Opportunity Title: Directed Energy Health Effects Directorate: Laser Research - Internship
Opportunity Reference Code: NAMRU-SA-2024-0015

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 Naval Medical Research Unit - San Antonio (NAMRU-SA) Directed Energy Health Effects Directorate (DEHE) is located in the Tri-Service Research Laboratory, Joint Base San Antonio-Fort Sam Houston, TX. NAMRU-SA's mission is to conduct gap driven directed energy, combat casualty care, and craniofacial health research to improve survival, operational readiness, and safety of Department of Defense personnel engaged in routine and expeditionary operations. NAMRU-SA scientists conduct basic, applied, and advanced technology research and development through prototype demonstration in an operational environment. The focus of the research in the DEHE Directorate is acute or chronic health effects because of exposure to the spectrum of non-ionizing electromagnetic energy from radiofrequencies through ultraviolet radiation. The Tri-Service Research Laboratory (TSRL) building consists of a 181,000 square foot facility with a 46,000 square foot vivarium that is fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care. The facility was built specifically for directed energy research and includes dedicated laser laboratories and shielded anechoic chambers for radiofrequency and microwave research. The surgical space available to NAMRU-SA, consisting of sterile and non-sterile operating rooms is 3,000 square feet with an additional 2,200 square feet of laboratory and procedure space.

What will I be doing?

Under the guidance of a mentor, you will have the opportunity to learn how to design experiments, perform data collection and conduct analysis pertaining to health effects of Laser systems relevant to Navy operations. You may be involved in set-up, calibration, maintenance and operation of Laser systems as well as the development of data collection and analysis procedures for these systems. You will collaborate closely with staff within the DEHE and Combat Casualty Care and Operational Medicine Directorates at NAMRU-SA.

Why should I apply?

You may have the opportunity to be involved in research activities that will expand your knowledge in the following areas:

• Developing and conducting protocol-driven scientific research addressing various aspects of military medicine, including, but not limited to: hemorrhage and resuscitation, immunomodulation, biomedical systems, bioassay development, craniofacial, infectious diseases and directed energy bio effects.
• Gaining experience in writing protocol-driven research proposals, animal use protocols, human use protocols, technical reports, final reports, and peer-reviewed manuscripts.

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• Managing, maintaining and troubleshooting laser, optics and directed energy systems.
• Evaluating data sets.
• Developing various presentation materials, and presenting findings at technical and professional meetings.
• Preparing experimental subjects, setting up experimental equipment, and aiding in training and development of experimental subjects for experimental procedures in accordance with approved animal or human use protocols.

Where will I be located?

San Antonio, Texas

What is the anticipated start date?

NAMRU-SA 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 will be filled as qualified candidates are identified.

What is the appointment length?

This appointment is a 12-month, full time 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 NAMRU-SA. 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

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.

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Qualifications

The qualified candidate is a U.S. Citizen who is currently pursuing, or has received within 5 years of the date of application, a B.S. or M.S. degree in biology, physics, molecular biology or related field. This position will provide exposure to unique medical aspects of laser exposure relevant to DoD interests to candidates in those fields.

The highly qualified candidate will have coursework and laboratory experience related to laser energy and familiarity with the following:

- The candidate will be required to acquire, at a minimum, a SECRET classification access level. Preference will be given to a candidate who already has this clearance level.
- Knowledge of conducting animal research projects involving lasers and/or directed energy.
- Capable of aseptic technique as it applies to tissue collection and preparation for pathological or histological analysis.
- Ability to make and record detailed observations and troubleshoot technical procedures.
- Experience in using MS Word, MS PowerPoint, MS Excel spreadsheets, and graphing software such as GraphPad Prism or SigmaPlot for data analysis, processing and basic statistics.
- Flexibility to work as a team member or independently as needed.

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.
- One Recommendation. Your application will be considered incomplete and will not be reviewed until one 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. 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 navy@orise.orau.gov. Please list the reference code of this opportunity NAMRU-SA-2024-0015 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!

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or currently pursuing.

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- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (2 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (2 👁)
  - **Social and Behavioral Sciences** (29 👁)