

# UNIVERSITY OF KENTUCKY BOARD OF TRUSTEES RESEARCH UPDATE

Ilhem Messaoudi, Ph.D.

Acting Vice President for Research



## UK RESEARCH HIGHLIGHTS

UK Research and Education Center

# Improving Drone Spraying to Treat Cornfield Diseases

The UK Research and Education Center aims to optimize drone-based spray systems to effectively manage diseases in Kentucky cornfields. Two years into the Kentucky Corn Growers Association study, researchers showed drone fungicide application is a viable way to treat corn. More study is needed to ensure farmers can optimize application for disease control and crop yield.





## UK RESEARCH HIGHLIGHTS

Markey Cancer Center

# Watching Pediatric Cancer Growth and Response

Markey Cancer Center researchers are using zebrafish to find less toxic and more effective ways to treat pediatric cancer. Zebrafish share 70% of their genes with humans. Because the skin of zebrafish larvae is clear, researchers can watch tumors develop through a microscope in real time and easily see how tumors grow and respond to potential treatments.



## UK RESEARCH HIGHLIGHTS

Martin-Gatton College of Agriculture, Food and Environment

# Examining the Impact of Free School Meals

With funding from the USDA's Agriculture and Food Research Initiative, UK researchers are studying how Universal Free School Meals (UFSM) — the second-largest food assistance program in the U.S. — impact food spending, diet quality and health outcomes. For millions of families, the program is a crucial safety net. Recent legislation in eight states has made UFSM permanent.





## UK RESEARCH HIGHLIGHTS

Stanley and Karen Pigman College of Engineering and Center for Applied Energy Research

# Turning Coal into Critical Materials

With funding from the Department of Energy, UK researchers from the Stanley and Karen Pigman College of Engineering and Center for Applied Energy Research are developing and testing technologies to produce rare earth metals, carbon fibers and graphite from coal. Essential to modern technologies, clean energy and economic security, these materials are vulnerable to supply chain disruptions and key to the future of U.S. manufacturing.





## UK RESEARCH HIGHLIGHTS

Markey Cancer Center

# Understanding Colorectal Cancer

UK Markey Cancer Center researchers are seeking answers to explain the high mortality rates of colorectal cancer in Appalachian Kentucky. By analyzing tumor samples in Appalachian and non-Appalachian patients, the team found differences in mutated genes and in the microbiome — fungi, viruses and bacteria inside tumors. Probiotic or antibiotic therapy could be a potential treatment.





## UK RESEARCH HIGHLIGHTS

Sanders-Brown Center on Aging

# Finding Alzheimer's Weak Link

Sanders-Brown Center on Aging researchers discovered how the brain's support cells communicate with blood vessels, a process that goes awry in Alzheimer's disease.

Featured on the cover of The Journal of Neuroscience, the research team revealed a critical weak link that may help explain why and how the brain's energy supply short-circuits in people with Alzheimer's and related dementias.

