

# THE BRAIN INITIATIVE

## Brain Research through Advancing Innovative Neurotechnologies

*“We have a chance to improve the lives of not just millions, but billions of people on this planet through the research that's done in this BRAIN Initiative alone. But it's going to require a serious effort, a sustained effort. And it's going to require us as a country to embody and embrace that spirit of discovery that is what made America, America.”*

*- President Obama on April 2, 2013*

## About the BRAIN Initiative

### The Initiative Kicks Off

(/share/brain-initiative) In April 2013, the President announced the launch of the BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative® – a bold, new initiative focused on revolutionizing our understanding of the human brain.

The BRAIN Initiative is one of the Administration's “Grand Challenges” – ambitious but achievable goals that require advances in science and technology. Since the President announced the BRAIN Initiative, dozens of leading technology firms, academic institutions, scientists, and other key contributors to the field of neuroscience have answered his call and made significant commitments to advancing the initiative. Top neuroscientists also have developed a 12-year research strategy for the National Institutes of Health (NIH) to achieve the goals of the initiative.

[JUMP TO A SECTION](#)

the April 2, 2013 unveiling of the BRAIN Initiative. (/photos-and-video/video/2013/04/02/president-obama-speaks-brain-initiative-and-american-innovation)

## The Significance

The BRAIN Initiative has the potential to do for neuroscience what the Human Genome Project did for genomics by supporting the development and application of innovative technologies that can create a dynamic understanding of brain function. It aims to help researchers uncover the mysteries of brain disorders, such as Alzheimer's and Parkinson's diseases, depression, and

*"The human brain is the most complicated biological structure in the known universe. We've only just scratched the surface in understanding how it works – or, unfortunately, doesn't quite work when disorders and disease occur... This is just the beginning of a 12-year journey and we're excited to be starting the ride."*  
*NIH Director Francis S. Collins, M.D., Ph.D.*

traumatic brain injury (TBI).

The initiative will accelerate the development and application of new technologies that will enable researchers to produce dynamic pictures of the brain that show how individual brain cells and complex neural circuits interact at the speed of thought. These technologies will open new doors to explore how the brain records, processes, uses, stores, and retrieves vast quantities of information, and shed light on the complex links between brain function and behavior.

## How Far We've Already Come



### On The Clock: The BRAIN Initiative



#### On The Clock: The BRAIN Initiative

April 2, 2013

Dr. Francis Collins, the Director of the National Institutes of Health, highlights the BRAIN Initiative.

[JUMP TO A SECTION](#)

the development of new tools for mapping neuronal connections, the increasing resolution of imaging technologies, the maturation of nanoscience, and the rise of biological engineering.

These breakthroughs have paved the way for unprecedented collaboration and discovery across scientific fields. For instance, by combining advanced genetic and optical techniques, scientists can now use pulses of light to determine how specific cell activities in the brain affect behavior. Similarly, through the integration of neuroscience and physics, researchers can now use high-resolution imaging technologies to observe how the brain is structurally and functionally connected in living humans.

While these technological innovations have contributed substantially to our expanding knowledge of the brain, significant breakthroughs in how we treat neurological and psychiatric disease will require a new generation of tools to enable researchers to record signals from brain cells in much greater numbers and at even faster speeds. That's where the BRAIN Initiative comes in.

## BRAIN Initiative Updates and Resources

Learn more about major developments and milestones of the BRAIN Initiative here:

*February 2015* | BRAIN Initiative Fiscal Year 2016 Fact Sheet

(/sites/default/files/microsites/ostp/brain\_initiative\_fy16\_fact\_sheet\_ostp.pdf)

*February 2015* | White House Blog Post: Investing in Research to Help Unlock the Mysteries of the BRAIN (/blog/2015/02/13/investing-research-help-unlock-mysteries-brain)

*September 2014* | Fact Sheet: Over \$300 Million in Support of the President's BRAIN Initiative

(/sites/default/files/microsites/ostp/brain\_fact\_sheet\_9\_30\_2014\_final.pdf)

*September 2014* | Infographic: BRAIN Initiative Federal, Private Sector, and Private Research Commitments (/share/brain-initiative)

*March 2014* | BRAIN Initiative Fiscal Year 2015 Fact Sheet

(/sites/default/files/microsites/ostp/FY%202015%20BRAIN.pdf)

*April 2013* | Fact Sheet: BRAIN Initiative Launch (/the-press-office/2013/04/02/fact-sheet-brain-initiative)

Learn more about **Federal agencies investing in the BRAIN Initiative**, including media updates and information on their grant awards:

**National Institutes of Health BRAIN Initiative Page** (<http://braininitiative.nih.gov/>)

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[JUMP TO A SECTION](#)

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## National Science Foundation BRAIN Initiative YouTube Channel

(<https://www.youtube.com/user/NSFbraininitiative>)

**Defense Advanced Research Projects Agency** (<http://www.darpa.mil/program/our-research/darpa-and-the-brain-initiative>) and the BRAIN Initiative Intelligence Advance Research Projects Activity

(<http://www.iarpa.gov/index.php/research-programs/neuroscience-programs-at-iarpa>) Neuroscience Programs

U.S. Food and Drug Administration (<http://www.fda.gov/>)

*The header image is from: [cbs.fas.harvard.edu/science/connectome-project/brainbow](https://cbs.fas.harvard.edu/science/connectome-project/brainbow) ([cbs.fas.harvard.edu/science/connectome-project/brainbow](https://cbs.fas.harvard.edu/science/connectome-project/brainbow))*

## View the Interactive Map

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[JUMP TO A SECTION](#)

## Submit Your Ideas or Share Your Story

Do you have ideas or comments on the BRAIN Initiative? Will you or someone you know benefit from this research? If so, share your idea or story here:

*This webform is now closed.*

