

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;

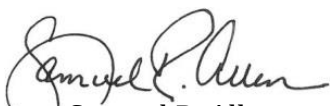
Reaffirm merit-based peer review

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

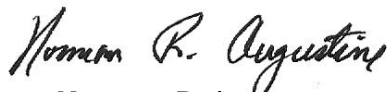
Stimulate further improvements in advanced manufacturing

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

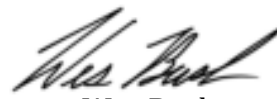
We, the signatories, urge support for these actions to keep the United States the global innovation leader. We stand ready to do our part.



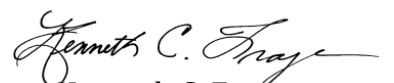
Samuel R. Allen
Chairman & CEO
John Deere



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
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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