

November 2, 2015

The Honorable Harold Rogers  
2406 Rayburn House Office Building  
Washington, D.C. 20515

The Honorable Thad Cochran  
113 Dirksen Senate Office Building  
Washington, D.C. 20510

The Honorable Nita Lowey  
2365 Rayburn House Office Building  
Washington, D.C. 20515

The Honorable Barbara Mikulski  
503 Hart Senate Office Building  
Washington, D.C. 20510

On behalf of the undersigned coalitions, which represent over 500 combined member organizations—incorporating the voices of industry, scientists, and higher education in the United States—we applaud Congress for taking the first step toward averting the harmful impacts of sequester-level discretionary spending caps and a year-long continuing resolution on the American scientific enterprise. As you allocate the additional funding made available under the Bipartisan Budget Act of 2015, **we urge you to make strong investments in America’s innovation ecosystem one of your highest priorities by increasing federal research funding by at least 5.2 percent above FY 2015 levels**—the same level of increase to discretionary spending.

We encourage you to build upon the bipartisan commitment already evident in FY 2016 appropriations bills, and enact legislation that provides real growth for federal investments in research and development across the board. Our recommendation echoes that of over 300 organizations from all fifty states representing American industry, higher education, science, and engineering, and a group of senior corporate leaders who recently endorsed the statement *Innovation: An American Imperative* (see attached). This statement urges Congress to enact policies and make investments that ensure the United States remains the global innovation leader.

Sequestration and the failure of federal research and development funding to keep pace with inflation in recent years are eroding our nation’s capacity to innovate. Federal agencies’ ability to fund cutting-edge research and recruit and retain scientific talent for intramural research has suffered and so has our nation’s ability to capitalize on discoveries that could benefit society in ways not yet realized. While the U.S. has been holding overall federal research funding flat, other nations such as China and South Korea and a number of European countries have been making long term commitments to robust investments in research. If we continue on our current path, we risk creating an innovation deficit, as other countries work to create an innovation dividend.

We urge you to take this opportunity to act decisively in favor of American innovation so that our nation’s economic, health, and national security will prosper for many years in the future.

Sincerely,

Dustin Todd  
Co-Chair, **Task Force on American Innovation**  
Semiconductor Industry Association

*The Task Force on American Innovation (TFAI) is an alliance of America’s leading companies and business associations, research university associations, and scientific societies that advocates on behalf of federal funding of basic research in the physical sciences and engineering.*

Nick Saab  
Co-Chair, **Coalition for Aerospace and Science**  
Lewis-Burke Associates LLC

Michael Fox  
Co-Chair, **Coalition for Aerospace and Science**  
Aerospace Industries Association, Civil Space Committee

*The Coalition for Aerospace and Science (CAS) is an alliance of over 50 industry, university and science organizations united in our support for robust and sustained federal funding for the National Aeronautics and Space Administration (NASA) and National Oceanic and Atmospheric Administration (NOAA).*

Jennifer Greenamoyer  
Co-chair, **Coalition for National Security Research**  
American Institute of Physics

*The Coalition for National Security Research is a broad-based coalition of 74 members including industry, research universities and institutes, and scientific and professional associations committed to a strong Defense Science and Technology Program.*

Paul Doucette  
Co-Chair, **Energy Sciences Coalition**  
Battelle

*The Energy Sciences Coalition (ESC) is a broad based coalition of organizations representing scientists, engineers and mathematicians in universities, industry and national laboratories who are committed to supporting and advancing the scientific research programs of the U.S. Department of Energy (DOE) Office of Science.*

Sam Rankin  
Chair, **Coalition for National Science Funding**  
American Mathematical Society

*The Coalition for National Science Funding (CNSF) is an alliance of over 140 professional organizations, universities and businesses united by a concern for the future vitality of the national science, mathematics, and engineering enterprise.*

