Opportunity Title: FDA Mechanisms of SARS-CoV-2 Cellular Entry Internship
Opportunity Reference Code: FDA-CDER-2020-0591

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

Reference Code FDA-CDER-2020-0591

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
- 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.CDER@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 3/31/2021 3:00:00 PM Eastern Time Zone

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

A research opportunity is available in the Office of Pharmaceutical Quality/Office of Biotechnology Products (OBP), Center for Drug Evaluation and Research (CDER), Food and Drug Administration (FDA) located in Silver Spring, Maryland.

This project explores the mechanisms of SARS-CoV-2 spike protein-mediated cell fusion using engineered non-infectious virus-like particles (VLP), focusing on the effect of different cytokines in human lung-derived epithelial cell lines, primary human lung epithelial cells, and/or human macrophages. A variety of similarly generated VLP, pseudotyped with alternative virus envelope glycoproteins will be studied as well. The project will also investigate VLP-induced cytokine secretion in various cell types and evaluate potential virus entry inhibitors.

Under the guidance of the mentor, the participant will learn laboratory and research techniques to perform experiments utilizing a variety of methods such as PCR, DNA purification, electrophoresis, Western blot analysis, flow cytometry, fluorescent microscopy, cell culture, etc. In addition, the participant will gain understanding of the mechanisms of virus entry.

Anticipated Appointment Start Date: Fall 2020

The Center for Drug Evaluation and Research (CDER) performs an essential public health task by making sure that safe and effective drugs are available to improve the health of people in the United States. As part of the U.S. Food and Drug Administration (FDA), CDER regulates over-the-counter and prescription drugs, including biological therapeutics and generic drugs. This work covers more than just medicines.

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 Silver Spring, Maryland, area. Participants do not become employees of FDA, DOE or the program administrator, and there are no employment-related benefits.

Opportunity Title: FDA Mechanisms of SARS-CoV-2 Cellular Entry Internship
Opportunity Reference Code: FDA-CDER-2020-0591

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.

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. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Previous laboratory experience with basic molecular biology techniques (PCR, DNA purification, electrophoresis, Western blot analysis, etc.)
- Experience with cell culture

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (4 👁)