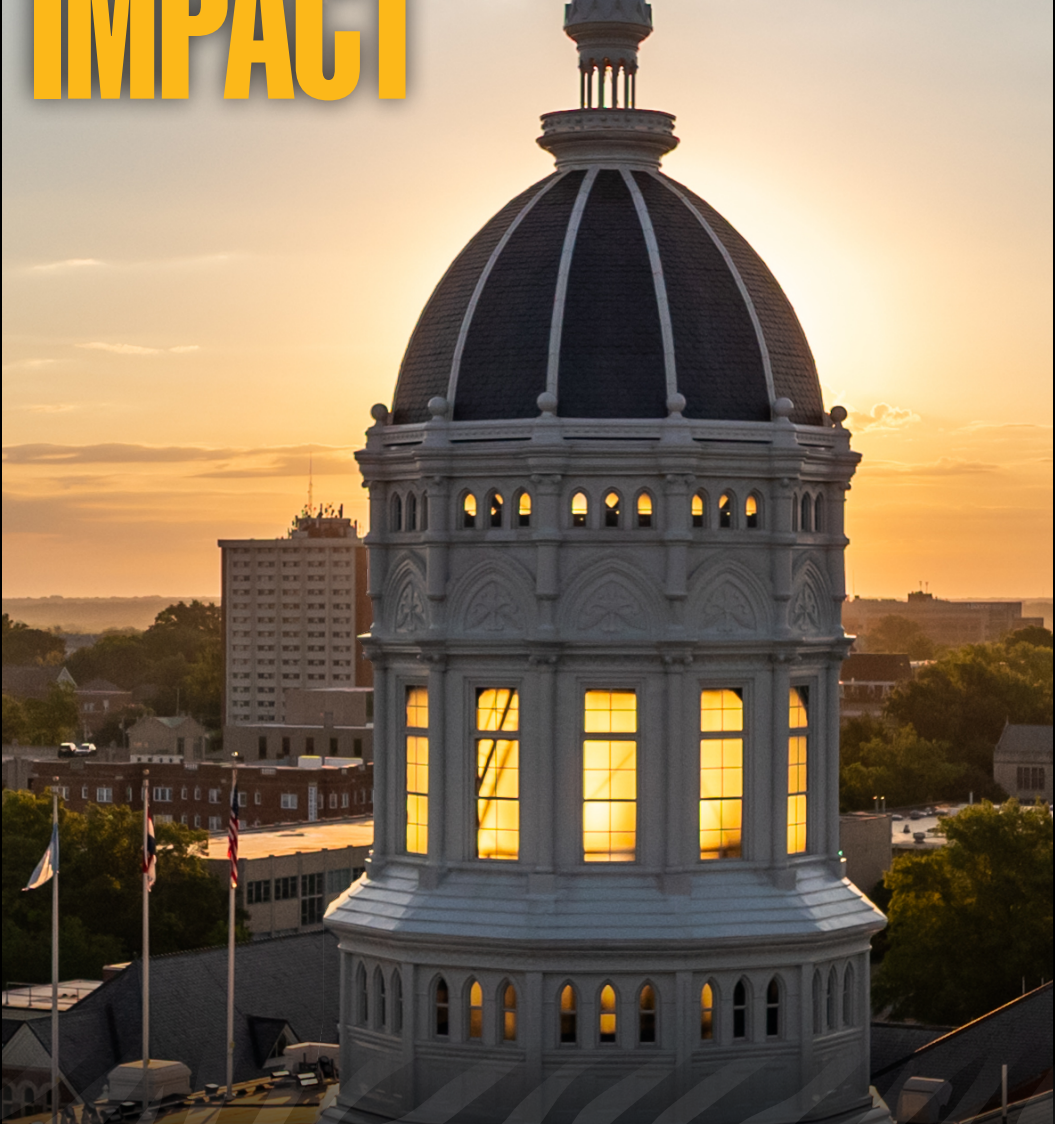


# INVESTING IN IMPACT



University of Missouri

## 2025 ANNUAL REPORT

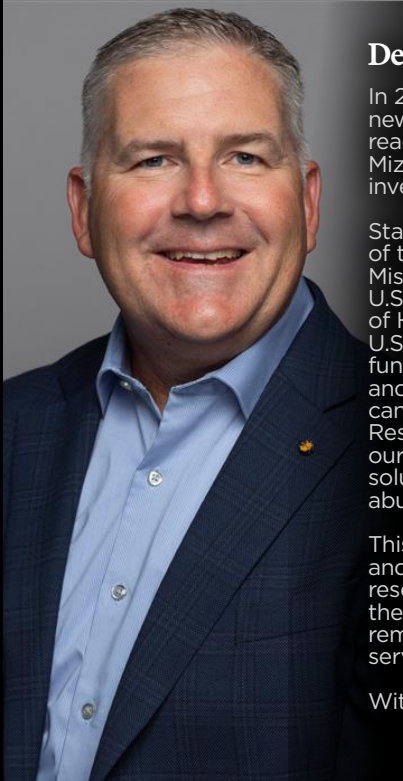
Research, Innovation and Impact



# Research, Innovation & Impact

University of Missouri

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## Dear Colleagues,

In 2025, the University of Missouri achieved a new university record: research expenditures reached \$553 million, a clear signal that Mizzou is delivering real returns on Missouri's investment in higher education.

State and federal partnerships are at the heart of this success. Support from the state of Missouri and federal agencies — including the U.S. Department of Energy, National Institutes of Health, National Science Foundation and the U.S. Department of Agriculture — is directly funding solutions that benefit all Missourians and Americans. These investments range from cancer treatments developed through the MU Research Reactor (MURR), to tools protecting our power grids and warfighters, to creative solutions for agriculture that ensure a safe and abundant food supply.

This work creates jobs, drives economic growth and positions Missouri as a national leader in research and innovation. We are grateful for the investments that make it possible, and we remain committed to delivering results that serve our state and our nation.

With gratitude,

Thomas E. Spencer  
Vice Chancellor for Research

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[RESEARCH.MISSOURI.EDU](https://RESEARCH.MISSOURI.EDU)

310 Jesse Hall, Columbia, MO 65211