Jon Groteboer  
President, **The Science Coalition**  
Harvard University

*The Science Coalition a nonprofit, nonpartisan organization of more than 50 of the nation's leading public and private research universities that is dedicated to sustaining the federal government's investment in basic scientific research as a means to stimulate the economy, spur innovation and drive America's global competitiveness.*

Jennifer Poulakidas  
Co-President, **United for Medical Research**  
Association of Public and Land-grant Universities

*United for Medical Research (UMR) is a coalition of leading research institutions, patient and health advocates, and private industry that have joined together to seek steady increases in funding for the National Institutes of Health.*

Juliane Baron  
Chair, **Friends of the Institute for Education Sciences**  
American Educational Research Association

*The Friends of the Institute of Education Sciences is support the critical research, data, statistics and evaluation programs at IES. Our mission is to advance the objectives of IES and encourage federal investment to conduct the highest quality education research, data collection, evaluations and dissemination at IES.*

Karl Anderson  
Co-chair, **Agriculture and Food  
Research Initiative Coalition**  
American Society of Agronomy,  
Crop Science Society of America,  
Soil Science Society of America

Meghan O'Brien  
Co-chair, **Agriculture and Food  
Research Initiative Coalition**  
American Society for Microbiology

Juli Obudzinski  
Co-chair, **Agriculture and Food  
Research Initiative Coalition**  
National Sustainable Agriculture  
Coalition

***The Agriculture and Food Research Initiative (AFRI) Coalition** is a coalition of scientific societies and science advocacy organizations who support full appropriation of the Agriculture and Food Research Initiative (AFRI) competitive grants program over time.*

R. Thomas Van Arsdall  
Executive Director, **National Coalition for Food and Agricultural Research**  
President, Van Arsdall and Associates

***The National Coalition for Food and Agricultural Research (NC-FAR)** is a nonprofit, nonpartisan, consensus-based and customer-led coalition that serves as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension and education.*

Alison Mize  
Co-Chair, **Biological and Ecological Sciences  
Coalition**  
Ecological Society of America

Robert Gropp, Ph.D.  
Co-Chair, **Biological and Ecological Sciences  
Coalition**  
Chair, **USGS Coalition**  
American Institute of Biological Sciences

***The Biological and Ecological Sciences Coalition (BESC)** is an alliance of scientific and professional societies, associations, and academic institutions are united by a goal to enhance awareness and appreciation for the biological and ecological sciences on Capitol Hill, at the White House, and in federal agencies.*

***The USGS Coalition** The USGS Coalition is an alliance of over 70 organizations united by a commitment to the continued vitality of the United States Geological Survey (USGS) and its ability to provide critical data and services to the nation.*

David Moore  
Executive Director, **Ad Hoc Group for Medical Research**  
Association of American Medical Colleges

***The Ad Hoc Group for Medical Research** is a coalition of patient and voluntary health groups, medical and scientific societies, academic and research organizations, and industry that support enhancing the federal investment in the biomedical, behavioral, and population-based research conducted and supported by the NIH.*

CC: The Honorable Mitch McConnell  
The Honorable Richard Shelby  
The Honorable Lamar Alexander  
The Honorable Susan Collins  
The Honorable Lisa Murkowski  
The Honorable Lindsey Graham  
The Honorable Mark Kirk  
The Honorable Roy Blunt

The Honorable Jerry Moran  
The Honorable John Hoeven  
The Honorable John Boozman  
The Honorable Shelley Capito  
The Honorable Bill Cassidy  
The Honorable James Lankford  
The Honorable Steve Daines  
The Honorable Patrick Leahy  
The Honorable Patty Murray  
The Honorable Dianne Feinstein  
The Honorable Dick Durbin  
The Honorable Jack Reed  
The Honorable Jon Tester  
The Honorable Tom Udall  
The Honorable Jeanne Shaheen  
The Honorable Jeff Merkley  
The Honorable Christopher Coons  
The Honorable Brian Schatz  
The Honorable Tammy Baldwin  
The Honorable Chris Murphy

