Opportunity Title: Bioinformatics Research Fellowship in Microbial Genetics at WRAIR
Opportunity Reference Code: MRMC-WRAIR-2022-0001

Organization U.S. Department of Defense (DOD)

Reference Code MRMC-WRAIR-2022-0001

How to Apply Click on *Apply* at the bottom of the opportunity to start your application.

Description The Walter Reed Army Institute of Research (WRAIR) is offering a post-Bachelor's fellowship in the Multidrug-Resistant Organism Repository and Surveillance Network (MRSN) Branch.

The Multidrug-Resistant Organism Repository and Surveillance Network (MRSN) is a unique entity that serves as the primary surveillance organization for antibiotic-resistant bacteria across the Military Healthcare System (MHS) . The laboratory receives and processes (routine ID, Antibiotic Susceptibility Testing and Whole Genome Sequencing) ~1,000 new isolates of ESKAPE+ pathogens every month from military hospitals across the world, and routinely collaborates with other U.S. Government agencies, allied nations, and academic research institutions.

What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers to perform comparative genomic analysis of hundreds of epidemiology-linked isolates (ongoing outbreaks in military hospitals) of MDR Enterococcus spp. Staphylococcus spp., Klebsiella spp., Acinetobacter spp., Pseudomonas spp., Enterobacter spp., and Escherichia coli. A variety of bioinformatic tools and software will be utilized to analyze bacterial genomes for the purpose of outbreak investigations and local, national, and international bacterial epidemiology. Within this research, you will have the chance to develop new and innovative methods for analyzing bacterial genomes and will have the opportunity to make significant contributions to this emerging field while conducting research in one of the most comprehensive sequencing laboratories in the USA.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to:

- Gaining hands-on knowledge of working with both short-read and long-read DNA sequences using the Illumina Miseq and Nextseq systems and the Oxford Nanopore MinIon platform.
- Conducting analyses using the most state-of-the-art software and bioinformatics tools and developing hands-on programming experience using Linux, Python, R.
- Establishing a fundamental understanding of translational, military-relevant scientific research.
- Expanding your network of scientific colleagues and seeking collaborations within the U.S. Department of Defense, academia, and commercial companies.

Where will I be located?

Silver Spring, Maryland

What is the anticipated start date?

The Walter Reed Army Institute of Research is ready to make appointments immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and internships or fellowships will be filled as qualified candidates are identified.

What is the appointment length?

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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.

What are the benefits?

You will receive a stipend to be determined by Walter Reed Army Institute of Research. Stipends are typically based on a 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

About WRAIR

The Walter Reed Army Institute of Research (WRAIR) aims to conduct biomedical research that is responsive to U.S. Department of Defense and U.S. Army requirements. WRAIR conducts basic science, applied science, and animal and human subjects research to deliver lifesaving products including knowledge, technology and medical material that sustain the combat effectiveness of the Warfighter. Areas of focus include tropical infectious diseases and HIV, medical care on the battlefield and post-traumatic stress disorders. For more information about the WRAIR, please visit www.wrair.army.mil.

About ORISE

This program, administered by Oak Ridge Associated Universities (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 DoD. Participants do not enter into an employee/employer relationship with ORISE, ORAU, DoD or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the ORISE Research Participation Program at the U.S. Department of Defense.

Qualifications

The qualified candidate will have, or will receive by Jun 30, 2022:

- A bachelor's degree in biology, microbiology, molecular biology, or biotechnology with a minor in Computer Sciences OR
- A bachelor's degree in computer science with a minor in microbiology, molecular biology, or biotechnology.

Highly competitive candidates will have experience in entomological studies such as:

- Laboratory experience with prokaryotic organisms is desired.

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).

Application Requirements

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A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click here for detailed information about acceptable transcripts.
- 1 Recommendation

If you have questions, send an email to ARMY-MRMC@orise.orau.gov. Please list the reference code of this opportunity MRMC-WRAIR-2021-0015 in the subject line of the email.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Currently pursuing a Bachelor's Degree to be received by 6/30/2022 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Engineering** (1 👁)
  - **Life Health and Medical Sciences** (48 👁)
  - **Mathematics and Statistics** (1 👁)