

# FEDERALLY FUNDED RESEARCH BOOSTS NATIONAL SECURITY

# SUPPORTING OUR TROOPS IN COMBAT

Research conducted by the Department of Defense (DOD) empowers and supports our troops.

## ■ Soldier Personal Digital Assistant:

Soldiers receive situational awareness and other information using:

**GPS:** Basic research funded by the Air Force, Navy, and AEC (now Department of Energy [DOE]) led to the global positioning system, which gives a soldier's specific location anywhere in the world.

### **WEARABLE SOLDIER RADIO TERMINAL:**

Provides voice communications and links a soldier's personal digital assistant to FalconView software, which networks and maps soldiers on the battlefield. Research funded by several DOD offices.

**LITHIUM PRIMARY BATTERIES:** Lighter, longer-lasting power source for soldiers built on basic research funded by DOE and applied research funded by the Army and Defense Advanced Research Projects Agency (DARPA).

## ■ Hemcon Bandage:

The HemCon bandage, which stops hemorrhaging within minutes, was a result of research and development funded by the Army and performed by the U.S. Army Medical Research and Materiel Command.

## ■ Interceptor Body Armor:

Led to the flexible, lightweight, highly ballistic-resistant body armor system that protects soldiers in combat. Materials and engineering design research sponsored by the Marine Corps, Army, and DARPA.



## ■ Joint Precision Air Drop System:

Improved air delivery drops food and equipment closer to soldiers, increases survivability of aircraft personnel and supplies, and makes humanitarian relief more efficient. Joint Army/Air Force research.

## ■ Laser Designator:

Laser sights that increase precision of weapons in the field were made possible by laser research begun at Bell Labs in the 1950s and later sponsored by the Army and Air Force.

## ■ Translation Devices:

Highly accurate voice recognition technology allows soldiers to generate and interpret speech in other languages. The original technology resulted from DARPA-sponsored research and was improved by other DOD agencies.

## ■ Luminescent Polymers for Explosive Sensing:

DOD-sponsored research has identified nanotechnologies that detect hidden improvised explosive devices (IEDs).

## ■ Meal, Ready-To-Eat:

Advanced technologies resulting from Army-sponsored research at Natick Soldier Research, Development and Engineering Center protect food rations from deteriorating in extreme environments, enhance soldiers' physical endurance, and help detect food contaminants.

## ■ Night Vision Goggles:

The photoelectric effect allows soldiers to see images in very low light. Current night vision technology is the result of DOD-funded research.

## ■ Soldier Training:

Gaming technology and simulation of battlefield environments prepare soldiers for deployment and provide theater mission training. Underlying technologies developed from Army-funded basic research.