

Opportunity Title: CDC Fellowship in Understanding Emergence of Azole-resistant *Aspergillus Fumigatus* in the U.S.

Opportunity Reference Code: CDC-DFWED-2022-0133

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 5/23/2022 3:00:00 PM Eastern Time Zone

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

CDC Office and Location: A research opportunity is available with the Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) in the National Center for Emerging and Zoonotic Infectious Diseases (NEZID) 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: The Mycotic Diseases Branch (MDB) is looking for a candidate to participate in cross cutting research activities at the intersection of laboratory and data and quality teams. This research project is aimed at the development and implementation of metagenomic assays for detection of fungal pathogens and antimicrobial resistance determinants in mixed environmental samples. Training opportunities include a variety of laboratory and bioinformatics methods and field investigations.

Learning Objectives: Under the guidance of a mentor, learning objectives include:

- Development and validation of molecular detection methods for Cyp51A TR34/TR46 markers in the environment
- Development and validation of an air and water sampling



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strategy for detection of azole-resistant *A. fumigatus* in the environment

- Training on bioinformatics tools for whole genome sequencing of *A. fumigatus*
- Training on isolation and identification of fungi from the environment
- Training on antifungal susceptibility testing
- Development and validation of surface and dust sampling methods for molds
- Development and validation of molecular detection methods based on targeted amplification and sequencing of rDNA genes
- Training on bioinformatics tools for analysis of metagenomics samples
- Training on culture and identification of pathogenic fungi
- Participation in a hospital mycobiome project to understand the prevalence of molds in healthcare environment
- If available, participation in an environmental investigation of a mold outbreak

Mentor(s): The mentor for this opportunity is Lynette Benjamin (bil0@cdc.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: **May 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, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details page](#) of the program website for information about the valid immigration statuses that are acceptable for program participation.

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.

The successful applicant(s) will be required to comply with

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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@orau.org 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. Microbiology, Molecular Biology), or be currently pursuing the degree with completion by May 31, 2022. Degree must have been received within the past five years.

Preferred skills:

- Knowledge of bioinformatics and wet-lab methods (or willingness to learn these tools)
- Interest in microbial ecology and willingness to participate in field work

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2022 11:59:00 PM.
- **Academic Level(s):** Graduate Students or Postdoctoral.
- **Discipline(s):**
 - **Life Health and Medical Sciences** (48 )