The Time is Now: Your Role in Changing the Nation’s Conversation about Science

Mary Woolley, Research!America
Bizarro World in Washington

- Congress is politicking and not talking seriously about what their inactions are doing to the nation
- The House Appropriations Committee hasn’t appropriated any money since 2011 (continuing resolutions instead)
- Republicans had open seats on the House Appropriations Committee for several months until days ago — previously it was one of the most sought after committee assignments
Are You Part of the 19%?

- From a press release describing a poll of academic leaders about the effects of sequestration:

  “Eighty-one percent of respondents cited impacts directly affecting their research activity. These ranged from reduction in the number of federal grants and delayed research projects to the inability to purchase research equipment or instrumentation (28%) and cancelled (19%) or delayed (38%) field or experimental work.”

Source: www.scienceworksforus.org
Sequestration is Taking a Toll

- NIH alone funded 640 fewer new grants in FY13; cuts will worsen over the next 10 years
- Furloughs and layoffs across the nation
- Patients denied access to clinical trials
- Young scientists leaving the field
- Scientists relocating out of the U.S.

Source: NIH; “Unlimited Potential, Vanishing Opportunity” (ASBMB)
Young Scientists At Risk

- In 1982, scientists under age 36 comprised 18% of all NIH primary investigators.
- By 2011, scientists under age 36 comprised 3% of all NIH primary investigators.

Source: Society for Neuroscience
“We’re not funding hundreds of grants because of the sequester. Which of those investigators would have been the Nobel prize winner we would celebrate in 20 years, we’ll never know.”

NIH Director Francis Collins, MD, PhD
What Can We Expect?

- Budget Conference Committee “may” reach a deal, with some relief from sequestration in FY14 and FY15 ($80 billion split evenly between defense and non-defense; budget caps slightly higher than BCA)
- Appropriations process remains at an impasse; FY14 and possibly FY15 funding will be based on the budget allocations made in FY13

*Bad news ... no budget under discussion is adequate to capitalize on scientific opportunity.*
WARNING: Failure to be an advocate can be hazardous to your research career
For decades, research and innovation was well-aligned with American hearts and minds.

Now?

• We are losing mind share on Capitol Hill
• We are definitely losing the votes

Polls show that the public believes research is part of the solution to what ails us, not part of the problem!
Public Support Matters

“...public sentiment is everything. With public sentiment, nothing can fail; without it nothing can succeed.”
Research!America Polls

- Commissioning public opinion polls on research issues for more than two decades:
  - National Polls
  - State-Based Polls
  - Issue-Specific Polls
- Telephone (random-digit dialing) polls are conducted with a sample size of 800-1000 adults (age 18+) and a maximum theoretical sampling error of +/- 3.5%. Data are demographically representative of adult U.S. residents (state or national).
- Online polls are conducted with a sample size of 1000-2000 adults and sampling error of +/-3.1%. The data are weighted in two stages to ensure accurate representation of the U.S. adult population.
Most Agree that Basic Research is Necessary

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.”

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
Americans Feel Government Should Encourage STEM Careers

Do you believe the federal government should increase support for programs and policies that would increase the number of young Americans who pursue careers in science, technology, engineering and mathematics?

- Yes: 70%
- No: 17%
- Not sure: 13%

Source: A Research!America poll of U.S. adults conducted in partnership with JZ Analytics in December 2012.
Very Important for Elected Officials to Listen to Scientists

In thinking about threats to our health, how important is it that elected officials at all levels listen to advice from scientists and public health professionals?

- Very important: 66%
- Somewhat important: 30%
- Not too important: 2%
- Not at all important: 2%

Source: Georgia Global Health Survey, May 2011
Charlton Research Company for Research!America
How skilled are scientists and researchers at presenting their case to Congress?

Rep. Brown: “They, generally speaking, have too great a faith in the power of common sense and reason. That’s not what drives political figures, who are concerned about emotions and the way a certain event will affect their constituency ...”

