Impact of COVID19: Creating the New Normal for Research
University of Massachusetts
Meeting the Moment

Research!America Microgrant Recipient: TriSci

University of Massachusetts Amherst

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TriSci Graduate Student Group Earns Microgrant for Science Advocacy and Communication Programming

UMass Medical School students among volunteers at opening of Worcester’s first large-scale vaccine site

By Jim Fessenden and Bryan Goodchild
UMass Medical School Communications

February 17, 2021

CONVERSATION ABOUT THE COVID-19 VACCINES

JANUARY 28

Get vaccinated!
Working shoulder to shoulder to defeat COVID-19

Join us in a virtual presentation
Thursday, January 28 at 6:30 pm

The Latino Empowerment Organizing Network, LÉON invites you to participate in a conversation about the vaccines against COVID-19. Physicians and scientists from the Worcester Community will discuss some of these topics:
- The importance of vaccines and their safety
- The vaccination plan for the City of Worcester
- Answers to questions from the community

Link to the webinar: https://umassmed.zoom.us/j/94730238852?pwd=JnVYRmNvc3FkUG52RQZmOTVZd299

RESEARCH AMERICA
DISCOVERY. INNOVATION. HEALTH.
Unprecedented challenges call for well-prepared leaders like YOU

It is more honest to frame the new, post-COVID-19 normal not as predictions, but as a series of choices.

Fate will not create the new normal; choices will.
Our Choices Matter

Choosing to wear a mask

Choosing to make sure all voices are at the table

Choosing to get COVID vaccine when eligible

Choosing to value multiple career paths

Choosing to speak up for science

Choosing to "hand the microphone" to others to allow them space to speak
COVID-19 is a disruptive event that requires a higher priority for science and technology

Which statement is closest to your view? Statement A: The COVID-19 pandemic is a disruptive event and requires that the United States assign a higher priority to science and technology. Statement B: Things will get back to normal soon; we don't need increased efforts in science.

Research!America’s Mission

The Research!America alliance advocates for science, discovery, and innovation to achieve better health for all.

Research!America is an innovator in advocacy for research
Research!America Alliance

We bring stakeholders together to heighten the priority of research and to help assure scientific progress and the health and vitality of the scientific enterprise.
Research!America Strategies for Success

- Keep a finger on public pulse via public opinion surveys
- Develop timely policy and advocacy resources
- Continuously cultivate new advocates and congressional champions
- Execute grassroots/grasstops advocacy campaigns
- Monitor and share federal developments
- Convene cross-sector discussions to inform research-relevant policy issues
- Work with the broad science community to assure all boats will rise
Federal R&D Intensity

Chart: Matt Hourihan, American Association for the Advancement of Science
Federal R&D Growth

Chart: Matt Hourihan, American Association for the Advancement of Science
Science and Technology Action Committee: A National Plan

Leadership

• Elevate the Science Advisor to the President to the Cabinet ✓
• Ensure science has a prominent voice in the Administration

Coordination

• Empower the NSTC with four Coordinators and new funding to address large-scale, long-term, existential challenges
• Identify new challenges through horizon scanning

Investment

• Double federal expenditures for R&D and STEM education over a five year period, to 1.4% of GDP, est. $380B
• Invest new funds in research, technology and manufacturing, infrastructure, education and human capital

https://sciencetechaction.org/

The Committee acknowledges and thanks the Kavli Foundation, Bloomberg Philanthropies, IBM, Simons Foundation International, and Schmidt Futures for their support of this project.
National Institutes of Health Appropriations
Fiscal Year 1989 - 2021

National Institutes of Health Appropriations
Fiscal Year 1989 - 2021 in Current and Constant Dollars

- Appropriations (current dollars)
- CPI adjusted (1989 dollars)
- with Emergency Funding (ARRA and COVID-19)

FY2021 Omnibus Appropriations with Emergency Funding: $47.77 billion
FY2021 Omnibus Appropriations: $42.93 billion
CPI Adjusted - FY2021 Omnibus Appropriations: $20.57 billion
The President has released the “American Jobs Plan” - $2T on infrastructure and jobs, including:

- $50 billion to NSF to create a technology directorate
- $70 billion to be distributed across R&D agencies to spur job creation and bolster R&D infrastructure, including in rural areas
- $30 billion to improve our nation’s pandemic preparedness
The President is expected to release a “skinny” version of his FY22 budget request soon, with robust funding increases for NIH (potentially $5-$6 Billion) and other federal agencies.

