



# UARIZONA RESEARCH HIGHLIGHTS

Through cutting-edge research and innovation, the University of Arizona is committed to expanding human potential, exploring new horizons, and enriching life for all. With \$955M in annual research activity, we are leading the way in tackling the most pressing and complex challenges of our time, from climate change to planetary defense, and pandemic preparedness to healthy aging. As the state's designated land-grant university, making a real-world impact is not just our goal, but our moral obligation.

## BY THE NUMBERS

### No. 1

ASTRONOMY & ASTROPHYSICS  
R&D Expenditures

### No. 2

WATER RESOURCES  
in the U.S. (No. 6 in the world)

### No. 3

HIGH HISPANIC-ENROLLMENT  
IN RESEARCH ACTIVITY  
in U.S. institutions

### No. 6

NASA-FUNDED ACTIVITY  
among public universities

### No. 7

PHYSICAL SCIENCES  
R&D Expenditures

### No. 6

COLLEGE OF PHARMACY  
in the nation

### No. 36

R&D EXPENDITURES  
overall

## ENTREPRENEURSHIP

(AS OF FY23)



**2,753 invention disclosures**

knowledge development that can change the world



**537 licenses & options**

for university inventions



**615 patents issued**

Ranked no. 28 among worldwide universities granted U.S. utility patents



**135 startups launched**

commercializing UArizona inventions



**\$1.61B in economic output**

from commercialization activities between FY17-FY21

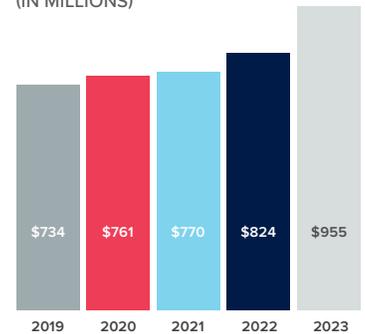
## LAND-GRANT MISSION

With offices in all 15 counties, UArizona Cooperative Extension is critical to our land-grant mission of accessible education, research, and outreach. Cooperative Extension connects us to Arizonans statewide, serving as a network of knowledgeable faculty and staff and lifelong educational programs that are transformational in Arizona and beyond.

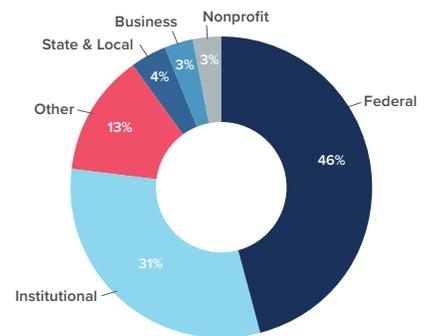
## TOP 20 IN R&D EXPENDITURES

(AMONG PUBLIC UNIVERSITIES)

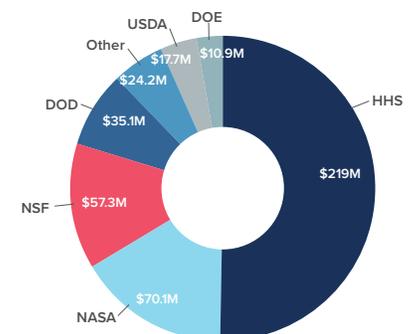
TOTAL RESEARCH EXPENDITURES (IN MILLIONS)



HERD\* FY23 FUNDING SOURCES



HERD\* FY23 FEDERAL SOURCES (IN MILLIONS)



\*National Science Foundation Higher Education Research and Development Survey

## KEY STRENGTHS

The Fourth Industrial Revolution is a time of augmented intelligence and the fusion of digital, physical, and biological worlds. As advancements like machine learning, AI, and 3D printing continue to change the essence of society, we are preparing the next generation of problem solvers to harness 4IR capabilities to tackle grand challenges.



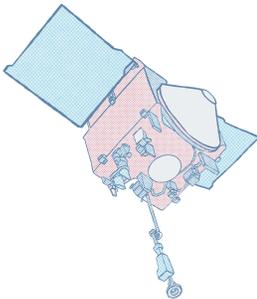
### ENVIRONMENT

- Mitigating the impacts of extreme heat and wildfire
- Pioneering a lifesaving, wastewater-based COVID-19 monitoring program
- Informing policymakers on environmental issues, including how to mine sustainably, conserve our water supply, and feed a global population of eight billion people



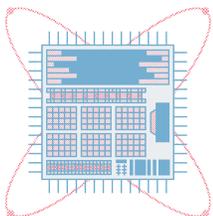
### HEALTH

- Home to Aegis Consortium, a transdisciplinary, collaborative network of experts focused on pandemic preparedness
- Precision Aging Network funded by a \$60M NIH grant to study the aging brain
- Home to state of Arizona's only National Cancer Institute-designated Comprehensive Cancer Center
- Addressing the national healthcare workforce shortage through our medical colleges in Tucson and Phoenix



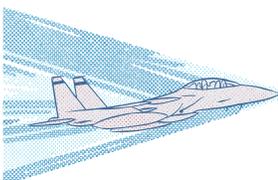
### SPACE

- OSIRIS-REx, NASA's first mission to collect a sample from the surface of near-Earth asteroid Bennu, was recently extended for 18 months to study another asteroid, Apophis
- Leading Aspera, a \$20M NASA mission to observe galaxy processes
- Led the development of critical imaging technology aboard NASA's James Webb Space Telescope
- Expanding infrastructure to support balloon-borne astronomy and the creation of nanosatellites with a new \$85M, 89,000-square-foot Applied Research Building
- Leading NEO Surveyor, a NASA mission expanding our nation's ability to find Earth-approaching asteroids and comets



### QUANTUM

- Home to the Center for Quantum Networks (CQN), funded by a five-year, \$26M National Science Foundation grant
- Operating a quantum entanglement testbed on the UArizona campus, connecting laboratories in six buildings with a combination of optical fibers and free-space optics between rooftops
- Bringing together 150 researchers across 10 U.S. universities and 12 corporate partners to lay foundations of the quantum internet



### NATIONAL SECURITY

- Advancing the ability to predict and prevent cyberattacks
- Advancing military operations in space
- Home to two hypersonic facilities and wind tunnels that permit testing from Mach 0 to Mach 5, \$10M in federal and state funding allowed for recent infrastructure upgrades
- Upgrading hypersonic research infrastructure with \$10M in federal and state funding awarded in early 2022