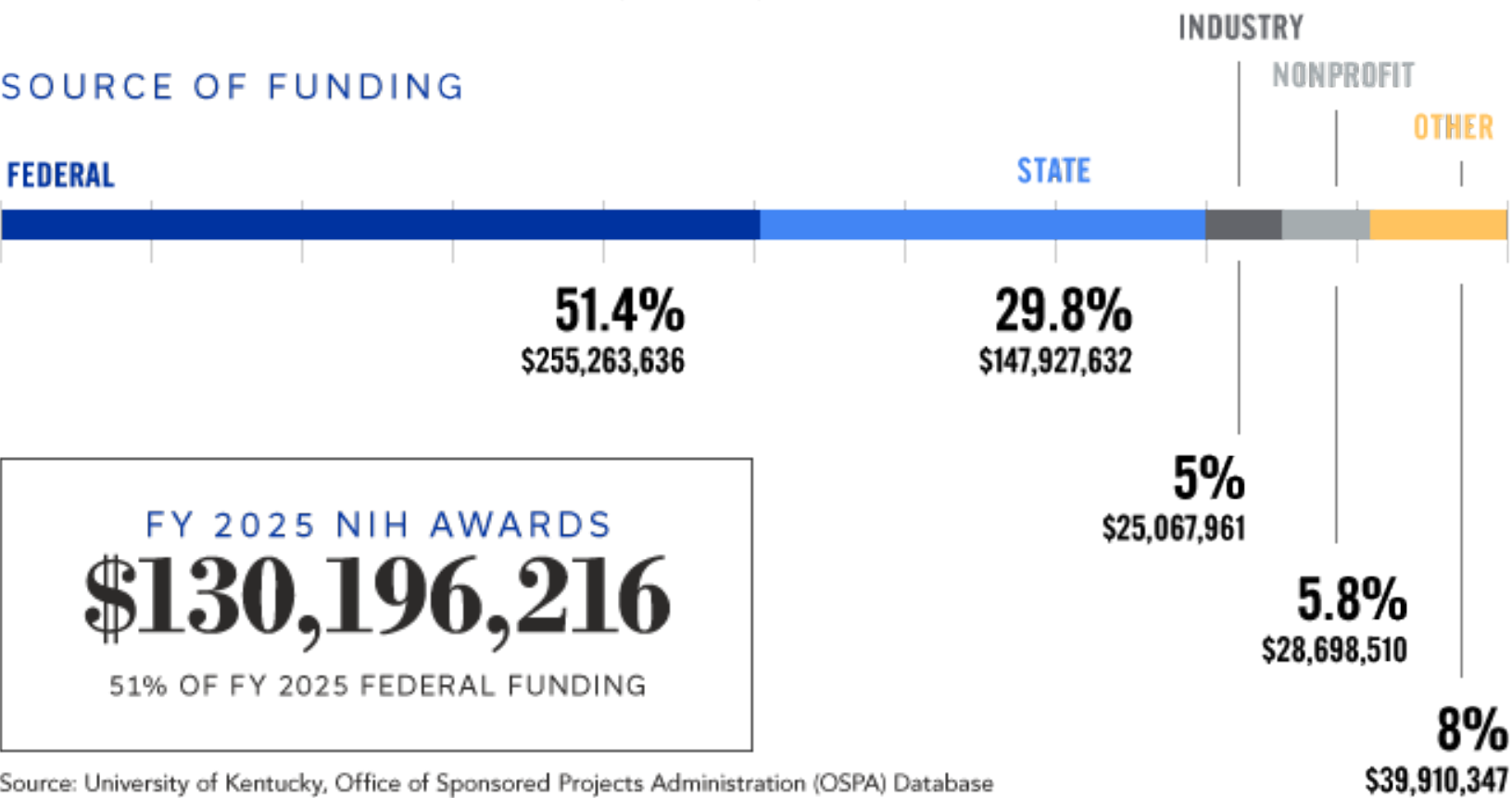


FY 2025 AWARDED GRANTS AND CONTRACTS

\$496,868,086

+1.7% (+\$8.4M) from FY 2024

SOURCE OF FUNDING

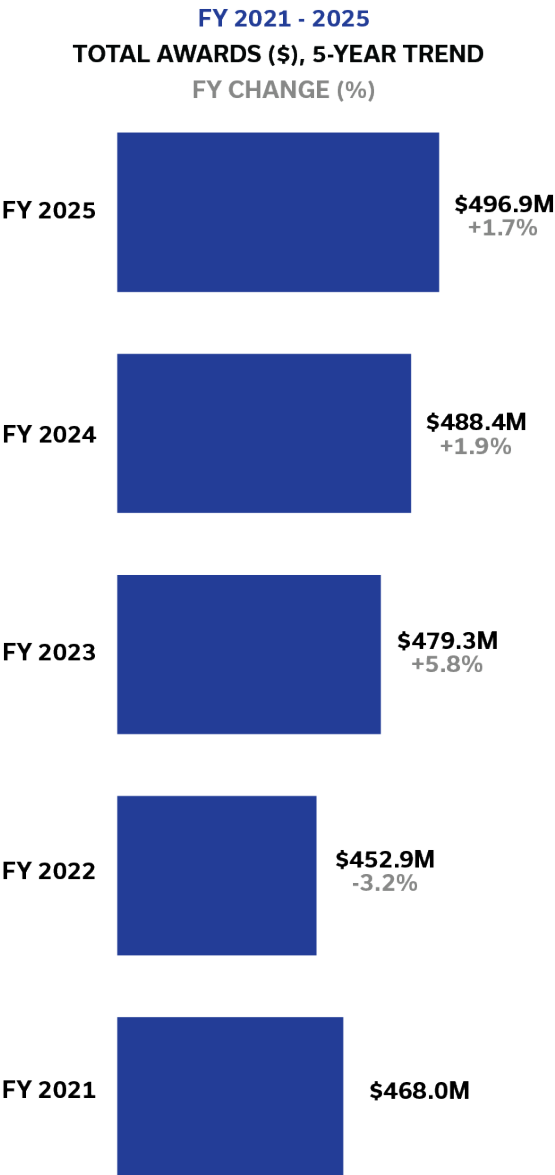


FY 2025 NIH AWARDS

\$130,196,216

51% OF FY 2025 FEDERAL FUNDING

Source: University of Kentucky, Office of Sponsored Projects Administration (OSPA) Database





# \$37,198,790

In October 2025, UK received \$37,198,790 in awards (external grants and contracts) for a year-to-date total of \$323,178,141. This is a **2.7% increase** compared to FY25 (\$314,818,825).

# 63

In October, 63 new projects were awarded to 57 principal investigators from 40 sponsors.

The Centers of Biomedical Research Excellence (COBRE) support the establishment and development of innovative, state-of-the-art biomedical research centers at Institutional Development Award (IDeA) eligible states through awards for three sequential five-year phases. Funded by the National Institute of General Medical Sciences (NIGMS).

UK currently has 4 prestigious COBRE awards.

- These multiyear awards are vital for faculty development and recruitment.
- New: Diabetes Prevention COBRE, Phase 1, total projected award: \$11 million
- New: COBRE for Translational Chemical Biology, Phase 2, total projected award: \$11.2 million



## Continuing our progress

- UK research continues to move forward despite the uncertainty, terminations and paused research projects since January 2025.
- UK investigators submitted a record number of research proposals to NIH, our largest source of federal funding, in FY25.
- UK investigators are submitting more proposals overall than last fiscal year.

# QUESTIONS

