

TEMPLE RESEARCH ON THE RISE

Temple University's Office of the Vice President for Research empowers student, faculty, staff and alumni innovators to develop research that impacts economic development, solves societal problems, opens new fields of discovery and creates sustainable technologies and businesses for the next generation.

Ranked 90th
for research activity,
NSF HERD Survey

83rd
for federal research
expenditures

Top 5
research activity
in Pennsylvania

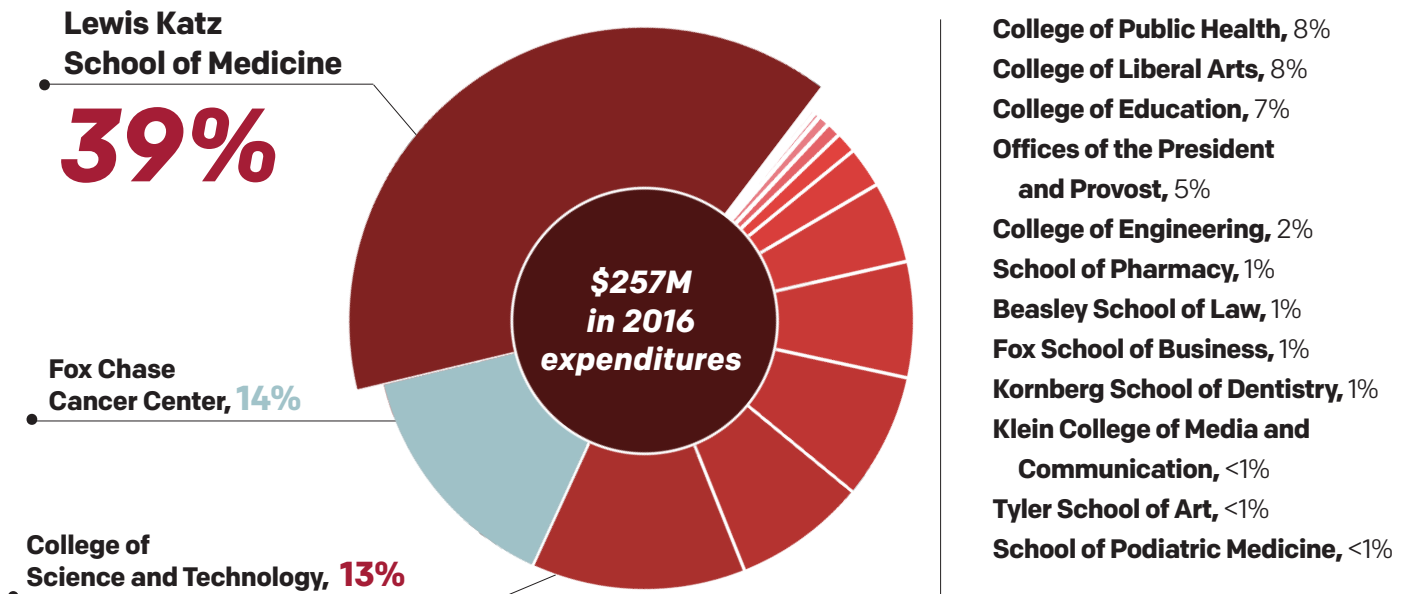
R1
highest research activity
Carnegie Classification

110
research-based
inventions per year

Temple University Research Expenditures

| | 2013 | 2014 | 2015 | 2016 | 2017 |
|--------------------------------|---------------|---------------|---------------|---------------|----------------------|
| Temple University | \$171,927,000 | \$178,313,000 | \$187,687,000 | \$200,275,000 | \$214,219,000 |
| Fox Chase Cancer Center | \$42,072,000 | \$57,852,000 | \$54,287,000 | \$56,759,000 | \$59,290,000 |
| Total | \$213,999,000 | \$236,165,000 | \$241,974,000 | \$257,034,000 | \$273,509,000 |

Research Portfolio by School/College



Research Awards and Proposals

1 Billion+
proposed in 2017

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|-------------------------|---------------|---------------|---------------|---------------|-----------------|-----------------|
| Dollars Awarded | \$120,677,726 | \$145,124,230 | \$140,041,124 | \$180,118,146 | \$181,198,031 | \$177,066,969 |
| Dollars Proposed | \$668,314,333 | \$689,965,510 | \$821,048,298 | \$998,589,045 | \$1,053,141,196 | \$1,075,448,294 |

