



## Experience ORISE Virtual Career Fair: Featuring Internships and Fellowships with the U.S. Department of Defense

### KEYNOTE PRESENTATION

**Title:** Opening the Gates and Laying Pathways to STEM Careers

**Speaker:** Dr. Debra Yourick

Director, Science Education and Fellowship Programs  
Walter Reed Army Institute of Research

**When:** Wednesday, Aug. 31, 2022, 12:15 p.m. ET

**Where:** Brazen Virtual Event Platform

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### SPEAKER BIO

**Dr. Debra Yourick** has both developed and expanded Army science education programs and fellowships and now leads the office she created as the director of Science Education and Fellowship Programs at the Walter Reed Army Institute of Research (WRAIR). Over her more than 30-year career, Dr. Yourick has also both taught pharmacology and conducted research at WRAIR on outcomes from traumatic and nerve-agent induced brain injury to identify possible therapeutic interventions. Her scientific expertise in pharmacology, toxicology, neurophysiology and neuropathology with specific emphasis on seizure development and neuroprotection has supported the missions of WRAIR and other agencies.



Through her strong interests in serving underrepresented groups in science, technology, engineering and mathematics (STEM) careers, Dr. Yourick co-created with Dr. Marti Jett, the Gains in the Education of Mathematics and Science or GEMS program, under two National Institutes of Health Science Education Partnership Awards (SEPA) from 2000-2006, a program now sustained at more than a dozen US Army research laboratories. Along with partners at three Maryland Historically Black Colleges and Universities (HBCUs) seeking to enhance and sustain partnerships with schools, her most recent SEPA builds on the summer GEMS program principles of near-peer mentorship (so named at WRAIR) and hands-on, inquiry-centered modules, by bringing them to early high school classrooms, to enhance science learning and mentoring for underrepresented groups throughout the school year. Dr. Yourick's teams of fellows and near-peer mentors have created dozens of unique STEM modules matched to the curriculum in partner schools. Undergraduate and post-baccalaureate near-peer mentors from the HBCUs teach and mentor the students with these classroom modules, a process shown in her prior research to lead to measurably improved attitudes toward science concept learning and science efficacy.

Dr. Yourick has personally mentored hundreds of students or fellows and indirectly mentored over thousands of participants in the U.S. Army Educational Outreach Program (AEOP), a program she helped develop and expand. She manages AEOP high school and college-level programs and also manages, as well as directly advises, junior and senior National Research Council and Oak Ridge Institute for Science and Education (ORISE) fellows for her own laboratory and the WRAIR.