The Role of Foundations and Scientific Societies in Supporting Frontier Research at Disciplinary Boundaries

Assembly of Science Officers Annual Meeting

American Institute of Physics

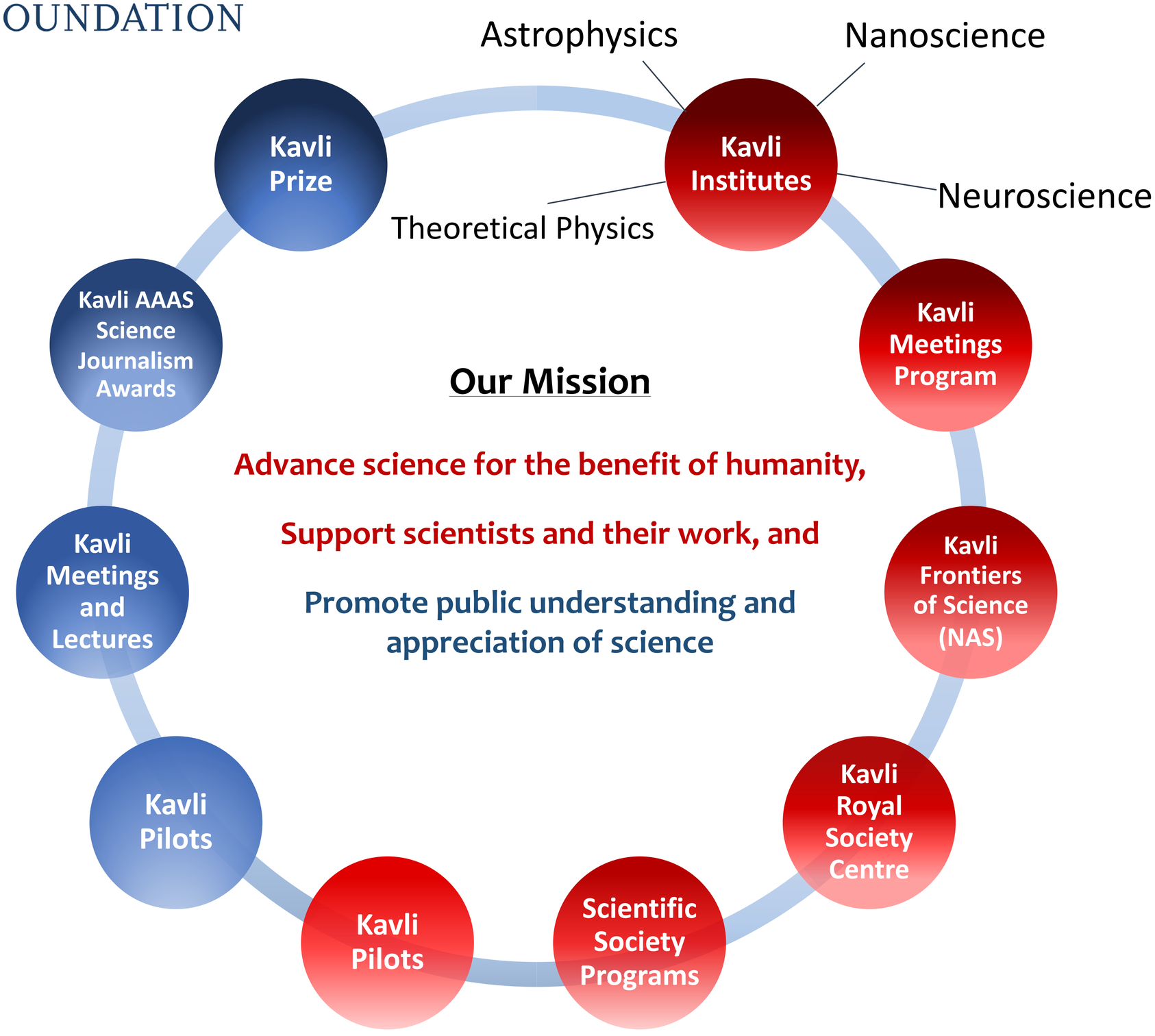
Robert W. Conn