Number of Proposals Submitted by School/College 2017

599 Lewis Katz School of Medicine

315 Fox Chase Cancer Center

257 College of Science and Technology

189 College of Public Health

145 College of Liberal Arts

116 College of Engineering

76 College of Education

46 School of Pharmacy

22 Offices of the President and Provost

19 Fox School of Business

15 Beasley School of Law

12 Kornberg School of Dentistry

7 Klein College of Media And Communication

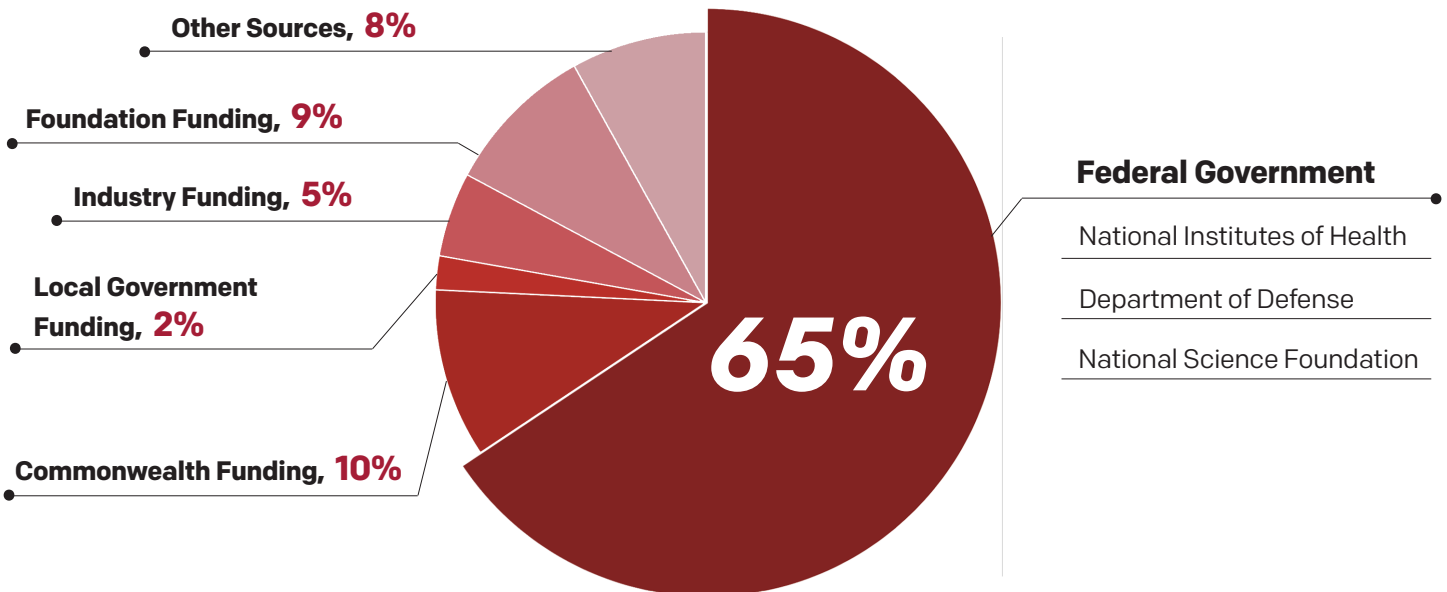
6 Tyler School of Art

4 School of Podiatric Medicine

2 Center for the Performing Arts

1,830
total proposals

Funding Sources 2017



Technology Commercialization Growth

| | 2017 | Increase over prior year | 2012 - 2017 | Increase over prior 5 years |
|------------------|-----------|--------------------------|-------------|-----------------------------|
| Inventions | 110 | +22% | 435 | +130% |
| Patents Filed | 67 | +29% | 190 | +217% |
| Licenses/Options | 15 | -11% | 52 | +174% |
| Licensing Income | \$579,632 | +42% | \$13.1M | +172% |
| Awarded Patents | 13 | +30% | 53 | +130% |
| Startups | 7 | +40% | 21 | +163% |

SPINOUT

Companies formed based on Temple discoveries account for:

\$397 M Investment

106 Active Jobs

39 Startups

Temple's licensing/technology transfer rate tripled in 2016 with 18 commercialization deals.

This high level was sustained with 15 deals in 2017.

This growth represents a 174% increase over the previous 5-year period.

\$13.1 Million in licensing income in the past 5 years

Faculty Highlights

18th Worldwide in Google Scholar Citations

2 Nobel Prize winners

15 Guggenheim Fellows

2 MacArthur Fellows

Award Highlights

\$20 million cooperative agreement with Army Research Lab, largest single year award ever

\$12 million Department of Energy Frontiers in energy research grant

2017 Keck Award, College of Science and Technology