

Opportunity Title: CDC Postdoctoral Fellowship in Molecular Genetics/Genomics - Translational
Opportunity Reference Code: CDC-NCEZID-DHCPP-2022-0271

Organization Centers for Disease Control and Prevention (CDC)

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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 12/12/2022 3:00:00 PM Eastern Time Zone

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

CDC Office and Location: A fellowship opportunity is available in the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of High-Consequence Pathogens and Pathology (DHCPP), Chronic Viral Diseases Branch (CVDB) at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia.

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: Under the guidance of a mentor, the selected candidate will participant with projects related to Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). S/he will participate with multi-site clinical studies, biorepository establishment, and development of specimen management databases, specimen processing, molecular testing, sequence and data analyses, and laboratory quality management system.

Learning Objectives: Specific training opportunities may include:

- Advance knowledge of ME/CFS pathogenesis using state of the art technologies in genotyping, gene expression and epigenetic (methylation, microRNAs) studies



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- Develop/implement simplified approaches for identification and validation of molecular targets of diagnostic, or therapeutic value
- Identification of molecular/biological subtypes of ME/CFS that have genetic underpinning with quantitative trait loci (QTLs) associated with gene expression (eQTL), protein (pQTL) or metabolites QTL and applying appropriate genetic statistical modeling/bioinformatics/computational knowledge
- Management of biorepository databases like Freezerworks. This can involve building adequate IT infrastructure to track and monitor specimen location, handling, processing, checking-in and checking-out of biological materials and associated data sets representing several large-scale case-control and longitudinal studies. Develop specimen life-cycle attributes with the knowledge of relational database structure
- Participate in assay optimization and development to carry out molecular epidemiologic studies, that may be focused on pathways involved with neuroimmune regulation, inflammation and ion channels and transporters
- Cataloguing, processing, and storing biologic samples while observing all safety guidelines
- Nucleic acid extraction (DNA and RNA), purification and evaluation of quality
- Documentation of laboratory activities, data, summaries
- Quality control and safety procedures necessary for the performance of laboratory protocols and working with biohazard materials
- Participate in laboratory quality management activities
- Participate in the weekly Branch meetings

Mentor(s): The mentor(s) for this opportunity is Mangalathu S. Rajeevan (mor4@cdc.gov). Please contact them if you have questions about the nature of this research.

Anticipated Appointment Start Date: September 15, 2022. 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

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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.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).





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

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields (e.g. Molecular Biology). Degree must have been received within five years of the appointment start date.

Preferred Skills:

- Some experience in translational research using approaches and tools of genomics/molecular genetics
- Prior experience with biorepository establishment, database structure and management
- Prior experience with molecular biology methods including next generation sequencing, and in the use of bioinformatics pipeline
- Familiarity with biological pathways

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (1 )
 - **Computer, Information, and Data Sciences** (2 )
 - **Engineering** (2 )
 - **Life Health and Medical Sciences** (48 )

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.)