

Opportunity Title: Molecular Biology Support

Opportunity Reference Code: USAFSAM-2024-0006

Organization U.S. Department of Defense (DOD)

Reference Code USAFSAM-2024-0006

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

Description The US Air Force School of Aerospace Medicine (USAFSAM) has a molecular biology internship opportunity open to those who are currently pursuing or have obtained a bachelor's degree or master's degree in the field of molecular biology or a related discipline.

What will I be doing?

As an Oak Ridge Institute for Science and Education (ORISE) participant, you will join a community of scientists and researchers in an effort to further your knowledge of infectious disease surveillance, wastewater surveillance, genomic sequencing, and data collection, management and visualization. The purpose of this training internship is to provide an educational experience to individuals interested in the fields of public health, infectious disease, epidemiology, and surveillance. The fellow will gain insight into how to communicate data and findings from a surveillance network to decision-makers, other researchers, and the public. Interns will train within the United States Air Force School of Aerospace Medicine's Applied Technology and Genomics division and can expect to gain valuable experiences in molecular biology, next generation sequencing, and environmental and infectious disease surveillance. Interns will also participate in activities related to database cleaning, data analysis, data visualization, and interpretation of results. Opportunities to develop manuscripts and/or posters or oral presentations for academic conferences are also possible.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to:

- Participate, with biological and medical scientists in laboratories, in setting up, operating, and maintaining laboratory instruments & equipment, monitoring experiments, making observations, and calculating/recording results
- Prepare and perform analysis of organic substances such as wastewater, blood, and nasal wash
- Collaboration and participation in meetings
- Be involved with verbal and written presentations of studies at scientific conferences
- Preparation of literature searches, scientific manuscripts, posters, presentations, and other information

Where will I be located?

Fairborn, Ohio

What is the anticipated start date?

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?



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This appointment is a twelve-month research appointment at a full-time level of participation. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

What are the appointment provisions?

You will receive a stipend to be determined by USAFSAM. 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 USAFSAM

The 711th Human Performance Wing's U.S. Air Force School of Aerospace Medicine (USAFSAM) was established in 1918 and is the premier institute for education and worldwide operational consultation in Aerospace and Operational Medicine. USAFSAM has been a leader in the field of aerospace medicine and human performance from the beginnings of aviation through the onset of the space age and into the present, and is the oldest continually operating institution of its kind. It is also host to the largest aeromedical library in the world. By joining forces with the Air Force and Navy Research Laboratories, USAFSAM fully leverages aeromedical, science, and technology to optimize performance, health, and survival of healthy humans in abnormal or extreme environments, including combat, air, space, and cyberspace. The Applied Technology and Genomics (PHT) Division is a Biosafety Level-2 laboratory, and the only research genetics laboratory in the USAF that can support several projects focusing on: bacterial/viral culture, DNA/RNA extraction, PCR amplification, DNA printing (primers/probes/synthetic constructs), next-generation sequencing, microscopy, analysis of genetic code, and secured storage of genetic code.

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](#).

Qualifications The qualified candidate will be currently pursuing or have obtained a bachelor's or master's degree in the field of biology, chemistry, biochemistry, cellular and molecular biology, microbiology or a similar discipline. Degree must be obtained within one year of the appointment start date. Anticipated degrees must be obtained by 7/31/2025.

Highly competitive applicants will have education and/or experience in one or more of the following:

- Proficient with biology techniques (e.g. microscopy, cell culture, DNA/RNA prep, PCR and

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sequencing)

- Two years of experience in a laboratory
- Experience with Illumina and Oxford nanopore sequencing chemistries and library preparation protocols

Those with interest in infectious disease epidemiology, microbial genomics, and next generation sequencing are strongly encouraged to apply.

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. We encourage you to contact your recommender(s) 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 airforce@orise.orau.gov. Please list the reference code of this opportunity USAFSAM-2024-0006 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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- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree or Master's Degree received within the last 12 months or anticipated to be received by 7/31/2025 12:00:00 AM.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([1](#) )
 - **Life Health and Medical Sciences** ([6](#) )