Half or more of the NIH increased would be earmarked for “HARPA”

Some in Congress may push for budget caps that preclude any increase for NIH and other research agencies.
Urgent: Take Action Today!

Congress can’t increase funding for NIH if the overall “cap” on the budget is too low.

Urge your Members of Congress to weigh in with Budget Committee leadership for budget parameters that enable a bold increase in R&D.

Scan the QR code to reach out! You can also Tweet @POTUS through the QR code.

Take action now!
“You can change the image of things to come. But you can’t do it sitting on your hands.”

Research!America Chair Emeritus, Former Congressman John Edward Porter
Q: What do elected officials and scientists have in common?
Q: What do elected officials and scientists have in common?

A: Serving the public’s interest.

*You can effectively engage with any elected official by thanking them for serving the public’s interest. And then say how you serve the public’s interest.*
Challenge: Pass the Starbucks Test (socially distanced of course)
Who Represents You?

Senator Edward Markey (D-MA)
Committee on Commerce, Science, and Transportation
Subcommittee on Space and Science

Senator Elizabeth Warren (D-MA)
Committee on Finance

Congressman Jim McGovern (D-MA-02)
Chairman, House Rules Committee

Live or vote off campus? Visit https://www.usa.gov/elected-officials to find those who represent you!
“...public sentiment is everything. With public sentiment, nothing can fail; without it nothing can succeed.”

President Abraham Lincoln
Research!America Surveys

- Commissioning public opinion surveys on research issues for 28 years:
  - National Surveys
  - State-Based Surveys
  - Issue-Specific Surveys
- Online surveys are conducted with a sample size of 1000-2000 adults and sampling error of +/-3.1% to +/-2.1%. The data are weighted in two stages to ensure accurate representation of the U.S. adult population.
- For many surveys, we oversample minority populations.
Ending the COVID-19 pandemic tops first 100 days priorities

Please indicate which of the following should be the top FIVE priorities for President Biden's and the new Congress' first 100 days in office.

- Ending the COVID-19 pandemic: 69%
- Assuring economic stability and growth: 49%
- Growing jobs: 45%
- Unifying the country: 42%
- Expanding access to health coverage: 29%

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2021
8 in 10 think the work of scientists benefits them

In general, to what extent do you think the work that scientists do benefits you?

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Scientific developments seen as more important since pandemic began

Three-quarters in U.S. see greater importance of scientific developments

<table>
<thead>
<tr>
<th>% of U.S. adults who say, thinking about the coronavirus outbreak, they see developments in science as...</th>
<th>More important</th>
<th>Less important</th>
<th>Makes no difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. adults</td>
<td>76</td>
<td>4</td>
<td>19</td>
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<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>76</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Women</td>
<td>75</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>76</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Black</td>
<td>71</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Hispanic</td>
<td>77</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Generation</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Millennial &amp; younger</td>
<td>74</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Gen X</td>
<td>72</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Baby Boomer &amp; older</td>
<td>80</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postgraduate</td>
<td>84</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>College grad</td>
<td>81</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Some college</td>
<td>76</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>HS or less</td>
<td>70</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>Party</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep/Iron Rep</td>
<td>66</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>Dem/Iron Dem</td>
<td>84</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

Note: Respondents who did not give an answer are not shown.

Most see scientific developments as more important post-outbreak

<table>
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<th>% of U.S. adults who say that, thinking about the coronavirus outbreak, they see developments in science as...</th>
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<tr>
<td>More important</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>76</td>
</tr>
</tbody>
</table>

Note: Respondents who did not give an answer are not shown.


