

Opportunity Title: Biomedical Engineering and Sciences - Fellowship
Opportunities (Blast Induced Neurotrauma Branch)
Opportunity Reference Code: MRDC-WRAIR-2023-0011

Organization U.S. Department of Defense (DOD)

Reference Code MRDC-WRAIR-2023-0011

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

Description The Blast Induced Neurotrauma Branch at Walter Reed Army Institute of Research (WRAIR) is seeking a current, or recently graduated, bachelor's, master's, or doctoral level candidates.

What will I be doing and why I should apply?

As an ORISE participant and under the guidance of a mentor, you will be involved with the mission of the Blast Induced Neurotrauma (BINT) Branch. The BINT branch has state-of- the-art equipment for blast exposure (e.g. advanced blast simulators), for functional assessments (e.g. Electroencephalogram (EEG) for brain, Auditory brainstem response (ABR)/Distortion-product otoacoustic emission for ear, Electroretinography for eye, Whole-body plethysmography - cardiopulmonary) and for behavioral assessments (e.g learning and memory, anxiety, activity, motor and coordination tests), which participants will have an opportunity to learn.

Participants will have opportunity to participate in several of the research focus areas using a cross-disciplinary approach.

Focus areas of research include, but not limited to:

- Injury biomechanics and understand the effectiveness of personal protective equipment as countermeasures to blast and blunt trauma
- Blast physics and experimental modeling of blast
- Signal processing and analysis of blast exposure
- Therapeutic strategies targeting pathophysiology of blast exposure
- Injury risk criteria and health hazard assessment associated with single and repeated blast exposure
- Neurosensory pathophysiology associated with blast exposure and development of countermeasure strategies
- Investigating genetic and neurodegenerative molecular cascades associated with blast and blunt trauma
- Interspecies scaling of injury using clinical readouts such as MRI, behavior and functional assessments (e.g. Electroencephalogram - EEG)
- Understanding wearable sensor technologies to detect and monitor blast exposure in training and laboratory environment
- Understanding sleep disturbances and post traumatic epilepsy associated with blast exposure

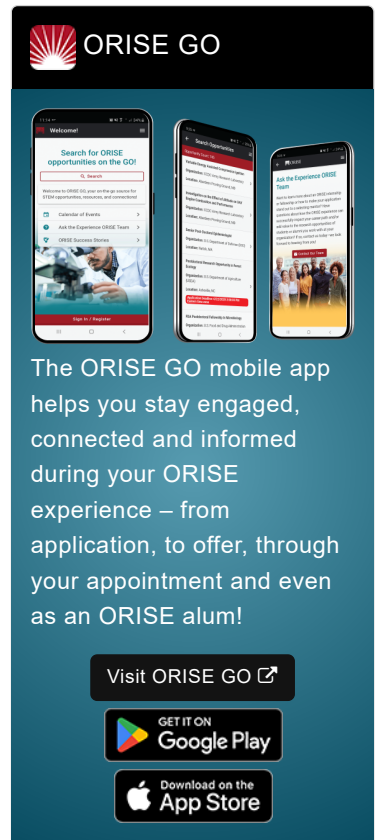
Where will I be located?

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. This internship may be part or full-time. 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. Stipend ranges are listed below:

Bachelors: \$45,000 – \$75,000

Masters: \$65,000 – \$85,000

PhD: \$75,000 –\$95,000

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 Department of Defense and U.S. Army requirements and delivers lifesaving products including knowledge, technology and medical material that sustain the combat effectiveness of the warfighter. WRAIR provides unique research capabilities and innovative medical solutions to a range of Force Health Protection and Readiness challenges currently facing U.S. Service Members, along with threats anticipated during future operations. These research opportunities include ongoing efforts to identify and treat traumatic brain injury as well as to understand and mitigate the deleterious effects of repeated exposures to blast. For more information about the WRAIR, please visit www.wrair.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](https://orise.doe.gov/).

Qualifications The qualified candidate will be currently pursuing a bachelor's, master's, or doctoral degree with an anticipated graduation date of December 31, 2024, or have an earned bachelor's, master's, or

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doctoral degree within the past 60 months.

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 - 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.](#)
- One Recommendation- Your application will be considered incomplete and will not be reviewed until a recommendation is submitted. We encourage you to contact your recommender 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. The recommender 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 MRMC-WRAIR-2023-0011 in the subject line of the email.

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Point of Contact [Brittany](#)

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2024 12:00:00 AM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([2](#) )
 - **Communications and Graphics Design** ([1](#) )
 - **Computer, Information, and Data Sciences** ([5](#) )
 - **Engineering** ([8](#) )
 - **Life Health and Medical Sciences** ([18](#) )
 - **Mathematics and Statistics** ([3](#) )
 - **Other Non-Science & Engineering** ([1](#) )
 - **Physics** ([3](#) )
 - **Science & Engineering-related** ([1](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).