

Opportunity Title: Translational Antiviral Drug Discovery & Protein Chemistry
Postdoctoral Research Opportunity
Opportunity Reference Code: USAMRDC-MRIID-2026-0008

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 a 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 engage in efforts to advance translational antiviral drug discovery. Research activities will include recombinant protein expression and purification, biochemical screening assay development, computational structural modeling, cell-based antiviral validation studies, and exposure to preclinical small-animal research models.

Why Should I Apply?

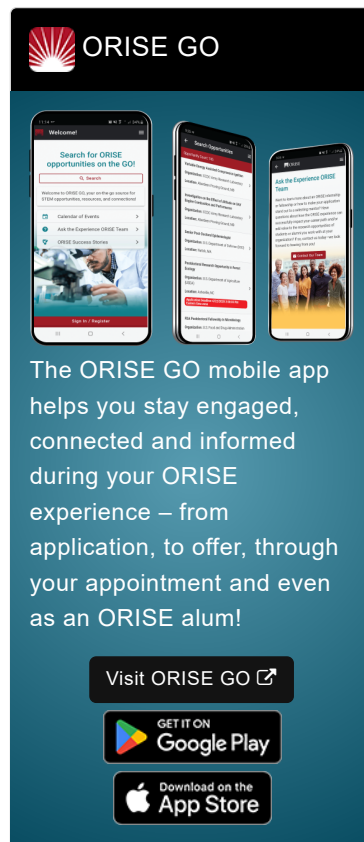
Under the guidance of a mentor, you will engage in research activities that include, but are not limited to:

- Designing, collecting, and analyzing of recombinant protein expression and purification pipelines to yield high-quality, stable viral and host targets.
- Optimizing and evaluating biochemical small-molecule library screening assays using purified protein targets to identify potential therapeutic candidates.
- Applying computational structural tools to model target structures, map binding pockets, and integrate structural insights with laboratory assays.
- Designing and executing cell-based assays to analyze compound-mediated target inactivation, degradation, or inhibition of viral replication.
- Translating benchtop biochemical findings into *in vivo* preclinical small animal models to evaluate therapeutic efficacy and pharmacokinetic profiles.
- Gaining exposure to cutting-edge transcriptomic, proteomic, and "imageomic" (high-content image informatics) datasets, as well as exploring the application of research findings to advanced 3D models such as organoids and 3D bioprinted tissues
- Learning about high-content, automated phenotypic drug screening pipelines against high-consequence pathogens of biodefense interests.
- Learning non-infectious surrogate viral systems, including pseudotyped viruses, minigenome systems, and virus-like particles (VLPs).
- Learning the operational, scientific, and regulatory steps required to translate *in vitro* molecular hits into small animal preclinical evaluation models.
- Processing and integrating complex transcriptomic, proteomic, and image-based data to map host-pathogen interactions and drug mechanisms of action.
- Developing a comprehensive, systems-level understanding of the viral life cycle, host-virus dynamics, and the pharmacological mechanisms of small-molecule therapeutics.

Where will I be located?

Frederick, Maryland

What is the anticipated start date?



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The USAMRIID 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?

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 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 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 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 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 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 [ORISE Research Participation Program at the U.S. Department of Defense \(DoD\)](#).

Qualifications The qualified candidate will be completing (by October 31, 2026) or have an earned doctoral degree in Biochemistry, Biophysics, Cellular & Molecular Biology, Structural Biology or other eligible discipline. Postdoctoral degree must have been received within five years of the appointment start date.

Preferred Skills:

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- Experience with recombinant protein expression systems and chromatography-based purification techniques (FPLC/AKTA).
- Exposure to or an enthusiastic willingness to learn—computational structural biology tools (such as AlphaFold, PyMOL, Rosetta, or basic molecular docking software) to visualize protein-protein interactions and guide bench-level assay design.
- Exposure to small-molecule library screening and or DNA-Encoded Libraries (DEL).

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 promptly and to let them know to expect a message from Zintellect. Your application is not considered "complete" until the recommendations are added. You can 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-2026-0008] 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 10/31/2026 11:59:00 PM.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([1](#) )
 - **Life Health and Medical Sciences** ([12](#) )