The Honorable Rodney P. Frelinghuysen  
The Honorable Robert B. Aderholt  
The Honorable Kay Granger  
The Honorable Michael K. Simpson  
The Honorable John Culberson  
The Honorable Ander Crenshaw  
The Honorable John R. Carter  
The Honorable Ken Calvert  
The Honorable Tom Cole  
The Honorable Mario Diaz-Balart  
The Honorable Charles W. Dent  
The Honorable Tom Graves  
The Honorable Kevin Yoder  
The Honorable Steve Womack  
The Honorable Jeff Fortenberry  
The Honorable Tom Rooney  
The Honorable Chuck Fleischmann  
The Honorable Jaime Herrera Beutler  
The Honorable David Joyce  
The Honorable David Valadao  
The Honorable Andy Harris, MD  
The Honorable Martha Roby  
The Honorable Mark Amodei  
The Honorable Chris Stewart  
The Honorable Scott Rigell  
The Honorable David Jolly  
The Honorable David Young  
The Honorable Evan Jenkins  
The Honorable Steven Palazzo  
The Honorable Marcy Kaptur  
The Honorable Peter J. Visclosky  
The Honorable José E. Serrano  
The Honorable Rosa L. DeLauro

The Honorable David E. Price  
The Honorable Lucille Roybal-Allard  
The Honorable Sam Farr  
The Honorable Chaka Fattah  
The Honorable Sanford D. Bishop  
The Honorable Barbara Lee  
The Honorable Michael M. Honda  
The Honorable Betty McCollum  
The Honorable Steve Israel  
The Honorable Tim Ryan  
The Honorable C.A. Dutch Ruppersberger  
The Honorable Debbie Wasserman Schultz  
The Honorable Henry Cuellar  
The Honorable Chellie Pingree  
The Honorable Mike Quigley  
The Honorable Derek Kilmer

# INNOVATION: AN AMERICAN IMPERATIVE

*A call to action by American industry, higher education, science, and engineering leaders urging Congress to enact policies and make investments that ensure the United States remains the global innovation leader.*

Our nation knows what it takes to innovate: a sustained commitment to scientific research, a world-class workforce, and an economic climate that rewards entrepreneurship and innovation. As the most dynamic and prosperous nation in the world, the United States has long benefitted from policies and investments that have promoted innovation and in turn driven productivity and economic growth, bolstered American trade, ensured our health and national security, and safeguarded the American dream. Our leadership is now at risk because of years of under-prioritizing federal scientific research investments and policies that promote innovation.

Now is not the time to rest on past success. As noted by the American Academy of Arts and Sciences in its 2014 Report *Restoring the Foundation: The Vital Role of Research in Preserving the American Dream*, "There is a deficit between what America is investing and what it should be investing to remain competitive, not only in research but in innovation and job creation." Competitor nations are challenging our leadership by copying our playbook for success. At the same time our nation's support for scientific research and innovation is stagnating. If these trends continue, other countries will soon surpass the United States as the global innovation leader.

We must heed the warnings in the *Restoring the Foundation* report and other salient reports of the past decade and act decisively. In particular, Congress must:

## ***Renew the federal commitment to scientific discovery***

by ending sequestration's deep cuts to discretionary spending caps and providing steady and sustained real growth in funding of at least four percent for basic scientific research at: the National Science Foundation, the National Institutes of Health, the Department of Energy's Office of Science, the Department of Defense, NASA, the National Institute of Standards and Technology, USDA, and NOAA;

## ***Make permanent a strengthened federal R&D tax credit***

as a part of comprehensive tax reform to encourage more private-sector innovation investment here in America instead of in competitor countries;

## ***Improve student achievement in science, technology, engineering, mathematics (STEM)***

through increased funding of proven programs and incentives for science and math teacher recruitment and professional development;

