

Opportunity Title: U.S. Army Institute of Surgical Research Summer 2020

Opportunities

Opportunity Reference Code: USAISR-2020-Summer

Organization U.S. Department of Defense (DOD)

Reference Code USAISR-2020-Summer

How to Apply Applications must be completed by February 15, 2020 at 8:00 a.m. EST.

A completed application consists of:

- All required fields in both the profile and application form. Within the application, you may select up to five research opportunities for consideration.
- Transcripts - Unofficial transcripts may be submitted. Transcripts must include name of the academic institution, name of the student, completed coursework and grades through Summer 2019 and courses in progress/completed during Fall 2019.
- A current resume/Curriculum Vitae
- Two academic recommendations completed by either faculty adviser or school faculty received by **February 15, 2020, 8:00 a.m. EST**

Important Information:

- Incomplete applications will not be considered.
- Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system.
- All documents must be in English or include an official English translation.

If you have questions, send an email to ARMY-MRMC@orise.orau.gov.

Description The US Army Institute of Surgical Research (USAISR) is seeking applications for summer internship appointments for undergraduate students from accredited colleges and universities to conduct research at the USAISR. The internship has a firm start date of Monday, 1 June, and will end on Friday, 7 August 2020. Applicants will be evaluated once their complete packet is submitted. The final deadline for application submission is Saturday, February 15, 2020. Only U.S. citizens with a minimum GPA of 3.0 are eligible for this program. Previous alumni of this program are not eligible to apply.

The intent of the undergraduate student internship is to provide an opportunity for students interested in science, engineering or medical career fields to participate in research directed at improving the care of injured military service members and society at large. This mentored research experience will expose interns to ongoing efforts in integrated science, technology and engineering solutions at the nation's premier military trauma research institute.

Department Descriptions:

Hemorrhage Control and Resuscitation Research Dept. (HCRRD)—Develop methods and products to stop bleeding, replace lost blood volume and mitigate the pathophysiologic consequences of severe trauma (e.g.,



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bleeding, burns)

- [ISR-HCRRD-01: Evaluating Novel Metabolic Stabilizing Agents as Adjuncts to Resuscitation After Severe Burn](#)
- [ISR-HCRRD-02: Evaluation of Point of Care Devices in a Swine Sepsis Model](#)

Blood Coagulation Research Dept. (BCRD)—Improve the safety, efficacy and logistical supportability of blood products, identify mechanisms of coagulation dysfunction in trauma, diagnostics and therapeutics to restore normal function.

- [ISR-BCRD-01: Effect of Trauma on Intracellular Pathways that Regulate Platelet Function](#)
- [ISR-BCRD-02: Effects of Radiation on Endothelial Cells](#)

Tactical and Enroute Care Research Dept. (TECRD)—Focused on patient care under the unique set of tactical, environmental and patient factors associated with point of injury care, including ground and air transport.

- [ISR-TECRD-01: Effects of High Levels of Ionizing Radiation Exposure on Stored Whole Blood and Endothelial Function](#)
- [ISR-TECRD-02: Effects of High Levels of Ionizing Radiation Exposure on Vascular Integrity and Survival](#)

Sensory Trauma Research Dept. (STRD)—Develop treatments, methods and modeling that protect, repair and restore the sensory system (e.g., Ocular, Auditory).

- [ISR-STRD-01: Development and Characterization of a Biomaterial Test Platform for Military-Relevant Globe Eye Injuries](#)

Clinical Research Support Dept. (CRSD)—Provides support to other ISR programs requiring technology solutions to identified programmatic requirements and documented gaps.

- [ISR-CRSD-01: Oxidative and Nitrosative Stress in Burns](#)

Burn and Soft Tissue Research Dept. (BSTRD): Battlefield Pain Management and Burn Injury Research

- [ISR-BSTRD-01: Evaluation of Treatments to Stabilize Acute Burn Wounds](#)
- [ISR-BSTRD-02: Neurobiological Mechanisms Affective Behaviors in Rat Model of Thermal Injury](#)
- [ISR-BSTRD-03: Combat and Operational Stress Effects on Trauma and Craniofacial Pain](#)
- [ISR-BSTRD-04: Assessing the Immunomodulatory Efficacy of Exosome-Laden Biomaterials](#)

Key Information

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Program Dates: June 1 – August 7, 2020 (10 weeks)

Research Location: Fort Sam Houston, San Antonio, TX

Stipend: ~\$2,750 per month, full-time participation

Number of Selections: Approximately 13 students will be selected for research participation.

Nature of Appointment The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

Qualifications Prerequisites: All interns must have completed at least their first year class requirements for a bachelor's degree with an overall GPA of 3.0 or higher (out of a maximum of 4.0; if other scale is used, provide qualitative interpretation and/or equivalency to 4.0 scale). A science or engineering program of study is preferred, and prior research experience will be considered.

For consideration, the applicant's CV must include the following elements:

- Professional Goal and objective statement (what are your career ambitions and what are you looking for in this experience?)
- Academic Major (if declared) or track (if undeclared)
- Grade-Point Average and expected year of graduation.
- Brief description of prior research laboratory experience(s) including specific laboratory or analytical skills (for example, electrophoresis, cell culture, etc.)
- Any relevant publications or other experience
- Rank-ordered preference of five Task Areas in which to work

Chosen applicants will collaborate closely with a USAISR staff mentor and their research team to conduct a scientific investigation in one of the research Task Areas of the USAISR. Applicants are asked to rank their Task Area preference to their top 5 choices. (Of note, not all areas will participate in the summer program and, therefore, top choices cannot be guaranteed). Interns will present the findings of their research projects at a poster session at the end of the experience.

Those traveling from outside the San Antonio, TX area may be eligible to receive additional travel funds, which will be considered on a case-by-case basis. All participants must procure their own housing and transportation.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Currently pursuing a Bachelor's Degree.
 - **Overall GPA:** 3.00
 - **Discipline(s):**

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- **Chemistry and Materials Sciences** ([12](#))
- **Communications and Graphics Design** ([2](#))
- **Computer, Information, and Data Sciences** ([16](#))
- **Earth and Geosciences** ([21](#))
- **Engineering** ([27](#))
- **Environmental and Marine Sciences** ([14](#))
- **Life Health and Medical Sciences** ([45](#))
- **Mathematics and Statistics** ([10](#))
- **Other Non-Science & Engineering** ([2](#))
- **Physics** ([16](#))
- **Science & Engineering-related** ([1](#))
- **Social and Behavioral Sciences** ([27](#))