# HEALTH

## Disease prevention and cancer research



### Diagnosing America's deadliest diseases

Blood thickness is linked to six of the top 10 causes of death in the U.S. Now a Mizzou-developed tool can measure it noninvasively, in real time. The goal is to make it a standard vital sign alongside blood pressure and heart rate.



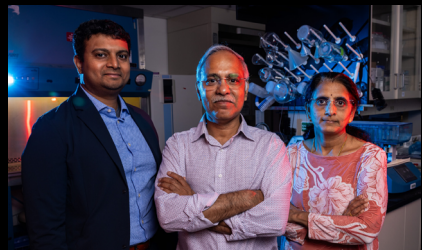
### Our reactor fights cancer

A powerful new radioisotope that delivers targeted radiation directly to cancer cells while sparing healthy tissue is being developed at MURR. This innovation has potential to reach patients nationwide and add to the reactor's cancer treatments, which benefit roughly 460,000 patients per year.



### Naming a disease, giving hope

A Mizzou-led international team identified an unknown genetic disease that damages motor neurons and causes progressive muscle weakness. Their work opens the door to new diagnostics and treatments for patients who previously had no answers.



### Why cancer drugs stop working

Mizzou scientists discovered why common lung cancer treatments fail after about 18 months and developed a nanoparticle-based approach to overcome that resistance, potentially extending the effectiveness of existing therapies.

# ENGINEERING

Energy, cybersecurity and eliminating forever chemicals



## Building the future of energy innovation

The University of Missouri Board of Curators approved a 116,000-square-foot Energy Innovation Center, set to open in 2028, that will bring together engineers, physicists, chemists and policy experts to tackle energy production, storage, security and distribution challenges facing Missouri and the nation.