The Honorable George E. Brown Jr. (1920-1999)

To restate the obvious, the National Institutes of Health is located administratively in the Department of Health and Human Services. Its mission is about health, not science per se. It behooves advocates to connect the dots between research and health.
What Do Americans Think is the Most Critical Health Issue?
Opinions on America’s Most Important Health Issue

What would you say is the single most important health issue facing people in the U.S. today? (first volunteered responses)

Source: Public Opinion Polls, 1992-2012
Research is Part of the Solution to Rising Health Care Costs

When it comes to rising health care costs, would you say research to improve health is part of the problem or part of the solution?

- 51% Part of the solution
- 29% Part of the problem
- 20% Not sure

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
Less Than 5% of Total Spending on Health is Spent on Research

Medical and Health Research vs. Health Care Spending in the U.S.

U.S. is Not Spending Enough of the Health Dollar on Research

The U.S. spends about 5 cents of each health dollar on research and development to prevent, cure and treat disease and disability. Do you think that this is too much, the right amount or not enough?

49% Not enough
24% The right amount
22% Too much
5% Not sure

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
Industry, Government Research Remains Flat

U.S. Cuts Health R&D Funding While Other Nations Accelerate

Global Trends in Health R&D Spending

% Change from 2012-2013

- U.S.
- Canada
- China
- Germany
- Japan
- South Korea

Source: Cell, 2013 Jul3;154(1):16-9
China On the Rise

“U.S. R&D expenditures accounted for about 31% of the worldwide total, down from 38% a decade earlier. The combined R&D expenditures of 10 Asian economies [including China and Japan] rose steadily to reach U.S. levels in 2009, driven mostly by China, now the second largest R&D performing nation.”

Source: National Science Board, Science and Engineering Indicators 2012
Also Consider ...

- The Beijing Genomics Institute has more capacity to sequence human genomes than all U.S. genome centers combined.
- The U.S. ranks sixth in R&D spending as a percentage of GDP.
- Many countries and regions have increased funding for the life sciences, among them the U.K., Japan, Sweden, Germany and the EU.
- U.S. share of global pharmaceutical industry output is declining while China’s is increasing.
In your view, which of the following will be considered the number one world leader in science and technology in the year 2020?

- United States: 27%
- China: 33%
- India: 5%
- European Union: 3%
- Brazil: 1%
- Not sure: 1%

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
Medical progress will slip in the U.S. if another country takes the lead in science, technology and medical innovation.

Source: A Research!America poll of likely voters conducted in partnership with JZ Analytics in August 2012.
E.U. scientists markedly more optimistic about their budgets than U.S. scientists

Slower market recovery forecast for U.S. due to uncertainty driven by sequestration, debt ceiling and continuing resolution
“You can change the image of things to come. But you can’t do it sitting on your hands ... The science community should reach out to Congress and build bridges.”

Research!America Chair, Former Congressman John Edward Porter
Research is Invisible
Most Americans Can’t Name a Living Scientist

Please name a living scientist.

- I can
- I cannot

70% I cannot
30% I can

- Stephen Hawking 43%
- Neil Degrasse Tyson 6%
- Bill Nye 5%
- Jane Goodall 5%
- James Watson 3%
- Richard Dawkins 2%
- Michio Kaku 2%
- Mehmet Oz 1%
- Other 33%

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
Most Americans Don’t Know Where Research is Conducted

Please name any institution, company or organization where medical or health research is conducted.

- Mayo Clinic 14%
- Johns Hopkins 14%
- CDC 8%
- NIH 6%
- Pfizer 4%
- Cleveland Clinic 3%
- St. Jude’s 2%
- American Cancer Soc. 2%
- Harvard University 2%
- Duke University 1%
- Eli Lilly 1%
- Other 43%

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics, with support from the American Society of Hematology, in November 2013.
What Can You Do?

- Tell your story; win hearts and minds
- Call top congressional leaders and the president; organize colleagues and friends to do the same
- Stay connected to your Member of Congress and urge others to follow suit
- Work to keep the value of research in the media
  - Write a letter to the editor or op-ed
  - Use social media
- Embrace our vision and use our materials in your advocacy
Our Vision

Achieve national commitment to pursuing medical and health research at the highest level of scientific opportunity in both the public and private sectors, in order to assure medical progress.
Research!America Goals:

- Achieve more funding for medical and health research
- Advocate a policy climate that stimulates rather than impedes research; for example, support:
  - R&D Tax Credit
  - Repeal of the Medical Device Tax
  - Small business innovation
- Ensure that the public hears about research and its benefits
- Empower others to advocate for medical and health research
Connecting the Dots: Messaging
Where Would We Be Without Physiology?