President and CEO, The Kavli Foundation

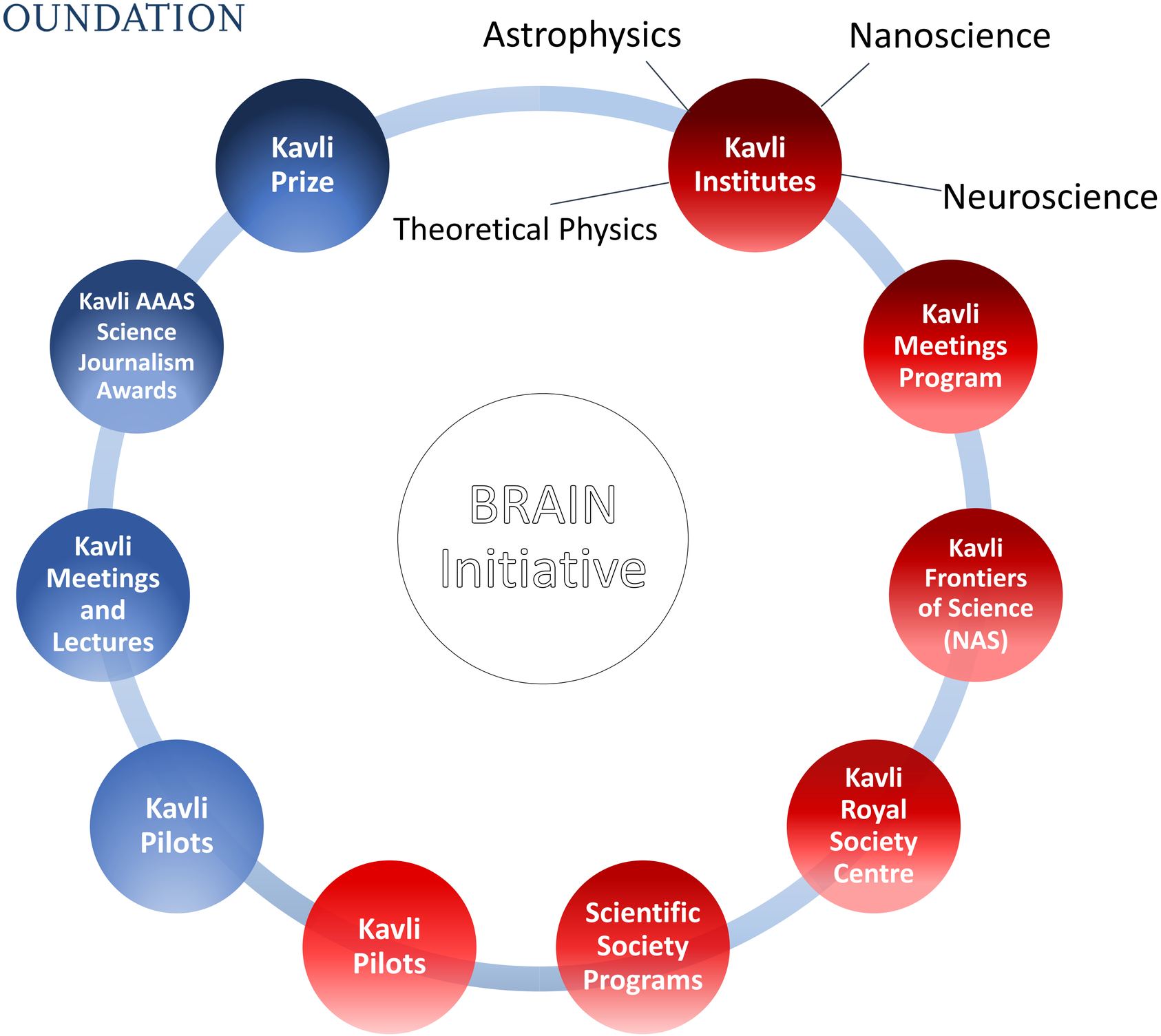
March 24, 2016

The Kavli Foundation is dedicated to advancing science for the benefit of humanity, promoting public understanding of scientific research, and supporting scientists and their work.