## Protecting power grids from cyberattacks

At a time when grid operators are increasingly vulnerable to sophisticated attacks that could knock out power to millions of people, an AI-powered cybersecurity framework developed by Mizzou faculty predicts cyberattacks on smart power grids with nearly 92 percent accuracy.



## Inspired by nature, researcher targets forever chemicals

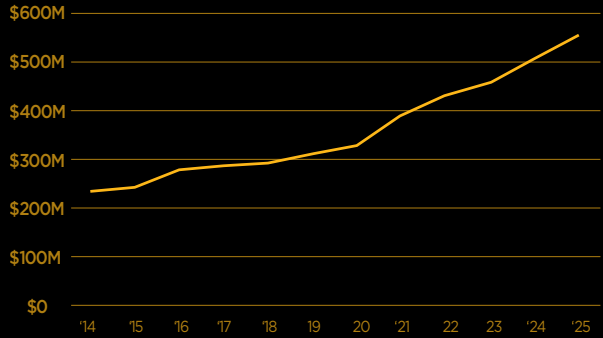
Mizzou researcher Susie Dai developed a low-cost, natural solution to remove and break down forever chemicals — contaminants linked to cancer and other serious health conditions that are increasingly found in drinking water — using agricultural waste and algae instead of expensive industrial processes.

# INVESTMENTS IN IMPACT

## Research expenditures FY 2025

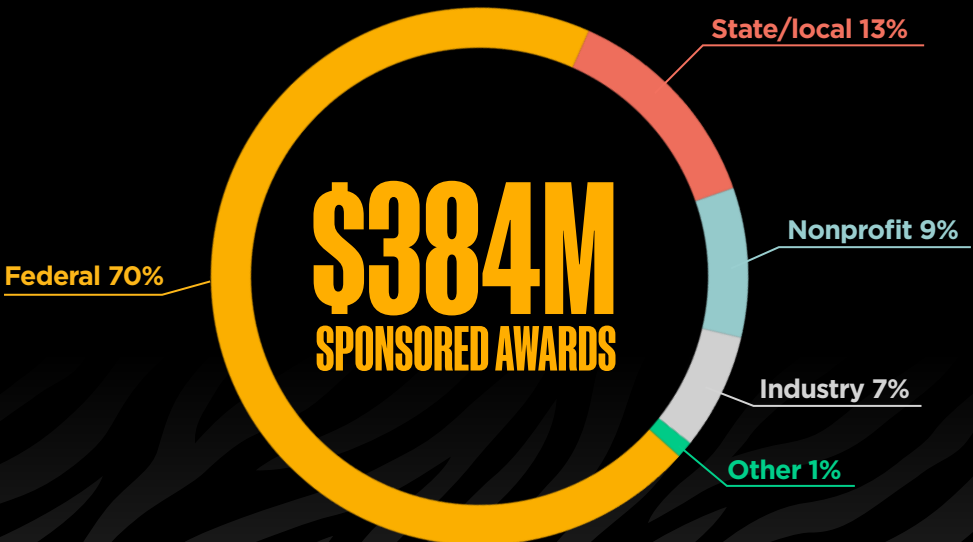
The University of Missouri conducted more than \$550 million in research in FY2025, setting a record and marking 12 years of consecutive growth. Mizzou research turns state and federal investments into something tangible — jobs created, companies launched and problems solved — right here in Missouri.

