Opportunity Title: Computational Toxicology
Opportunity Reference Code: EPA-ORD-NCCT-2016-02

Organization U.S. Environmental Protection Agency (EPA)

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

Description A postdoctoral research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD). The appointment will be served with the National Center for Computational Technology (NCCT) in Research Triangle Park, NC.

NCCT is responsible for developing new computational tools and providing quantitative analysis for improving environmental risk assessments and regulatory decisions pertaining to chemical safety and sustainability. NCCT has been a driving force in the Endocrine Disruptor Screening Program in the 21st Century (EDSP21) project and has generated large datasets covering estrogen, androgen, thyroid and steroidogenesis. This project aims to develop a computational and mathematical modeling of chemical perturbations of steroidogenesis for use in the EDSP21 project.

The participant will be collaborating with a multidisciplinary research team including scientists at EPA and other partners. The research activities will include: (1) analyzing high-throughput screening data; and (2) developing models of steroidogenesis. A research plan will be developed and the project will be conducted under the guidance of a mentor. The participant will have latitude in exercising independent initiative and judgment in the research commensurate with the level of training.

The ToxCast research program has generated bioactivity data on thousands of chemicals across roughly one thousand assay endpoints. A subset of these assays measure bioactivity or hormones along the steroidogenesis pathway and require synthesis to provide optimal interpretation for chemical prioritization and follow-up testing efforts.

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Through this project, the participant will gain education and training in the general areas of computational biology and toxicology, endocrine biology, and mathematical modeling. Research findings will be communicated through peer-reviewed publications, national meetings of professional societies, and research-in-progress seminars.

The participant will be involved in highly visible predictive toxicology efforts as part of the computational toxicology research projects, will be engaged with researchers world-wide, and will have the opportunity to be published in peer-reviewed journals and present research results at local and national meetings.

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 EPA.

Qualifications

Applicants must have received a doctoral degree in computer science, environmental science, biology, cellular or molecular biology, pharmacology, environmental health, biochemistry, toxicology, mathematics, or chemistry within five years of the desired starting date, or completion of all requirements for the degree should be expected prior to the starting date. Proficiency in computational biology with an emphasis on steroidogenesis or other areas of endocrine biology is desirable.

The appointment is full-time for one year and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend. Funding may be available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee**.

The mentor for this project is Matt Martin (martin.matt@epa.gov). The desired start date is May 16, 2016.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1 👁)
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Environmental and Marine Sciences** (1 👁)
  - **Life Health and Medical Sciences** (6 👁)
  - **Mathematics and Statistics** (4 👁)