

Opportunity Title: Bioinformatics Fellowship

Opportunity Reference Code: USAFSAM-2024-0007

Organization U.S. Department of Defense (DOD)

Reference Code USAFSAM-2024-0007

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 bioinformatics fellowship opportunity open to those who have obtained a master's degree in the field of Biological Sciences, Public Health, Biocomputing, or similar field.

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 the fellow's knowledge of infectious disease surveillance, wastewater surveillance, genomic sequencing, and data collection, management and visualization. The purpose of this training fellowship 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. Fellows 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 bioinformatics, high performance computing, and infectious disease surveillance. The fellow will also participate in activities related to database cleaning, data analysis, data visualization, and interpretation of results. The fellow may also have opportunities to develop manuscripts and/or posters or oral presentations for academic conferences.

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:

- Analyze large-scale data and summarize findings using statistical software
- Develop analysis pipelines and workflows utilizing available platforms
- Perform data analysis and develop visualizations using public and in-house tools and dashboards
- 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?

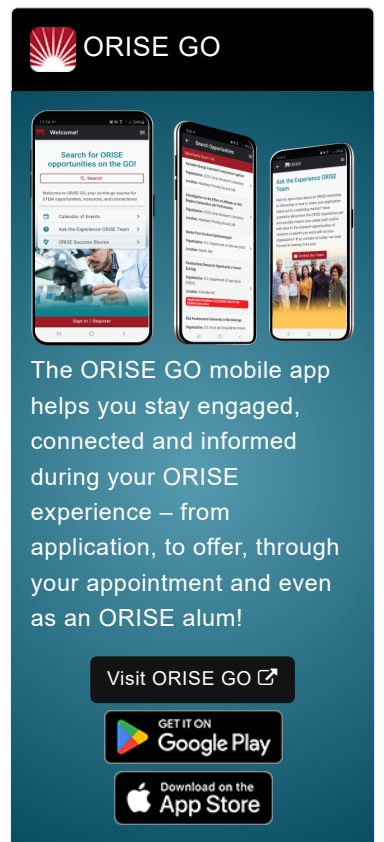
The location of this appointment may vary.

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?

This appointment is a twelve-month research appointment at a full-time level of participation.



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

The qualified candidate will have obtained a master's degree in the field of Biological Sciences, Public Health, Biocomputing, or similar field. Degree must be obtained within two years of the appointment start date.

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

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following:

- Strong skills and experience with scripting, data visualization, data management, programming, and analysis tools (e.g., Linux/Unix, Python, Perl, Tableau, MS Excel, and R/R Studio).
- Expert knowledge of bioinformatics software for traditional sequence analysis, next-generation sequence assembly and analysis, and/or gene expression studies. Possess knowledge of the applicable scientific procedures and techniques to generate these data sets.
- Familiarity with network and server administration to develop and support the flow and storage of datasets and code
- Experience with developing basic data collection tools, data dictionaries and minimum data elements preferred
- Experience in workflow languages and containerization computing (i.e. Nextflow, Snakemake, Docker, Conda)

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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-2024-0007 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:** Master's Degree received within the last 24 month(s).
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([1](#))
 - **Environmental and Marine Sciences** ([2](#))
 - **Life Health and Medical Sciences** ([8](#))

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