Opportunity Title: FDA Biochemistry of Blood Coagulation Fellowship
Opportunity Reference Code: FDA-CBER-2022-35

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

Reference Code FDA-CBER-2022-35

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

Application Deadline 12/30/2022 3:00:00 PM Eastern Time Zone

Description ***Application will be reviewed on a rolling-basis**.

A research opportunity is available with the Office of Tissue and Advanced Therapeutics (OTAT) at the Center for Biologics Evaluation and Research (CBER), U.S. Food & Drug Administration (FDA) in Silver Spring, Maryland.

This fellowship will be focused on investigating the biochemical mechanisms of human blood coagulation, to enhance the safety and efficacy of products that treat blood coagulation disorders. The selected participant will be studying mechanisms of interactions of blood coagulation factor VIII with its plasma clearance receptors and learn various methodologies to model and test these interactions in vitro. The participant will receive mentoring on fulfilling the project, which will include collaboration with researchers within and outside the FDA.

Through experience gained from this appointment, the fellow will learn valuable methods in biochemistry and molecular biology that are desired job skills in industry.

In more details, the research program of the lab is described at: https://www.fda.gov/vaccines-blood-biologics/biologics-research-projects/towards-longer-acting-factor-viii-products-betterpurity

The following papers provide examples of the research work performed in our lab:

- 1. Marakasova et al (2021) Molecular chaperone RAP interacts with LRP1 in a dynamic bivalent mode and enhances folding of the ligand-binding regions of LDLR family receptors. J. Biol. Chem. 297(1):100842-59.
- 2. Chun et al (2021) Characterization of protein unable to bind von

Willebrand factor in recombinant factor VIII products. J. Thromb. Haemost. 19(4):954-66.
- 3. Shestopal et al (2017) Expression and characterization of a codon-optimized blood coagulation factor VIII. J. Thromb. Haemost. 15(4):709-20.
- 4. Kurasawa et al (2015) Cluster III of the low-density lipoprotein receptor-related protein 1 binds activated blood coagulation factor VIII. Biochemistry 54(2):481-9.
- 5. Kurasawa et al (2013) Mapping the binding region on the low-density lipoprotein receptor for blood coagulation factor VIII. J. Biol. Chem. 288(30):22033-41.

Anticipated Appointment Start Date: September 1, 2022. Start date is flexible and will depend on a variety of factors.

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.

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 master's or doctoral degree in one of the relevant fields (e.g. Biological Sciences, Chemistry), or be currently pursuing the degree with completion by the appointment start date. Degree must have been received within the past five years.

Preferred Sills:

- Biochemistry and molecular biology techniques
- Designing plasmid constructs
- Bacterial and tissue cultural techniques
- Recombinant protein expression
- Purification and PAGE/Western blot analysis

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- Ability to adapt relevant functional assays with proteins
- Knowledge of chemical kinetics and surface plasmon resonance is a plus.

Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 9/1/2022 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Life Health and Medical Sciences** (48 👁)

Affirmation Have you lived in the United States for at least 36 out of the past 60 months? (36 months do not have to be consecutive.)