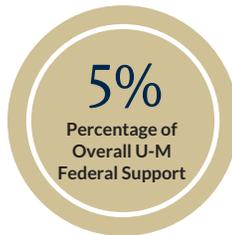




DEPARTMENT OF ENERGY
SUPPORTED RESEARCH AT THE

UNIVERSITY OF MICHIGAN



FY 2016 Research Expenditures: \$39,098,970

Year-to-year, Department of Energy-supported projects involve about:

Faculty Researchers.....	154
Postdoctoral Fellows.....	47
Graduate Student Researchers.....	62

Examples of U-M projects supported by the Department of Energy (DoE):



TRANSFORMATIONAL ENERGY AND BATTERY PROJECTS

Two DoE grants that total \$5.4 million will help U-M engineering researchers work on transformational engine and battery projects.

U-M's efforts could lead to efficiency gains in cars and trucks, the electrical grid and beyond. The grants are part of funding from DoE's Advanced Research Projects Agency-Energy, also known as ARPA-E. The projects were chosen because they "advance U.S. energy security and help achieve climate goals," according to an ARPA-E statement.



U-M SETTLES LONGSTANDING DEBATE ON HOW METHANE IS MADE BIOLOGICALLY

A U-M research team has been pursuing the answer to the methane question for 25 years.

All this time, we've been using natural gas for power without understanding how it's formed.

"We were totally surprised," said computational chemist Simone Raugei, a co-author at the Department of Energy's Pacific Northwest National Laboratory. "We thought we'd find evidence for other mechanisms."

The work is important for both producing methane as a fuel source and tempering its role as a powerful greenhouse gas. Understanding how microbes generate methane might help scientists find ways to control pollution or make fuels.



RESEARCHERS 'SOLVE' KEY ZIKA VIRUS PROTEIN STRUCTURE

Researchers have revealed the molecular structure of a protein produced by the Zika virus that is thought to be involved in the virus's reproduction and its interaction with a host's immune system.

The results provide scientists around the globe with new information about the NS1 protein's role in Zika virus infections, and expands scientists' understanding of the flavivirus family, which also includes dengue, West Nile and yellow fever. The study was led by U-M and done in collaboration with Purdue University.

Researchers collected X-ray crystallography data at the U.S. Department of Energy's Advanced Photon Source at Argonne National Laboratory, getting us one step closer to a Zika virus vaccine.