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Opportunity Title: FDA Computational Toxicology Fellowship
Opportunity Reference Code: FDA-CDER-2019-0453

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

Reference Code FDA-CDER-2019-0453

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. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted.

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 3/31/2020 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 New Drugs/Immediate Office, Center for Drug Evaluation and Research (CDER), Food and Drug Administration (FDA) in Silver Spring, Maryland.

This project in the Office of New Drugs/Immediate Office will research the use of standardized electronic toxicology study SEND datasets to develop quantitative structure activity relationship (QSAR) models that can be used to predict various general toxicology study endpoints, e.g. hepatotoxicity, renal toxicity. These models may be useful in the toxicological qualification of compounds for which it may not be practical or feasible to conduct general toxicology studies, i.e. unstable impurities, major human metabolites, and leachables/extractables associated with the container closure system of parenteral products.

Under the guidance of a mentor the participant will be trained on the following topics:

- The SEND data standard with respect to how it encodes toxicology study results
- The fundamentals of QSAR analysis and model building
- Development of methods to detect toxicity signals in SEND datasets
- Deployment of QSAR models to predict the detection of toxicity, based on signals in SEND datasets

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.

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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 doctoral degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Strong organizational, analytical, interpersonal, and research skills in biology, pharmacology, toxicology, or a related field of biomedical science
- Familiarity with R, Python, MATLAB, Perl, JavaScript, Java, or a similar programming language to analyze and visualize scientific data; and predictive modeling, machine learning, and big data analytics

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (2 👁)
  - **Computer, Information, and Data Sciences** (2 👁)
  - **Life Health and Medical Sciences** (3 👁)
  - **Mathematics and Statistics** (1 👁)
  - **Social and Behavioral Sciences** (1 👁)