

**Opportunity Title:** USAMRIID Doctoral/Post-Doctoral Fellowship – Synthetic Genomics and Molecular Biology

**Opportunity Reference Code:** USAMRDC-MRIID-2025-0002

**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** 12/31/2025 11:59:00 PM Eastern Time Zone

**Description** The Department of Defense (DoD) is offering a Doctoral or Postdoctoral Fellowship 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 join a community of scientists and researchers in an effort to investigate the potential of diverse therapeutic delivery vehicles for medical countermeasure development. Coupling different synthetic biology techniques, you will participate in the development and application of molecular platforms for *in vitro* and possibly *in vivo* protein expression. During your ORISE appointment, you will support CGS's mission to develop new medical countermeasures and molecular delivery systems against high-consequence pathogens. You will also gain experience in proteomic techniques and gene editing strategies. The goal of this project is to develop and optimize viral vectors into a functional delivery system to neutralize or prevent viral infections. Specific project aims include:

- Participate in engineering viral vectors to deliver therapeutics to cellular targets
- Support the development of frameworks to evaluate delivery efficiency, *in vitro* vaccine fidelity, and off-target effects using immunomics, genomics, and proteomic assays.
- Gain experience in utilizing CRISPR-Cas systems to engineer and improve existing viral vectors

**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,

- Using CRISPR-Cas and other synthetic genomics to techniques to engineer and improve existing viral vector systems
- Researching and participating in the development of alternative viral vectors to expand existing vaccine-delivery systems
- Researching concepts in synthetic biology, genome editing, and therapeutic delivery vehicles.

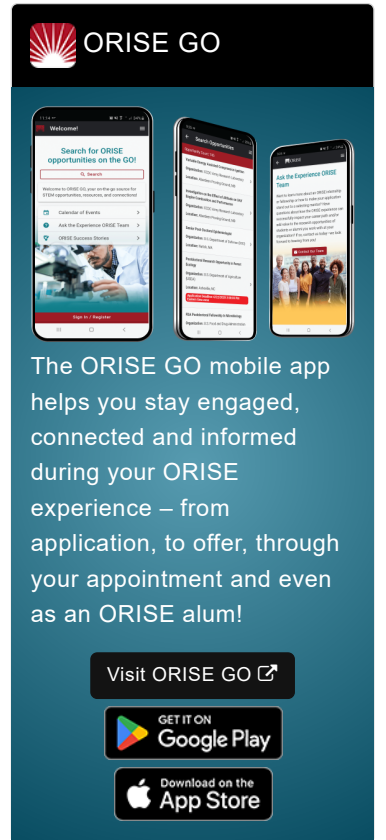
**Where will I be located?**

Frederick, Maryland

**What is the anticipated start date?**


June 9, 2025. The USAMRDC MRIID 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 provisions?**

You will receive a stipend to be determined by USAMRDC MRIID. 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 USAMRDC MRIID**

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 USAMRDC MRIID, 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 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 entered a graduate doctoral-degree program or have graduated and obtained a doctorate degree in the area of molecular biology, microbiology, biomedical engineering, and/or other biological/medical sciences. Degree must have been received within five years of the appointment start date or will be received by April 1, 2030.

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

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following:

- Familiar with basic concepts of genome editing and reverse genetics/synthetic genomics.
- Experience conducting some research in the area of genetics, microbiology, proteomics, and/or infectious diseases.
- Some knowledge in the field of bioinformatics and has some familiarity with programming languages and Linux computing environments.

#### **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](mailto:ARMY-MRMC@orise.orau.gov). Please list the reference code of this opportunity [USAMRDC-MRIID-2025-0002] 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.

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**Point of Contact** [Kimberly](#)

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 4/1/2030 12:00:00 AM.
  - **Discipline(s):**
    - **Life Health and Medical Sciences** ([10](#) 