“Trust in Medical Scientists Has Grown in U.S., but Mainly Among Democrats”

PEW RESEARCH CENTER
There has been a great deal more attention to science during the COVID-19 pandemic. Some people say that science in general is now more trusted because of this heightened awareness; others disagree. Which would you say applies to you?

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Do you agree or disagree with the following statement? Even if it brings no immediate benefits, basic scientific research that advances the frontiers of knowledge is necessary and should be supported by the federal government.

85% say they strongly or somewhat agree it should be supported by the federal government.

This is up from 77% in August 2020, and 80% in January 2019.

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Strong Support for Federally Supported Basic Scientific Research in Universities

As you may know, the federal government provides public funds to universities to conduct basic scientific research. Do you approve or disapprove of the federal government spending to sponsor scientific research at universities?

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2021
8 in 10 Americans recognize the value of both public and private research in the development of COVID-19 vaccines

To the best of your knowledge, how essential was publicly funded research to the development of COVID-19 vaccines?

- Very essential: 56%
- Somewhat essential: 25%
- Not too essential: 7%
- Not at all essential: 10%
- Not sure: 12%

To the best of your knowledge, how essential was private sector funded research to the development of COVID-19 vaccines?

- Very essential: 54%
- Somewhat essential: 27%
- Not too essential: 5%
- Not at all essential: 12%
- Not sure: 10%

Americans have confidence in doctors, nurses, scientists, and public health officials

How much confidence do you have in each of the following to act in your best interest?

- **Doctors**: 86% (A great deal + Some), 11% (Not much + None at all), 3% (Not sure)
- **Nurses**: 85% (A great deal + Some), 12% (Not much + None at all), 5% (Not sure)
- **Scientists**: 80% (A great deal + Some), 16% (Not much + None at all), 4% (Not sure)
- **Public health officials**: 78% (A great deal + Some), 19% (Not much + None at all), 3% (Not sure)
- **Police officers**: 72% (A great deal + Some), 25% (Not much + None at all), 3% (Not sure)
- **Military leaders**: 73% (A great deal + Some), 24% (Not much + None at all), 4% (Not sure)
- **Public school principals (K-12)**: 67% (A great deal + Some), 28% (Not much + None at all), 4% (Not sure)
- **College and university professors**: 64% (A great deal + Some), 34% (Not much + None at all), 4% (Not sure)
- **Religious leaders**: 62% (A great deal + Some), 35% (Not much + None at all), 4% (Not sure)
- **Business leaders**: 58% (A great deal + Some), 38% (Not much + None at all), 5% (Not sure)
- **Elected officials**: 50% (A great deal + Some), 47% (Not much + None at all), 3% (Not sure)

Source: A Research!America survey of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Less than a Third of Americans Can Name a Living Scientist

Can you name a living scientist?

Of those saying “yes”, Dr. Fauci named by 35% from 24% in August 2020.

Total saying “yes” increased from 20% in 2019 to 27% in 2021.

More Than Half Americans Cannot Name a Place Where Medical or Health Research is Conducted

Can you name any institution, company or organization where medical or health research is conducted?

- **54%** Yes
- **46%** No/Not sure

- Pfizer: 14%
- CDC: 11%
- Mayo Clinic: 9%
- Johns Hopkins University: 7%
- WHO: 5%
- NIH: 5%
- Johnson & Johnson: 3%
- Moderna: 3%
- St. Jude's: 3%
- Harvard: 1%
- Astra Zeneca: 1%
- Cleveland Clinic: 1%
- Duke University: 1%
- Other: 37%

*Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2021*

- **Pfizer** up from 3% to 12%
- **CDC** up from 5% to 11%
- **Mayo Clinic** down from 12% to 9%
Many Americans are unaware that medical research takes place in all 50 states.

To the best of your knowledge, would you say that medical research in the U.S. is conducted in all 50 states?

Create the New Normal: Increase the Visibility of Science
Strong Majority of Americans Think Scientists Should Inform Elected Officials About Their Research

How important is it for scientists to inform elected officials about their research and its impact on society?

