



# DEPARTMENT OF DEFENSE RESEARCH

UW-MADISON: RANKED #8 NATIONALLY WITH \$1.3 BILLION IN ANNUAL RESEARCH EXPENDITURES

The Department of Defense (DoD) Science and Technology (S&T) account and the Defense Advanced Research Projects Agency (DARPA) support research that leads to the development of innovative biomedical technologies and advancements in national security. Discoveries from defense research have led to shifts in military capabilities that support the U.S. Armed Forces and play a vital role in ensuring the U.S. has medical technologies to support military readiness. At UW-Madison, DoD funding supports research ranging from advancements in cancer identification and treatment to high-speed telecommunications transmission.

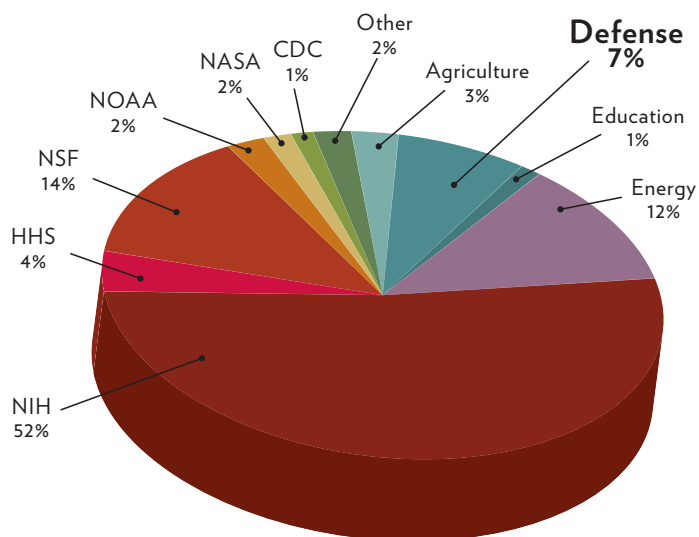
## EXAMPLES OF DOD RESEARCH AT UW-MADISON

### School of Medicine and Public Health

Scientists at UW-Madison have identified two subtypes of metastatic prostate cancer that respond differently to treatment. Researchers identified genetic signatures that can divide metastatic (spreading) prostate tumors into two types, one of which responds better to testosterone-blocking treatment than the other. The researchers hope to develop blood tests that could more easily determine the type of metastatic prostate cancer found in an individual, which may one day guide physicians in treating patients with the therapies best suited to their disease. [More online.](#)

### Department of Physics, College of Engineering

Silicon-based fiber optics are currently the best structures for high-speed, long-distance transmissions, but graphene — an inexpensive ultra-thin, all-carbon, and adaptable material — could improve performance even more. UW-Madison researchers fabricated graphene into the smallest ribbon structures to date, further closing in on the properties needed to move graphene toward useful telecommunications equipment. With further modifications, graphene could be used to modulate telecommunications signals at lightning-quick speeds and even block unwanted communications frequencies. [More online.](#)



# \$54.8 million

Dept. of Defense federal research awards at UW-Madison in 2020-21

## WHY UNIVERSITY RESEARCH MATTERS

By supporting DoD funding in research, you support programs that ensure our military stays on the leading edge of technology capabilities.

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