

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.

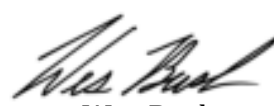
We, the signatories, urge support for these actions to keep the United States the global innovation leader. We stand ready to do our part.



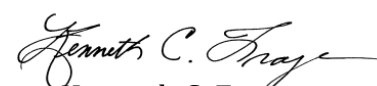
Samuel R. Allen
Chairman & CEO
John Deere




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
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 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
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 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