

Opportunity Title: Development of synthetic antibodies against antibiotic-resistant biothreat

Opportunity Reference Code: DOE-MSIPP-21-6-LANL

Organization U.S. Department of Energy (DOE)

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- How to Apply**
- Completion of all required fields in the application and successful application submission
 - Undergraduate or graduate transcripts as appropriate
 - Two recommendations

If you have questions, send an email at MSIPPInternships@orau.org. Please include the reference code for this opportunity in your email.

For Technical information, contact Cassandra Casperson at Casperson@lanl.gov.

Certification:

I certify that I am at least 18 years of age and a US citizen, and am currently enrolled as a student in a degree seeking undergraduate or graduate program in a STEM field at an accredited Minority Serving Institution (MSI).

Application Deadline 1/29/2021 11:59:00 PM Eastern Time Zone

Description The Minority Serving Institutions Partnership Program (MSIPP) Internships is a new program to promote the education and development of the next generation workforce in critical science, engineering, technology, and math (STEM) related disciplines that complement current and future missions of DOE national laboratories. The MSIPP Internship program is designed to provide an enhanced training environment for next generation scientists and engineers by exposing them to research challenges unique to our industry.

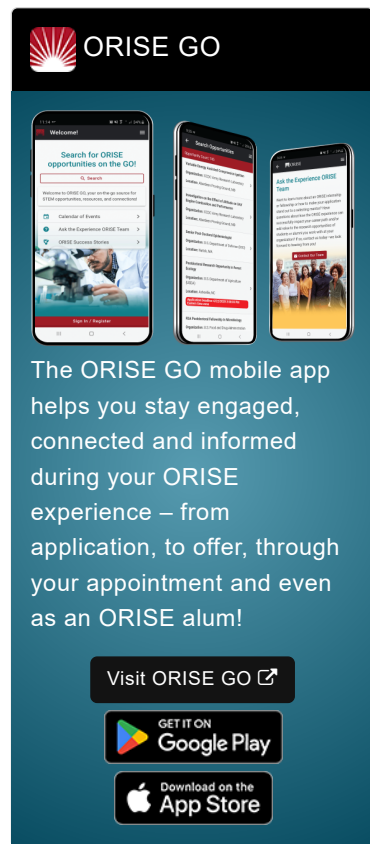
MSIPP Interns will be given the opportunity to complete Summer Internships aligned with ongoing U.S. Department of Energy Office of Environmental Management (DOE-EM) research under the direction of a host national laboratory. The internship will be performed at the host national laboratory, utilizing their facilities and equipment under the guidance of a research staff member.

Minority Serving Institutions are institutions of higher education enrolling populations with significant percentages of undergraduate minority students.

Project: The work performed at Los Alamos National Laboratory (LANL) matters to our country and the world. An important requirement within LANL mission is the ability to detect and combat biothreats. In response to this need, LANL Bioscience Division (B-DO) works on rapid and specific detection of pathogens, and development of therapeutic reagents to combat antibiotic-resistant microbes.

As a LANL hire you will contribute to this work by selecting high specificity/affinity antibodies and/or peptides against several gram-negative bacteria, through state-of-the-art in-vitro selection technologies like phage and yeast display. Furthermore, you will help developing these affinity molecules into antibiotics, and diagnostic reagents compatible with deployable detectors.

Salary: Selected candidate will be compensated by either a stipend or salary, and may include one round trip domestic travel to and from the host laboratory. Stipends and salaries will be commensurate with cost of living at the location of the host laboratory. Housing information will be provided to



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interns prior to arrival at the host laboratory, and will vary from lab to lab.

Qualifications Eligible applicants must:

- Be a citizen of the United States,
- Be at least 18 years of age,
- Currently enrolled as a full-time undergraduate or graduate student at an accredited Minority Serving Institution, <https://orise.ornl.gov/msipp/documents/approved-msi-school-list.pdf>,
- Working toward a science, technology, engineering, or mathematics (STEM) degree,
- Have an undergraduate or graduate cumulative minimum Grade Point Average (GPA) of 3.0 on a 4.0 scale, and
- Pass a drug test upon selection to participate in the MSIPP *The process and timing for drug testing varies from lab to lab. Use of Marijuana/Cannabis or its derivatives if prescribed is legal in some states. However, having these drugs in your system is NOT legal at United States Federal Contractor sites and National Laboratories.

Required Knowledge, Skills, Work Experience, and Education

- Basic sterile techniques used in laboratory
- Basic molecular biology

Successful candidates will:

Desired Knowledge, Skills, Work Experience, and Education

It is desirable for the candidate to have:
Proficiency in:

- PCR
- Flow cytometry
- ELISA
- DNA purification, characterization, modification
- Protein expression, purification, and characterization

It is desirable for the candidate to have:

- GPA 3.0 for undergraduate
- GPA 3.2 for graduate

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|---------------------|--|
| Eligibility | • Citizenship: U.S. Citizen Only |
| Requirements | • Degree: Bachelor's Degree or Master's Degree received within the last 12 months or currently pursuing. |
| | • Overall GPA: 3.20 |
| | • Discipline(s): <ul style="list-style-type: none">◦ Life Health and Medical Sciences (3👁) |

Affirmation Certification:

I certify that I am at least 18 years of age, a US citizen, and currently enrolled as a student in a degree seeking undergraduate or graduate

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program in a STEM field at an accredited Minority Serving Institution (MSI).
Click [here](#) to verify that you are enrolled at a current MSI.