Neuroscience and society: Envisioning brain science for a better future

Research! America
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President and CEO
Dana Foundation
Constructive branding firm is revising language and adding integrity value.

Dana Foundation History

- 1950
  - Grants to independent colleges
  - Health research (Dana Farber Cancer Institute)

- 1960
  - Dana Scholars, Professorships

- 1970
  - Innovations to improve K-12 education

- 1980
  - Neuroscience and society education, training, and public engagement

- 1990
  - Neuroscience research and public outreach

- 2000
  - Neuroethics

- 2010

- 2020
Neuroscience advances carry significant ethical, legal, and societal implications

“The ethical questions raised by neurotechnologies are international questions… they can carry more ethical, legal, or social weight because the activity of our brains leads to our innermost selves.”

Yuste and Bargmann, Cell 2016
Neuroscientists must navigate complex ethical issues.

“Someday in the future we might be able to decode what people are thinking” which raises “some really important questions about the ethics of this kind of technology.”
Brain science for a better future

Our mission is to advance neuroscience that benefits society and reflects the aspirations of all people.
Dana Foundation Values

We are bold.

We build trust.

We are collaborative.

We lead with empathy.

We value diversity.

We stay grounded.
Dana Education: Sparking interest and education around neuroscience and the ways it interfaces with our lives

Annual global education initiative with ~6,000 partners in 120 countries
Dana NextGen: Developing a new generation of interdisciplinary experts who shepherd neuroscience uses for a better world

Dana Centers for Neuroscience & Society

- Training to embed neuroscience in societal context
- Catalytic grants for interdisciplinary work
- Growing future leaders
Eleven institutions funded for Dana Center Planning Grants

- Stony Brook University
- Wake Forest University
- Loyola University Chicago
- UCSF
- Georgia Tech
- Harvard University
- UCLA
- Penn University
- Johns Hopkins University
- Georgia State University
- MIT
- Massachusetts Institute of Technology
Dana Frontiers: Growing capacity for informed public reflection on emerging neuroscience and neurotechnology
### Brain Health Issues Directly Impact More Than 8 in 10 Americans

Have you or anyone close to you had or have any of the following conditions?

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>55%</td>
</tr>
<tr>
<td>Alzheimer’s Disease/Dementia</td>
<td>48%</td>
</tr>
<tr>
<td>Substance use disorder/Addiction</td>
<td>42%</td>
</tr>
<tr>
<td>Generalized anxiety disorder (GAD)</td>
<td>42%</td>
</tr>
<tr>
<td>Stroke</td>
<td>41%</td>
</tr>
<tr>
<td>Learning disabilities</td>
<td>38%</td>
</tr>
<tr>
<td>Post-traumatic stress disorder (PTSD)</td>
<td>37%</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>37%</td>
</tr>
<tr>
<td>Epilepsy/Seizures</td>
<td>27%</td>
</tr>
<tr>
<td>Parkinson’s</td>
<td>21%</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>20%</td>
</tr>
<tr>
<td>Amyotrophic Lateral Sclerosis (ALS)</td>
<td>10%</td>
</tr>
<tr>
<td>Other brain condition(s)</td>
<td>14%</td>
</tr>
</tbody>
</table>

Source: A ResearchAmerica survey of U.S. adults conducted in partnership with the Dana Foundation and Zogby Analytics in August 2022.
Brain Health Is Among Most Important Health Issues
What are the most important health issues facing America?

- COVID-19: 55%
- Cost of Health Care: 44%
- Mental Health: 37%
- Gun Violence: 36%
- Opioid Addiction: 23%

Source: A ResearchAmerica survey of U.S. adults conducted in partnership with the Dana Foundation and Zogby Analytics in August 2022.
Americans Are Not Knowledgeable About Brain Health Research

How knowledgeable would you say you are about brain health research?

- Very Knowledgeable
- Somewhat Knowledgeable
- Not Very Knowledgeable
- Not At All Knowledgeable
- Not Sure

Source: A Research!America survey of U.S. adults conducted in partnership with the Dana Foundation and Zogby Analytics in August 2022.
### Doctors, Nurses, and Researchers Are Most Trusted Sources of Brain Health Information

To what extent do you trust the following sources of information on brain health?

<table>
<thead>
<tr>
<th>Source</th>
<th>Very + Somewhat Trustworthy</th>
<th>Not Very + Not At All Trustworthy</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>91%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Medical &amp; Health Researchers</td>
<td>88%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Nurses &amp; Other Health Providers</td>
<td>87%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Family &amp; Friends</td>
<td>61%</td>
<td>%</td>
<td>33%</td>
</tr>
<tr>
<td>Online Medical Forums</td>
<td>56%</td>
<td>35%</td>
<td>8%</td>
</tr>
<tr>
<td>Museums</td>
<td>49%</td>
<td>36%</td>
<td>14%</td>
</tr>
<tr>
<td>Newspapers/Magazines</td>
<td>43%</td>
<td>50%</td>
<td>7%</td>
</tr>
<tr>
<td>TV/Radio</td>
<td>40%</td>
<td>53%</td>
<td>7%</td>
</tr>
<tr>
<td>Podcasts</td>
<td>40%</td>
<td>50%</td>
<td>11%</td>
</tr>
<tr>
<td>Elected Officials</td>
<td>31%</td>
<td>60%</td>
<td>8%</td>
</tr>
<tr>
<td>Social Media</td>
<td>31%</td>
<td>62%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: A ResearchAmerica survey of U.S. adults conducted in partnership with the Dana Foundation and Zogby Analytics in August 2022.
Americans Are Curious and Hopeful About Brain Health Research

Please select from the following the top five words that best reflect your attitudes towards brain health research:

- Concerned 33%
- Excited 33%
- Amazed 41%
- Hopeful 59%
- Open 37%
- Curious 66%
- Powerful 25%
- Engaged 26%
- CAUTION 39%
- Optimistic 52%
- Skeptical 19%
- Confused 12%
- Uninterested 1%

Source: A ResearchAmerica survey of U.S. adults conducted in partnership with the Dana Foundation and Zogby Analytics in August 2022.
6 in 10 Say Patients Should Have a Voice in Determining Research Priorities

Some people say that patients should have more of a voice in determining brain health research priorities. In general, which statement most closely matches your view?

- 62%: Patients should have more of a voice in setting research priorities.
- 19%: There is no need for change since there is a good balance of patient and researcher input in setting research priorities.
- 19%: Not Sure

Source: A Research!America survey of U.S. adults conducted in partnership with the Dana Foundation and Zogby Analytics in August 2022.
New approaches to education, training, research, and public engagement are needed across sectors to address ethical and societal issues in neuroscience.
Brain science for a better future.