

Opportunity Title: Postdoctoral fellowship in Malaria Drug Discovery

Opportunity Reference Code: MRMC-WRAIR-2020-0009

Organization U.S. Department of Defense (DOD)

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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 (blacked 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.

As an ORISE participant you will support our mission in executing established *in vitro* drug screening assays against Plasmodium parasites 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 handling collaboration exchanges, data/results analysis, generation of research reports and manuscripts for publication, along with opportunities for intra- and extramural presentations.

This learning experience will allow you to build upon your current knowledge and skills to perform small-molecule screening assays, subsequent determination of the half maximal inhibitory concentration, and mechanistic or structural evaluation using basic molecular biology techniques as required. Under the guidance of a mentor, you will provide research related progress/technical reports and experimental data as requested and present findings to the group and/or to the department during Project Review Meetings. You will also gain considerable latitude to develop and carry forward new, independent projects and carry out cutting-edge parasite biology research for high impact publications in peer-reviewed research journals and for future funding applications.

Additional learning objectives will include:

- Produce, coordinate, and maintain parasite cultures or infected mosquitoes for use in the *in vitro* assays
- Participate in project planning (goals, timelines, and resources)



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- Make detailed observations, document results, perform data analysis, data management/curation using internal CoreLIMS system, and upload/transfer data to collaborators
- Attend and present at relevant national scientific conferences, if required by Department of Discovery.

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/parasitology

Preferred Qualifications:

The desired malaria postdoctoral candidate will have a strong publication record in parasitic (malaria preferred) research and drug discovery. Experience in small molecule drug discovery, Plasmodium pre-erythrocytic biology, and experience with *in vitro* cell culture (preferably primary hepatocytes and hepatoma cell lines) is highly preferred. Experience working with mosquitoes, salivary gland dissections, malaria liver-stage related assays, and microscopy is an advantage. Other important qualities include: an ability to work independently, high self-motivation, strong critical-thinking skills, and exemplary communication and collaboration skills.

- 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](#) )

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