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Strong Majority of Americans Think Scientists Should Inform the Public About Their Research

How important is it for scientists to inform the public about their research and its impact on society?

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Most Americans support research to address health disparities for COVID-19 and more

Studies show that in addition to increased risk from COVID-19, some health problems such as cancer, diabetes, heart disease, and infant mortality happen more often among certain minorities or citizens with lower incomes. How important do you feel it is to conduct medical or health research to understand and eliminate these disparities?

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2021
COVID-19 may have worsened opioid abuse issues

In the past year, do you think the problem of people being addicted to opioids in your community has gotten better, gotten worse, or remained about the same?

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2021
Philanthropist and Advocate Mary Lasker (1984)

“If you think research is expensive, try disease.”

2020 Version:

“If you think science preparedness is expensive, try a pandemic.”
COVID-19 has pushed science to the forefront of public attention.

Experiencing science in “real time” → This is new for scientists too

Scientists are not trained to engage the public

We propose federally-funded PhD students get specific training

Participate in a Public Engagement (PE) course

Ensure that new generations of scientists are increasingly visible and comfortable with the broader community → increase trust of and support for science, stronger interest in STEM careers, stronger, science-driven economy

Mary Woolley, Jenny Luray, and Sarah Ackerman, September 2020
Change the Narrative

Lead with “why”
Don’t talk first about “what” you do or “how” you do it.
Prevention saves lives and saves money

Name your adversary
What does your audience fear?
What are you doing to defeat it?
Health disparities put millions at risk

Tell a tale of adventure
Exploration, adventure, urgency makes a good story
Scientists are searching the globe for ways to prevent the next pandemic

Adapted from Narratives project, 2016
Skepticism is Not Just for Scientists

- People are understandably confused by the three steps forward/two steps back *dynamic process* of science.
- By standing back or failing to engage, researchers and advocates aren’t helping resolve public confusion.
- **Healthy skepticism** is a good thing in science and in public discourse!
Research finds solutions to what ails us!

**Aspirational Communications**

**THEN**

- In 1900, mortality due to infectious diseases was 797 deaths per 100,000 in the United States.
- The three leading causes of death were pneumonia, tuberculosis, and gastrointestinal illness.

**NOW**

- The mortality rate from infectious diseases in 2014 was 34 per 100,000.
- Public sanitation efforts, vaccines, antibiotics, and other public health tools, mean that far fewer people today die from infectious diseases.

**IMAGINE**

- A world without deaths from preventable infectious diseases.
A Nation Worth Defending

- U.S. defense budget for 2020: $721 billion
- Health Security: The National Institutes of Health budget for 2020 is $41.68 billion

“The NIH... is our nation's Department of Defense for America's personal health”*

Sources: DoD, NIH, Congressman Steve Cohen* (D-TN)
Relatable Communications
AKA Social Math

• Americans spent more than $30 billion on digital entertainment in 2020.

• That amount is equivalent to 8 years of NIH human genome research funding.

Sources: Statista; NIH
You Serve the Public Interest

• Talk about who you are (and who “we” scientists are).
  • We are the kind of people who protect people from health threats.
  • We are the kind of people who go to the places where we are needed.
  • We are the kind of people who alleviate systemic causes of illness like poverty and access to care.

• Speaking to who you are helps people connect to you and your story.
The New Normal on Campus

- Sponsor and support student science policy groups on your campus
- Partner with communications faculty
- Empower everyone to engage

Research!America recently announced third year of civic engagement microgrants

https://www.researchamerica.org/advocacy-action/student-advocacy
Advocacy Action From Your “Desk”

- Email, tweet, or call your member of Congress
- Stay informed — read our Weekly Letter
- Join our alliance member webinars and calls
- Talk to your friends and neighbors
- Engage everyone in your department in public outreach activities

https://www.researchamerica.org/contact-members-congress
Meet the Moment: Put a Face on Research: YOURS!
Remember

The most important four words a scientist can say and convey are ...
“I work for you.”
Research!America Works for You

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- www.twitter.com/researchamerica
- www.youtube.com/researchamerica
- mwoolley@researchamerica.org