

**Opportunity Title:** CDC Macaque Models of HIV Treatment and Prevention

Internship

**Opportunity Reference Code:** CDC-NCHHSTP-2023-0183

**Organization** Centers for Disease Control and Prevention (CDC)

**Reference Code** CDC-NCHHSTP-2023-0183

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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.

**Application Deadline** 10/1/2023 3:00:00 PM Eastern Time Zone

**Description** \*Applications will be reviewed on a rolling-basis, and this posting will remain open until a qualified candidate is identified.

**CDC Office and Location:** A research opportunity is currently available in the Laboratory Branch (LB) of the Division of HIV Prevention (DHP) within the National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. **Successful applicants will be required to relocate to Atlanta, GA.**

The Centers for Disease Control and Prevention (CDC) is one of the major operation components of the Department of Health and Human Services. CDC works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

**Research Project:** The purpose of the project “Macaque models of HIV treatment and prevention” is to identify in animal models novel long-acting HIV treatment and prevention modalities that can i) maximize virus suppression in persons living with HIV or ii) prevent infection when used for pre-exposure prophylaxis (PrEP) in uninfected individuals. The selected participant will be researching alongside a mentor within the HIV Laboratory branch at the Division of HIV Prevention at CDC. The Laboratory Branch has unique expertise in drug pharmacokinetics and macaque models of virus suppression and PrEP. The research assignment requires the use of molecular assays to detect and characterize RNA and DNA sequences in animals infected with simian HIV (SHIV).

Specific activities include:

- Perform a variety of molecular and serologic diagnostic assays to monitor infection with SHIV in macaques.



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- Prepare antiretroviral drug cocktails and SHIV stocks for in vivo studies in macaques.
- Process blood, mucosal fluids, and tissues using established procedures and make adjustments as needed. Assist in the isolation of cell subpopulations from tissues for antiretroviral drug measurements.
- Perform molecular biology techniques including cloning and sequence analysis to characterize viruses from infected animals, and assess antiretroviral drug resistance profiles and evolution of viral genomes.
- Propagate and characterize new virus stocks in vitro including their infectious titer and phenotypic susceptibility to antiretroviral drugs
- Develop and apply new PCR assays and make adjustments to improve assay performance.

**Learning Objectives:**

- Learn the latest developments of HIV prevention and treatment.
- Acquire knowledge on animal models of pre-exposure prophylaxis for HIV prevention.
- Acquire knowledge on preclinical testing of novel HIV prevention modalities including on demand and long-acting HIV pre-exposure prophylaxis.
- Perform molecular and serologic assays to monitor HIV or SIV infection status.
- Acquire knowledge on antiretroviral drugs and drug pharmacology.

**Mentor(s):** The mentor for this opportunity is Charles Dobard ([gok5@cdc.gov](mailto:gok5@cdc.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** Fall 2023. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for one year, but may be renewed upon recommendation of CDC and is contingent on the availability of funds.

**Level of Participation:** The appointment is full-time.

**Participant Stipend:** The participant will receive a monthly stipend commensurate with educational level and experience.

**Citizenship Requirements:** This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR).

**ORISE Information:** 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 CDC. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

**Questions:** Please visit our [Program Website](#). After reading, if you have additional questions about the application process please email [ORISE.CDC.NCHHSTP@ornl.gov](mailto:ORISE.CDC.NCHHSTP@ornl.gov) and include the reference code for this opportunity.

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**Qualifications** The qualified candidate should have received a bachelor's, master's or doctoral degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Experience in the use of molecular and serological diagnostic assays to monitor viral infection.
- Some experience in processing biological specimens and in sequence analysis.
- Knowledge regarding antiretroviral drugs, drug resistance, and animal models of virus infection.

**Eligibility** • **Citizenship:** LPR or U.S. Citizen

**Requirements** • **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).

- **Discipline(s):**
  - **Life Health and Medical Sciences** ([6](#) )

**Affirmation** I certify that I have not previously been employed by CDC or by a contractor working directly for CDC. I understand that CDC does not permit individuals with a prior employment relationship with CDC or its contractors to participate as trainees in the ORISE program. (Exceptions may be granted for individuals who, since the previous CDC employment, have obtained a new STEM degree which necessitates training in a new field.)