# **ARIZONA** 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. 4

**EARTH SCIENCE** in the U.S.

No. 6

NASA-FUNDED ACTIVITY

among public universities

# No. 6

COLLEGE OF PHARMACY in the nation

No. 7

PHYSICAL SCIENCES
R&D Expenditures

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.

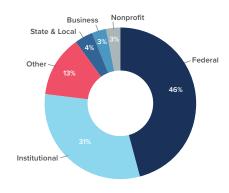
# TOP 20 IN R&D EXPENDITURES

(AMONG PUBLIC UNIVERSITIES)

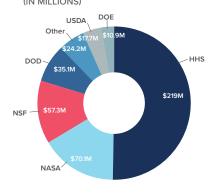
## TOTAL RESEARCH EXPENDITURES



#### **HERD\* FY23 FUNDING SOURCES**



# HERD\* FY23 FEDERAL SOURCES (IN MILLIONS)



<sup>\*</sup>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



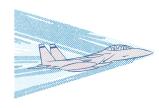
#### SPACE

- OSIRIS-Rex successfully returned samples from the surface of a near-Earth asteroid Bennu, and was recently extended by NASA for 18 months to study another asteroid, Apophis
- Leading Aspera, a \$20M NASA Astrophysics mission to observe nearby galaxies
- Led the development of multiple instruments and critical imaging technology aboard NASA's James Webb Space Telescope
- Expanding infrastructure to support orbital and 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 Earthapproaching asteroids and comets



#### **HUMAN EXPERIENCE**

- Exploring the human experience through groundbreaking work encompassing subject areas as diverse as language, gender stereotypes, and effective interpersonal communications
- Supporting initiatives like Leveraging Insights to Strengthen Regional Talent and Opportunities (LISTO), which increases opportunities for Hispanic students in STEM
- Prioritizing human experience and increasing diversity across our faculty, staff, and student body
- · Fulfilling our land grant mission to serve the people of Arizona



#### 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