- No EKGs?
- Still using cow and pig insulin to treat Type 2 diabetes?
- High blood pressure, smoking not seen as risk factors for stroke?
- No hope for any of the millions of patients affected by immune system disorders?

Sources: *Texas Heart Institute Journal*, NIH
Research Saves Money

- Treatments that have the ability to stop MS before significant impairment has set in could save the U.S. up to an estimated $20 billion annually.
- By decreasing hospitalizations, beta-blockers reduce the societal cost of treatment by $3,900 over five years and reduce Medicare expenditures by $6,000 per patient.

Sources: Research!America fact sheet series, “Investment in Research Saves Lives and Money”
Research Fuels the Economy

- NIH employs 1 million U.S. citizens, generates $84 billion in wages and salaries
- The federal investment of $3.8 billion in the Human Genome Project helped drive more than $790 billion in economic output
- Life sciences industry supports more than 7 million jobs and contributes $69 billion annual to GDP
- Bureau of Economic Analysis reclassified R&D costs from an "expense" to an "investment" when calculating GDP

Sources: ITIF, Research!America
Nine in Ten Small Business Owners: R&D Important to Competitiveness

How important do you think research and development is to global competitiveness?

- Very important: 52%
- Somewhat important: 38%
- Not too important: 4%
- Not at all important: 2%
- Not sure: 4%

Source: A Research!America online survey of small business owners conducted in partnership with Zogby Analytics in February 2013.
Government Research Important to Private Sector Innovation

How important is basic research funded by the federal government to private sector innovation?

- **25%** Very important
- **42%** Somewhat important
- **16%** Not too important
- **8%** Not at all important
- **9%** Not sure

Source: A Research!America online survey of small business owners conducted in partnership with Zogby Analytics in February 2013.
1 out of every 40 jobs in Georgia is tied to the bioscience industry.

- Emory University research has helped create nearly 60 start up companies.

- 28 Georgia businesses received $15 million in NIH funding in FY12 for R&D of technologies with potential commercial applications.
Localized Communications: GA

“Under Sequestration funding would drop anywhere between 7-10%”
Advocacy in Action: Kerri Mowen, PhD

- Assistant professor, Dept. of Chemical Physiology, The Scripps Research Institute, La Jolla, CA
- Worried about cuts in NIH funding, she created an online petition; 4,000 people signed on
- That led to a front-page story in the San Diego Union-Tribune, a segment on CBS News and in The Financial Times
‘Cultural Gap’ Between Scientists, Media

“... Many scientists, especially those in mid-to-late career, fail to see the value of bridging [the cultural gap between scientists and communicators] and may even be hostile to the idea. For their part, journalists and communicators often feel inadequate when trying to translate science. We have been shocked by the size of that cultural gap during the first two years of our project.”

—Jack Schultz, PhD, and Jon Stemmle, University of Missouri (“Teaching Future Scientists to Talk,” April 5, 2012, The Chronicle of Higher Education)
“What you understand well can be communicated well. It's a matter of not just discipline but obligation to the public for scientists to communicate both the excitement of science, the prospects of science and the accomplishments of science.”

Elias A. Zerhouni, MD
Currently, 81 new drugs for Alzheimer’s disease are in development by private industry. Basic research is needed to fuel the creation of new drugs for prevention and treatment.
Simplified Communications
In 2012, the National Football League earned $9.5 billion in revenue.

That amount would fund the National Institute of General Medical Sciences for nearly 4 years!

Sources: CNN; NIH FY12; Flickr photo by Jeffrey Beall
Relatable Communications, AKA Social Math

• Americans are expected to spend $602 billion during the November-December holiday season in 2013.

• That amount would fund the National Institutes of Health for nearly two decades!