## ***Reform U.S. visa policy***

to welcome and keep highly educated international professionals, particularly those holding STEM degrees from U.S. universities;

## ***Take steps to streamline or eliminate costly and inefficient regulations***

and practices governing federally funded research to help unburden researchers to focus more time on conducting research and training the next generation of scientists, engineers, health care professionals, and business leaders;

## ***Reaffirm merit-based peer review***

as the primary mechanism major federal agencies should employ in making competitive scientific research grants to ensure the most effective use of taxpayer dollars; and

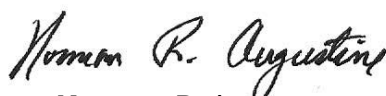
## ***Stimulate further improvements in advanced manufacturing***

through support for programs aimed at accelerating manufacturing innovation and new federal-industry-academic partnerships.

We, the signatories, urge support for these actions to keep the United States the global innovation leader. We stand ready to do our part.



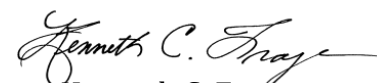
Samuel R. Allen  
Chairman & CEO  
John Deere




Norman R. Augustine  
Co-Chair  
*Restoring the Foundation*



Wes Bush  
Chairman, President & CEO  
Northrop Grumman



Kenneth C. Frazier  
Chairman & CEO  
Merck & Co., Inc



Marillyn A. Hewson  
Chairman, President, & CEO  
Lockheed Martin Corporation



Charles O. Holliday  
Chairman  
Royal Dutch Shell plc



Joseph Jimenez  
CEO  
Novartis



W. James McNerney, Jr.  
Chairman of the Board & CEO  
The Boeing Company



Satya Nadella  
CEO  
Microsoft



Jay Timmons  
President & CEO  
National Association of  
Manufacturers

Academy of Radiology Research  
 Acoustical Society of America  
 Ad Hoc Group for Medical Research  
 Adv. Technical Intelligence Assn.  
 Aerospace Industries Association  
 Agricultural & Applied Economics Association  
 Aizoon Technology Consulting  
 AMD  
 American Academy of Arts & Sciences  
 American Anthropological Association  
 American Association for Dental Research  
 American Association for the Advancement of Science  
 American Association for the Study of Liver Diseases  
 American Association of Colleges of Pharmacy  
 American Association of Mycobacterial Diseases  
 American Association of Petroleum Geologists  
 American Association of Physical Anthropologists  
 American Association of Physicists in Medicine  
 American Association of Physics Teachers  
 American Association of State Colleges and Universities  
 American Astronomical Society  
 American Chemical Society  
 American Council on Education  
 American Dairy Science Association  
 American Dental Education Association  
 American Educational Research Association  
 American Geophysical Union  
 American Geosciences Institute  
 American Institute for Medical & Bio. Engineering  
 American Institute of Aeronautics and Astronautics  
 American Institute of Chemists  
 American Institute of Physics  
 American Mathematical Society  
 American Meteorological Society  
 American Physical Society  
 American Physiological Society  
 American Phytopathological Society  
 American Political Science Association  
 American Psychological Association  
 American Society for Engineering Education  
 American Society for Microbiology  
 American Society for Nutrition  
 American Society of Agronomy  
 American Society of Animal Science  
 American Society of Plant Biologists  
 American Sociological Association  
 American Veterinary Medical Association  
 Anchorage Economic Development Corporation  
 Applied Materials, Inc  
 Archaeological Institute of America  
 Arizona Nevada Academy of Science (ANAS)  
 Arizona State University  
 Arkansas Research Alliance  
 ASME  
 Association for Information Science and Technology  
 Association for Psychological Science  
 Association for Women in Mathematics  
 Association for Women in Science  
 Association of American Geographers  
 Association of American Medical Colleges  
 Association of American Universities  
 Association of American Veterinary Medical Colleges  
 Association of Independent Research Institutes  
 Association of Public and Land-grant Universities  
