

DEVCOM scientist works to build pipeline of biotechnology professionals

By Argie Sarantinos, DEVCOM Headquarters April 12, 2023



1 / 3 Show Caption + Bryn Adams, Ph.D., DEVCOM Army Research Laboratory's branch chief for synthetic biology tools branch and acting branch chief of biology in military environments branch, assists a future STEM scholar in an experiment as part of an after-school biotechnology program at Laurel High School in Laurel, Maryland. Adams mentors students and encourages them to explore biotechnology and synthetic biology career paths. (Photo Credit: U.S. Army) [VIEW ORIGINAL](#)



2 / 3 Show Caption + Bryn Adams, Ph.D., DEVCOM Army Research Laboratory's branch chief for synthetic biology tools branch and acting branch chief of biology in military environments branch, learns how to make Navajo sausages as part of a traditional Navajo celebration feast with students and their community in Montezuma Creek, Utah, during the 2022 Navigate the Future Summer Program. (Photo Credit: U.S. Army) [VIEW ORIGINAL](#)



3 / 3 Show Caption + Bryn Adams, Ph.D., is the DEVCOM Army Research Laboratory's branch chief for synthetic biology tools branch and acting branch chief of biology in military environments branch. Adams (in middle of photo) and eight senior cohorts worked with students at White Horse High School in Montezuma Creek, Utah, as part of the 2022 Navigate the Future Summer Program for Native American high school students. (Photo Credit: U.S. Army) [VIEW ORIGINAL](#)

Teaching Native American students about biotechnology and related career paths they can pursue is one way that Bryn Adams, Ph.D., hopes to build an even better workforce at the U.S. Army Combat Capabilities Development Command, or DEVCOM. She spent two weeks working with students on the

Navajo Nation Reservation in southeastern Utah as part of the Navigate the Future Summer Program for Native American high school students.

Adams is the DEVCOM Army Research Laboratory's branch chief for synthetic biology tools branch and acting branch chief of biology in military environments branch. She was chosen from a group of scientists across the Department of Defense for her exceptional work as a Science, Technology, Engineering and Mathematics advocate and became the 'face of biotechnology.'

One of the STEM projects she is most proud of is her work with the Native American community and the Navigate the Future Summer Program.

"The students on the Navajo [Nation] Reservation, who were high school juniors and seniors, were . . . so excited to learn. We did hands-on experimental learning to get them interested in biotechnology. I wanted to show them that biotechnology is not scary and there are so many potential career paths," Adams said.

Adams sees young people as the next generation of STEM scientists. She mentors students from multiple backgrounds, and she also develops biotechnology and synthetic biology curricula for high school and college students.

"Including the viewpoints of indigenous people is critical in getting biotechnology to everyone. I would love to see more indigenous people join our diverse workforce," Adams said.

Prior to her current role, Adams worked at the Office of the Under Secretary of Defense where she stood up the Education and Workforce Development component of the biotechnology modernization priority. In this role, she worked to build a pipeline of skilled biotechnology professionals available within the biodefense industry that broadly supports the DOD.

Adams' original life plan was to be a medical doctor, but after she became an emergency medical technician, she realized that was not the career she wanted to pursue.

"I could solve complex medical problems, but I had the worst bedside manners with patients. So, a week before I was supposed to take the test to get into medical school, I decided to get a Ph.D. and become a researcher," Adams said.

She earned a doctorate degree in interdisciplinary biology, which includes doctoral level physics, chemistry and engineering. After completing a joint postdoctoral fellowship with Edgewood Chemical Biological Center – now DEVCOM Chemical Biological Center – and the University of Maryland, College Park, she became an Army civilian at DEVCOM Army Research Laboratory in 2014.

She worked closely with Debbie Black-Conn, Ph.D., and a team at DEVCOM ARL that built the first biotechnology unit in the Gains in the Education of Mathematics and Science program at DEVCOM ARL. GEMS is an Army-sponsored summer enrichment program for middle and high school students. It is based on a multi-disciplinary educational curriculum that includes age- and grade-appropriate, hands-on activities in: science, engineering, mathematics, computational sciences, computational biology, biomedical sciences, chemistry, and biology.

“Dr. Bryn Adams is an amazing researcher and STEM champion. She is passionate about mentoring future STEM professionals and creating biotechnology and synthetic biology curricula for high school and college students. She is also a cornerstone for the creation of biotechnology educational outreach and workforce development opportunities that the DOD National Defense Education Program funds,” Black-Conn said.

While Adams has passed the GEMS biotechnology torch to a colleague, she continues to work with students in elementary school through college, including those working on their undergraduate, graduate and postdoctoral degrees.

“Working with students from different age groups with a variety of world views makes me a better communicator. If I can communicate what we do to a child in kindergarten, then I can communicate it to anybody,” Adams said.

One of her favorite parts about working with children is the questions they ask.

“It absolutely amazes me the way their minds work. I would love to sit down with them so they can explain their thought processes and how they came up with the questions they ask me. So often, they catch me off guard with questions I never anticipate,” Adams said.

She notes that mentoring students satisfies her desire to give back and share what she learned from scientists throughout her career who mentored and trained her on how to be a good Army scientist.

“It is priceless to give back and make those who trained me feel proud by passing on knowledge about how to do quality science for the warfighter,” Adams said.

The U.S. Army Combat Capabilities Development Command, known as DEVCOM, is home to thousands of Army scientists, engineers, technicians and analysts working around the globe to leverage cutting-edge technologies and empower the American warfighter with the data and abilities to see, sense, make decisions and act faster than our adversaries – today and in the future.

As part of Army Futures Command, DEVCOM takes calculated risks to find new technological solutions each day. Our experts drive innovation, improve existing technologies and engineer solutions to technical challenges. Our work goes beyond theory to simulation and prototyping. We take potential science and technology solutions from the lab “into the dirt” for experimentation alongside Army Soldiers. DEVCOM prides itself as a global ecosystem of innovators, from world-class universities and large defense contractors, to small, minority-owned businesses and international allies and partners.