THE KAVLI FOUNDATION



THE KAVLI FOUNDATION



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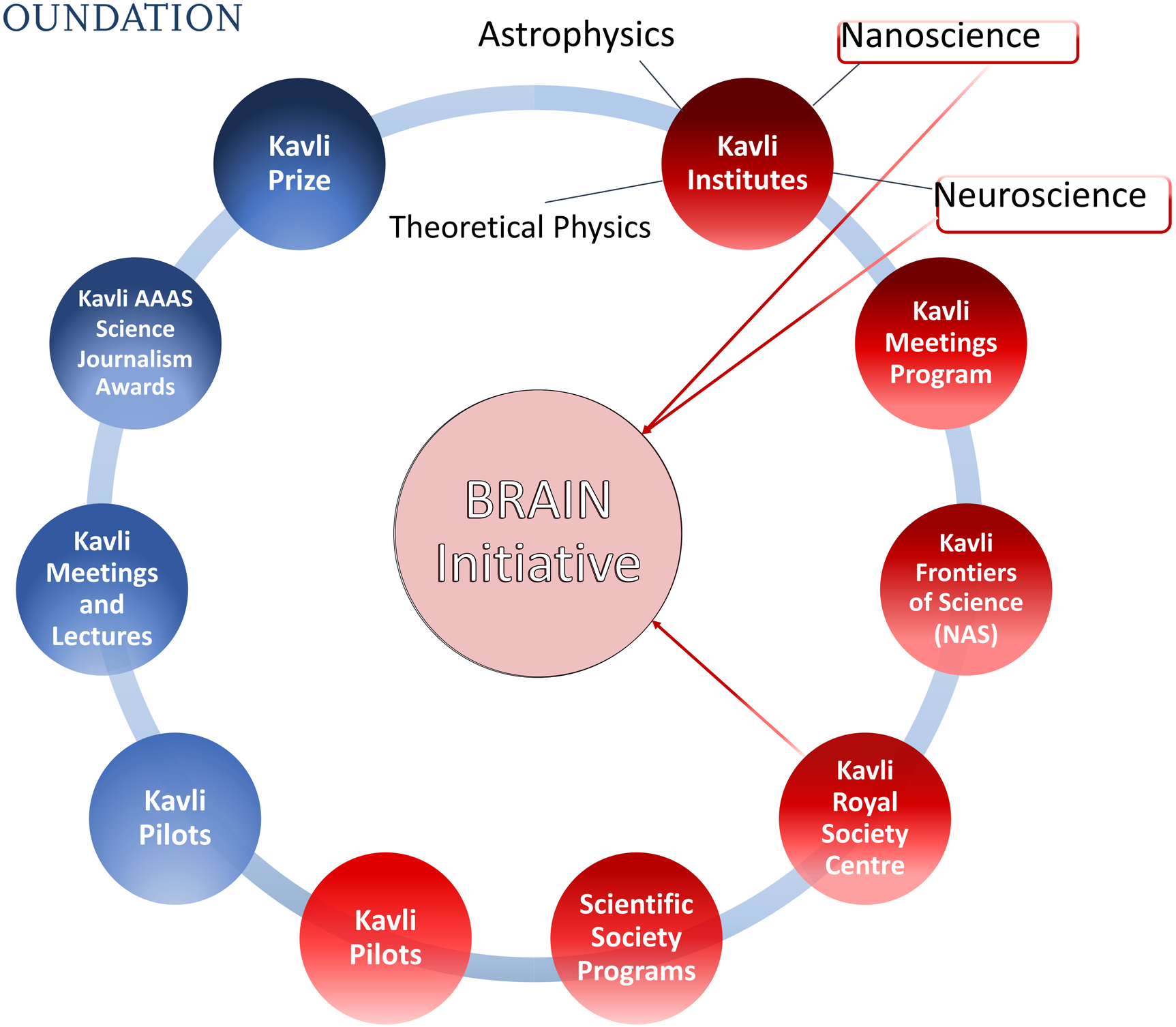

