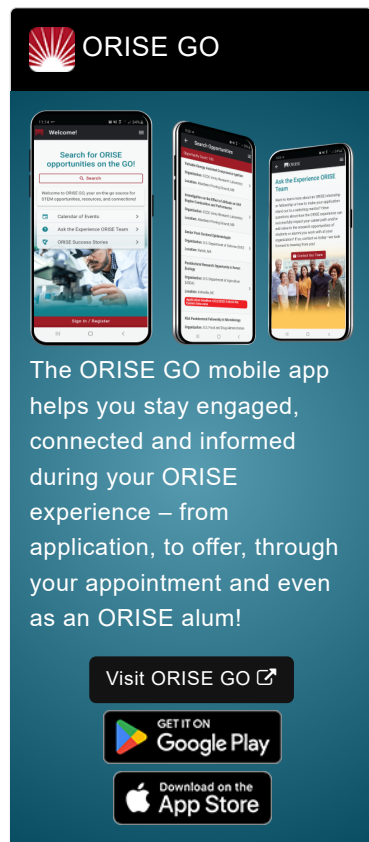
All documents must be in English or include an official English translation.

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

Description A research training opportunity is available within the Division of Applied Research and Technology (DART) located in the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC) in Cincinnati, Ohio. DART provides national and international leadership in research focused on the prevention of occupational illness and injury by developing and evaluating: methods and tools to identify and quantify workplace hazards (chemical, physical, organizational); and strategies and technologies to control exposures to workplace hazards.

The overarching learning experience of this research training opportunity is to assist in the development, evaluation and implementation of improved measurement methodologies that contribute to the reduction of adverse health effects associated with exposure to hazardous materials in the workplace. The research training opportunity will involve conducting laboratory research to develop and evaluate gas chromatography-mass spectrometry (GC-MS) methods.

The selected fellow will be trained in the operation and maintenance of GC-MS and thermal desorption (TD)-GC-MS systems. The fellow will also assist in designing and carrying out experiments as well as data analysis. Research will involve development and evaluation of sampling and analytical methods for measurement of compounds that are of interest in occupational exposure. Sampling methodologies typically involve collection of air samples using filters, sorbent tubes (including thermal desorption tubes), or whole air samplers. After methods are developed, evaluated, and validated, they are published in the NIOSH Manual of Analytical Methods (NMAM) and/or the peer-reviewed literature. The NMAM is a compilation of sampling and analytical methods that are evaluated according to established experimental protocols and performance criteria for use in workplace exposure monitoring. It is the primary repository for methods developed by DART. The NMAM is internationally respected and is one of



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the most highly accessed NIOSH web sites.

One of the projects to be undertaken involves further evaluation of the 4th Edition NMAM Method 2549 (Volatile Organic Compounds Screening) so that it can become an NMAM 5th Edition method. A second project involves development and evaluation of a quantitative method for volatile organic compounds by TD-GC-MS. There are also potential opportunities for new GC-MS method development projects, for example, in the area of polynuclear aromatic hydrocarbons (PAHs).

The selected fellow will be expected to have shown proficiency in communicating research results through written reports and publications.


**** Desired Start Date: July 1, 2018 ****

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 CDC. The initial appointment is for one year, but may be renewed upon recommendation of CDC 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 CDC in the Cincinnati, Ohio, area. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits.

Qualifications

- Ph.D. in Chemistry
- Knowledge of common laboratory instruments and techniques i.e. pipetting, balances
- Knowledge of laboratory methods and standard operating procedures
- Knowledge of gas chromatographs, mass spectrometers, and other instruments
- Basic computer skills and understanding of data management
- Knowledge of quality assurance/quality control procedures

**Eligibility
Requirements**

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([3](#) )