 Association of Research Libraries  
 Association of University Technology Managers  
 ASTRA, Alliance for Science & Technology Research in America  
 Auburn University  
 Battelle  
 Bay Area Council  
 Biophysical Society  
 Biotechnology Industry Organization  
 Boise State University  
 Boston University  
 Botanical Society of America  
 Brown University  
 Business-Higher Education Forum  
 California Institute of Technology  
 California Polytechnic State University  
 Carnegie Mellon University  
 Cary Institute of Ecosystem Studies  
 Case Western Reserve University  
 Center for Policy on Emerging Technologies  
 Clemson University  
 Coalition for Aerospace and Science  
 Coalition for National Science Funding  
 Coalition for National Security Research  
 Colorado School of Mines  
 Colorado State University  
 Columbia University  
 Computing Research Association  
 Consortium for Ocean Leadership  
 Consortium of Social Science Associations  
 Cornell University  
 Council of Graduate Schools  
 Council of Scientific Society Presidents  
 Council on Competitiveness  
 Council on Governmental Relations  
 Crop Science Society of America  
 Delaware State University  
 Duke University  
 Earthquake Engineering Research Institute  
 Ecological Society of America  
 EDUCAUSE  
 Emory University  
 Energy Sciences Coalition  
 Entomological Society of America  
 EPICenter Memphis  
 FASS  
 Federation of American Societies for Experimental Biology  
 Federation of Associations in Behavioral and Brain Sciences  
 Florida State University  
 Foundation for Science and Disability  
 Genetics Society of America  
 Geological Society of America  
 George Mason University  
 Georgia Institute of Technology  
 Georgia Regents University  
 Georgia Research Alliance  
 Google  
 Greater Boston Chamber of Commerce  
 Greater Madison Chamber of Commerce  
 Harvard University  
 Hawaii Academy of Science  
 Hepatitis B Foundation  
 Hewlett-Packard Company  
 Human Factors and Ergonomics Society  
 IBM  
 Idaho Academy of Science and Engineering  
 IEEE-USA  
 Indiana University  
 Infineon Technologies Americas Corp.  
 Information Technology Industry Council (ITI)  
 Innovation Associates  
 Institute of Food Technologists  
 Intel Corporation  
 International Economic Development Council  
 International Society for Educational Planning  
 International Technology and Engineering Educators Assn.  
 Iowa State University  
 IPC - Association Connecting Electronics Industries  
 Jefferson Science Associates LLC  
 Kansas State University  
 Kent State University  
 Kentucky Academy of Science  
 Linguistic Society of America  
 Louisiana State University  
 Lowell Observatory  
 Maine State Chamber of Commerce  
 Massachusetts Institute of Technology  
 Materials Research Society  
 Mathematical Association of America  
 Michigan State University  
 Michigan Technological University  
 Micron Technology, Inc  
 MN-SBIR  
 Montana State University  
 National Alliance for Eye and Vision Research  
 National Association of Colleges and Employers  
 National Association of Geoscience Teachers  
 National Association of Graduate-Professional Students  
 National Association of Marine Laboratories  
 National Center for Science Education  
 National Center for Technological Literacy- Museum of Science  
 National Coalition for Food and Agricultural Research  
 National Council for Science and the Environment  
 National Defense Industrial Association  
 National Ground Water Association  
 National Science Education Leadership Association  
 National Science Teachers Association  
 New Mexico State University  
 New York University  
 North Carolina Academy of Science  
 North Dakota State University  
 Northeastern University  
 Northern Illinois University  
 Ohio University  
 Oklahoma Academy of Science  
 Oklahoma State University  
 ON Semiconductor  
 ONAMI  
 Oregon State University  
 Pace University  
 Parapsychological Association  
 Penn State University  
 Phiston Technologies, Inc.  
 Population Association of America  
 Portland State University  
 Poultry Science Association  
 Princeton University  
 Qualcomm  
 Rensselaer Polytechnic Institute  
 Research!America  