**\$553M**  
TOTAL RESEARCH  
EXPENDITURES

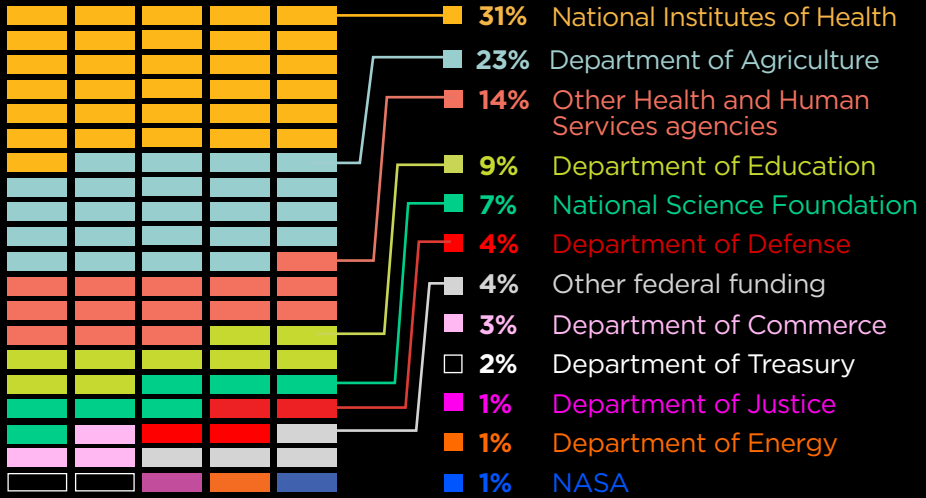


Source: Higher Education Research and Development (HERD) Survey reports, National Science Foundation

## Grants and contracts



## Major funding sources



## Federal awards

**\$271M** FEDERAL SPONSORED AWARDS

## Achievements

**1,286** Distinct awards received

**906** Different investigators won awards

**123** U.S. patents issued and new inventions disclosed

**2,800** Faculty books and articles published in 2024

**\$1.9M** Licensing income from commercial partners

**\$1.9M** Internal Research Council grants awarded since 2020

# HUMANITIES

Education, democracy and ancient history

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## Teaching Missouri's constitutional roots

The U.S. Department of Education awarded MU's Kinder Institute on Constitutional Democracy a three-year grant to strengthen civics education statewide. It funds teacher professional development, a new virtual learning module and an expansion of its Civil Dialogues public forum series — all timed with the nation's 250th anniversary.

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## Catching kids before they fall behind

Mizzou researchers developed a free, easy-to-use screening tool that helps kindergarten teachers identify students who may need extra academic or social-emotional support. In a pilot with 350 Missouri kindergarteners, researchers found that one in four students could benefit from early intervention at no cost to schools.



## Mizzou puts Missouri on the world archaeological map

A Mizzou-led team unearthed one of the earliest known examples of Roman monumental architecture near Rome — a massive stone-lined water basin built around 250 B.C. — uncovering more about how ancient cities were designed and governed. The discovery positions the university as a leading institution in classical archaeology and strengthens international research partnerships.

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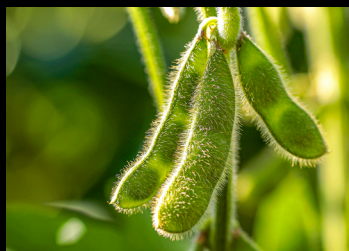
# AGRICULTURE

Crop resilience and livestock health



## Advancing flu research

Mizzou researchers are using cutting-edge genetic technology to identify which immune cells in pigs best recognize and fight influenza. Because pigs and humans share strong biological similarities, this work could protect Missouri's pork industry and help prevent the next flu pandemic through longer-lasting protections and improved therapies.



## Soybean resilience to stress

When heat and drought threaten Missouri soybean fields, the plants have a surprising defense. Mizzou scientists discovered that soybeans naturally cool their flowers and pods by keeping pores open on reproductive tissues while closing them on leaves, saving up to 95 percent of the plant's water. This NSF-supported research could guide the development of more resilient varieties better equipped to withstand tough growing conditions.

## Managing livestock losses

Animal death is part of farm life, and Mizzou faculty deliver hands-on, research-backed workshops that teach farmers how to safely dispose of carcasses. These trainings strengthen our biosecurity and protect Missouri herds.

