Opportunity Title: Graduate Research Fellowship in Biomarker Profiling and Computational Biology
Opportunity Reference Code: USAMRDC-MRIID-2025-0001

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.

Application Deadline 7/4/2025 3:00:00 PM Eastern Time Zone

Description The Department of Defense (DoD) is offering Graduate Fellowship at the U.S. Army Medical Research and Development Command - Medical Research Institute of Infectious Diseases (USAMRDC MRIID). Current graduate students or recent master's or doctoral degree recipients with interest and experience in computational biology and systems-based technologies are eligible to apply.

What will I be doing?

As an Oak Ridge Institute for Science and Education (ORISE) participant, you will join a community of scientists and researchers to understand host-pathogen interactions using systems-based technologies. We utilize an array of high throughput technologies exploring genomics, proteomics, metabolomics, transcriptomics, high content imaging and support the Institute with subject matter expertise and high-performance computing resources for computational biology. The participant will gain experience in a coordinated program of *in vitro* studies, small animal model work, and evaluation of control groups in ongoing NHP studies to provide a comprehensive profile of biomarkers (DNA Sequencing/Pathogen Characterization, RNAseq/transcriptomics, Mass spectrometry/proteomics and Raman Spectroscopy/metabolomics) to detect different pathogen disease states, further supporting field triage and intervention strategies. The Graduate Fellow may expect to be involved in the following project aims:

- Participating in the determination of diagnostic and triage potentials of Raman Spectroscopy for infection pathogens.
- Participating in the determination of diagnostic and triage potentials of Raman Spectroscopy for toxins.
- Participating in confirmatory mass spectrometry analysis.

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. You will also engage in activities and research in several areas. Unique learning opportunities of this Graduate Fellowship may include, but are not limited to:

- New proteomic methodologies and state of the art mass spectrometers, such as the timsTOF Ultra 2, to measure and identify peptides and metabolites in complex biological samples.
- Use of Resonance Raman spectroscopy (RSS) to provide differential identification of metabolites of high consequence pathogen or toxin

insult.
- Investigate if RRS is sufficiently mature to describe biomarkers identifying toxins and high consequence pathogens at the family taxonomic level.

Where will I be located?

Frederick, Maryland

What is the anticipated start date?

August 15, 2025. 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?

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 appointment 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 into 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/.

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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 a master's or postdoctoral degree in the area of molecular biology, virology, biological sciences, pathology, and/or other biological/medical sciences or have completed by December 21, 2030. Postgraduate degree must have been received within five years of the appointment start date. U.S. military veterans who have been honorably discharged (or who have been medically discharged because of a service-connected disability) and who received a master's or doctoral degree within ten years of the desired start date are also eligible.

Highly competitive applicants will have education and/or experience in one or more of the following:

- Experience in *in vitro* and/or *in vivo* experimental design and analysis.
- Experience with analytical instrumentation such as: FT-IR, UV-VIS, Raman, HPLC-MS, GC-MS, and/or MALDI-TOF MS.
- Experience conducting some research in genomics, toxicology and/or infectious diseases.
- Experience with systems biology approaches to include DNA and RNA Sequencing, Proteomics, and Metabolomics.

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. Your application will be considered incomplete and will not be reviewed until two recommendations are submitted. We encourage you to contact your recommenders as soon as you start your

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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 [USAMRDC-MRIID-2025-0001] 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 months or anticipated to be received by 12/31/2030 12:00:00 AM.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (9 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).