Opportunity Title: NIH Postdoctoral Opportunity in Advancing PBPK Modeling of Fetoplacental Exposure
Opportunity Reference Code: NIH-DPCPSI-ORIVA-PBPK-2026

Organization National Institutes of Health (NIH)

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How to Apply Click on ***Apply*** below to start your application. An initial review of applications will occur on **July 1, 2026**. Thereafter, applications will be reviewed on a rolling-basis throughout the 2026 calendar year, and selections made as projects for participation become available.

Description This postdoctoral research opportunity is currently available within the National Institutes of Health (NIH), ORIVA (Office of Research Innovation, Validation, and Application). This postdoctoral research opportunity aims to generate quantitative data on placental transfer, permeability, and tissue-specific exposure to improve Physiologically Based Pharmacokinetic (PBPK) models, enabling the translation of in vitro toxicity findings into predictive assessments of human in vivo exposure.

What will I be doing?

- The participant will develop practical skills in advanced cell culture and human-relevant placenta-cardiomyocyte co-culture systems, including experimental design, compound exposure studies, and quantitative assessment of placental transfer and fetal tissue exposure. Training will include laboratory techniques such as permeability and transfer kinetics assays, concentration-response analysis, microscopy, biomarker assessment, and data acquisition using relevant analytical platforms. Training in mitochondria, metabolism and multiomics approaches will also be provided. Under the guidance of a mentor, the participant will also learn how the generated experimental data can be applied in PBPK model parameterization, model refinement, and validation. In addition, the project will strengthen critical thinking, interdisciplinary collaboration, scientific communication, and data interpretation skills within the context of New Approach Methodologies (NAMs) for human based risk assessment.

Why should I apply?

As a participant in a STEM research learning program, you will have the opportunity to explore and understand various NIH support mechanisms and collaborative research initiatives involving NIH. You will be introduced to NIH databases and tools for data analysis, gaining insight into how to identify metrics and key indicators for evaluating programs. Through guided mentorship, you will learn how to assess the outcomes of different types of collaborative research programs, compare their effectiveness, and develop informed recommendations for future initiatives based on available data. This experience is designed to enhance your analytical skills and deepen your understanding of program evaluation in a research-focused environment.

Where will I be located?

Fellows are expected to be fully engaged in-person at Research Triangle Park, NC.

What financial provisions will I receive?

The selected candidates will receive a monthly stipend to help offset living and other expenses during this appointment. Stipend rates are determined by NIH officials and

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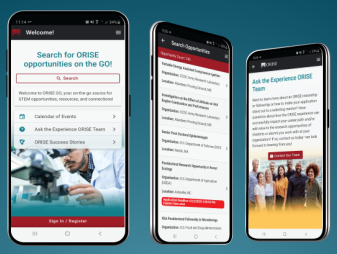

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are based on the candidate's academic and professional background. In addition, NIH may provide a health insurance supplement to cover the monthly premium costs if you elect the ORAU/ORISE health insurance plan, as necessary.

What is the length of the appointment?

The appointment will initially be for one year but may be renewed upon recommendation of NIH and is contingent on the availability of funds, for a total of up to 5 years.

When are selections made?

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What is the Nature of the Appointment?

This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and the National Institutes of Health (NIH). Participants do not become employees of NIH, DOE, ORISE, nor ORAU, and there are no employment-related benefits.

Qualifications

The qualified candidate must be 18 years or older and should have received a doctoral degree in one of the relevant fields. The candidate must have cell culture experience ideally with placental or cardio physiology and/or modeling. The degree must have been received within the last five years of the appointment start date. Current graduate students who are nearing degree completion may apply but must have completed their degrees by the start of the fellowship.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page for information about the valid immigration statuses that are acceptable for program participation.

A completed application consists of:

- A complete Zintellect profile.
- A program specific application submitted in Zintellect.
- Transcript(s) – Submit a copy of your most recent official transcript. For this opportunity, an unofficial transcript or copy of the student academic record printed by the applicant or by academic advisors from internal institution systems may be submitted to complete the application requirement, if you do not have a copy of your official transcript at the time of application. The transcript or academic record must include the name of the academic institution, name of the student, courses completed/in progress, grades and degree expected/awarded. A copy of your official transcript and/or letter showing proof of your degree may be required prior to starting the appointment. All transcripts must be in English or include an official English translation.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list.

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- One Recommendation - Applicants are required to provide contact information for at least one recommendation in order to submit the application. Recommendations should be from professionals who can speak to your abilities and potential for success, as well as your scientific capabilities and personal characteristics. Recommendation requests must be sent through the Zintellect application system. Recommenders will be asked to complete a recommendation in Zintellect. Recommendations submitted via email will not be accepted. Recommendations must be submitted before your application can be reviewed.

All documents submitted must be in English or include an official English translation. All social security numbers, student identification numbers, and/or dates of birth should be removed (blanked out or blackened out, made illegible, etc.) prior to uploading into the application system.

If you have questions, contact us at NIHprograms@orau.org. Please include the reference code NIH-DPCPSI-ORIVA-PBPK-2026 for this opportunity in your email.

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Stipend $88,000.00 Yearly

Point of Contact Daphne

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Engineering** (1 👁)
  - **Life Health and Medical Sciences** (10 👁)
- **Age:** Must be 18 years of age

Affirmation I affirm that I have received my doctoral degree within the last five years or am currently enrolled in a PhD program. If currently enrolled, I understand that my degree must be received before the appointment start date.