Opportunity Title: FDA Food Allergens Chemistry Internship
Opportunity Reference Code: FDA-CFSAN-2021-0004

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

Reference Code FDA-CFSAN-2021-0004

How to Apply

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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

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

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

Application Deadline 12/29/2020 3:00:00 PM Eastern Time Zone

Description

***Applications will be reviewed on a rolling-basis.**

A research opportunity is currently available at the U.S. Food and Drug Administration (FDA), Center for Food Safety and Applied Nutrition (CFSAN), Office of Food Safety (OFS) located in College Park, Maryland.

Research is needed to establish reliable analytical methods for detecting chemical hazards, such as allergens, in food and for developing controls to prevent contamination of food. Industrial and retail frying operations often process multiple food products of varying allergen content/profiles in a single fryer. Furthermore, fryers are not typically cleaned between products, and the fryer oil is often reused in order to reduce processing costs. Sieves, metal screens, paper filters and other filtration devices are used to maintain oil quality, particularly when frying oil is reused. At present, little information has been published on the transfer of allergens from a product to oil during industrial and retail frying operations, and the effects of filtration treatments on removal or control of allergens that may be present in frying oil. This project will trace seafood (finfish; crustacean shellfish) allergens, gluten and milk found in uncoated, breaded, and battered seafood products into oil used during industrial frying of such products. Subsequently, experiments will determine the extent of transfer of allergens and gluten from the contaminated frying oil to other foods such as an uncoated potato product (French fries). Vat and continuous fryers will be used to simulate the conditions found during industrial production of fried foods. Experiments will evaluate the effectiveness of passive and active oil filtration treatments on removal of allergens from contaminated oil. Finally, analytical methods will be evaluated and/or developed for their ability to accurately quantify allergens in heated frying oil and fried foods.

Under the guidance of a mentor, the participant will investigate 1) analytical methods for detecting allergens in frying oil and in fried (thermally-treated) food, 2) the transfer of allergens from foods to frying oil and other foods prepared in reused oil, 3) the effectiveness of active and passive oil filtration systems for removing allergens from contaminated frying oil and 4) the differences between allergen transfer in batch vs continuous fryers. This project will lead to an enhanced understanding of the factors affecting allergen cross-contact during industrial batch and continuous frying operations and will result in the development of best practices for controlling allergens during the production of fried foods.

It is anticipated that through this position, the participant will receive training and become proficient in 1) use of analytical methods for detection of allergens in food, 2) designing and performing pilot plant and lab-based processing studies, and 3) presentation and writing of research presentations and papers.

Anticipated Appointment Start Date: January 4, 2021

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 six months, but may be renewed upon recommendation of FDA contingent on the availability of funds. The participant will receive a monthly stipend commensurate with

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educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at FDA in the College Park, Maryland area. Participants do not become employees of FDA, DOE or the program administrator, and there are no employment-related benefits.

Completion of a successful background investigation by the Office of Personnel Management is required for an applicant to be on-boarded at FDA. OPM can complete a background investigation only for individuals, including non-US Citizens, who have resided in the US for a total of three of the past five years.

FDA requires ORISE participants to read and sign their FDA Education and Training Agreement within 30 days of his/her start date, setting forth the conditions and expectations for his/her educational appointment at the agency. This agreement covers such topics as the following:

- Non-employee nature of the ORISE appointment;
- Prohibition on ORISE Fellows performing inherently governmental functions;
- Obligation of ORISE Fellows to convey all necessary rights to the FDA regarding intellectual property conceived or first reduced to practice during their fellowship;
- The fact that research materials and laboratory notebooks are the property of the FDA;
- ORISE fellow's obligation to protect and not to further disclose or use non-public information.

Qualifications

The qualified candidate should have received a bachelor's or master's degree in one of the relevant fields, or be currently pursuing the degree with completion by January 2021. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Strong academic records and experience in analytical chemistry, food chemistry and/or protein analytical methods
- Familiarity with assays such as ELISA tests and protein-based tests for detecting and quantifying food allergens in food
- Ability to interpret and evaluate the results of analysis to determine validity and scientific significance
- Experience writing scientific reports and manuscripts which include, diagrams, charts, graphs, etc. related to research activities and outcomes
- Excellent verbal and written communication skills

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or anticipated to be received by 1/1/2021 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (3 👁)
  - **Life Health and Medical Sciences** (2 👁)