

Opportunity Title: Postdoctoral Fellowship in Antibacterial Drug Discovery
Opportunity Reference Code: MRMC-WRAIR-2020-0010

Organization U.S. Department of Defense (DOD)

Reference Code MRMC-WRAIR-2020-0010

How to Apply Components of the online application are as follows:

- Profile Information
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - [Click here for detailed information about acceptable transcripts](#)
- 1 Recommendations

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system.

If you have questions, send an email to ARMY-MRMC@ORISE.ORAU.gov. Please list the reference code of this opportunity in the subject line of the email.

All documents must be in English or include an official English translation.

Description

The Walter Reed Army Institute of Research (WRAIR) is offering a postdoctoral opportunity in the Malaria program within the Drug Discovery Department, Experimental Therapeutics Branch. This postdoctoral opportunity will support an exciting collaboration between WRAIR and the Defense Advanced Research Projects Agency (DARPA). This DARPA-funded research project will focus on artificial intelligence to mine large libraries of small molecules for antimicrobial properties *in silico*. Within this collaboration, WRAIR will provide *in vitro* and *in vivo* testing of these compounds for antimicrobial activity against multidrug-resistant bacteria, parasites, and viruses with the desired goal of collaboratively discovering novel antimicrobial therapies and to confirm hits identified using AI.


As an ORISE participant you will support our mission in executing established *in vitro* drug screening assays against multidrug-resistant bacteria, and other assays addressing Department goals for antimicrobial (including malaria, bacteria, and/or viruses) drug discovery and development as needed. You will gain hands-on experience in collaboration exchanges, data/results analysis, generation of research reports and manuscripts for publication, along with opportunities for intra- and extramural presentations.

During your appointment you will collaborate with a research team focused on the screening of small molecules for antibacterial activity, and will engage with the antibiotics-section lead, intra- and extramural researchers to coordinate small molecule testing, data analysis, and delivery/discussion of results. Under the guidance of a mentor, you will also execute small-molecule screening assays and subsequent determination of minimum inhibitory concentrations for publications and presentations at scientific conferences. This learning experience will also provide you with additional opportunities for authorship on both collaborative and independent research efforts in antimicrobial drug discovery will be available.

Additional learning objectives will include:




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- Maintain and prepare cultures of bacteria
- Make detailed observations, document results, perform data analysis, data management/curation using internal CoreLIMS system, and upload/transfer data to collaborators.
- Project planning (goals, timelines, and resources)

For more information on WRAIR please visit www.wrair.army.mil for more information.

Appointment Length

This appointment is a twelve month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

Participant Benefits

Participants will receive a stipend to be determined by WRAIR. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement. *Participants are eligible to purchase health insurance through ORISE.*
- Relocation Allowance
- Training and Travel Allowance

Nature of Appointment

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

Qualifications




Minimum Qualifications:

- Ph.D. or equivalent degree in Biological or Biomedical Sciences with ideally 2-5 years of research experience.
- Excellent written and verbal communication skills
- Background in microbiology/bacteriology.

Preferred Qualifications:

Top-tier candidates will have a strong publication record studying pathogenic and/or multidrug-resistant bacteria, in particular Gram-negative organisms. Experience in drug discovery/testing is an advantage. Desirable qualities include self-motivation, exemplary critical-thinking skills, the ability to troubleshoot assays, as well as an ability to work with others while maintaining a pleasant attitude.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (12 )
 - **Environmental and Marine Sciences** (12 )
 - **Life Health and Medical Sciences** (45 )