Sources: National Retail Federation; NIH FY12
For Immediate Release

Majority of Americans Believe Another Government Shutdown Likely in Coming Months; Last One Harmful to Medical Research

New National Poll Reveals Many Respondents Predict China will Surpass U.S. in Science and Innovation by 2020

ALEXANDRIA, Va.—December 3, 2013 — Nearly two-thirds (65%) of Americans say it’s likely there will be another government shutdown in the months ahead as Congress continues to debate deficit and budget issues, according to a new national public opinion poll commissioned by Research!America and the
Save Research Campaign

WARNING: Washington politics just might kill you

Americans are dying to know: Will Congress abandon medical research?

Congress will make budget decisions soon. They can decide to advance medical innovation or jeopardize efforts to find cures for cancer, heart disease, Alzheimer’s, Parkinson’s, diabetes, lupus and other threats to our health.

Tell Congress we need CURES, NOT CUTS. Learn more at SaveResearch.org
Do You Know These People?
Key Congressional Decision Makers, 113th Congress

Rep. Hal Rogers (R-KY)  
Chair, House Appropriations Committee

Rep. Jack Kingston (R-GA)  
Chair, House LHHS Appropriations Subcommittee

Sen. Barbara Mikulski (D-MD)  
Chair, Senate Appropriations Committee

Sen. Tom Harkin (D-IA)  
Chair, LHHS, Appropriations Subcommittee
Congressional Leadership, 113th Congress

**House**
- Rep. John Boehner (R-OH) Speaker
- Rep. Eric Cantor (R-VA) Majority Leader
- Rep. Nancy Pelosi (D-CA) Minority Leader
- Rep. Steny Hoyer (D-MD) Minority Whip

**Senate**
- Sen. Harry Reid (D-NV) Majority Leader
- Sen. Dick Durbin (D-IL) Majority Whip
- Sen. Mitch McConnell (R-KY) Minority Leader
- Sen. John Cornyn (R-TX) Minority Whip
Do These People Know You?
A Challenge: Pass the Starbucks Test
What is the Message to Congress Now?

- Eliminate sequestration
- Make research for health a top national priority

*Change the conversation from “cuts first and other priorities later” to “research and innovation is a priority now”!*
Most Don’t Know Their Elected Officials’ Positions on Research

How well informed would you say you are about the positions of your senators and representative when it comes to their support of medical, health and scientific research?

- Very well informed: 8%
- Somewhat well informed: 7%
- Somewhat uninformed: 24%
- Very uninformed: 25%
- Not sure: 36%

Source: Your Candidates-Your Health Public Opinion Poll, October 2011, JZ Analytics for Research!America
Ask Your Candidates!: Our 2014 Voter Education Initiative

- Outreach to candidates
  Candidates for federal office are invited to participate by discussing their hopes and concerns about research and related issues

- Extensive public outreach through the Research!America advocacy network and sponsoring partners to encourage candidates for federal office to share their views
“Scientists are obliged to make the case for science to lawmakers. … If I had to do it all over again I would spend more time talking to general audiences and public officials, penning op-eds.”

J. Michael Bishop, MD, Nobel laureate; Research!America Advocacy Awards, March 15, 2011
‘A Nobel in the Family: My Brother, the Genius’

“I admire and love my brother [Paul Greengard], but he lives on a higher plane, and what he does is secret, unrevealable. To me, anyway …

“Every time he took a new job — whether at Albert Einstein College of Medicine or Yale — I’d ask him about it. Then he’d get into electro-physiological properties, and it was all over …

“Now, he has won the Nobel Prize in physiology or medicine, an honor he shares with two other scientists. In reporting it, the newspapers said their work on the way brain cells communicate might one day help cure diseases like Parkinson’s and Alzheimer’s.

“I’m thrilled he won. Now I know what he does.”

— Chris Chase in a New York Times opinion piece on October 15, 2000
Take Action Now

- Join our advocacy network for updates on how you can be involved in making research to improve health a higher national priority.
Remember the most important four words a researcher can say and convey:
“I work for you.”
Connect with Research!America Online

- www.researchamerica.org/blog
- www.researchamerica.org/facebook
- www.twitter.com/researchamerica
- www.youtube.com/researchamerica