



News Release

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ECBC partners with DTRA CB to help STEM the challenge of a significant decline in U.S. science, technology degrees

LAS VEGAS, Nev. – For the first time, the U.S. Army Edgewood Chemical Biological Center (ECBC) partnered with the Defense Threat Reduction Agency's Chemical and Biological Technologies Directorate (DTRA CB) in the execution of a joint science, technology, engineering and mathematics (STEM) educational outreach initiative.

They collectively increased awareness of emerging STEM career fields for 25 Rancho High School students enrolled in the biotechnology magnet program within the Clark County Public School District Nov. 14 — on the opening day of this year's Chemical and Biological Defense (CBD) Science and Technology (S&T) Conference.

DTRA CB and ECBC closely work together in developing technologies that help counter chemical, biological, radiological, nuclear and explosive threats to warfighters and the nation. On a regular basis, they support the Department of Defense's CBD Program through the delivery of cutting-edge research and development (R&D) solutions.

The conference, which DTRA CB held until Nov. 18, coincided with the 90th anniversary of American Education Week. While most attending ECBC workforce members participated in the conference to expand their network and identify collaboration opportunities in their respective science and technology fields, the Center's Community and Educational Outreach team joined DTRA CB in celebrating the nation's commitment to students and educators.

Alan Rudolph, Ph.D., the director for DTRA CB within the Research and Development Enterprise, kicked off this STEM education initiative addressing participating biotechnology students with words of encouragement and reiterating the nation's dire need for subject matter experts in fields such as biosurveillance, diagnostics and therapeutics.

Students first participated in a discussion with leading CBD scientists over lunch, facilitated by Presidential Management Fellow Matthew Tobelman, Ph.D. and Army MAJ Dale Taylor. This opportunity allowed them to ask targeted questions about various R&D areas and careers in the CBD arena.

Then, STEM professionals from government, industry and academia offered the group of aspiring biotechnologists seven different hands-on experiences that reinforced STEM concepts and techniques that are critical in solving the nation's current and future challenges.

Looking to immerse students into the real-world application of science, ECBC Biologists Alena Calm and Janna Madren-Whalley conducted an enzyme-linked immunosorbent assay experiment with the group, while ECBC Research Biologist Brady Redmond, Ph.D. engaged them in using the DNA agarose gel electrophoresis method. In addition, the Center's outreach team educated students about STEM scholarship and career opportunities in a fun way, letting them compete in a Jeopardy game.

"I think it was very interesting to learn about the need for professionals in these fields," said student mother and chaperone Nikole Gomez. "This event will hopefully help my daughter figure out which career pathway she would like to pursue."

David Miller, K-12 Science and Math Coordinator for Clark County School District, said that "the mix of hands-on activities and presentations was very helpful in giving students a real-world perspective of the various STEM career fields outside of the classroom."

"At the high school level, they really need to think about where they would like go and what their goal could be," he continued.

Additional organizations that supported this event with educational outreach activities and presentations included GenSpace, Battelle Memorial Institute, iGEM, and the U.S. Army Medical Research Institute of Infectious Diseases.

For more information about ECBC, visit <http://www.ecbc.army.mil/>.

ECBC is the Army's principal research and development center for chemical and biological defense technology, engineering and field operations. ECBC has achieved major technological advances for the warfighter and for our national defense, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a U.S. Army Research, Development and Engineering Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Maryland. For more information about the Edgewood Chemical Biological Center, please visit our website at <http://www.ecbc.army.mil> or call (410) 436-7118.