



U.S. ARMY
RDECOM

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U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND

Army Research Laboratory

Overview

- ARL is the link between the scientific and military communities with the mission to discover, innovate and transition science and technology to ensure dominant strategic land power.
- The lab's research continuum stretches from current operations support to early, long-term, basic research that explores new technologies.
- ARL drives opportunities in power projection, information, lethality and protection, and Soldier performance for the Army of 2030 and beyond using a framework of eight science and technology campaigns – a systematic course of aggressive S&T activities envisioned to lead to enhanced land power capabilities in the deep future.
- Core competencies: materials sciences; information sciences; ballistics; aeromechanics; human performance; survivability, lethality, vulnerability analysis and assessment.
- Major Partners: RDECOM RDECs, PEOs, DARPA, Army Test and Evaluation Command.
- People:
 - 1,975 civilians
 - 1,379 scientists and engineers
 - 552 doctorates, 479 master's degrees, 348 bachelor's degrees
 - 37 military
 - 914 contractors



2014 Successes

- ARL's Open Campus initiative, unveiled in 2014, is a collaborative endeavor, with the goal of building an S&T ecosystem that will encourage groundbreaking advances in basic and applied research areas of relevance to the Army. Through the Open Campus framework, ARL scientists and engineers will work collaboratively and side-by-side with visiting scientists in ARL's facilities and as visiting researchers at collaborators' institutions.
- Army researchers are evaluating prototype devices developed for the Defense Advanced Research Projects Agency's Warrior Web program. The goal is to create a soft, lightweight undersuit to help reduce injuries and fatigue, while improving mission performance.
- ARL Soldier-protection experts have received a \$500,000 grant from the NFL, Under Armour and GE's Head Health Challenge II initiative that will assist its research to protect against brain injury. ARL has been a leader in the development of new materials and designs for improved ballistic helmets. In this new program, ARL scientists will explore a new paradigm for head protection: rate-actuated tethers.
- ARL scientists and engineers and a group of university partners are trying to answer exactly how, and to what degree, shock waves cause brain damage. Researchers are investigating new material development for helmet padding systems. From this research, they expect greater insight and innovation in addressing strategies for mitigating the effects of blast.