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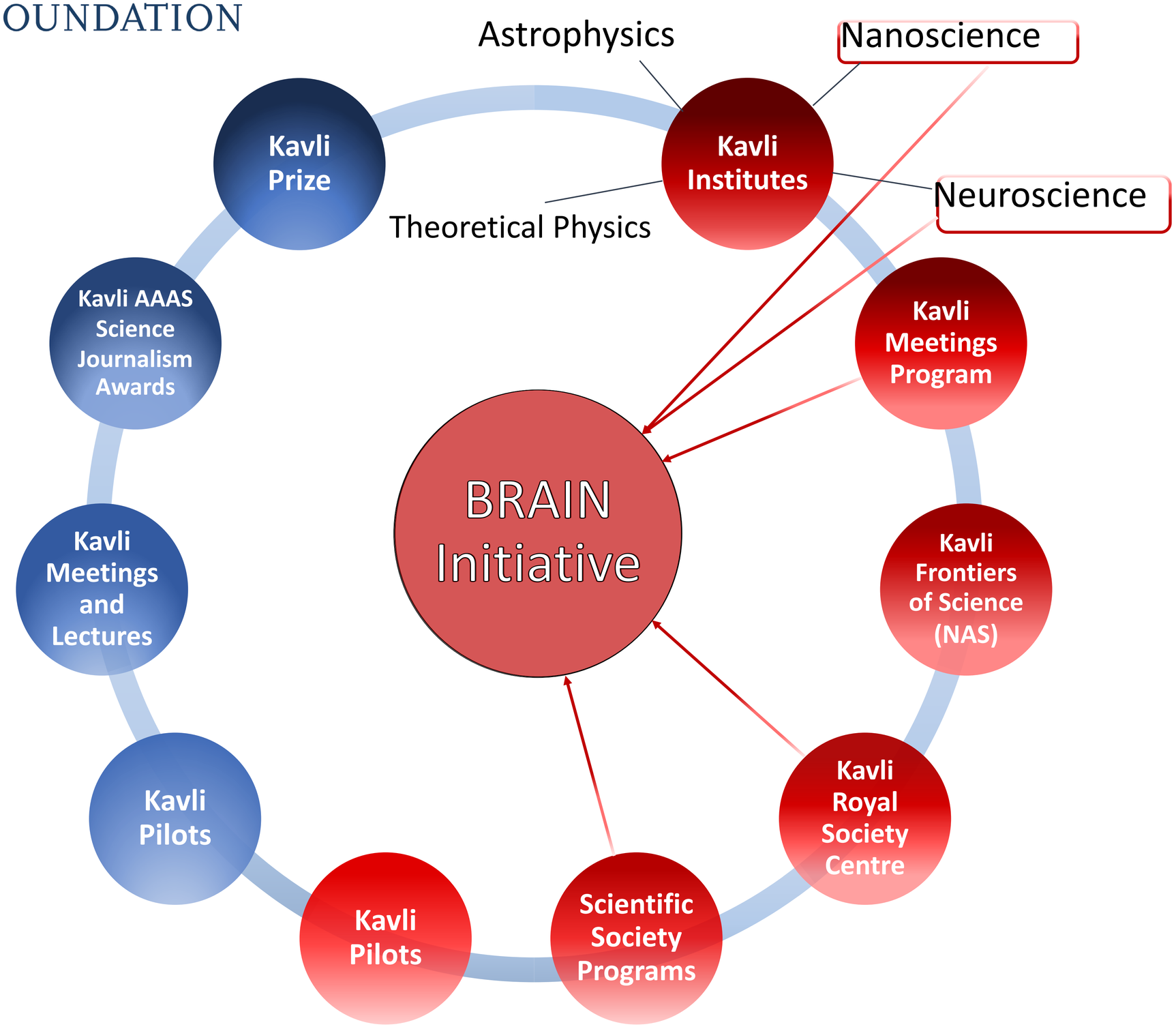
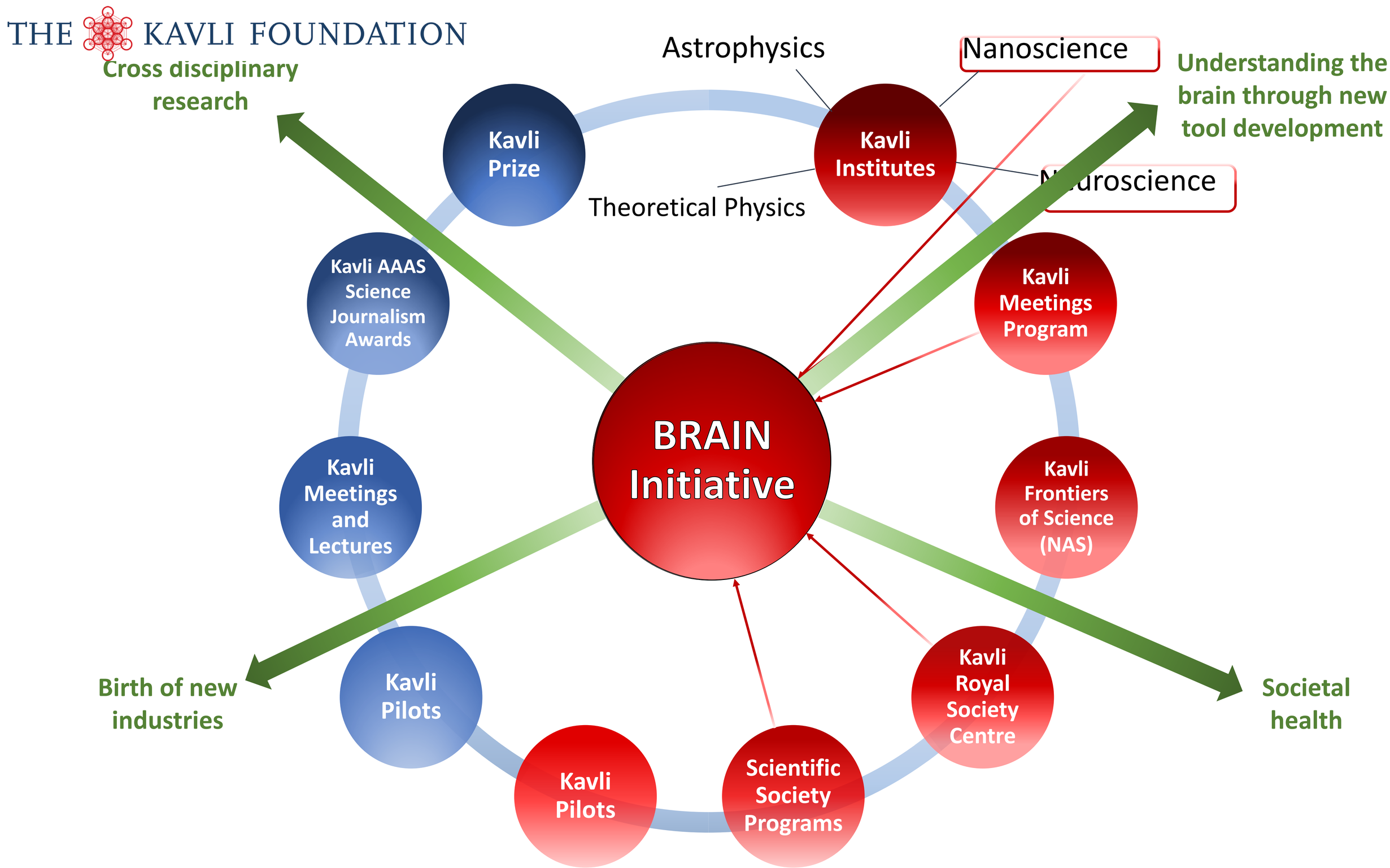



