

**Opportunity Title:** Biology / Chemistry: Biocontaminants

**Opportunity Reference Code:** AFIT-2020-0034

**Organization** U.S. Department of Defense (DOD)

**Reference Code** AFIT-2020-0034

**How to Apply** Components of the online application are as follows:

- Profile Information
- 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.](#)
- 1 Recommendation is required.

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.

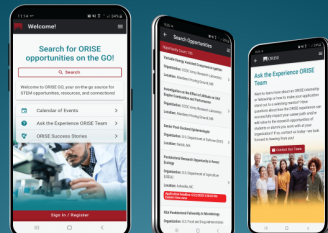
If you have questions, send an email to [AIRFORCE@orise.orau.gov](mailto:AIRFORCE@orise.orau.gov). Please list the reference code of this opportunity in the subject line of the email.

All documents must be in English or include an official English translation.

**Description** AFIT's mission is to help build America's airpower, by educating military and civilian Airmen to innovatively accomplish the Air Force's core missions, in support of joint operations, more effectively, efficiently, sustainably and affordably. We provide unique defense-focused, research-enabled, multi-disciplinary advanced academic education, as well as globally delivering career-long, action-based, functional professional continuing education, over a continuum of learning, on-command and on-demand. Our success is measured by the career-long contributions of our graduates, faculty and staff. AFIT accomplishes this mission through four schools: the Graduate School of Engineering and Management.


Under the guidance of a mentor, the participant will assist with a study aimed to evaluate the fate of biological contaminants present in water and wastewater. This study will evaluate phylogenetic composition, adsorption, bioaerosol formation, and fate in treatment systems. Biocontaminants of interest include spore-forming bacteria and viruses. Specifically, the participant will be expected to:


- 1) Collect data using modern microbiological techniques
- 2) Carry out statistical analysis




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- 3) Use software platforms
- 4) Prepare illustrations, including figures, and tables, that summarize experimental findings
- 5) Explain methodologies and results in oral and written form

**Appointment Length**

This appointment is a six 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.

**Participant Benefits**

Participants will receive a stipend to be determined by **AFIT**. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:









- Health Insurance Supplement. *Participants are eligible to purchase health insurance through ORISE.*
- Relocation Allowance
- Training and Travel Allowance

**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** The candidate should be an undergraduate working toward a BS degree in biochemistry and molecular biology. Must have course work in organic chemistry, cell culture, molecular biology techniques, and protein purification.

- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree received within the last 60 months or currently pursuing.
  - **Academic Level(s):** Post-Bachelor's or Undergraduate Students.
  - **Discipline(s):**
    - **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](#) )

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- **Other Non-Science & Engineering** ([2](#) 👁)
- **Physics** ([16](#) 👁)
- **Science & Engineering-related** ([1](#) 👁)
- **Social and Behavioral Sciences** ([27](#) 👁)