 Rice University  
 Rochester Institute of Technology  
 Rutgers, the State University of New Jersey  
 SAGE  
 Semiconductor Equipment & Materials International (SEMI)  
 Semiconductor Industry Association  
 Semiconductor Research Corporation  
 Silicon Valley Leadership Group  
 Small Business Technology Council  
 Society for In Vitro Biology  
 Society for Industrial and Applied Mathematics  
 Society for Industrial and Organizational Psychology  
 Society for Neuroscience  
 Society of the Study of Evolution  
 Society of Toxicology  
 Soil Science Society of America  
 South Dakota State University  
 Southeastern Universities Research Association  
 Southern Illinois University System  
 SPIE, the international society for optics and photonics  
 SRI International  
 SSTI  
 Stanford University  
 State University of New York  
 Stillwater Chamber of Commerce  
 Stony Brook University  
 Supporters of Agricultural Research Foundation  
 SURA  
 Syracuse University  
 Task Force on American Innovation  
 Technology Association of Georgia  
 TechVision21  
 Texas A&M University  
 Texas Instruments Incorporated  
 Texas Tech University  
 The Coalition for the Life Sciences  
 The College of William and Mary  
 The Electrochemical Society  
 The Industrial Research Institute  
 The Johns Hopkins University  
 The New England Council  
 The Ohio State University  
 The Optical Society  
 The Procter & Gamble Company  
 The Science Coalition  
 The University of Alabama at Birmingham  
 Tri-City Development Council – Tri-Cities, WA  
 Tufts University  
 UEDA  
 UNAVCO  
 United for Medical Research  
 Universities Research Association  
 University at Buffalo, State University of New York  
 University City Science Center  
 University Corporation for Atmospheric Research  
 University of Alaska  
 University of Alaska Fairbanks  
 University of Arizona  
 University of Arkansas  
 University of California System  
 University of California, Berkeley  
 University of California, Davis  
 University of California, Irvine  
 University of California, Los Angeles  
 University of California, Merced  
 University of California, Riverside  
 University of California, San Diego  
 University of California, San Francisco  
 University of California, Santa Barbara  
 University of California, Santa Cruz  
 University of Central Florida  
 University of Cincinnati  
 University of Colorado at Colorado Springs  
 University of Colorado Boulder  
 University of Colorado Denver  
 University of Colorado, Anschutz Medical Campus  
 University of Connecticut  
 University of Delaware  
 University of Florida  
 University of Georgia  
 University of Hawaii  
 University of Illinois  
 University of Illinois at Chicago  
 University of Illinois at Urbana-Champaign  
 University of Iowa  
 University of Kansas  
 University of Louisville  
 University of Massachusetts Amherst  
 University of Maryland  
 University of Michigan  
 University of Minnesota  
 University of Mississippi  
 University of Missouri System  
 University of Nebraska  
 University of Nevada, Reno  
 University of New Hampshire  
 University of New Mexico  
 University of North Carolina at Chapel Hill  
 University of North Carolina System  
 University of North Carolina Wilmington (UNCW)  
 University of Notre Dame  
 University of Oklahoma  
 University of Oregon  
 University of Pennsylvania  
 University of Pittsburgh  
 University of Rochester  
 University of South Dakota  
 University of South Florida  
 University of Southern California  
 University of Tennessee  
 University of Toledo  
 University of Vermont  
 University of Virginia  
 University of Washington  
 University of Wisconsin System  
 University of Wisconsin-Madison  
 University of Wisconsin-Milwaukee  
 University of Wyoming  
 Utah State University  
 Van Fleet & Associates  
 Vanderbilt University  
 Vermeer Corporation  
 Washington State University  
 Washington State University, Tri Cities  
 Washington University in St. Louis  
 Wayne State University  
 West Virginia University  
 Western Massachusetts Economic Development Council  
 Western Michigan University  
 Woods Hole Oceanographic Institution  
 Yale University