

How can we invest to make science more innovative and impactful?

Alyson Wilson, Ph.D.
North Carolina State University
<http://alysongwilson.github.io>

The web site for the directed study is:

<https://alysongwilson.github.io/nysc2020.html>

When I was working at the Science and Technology Policy Institute the Director of NIH asked us to conduct a study to evaluate the **NIH Director's Pioneer Award (NDPA)**.

- The NDPA was in its 10th year, which was the last year the Director could fund it without turning the program over to the Institutes.
- Does NDPA-funded research produce *unusually high impact* as compared to research funded by other programs?
- Are the research approaches used by the Pioneers more *innovative* as compared to research funded by other programs?

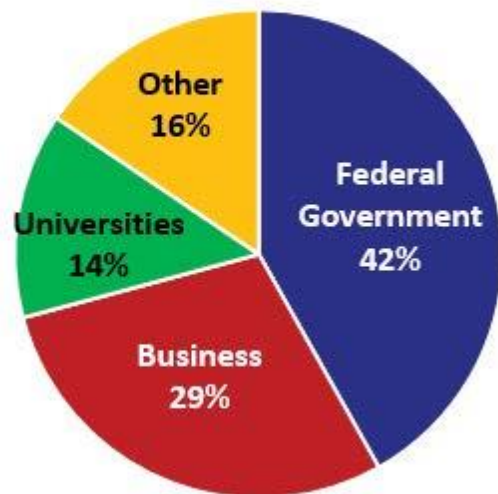
What is the federal budget for science?

- The total U.S. R&D budget for 2020 is \$156.0 Billion.
 - \$64.5 B is “defense” R&D
- Basic and Applied, each 30%, Development 40%

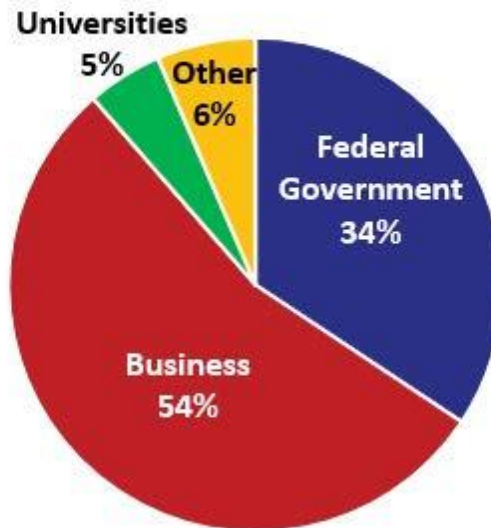
What agencies spend money on science?

- | | | |
|---------------------------------|-----------------|-------|
| • Department of Defense | \$64.5B (41.3%) | } 95% |
| • National Institutes of Health | \$40.2B (25.8%) | |
| • Department of Energy | \$19.2B (12.3%) | |
| • NASA | \$14.1B (9.0%) | |
| • National Science Foundation | \$6.8B (4.4%) | |
| • Department of Agriculture | \$2.9B (1.9%) | |
-
- Department of the Interior, Veterans Administration, Department of Commerce, Department of Transportation, Department of Homeland Security

Basic Research



Applied Research



Development

