Opportunity Title: USAMRIID Bio-Threat Assessment and Software Development Research Opportunity
Opportunity Reference Code: USAMRDC-MRIID-2026-0007

Organization U.S. Department of Defense (DOD)

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

Description The Department of Defense (DoD) is offering master's and doctoral-level internship and fellowship opportunities at the U.S. Army Medical Research and Development Command – Medical Research Institute of Infectious Diseases (USAMRDC MRIID).

What will I be doing?

As an Oak Ridge Institute for Science and Education (ORISE) participant, you will engage in a collaborative learning experience alongside a multidisciplinary community of scientists and researchers. Through this fellowship, you will acquire practical, hands-on experience in designing and constructing software tools for Next-Generation Sequencing (NGS) and synthetic biology applications.

Why should I apply?

Through this research opportunity, you will learn how computational methods, hardware, and software are integrated to solve real-world biosurveillance challenges, ultimately understanding how to identify, characterize, and evaluate known and unknown biothreats. Under the guidance of an experienced mentor, you will advance your skills and knowledge navigating Linux environments, scripting languages for handling large-scale genomic data, and learning how to apply programming languages to implement complex computational models and algorithms.

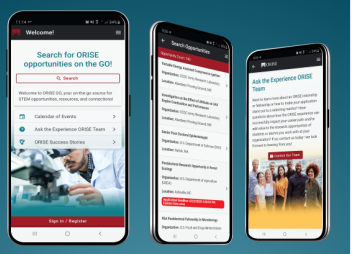
Learning objectives will include:

- **Bioinformatics Tool Development:** Learning how to design and develop software tools to analyze large-scale, high-throughput genomics datasets generated from state-of-the-art Oxford Nanopore and Illumina sequencers.
- **Synthetic Biology Applications:** Gaining experience in building software tools that support synthetic biology research, including CRISPR/Cas systems, molecular engineering, and vaccine/therapeutic delivery platforms.
- **Advanced Computational Biology & Software Engineering:** Learning how to develop computational biology software using both traditional coding suites and emerging AI/Large Language Model (LLM) tools.
- **Genomic Sequencing & Bioinformatics:** Gaining a deep understanding of the biological principles underpinning biosurveillance, viral evolutionary analysis, and biothreat assessment. You will learn how to develop methods for field-sequencing and real-time identification of unknown pathogens.
- **Applied Synthetic Biology:** You will learn how to translate biological requirements into project-specific digital tools, gaining exposure to cutting-edge research in CRISPR/Cas technologies, and molecular engineering.
- **Professional Development:** You will learn how to collaborate within a professional scientific environment, present research findings, and document software code to industry standards.

Where will I be located?

Frederick, Maryland

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What is the anticipated start date?

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?

Appointments are initially for one year with the option to extend the appointment for up to four additional years, contingent upon project needs and funding availability.

What are the provisions?

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

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

Security Clearance

While participants will not enter an employment relationship with DoD or any other agency, this opportunity will require a suitability investigation/background investigation. Any offer made is considered tentative pending favorable outcome of the investigation.

About USAMRIID

USAMRIID's reputation has been built over the years by numerous scientists and technical staff working to protect both military personnel and civilians from the threat of infectious diseases. The Institute participates in support of emerging disease investigations, working alongside colleagues from the Centers for Disease Control and Prevention and the World Health Organization. As a reference laboratory for the Department of Defense, USAMRIID sets the standard for identification of biological agents. The Institute's workforce represents some of the top infectious disease and biological defense experts in the Nation—indeed, in the world. For more information about the USAMRIID, please visit https://usamriid.health.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 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 a master's or doctoral degree in data sciences, software engineering, bioinformatics, infectious disease or any of the disciplines listed in the opportunity's

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Eligibility criteria. Degree must have been received within five years of the appointment start date.

Application Requirements

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 - Please upload a copy of a transcript for your current or most recent degree program that meets the disciplinary qualifications of the opportunity. Click here for detailed information about acceptable transcripts.
- Two Recommendations. We encourage you to contact your recommenders as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

If you have questions, send an email to ARMY-MRMC@orise.orau.gov. Please list the reference code of this opportunity [USAMRIID-2026-0007] in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the “Apply” button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

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!

Point of Contact Kimberly

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (7)
  - **Life Health and Medical Sciences** (9)