THE KAVLI FOUNDATION
Cross disciplinary research
Astrophysics
Nanoscience
Understanding the brain through new tool development
Kavli Prize
Kavli Institutes
Theoretical Physics
Neuroscience
Kavli AAAS Science Journalism Awards
Kavli Meetings Program
BRAIN Initiative
Kavli Meetings and Lectures
Kavli Frontiers of Science (NAS)
Birth of new industries
Kavli Pilots
Kavli Royal Society Centre
Societal health
Kavli Pilots
Scientific Society Programs

APS News: BRAIN Initiative

APS NEWS

Physicists Ready to Add Their BRAIN Power

By Michael Lucibella

Physicists are poised to play a major role in President Obama's proposal to better understand the human brain, which he announced on April 2. The president proposed allocating $100 million for the initiative, to be divided among the National Institutes of Health, the National Science Foundation and the Defense Advanced Research Projects Agency (DARPA). Though the specific goals and scope of the project are still being determined, they will likely include developing new techniques to map and study the brain.

Scientists involved with shaping the BRAIN Initiative, short for Brain Research through Advancing Innovative Neurotechnologies, emphasized the interdisciplinary nature of the research.

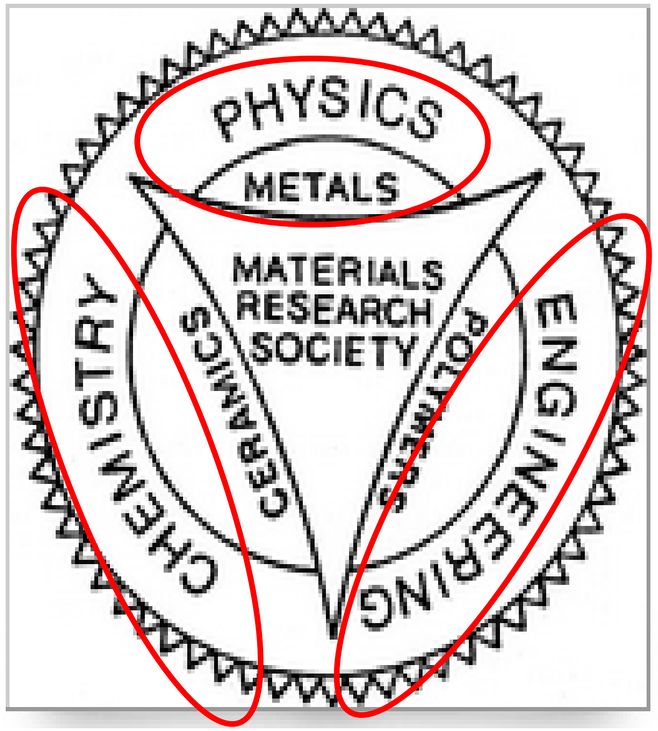
"Many of the advances if not most of the advances, come from the physical sciences," said Michael Roukes, of the Kavli Nanoscience Institute at Caltech. He added that physicists are adept at "thinking about complex highly correlated systems of networks."

Roukes was part of the Kavli team that first suggested to the administration's Office of Science and Technology Policy (OSTP) the idea for a project to map all of the neural connections in the human brain. Their original Brain Activity Map proposal, which the President highlighted in his State of the Union address in February, ultimately evolved into the White House's BRAIN Initiative.

Partnering with Scientific Societies to Promote Interdisciplinary Meetings and Public Outreach

The Kavli Foundation seeks to

- Catalyze emergent fields
- Support cross-disciplinary discussion – find gaps and opportunities



THE ALLIED GENETICS 2016 CONFERENCE

Philanthropy in American Society

From Carnegie's Famous Admonition of 1901 to the Gates-Buffett Giving Pledge of 2010 –

Giving Back is an American Cultural Imperative

And Today, New Wealth is Being Created at a Rate not seen in more than a Century

Philanthropic Giving Over More than a Century Helps Underwrite Today's Operating Budgets of Universities

