

**Opportunity Title:** Biomanufacturing Process Development Internship at  
DEVCOM - Chemical Biological Center  
**Opportunity Reference Code:** DEVCOM-CBC-2022-0004R

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

**Reference Code** DEVCOM-CBC-2022-0004R

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

**Description** The Department of Defense (DoD) is offering a post-graduate internship at the U.S. Army Combat Capabilities Development Command - Chemical Biological Center (DEVCOM-CBC) within The Research and Technology (R&T) Directorate.

#### What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers in the R&T Directorate with a mission to provide integrated science and technology solutions to identify and mitigate novel and emerging chemical and biological threats.

#### Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. During your appointment, you will participate in the configuration and operation of DEVCOM-CBC's Biomanufacturing process development pilot plant. You will also have an opportunity to gain experience in fermentation, downstream processing, and biochemical analysis of the products of organisms modified using the techniques of synthetic biology at varying stages of purification and manufacture.

Along the way, you will collaborate with team personnel to design and implement biological and chemical engineering strategies for production of critical chemicals and precursors, gaining exposure to production techniques including but not limited to medium- and large-scale fermentation, centrifugation, tangential-flow filtration, chromatography, distillation, and/or extraction. Under the mentorship of DEVCOM-CBC senior scientists, you will learn analytical techniques which will include HPLC, LC-MS, and GC-MS.

In addition, you will learn and engage in activities which include but are not limited to:

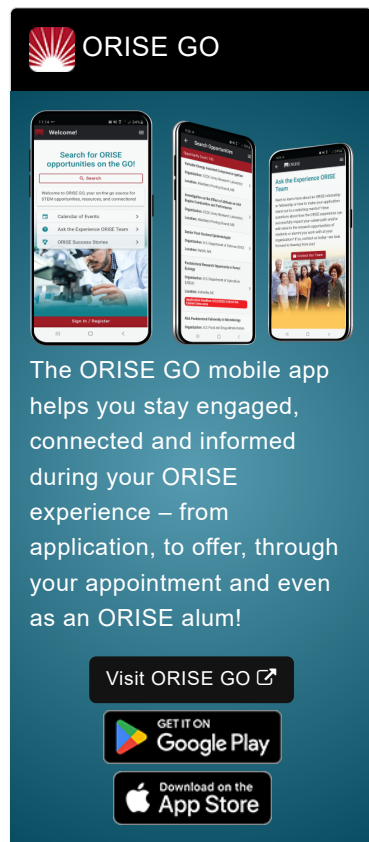
- Technoeconomic analyses
- Process safety analysis
- Risk assessment
- Hazard mitigation in large-scale process development

#### Where will I be located?

- Aberdeen Proving Ground, MD


#### What is the anticipated start date?


The DEVCOM-CBC anticipates making appointments following the 2022-23




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academic year (May/June 2023). 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.

### **Appointment Length**

This appointment is a twelve-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.

### **What are the benefits?**

You will receive a stipend to be determined by DEVCOM-CBC. Stipends are typically based on a 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

### **About DEVCOM-CBC**

U.S. Army Combat Capabilities Development Command Chemical Biological Center (DEVCOM-CBC) conducts applied research and development for the detection and identification of chemical, biological, and explosive materials to provide next-generation detection capabilities to the Warfighter.

In 2023, DEVCOM-CBC's Biotechnology Branch will conclude a 2-year modernization and expansion of its Biomanufacturing research and development laboratory. To its existing bioproduction operations, which feature fermentation vessels up to 1000 liter capacity and downstream processing capabilities for bacterial and phage-based products, the facility will add additional capability to include distillation, extraction, chromatography, and other operations required to separate chemicals, precursor molecules, and other military-relevant biotechnology products. At the completion of the modernization effort, the Biotechnology branch will serve the DoD as a pilot-scale biomanufacturing research and process development facility. For more information about the DEVCOM CBC, please visit <https://www.cbc.devcom.army.mil>.

### **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

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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 have a Bachelor's or Master's degree in Chemical Engineering or related field, and degree must have been received within 5 years of appointment start date.

Highly competitive applicants will have one or more of the following:

- Prior coursework and/or experience in process design
- Interest in separation and purification of biologically derived products from fermentation broth or from other related bioproduction processes
- Experience in environments with rigorous regulatory, process, and/or safety controls

#### **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 - 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](#).
- 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. Recommender 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 [ARMY-RDECOM@orise.orau.org](mailto:ARMY-RDECOM@orise.orau.org). Please list the reference code of this opportunity **DEVCOM-CBC-2022-0004R** 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 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** ([4](#) )
  - **Engineering** ([2](#) )

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- **Life Health and Medical Sciences** ([3](#) 👁)