

Department of Defense: Supporting Research at Michigan



The University of Michigan (U-M) is one of the top university recipients of competitively-awarded grants from the Department of Defense (DoD). Support from DoD allows universities across the country to conduct fundamental research and develop cutting-edge technologies to ensure the nation's military is well equipped to address the complex challenges and threats our nation faces.

DoD partners with other federal agencies to support regional manufacturing centers. U-M co-leads Lightweight Innovations For Tomorrow (LIFT), located in Detroit, which seeks to develop lightweight modern metal manufacturing technologies. DoD funding also supports training the next generation of scientists and engineers.

\$79M

Research Expenditures
in FY2018

463 Active Projects

9.2%

of Overall

U-M Federal
Support

U-M research projects supported by DoD
annually involve about:

412 Faculty
62 Postdoctoral Fellows
55 Graduate Students



Artificial Cartilage

Researchers at U-M helped develop “Kevlartilage” to match the unparalleled liquid strength of cartilage, which can withstand some of the toughest forces on our bodies. Many people with joint injuries would benefit from a good replacement for cartilage, such as the 850,000 civilian and military patients in the U.S. who undergo surgeries removing or replacing cartilage in the knee. “Understanding cartilage is understanding how life forms can combine properties that are sometimes unthinkable together,” said U-M Professor Nicholas Kotov.



Risk and Resilience

U-M researchers are working to identify factors that protect or pose risks to the emotional well-being and mental health of soldiers and veterans. The Study to Assess Risk and Resilience in Service members is the largest study of mental health risk and resilience factors ever conducted among military personnel. “Survey data provides researchers worldwide with information that can be used to help the Army better understand suicidal behaviors among soldiers, while at the same time disprove many commonly held beliefs about risk factors for suicide,” said U-M Research Associate Professor James Wagner.



Concussion Consortium

Concussions remain a serious concern for student-athletes, service members, youth sports participants and the broader public. U-M Professor Steven Broglio leads the largest and most comprehensive study of concussion and head impact exposure ever conducted. In collaboration with the Uniformed Services University, the Concussion Assessment, Research and Education (CARE) Consortium study has collected data on more than 39,000 student-athletes and cadets at 30 colleges and military service academies — including more than 3,300 who have experienced concussions. This study will inform efforts to improve health and safety, as well as the culture of concussion reporting and management.