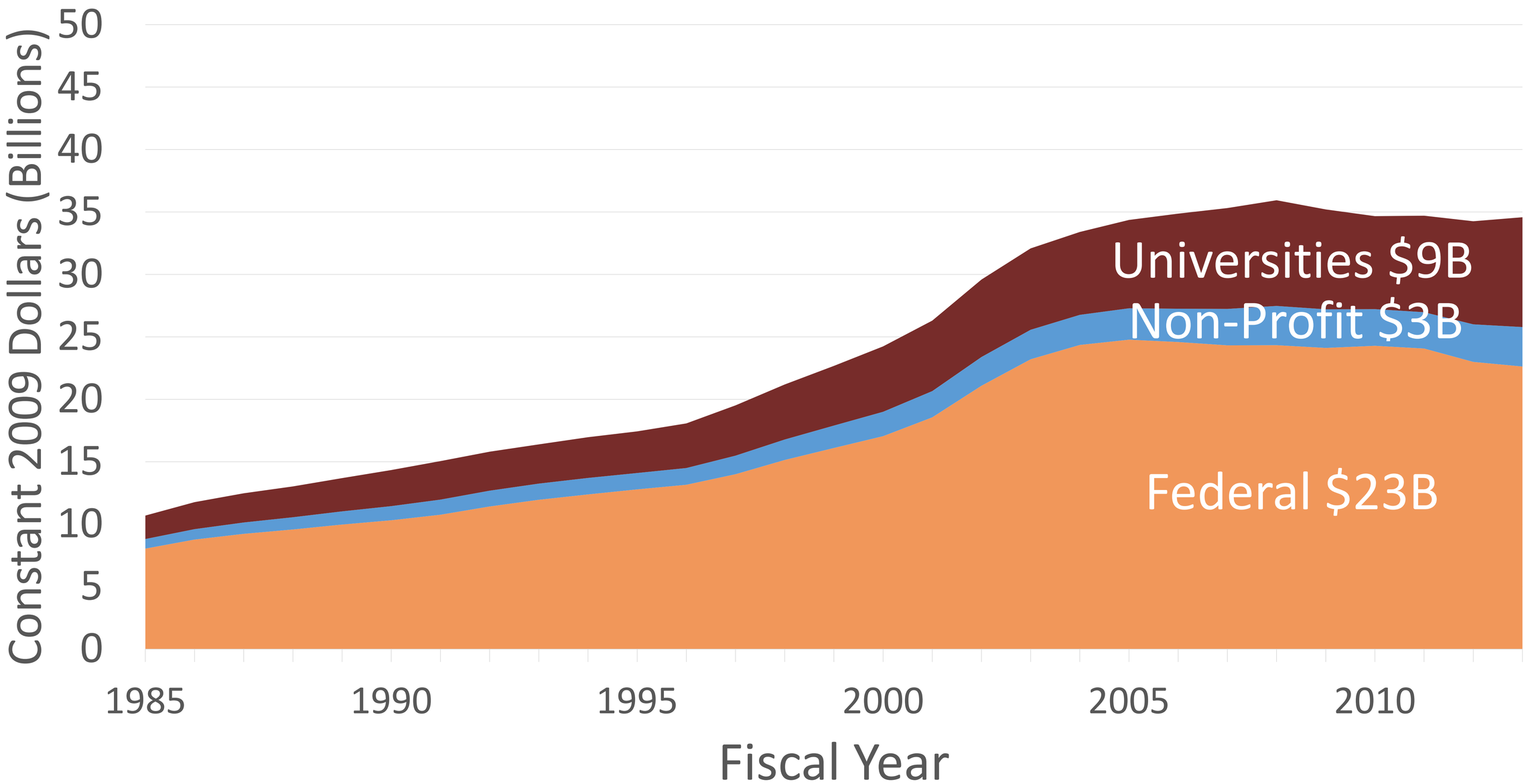
	School	Endowment	Annual Payout (5%)
1	Harvard University	$36,429,000,000	$1,821,000,000
2	Yale University	$23,859,000,000	$1,193,000,000
3	Stanford University	$21,466,000,000	$1,073,000,000
4	Princeton University	$20,576,000,000	$1,029,000,000
5	MIT	$12,425,000,000	$621,000,000
6	Texas A&M University	$10,521,000,000	$526,000,000
7	University of Michigan	$9,604,000,000	$480,000,000
8	University of Pennsylvania	$9,582,000,000	$479,000,000
9	Columbia University	$9,223,000,000	$461,000,000
10	University of Notre Dame	$8,189,000,000	$409,000,000

Source: US News and World Report (2014 Data)

America's Universities Receive $35 Billion Annually For Basic Research, a Third of It from their own Resources.

U.S. Basic Research at Universities Funding by Source

Source: AAAS and NSF Science & Engineering Indicators 2016



Looking Ahead for Science

SCIENCE
PHILANTHROPY ALLIANCE

SCIENCE PHILANTHROPY ALLIANCE

- *Six Founding Foundations*
  - Howard Hughes Medical Institute
  - The Kavli Foundation
  - Gordon & Betty Moore Foundation
  - The Simons Foundation
  - Alfred P. Sloan Foundation
  - Research Corp. for Science Adv.

- *Science Philanthropy Alliance Goals*
  - Increase Philanthropic Support for Basic Science
  - Work with American's Research Universities and Private Research Institutions to Ensure Support for Basic Science is Strong

The *Science Philanthropy Alliance* will Make the Case

To Philanthropists on Behalf of Basic Science

History Suggests We can be *Optimistic* That Much

New Wealth will be Given Back for the Benefit of Society