

December 22, 2016

Dear President-elect Trump:

As leading scientific organizations in the biological sciences, we write to encourage you to make scientific research and education a priority during your administration. Part of what makes America great is our capacity to generate new knowledge and ideas that spur innovation and drive the development of new economic opportunities for all Americans.

We respectfully request that you take swift action to:

- 1) Make scientific research a budget priority
- 2) Appoint a Presidential Science Advisor with strong scientific credentials
- 3) Direct your administration to use peer-reviewed scientific information to inform decisions

Biology is the science of life. Every day, discoveries arising from biological research contribute to improved human health and economic security. Biology is a foundational science from which we build new antibiotic and antiviral medications, translate findings from genetics laboratories into the development of more drought tolerant food crops, and develop new materials inspired by biological compounds and structures. Biological diversity surveys, for example, provide us with the information we need to identify and model diseases, such as Ebola and Zika, which can jump from wild animal populations to humans. Insights derived from our investigations into the human microbial biome are improving our understanding of various health conditions and diseases, such as food allergies, Crohn's and Inflammatory Bowel Disease, among many others. Biological research enables us to make more informed decisions about natural resource management and stewardship. When we understand how ecological systems function, we can prevent and better mitigate disruptions to important environmental processes that provide us with clean air and water.

Research is an important engine that powers our economy. Over the past 50 years, roughly half of our nation's private sector economic growth has resulted from research and development. One analysis of the return on the federal government's \$12 billion investment in the Human Genome Project found that it generated an estimated \$800 billion in economic return. Other economic analyses of investments in agricultural research have estimated a \$10 return on every \$1 the federal government invests. These are just some examples and others may be found in a recent report from the American Institute of Biological Sciences (see https://www.aibs.org/public-policy/resources/AIBS_Biological_Innovation_Report.pdf). In short, taxpayer support of scientific research pays dividends.

The federal government provides more than half of the funding for basic research in the United States. Indeed, industry counts on the federal government to support fundamental discovery so that the private sector may target its resources to new product development. For example, 80,000 patents awarded over a 10-year period were based on research initially funded by the federal government's National Science Foundation.

Although the United States has long been a global leader in science, our leadership is waning. Foreign countries are allocating growing shares of their Gross Domestic Product to research and development. New investments in federal research agencies must be a priority if we are to be a global power.

Science is a rapidly advancing field that builds on itself. One scientific discipline borrows from another. Thus, it is important that federal agencies coordinate and strategically leverage their research portfolios. One of the ways in which the federal government coordinates its scientific priorities is through the President's Science Advisor and the White House Office of Science and Technology Policy. A strong and respected science advisor can provide the honest and timely analysis you will require to make informed decisions on threats to public health, national security, and environmental incidents that can threaten the well-being of people for years into the future. The Office of Science and Technology Policy can also help to ensure that federal research programs are responding to the needs of the scientific community and the nation. We encourage you to work with the National Academies of Science and professional scientific associations such as the undersigned to identify a highly qualified individual who can provide you with the highest caliber scientific advice and counsel.

Science has not been, nor do we think it should be, a partisan issue. Rather, it is a public benefit. We request that upon taking office you provide clear and immediate guidance through the White House Office of Management and Budget and the Office of Science and Technology Policy to all federal department and agency heads directing them to seek and use peer-reviewed scientific information as the basis for decision-making. Many federal programs have established scientific advisory boards and committees. These panels should be filled and staffed by qualified scientists. To do otherwise will call into question the credibility of any government actions taken on matters of health, security, or environmental stewardship.

We stand ready to work with you, your transition team, and your administration to move forward programs and policy that advance science for the benefit of the nation. Please contact Dr. Robert Gropp at rgropp@aibs.org or 202-628-1500 x 250 if we can provide any assistance to you and your administration.

Sincerely,

American Arachnological Society
American Institute of Biological Sciences
American Malacological Society
American Ornithological Society
American Society of Agronomy
American Society of Ichthyologists and Herpetologists
American Society of Mammalogists
American Society of Naturalists
American Society of Parasitologists
American Society of Primatologists

Animal Behavior Society
Annis Water Resources Institute, Grand Valley State University
Association for Tropical Biology and Conservation
Association of Southeastern Biologists
Belle W. Baruch Institute for Marine and Coastal Science, University of South Carolina
Berkeley Natural History Museums
BioQUEST
Botanical Society of America
Coastal and Estuarine Research Federation
Crop Science Society of America
Delaware Museum of Natural History
Entomological Society of America
Great Lakes Research Center of Michigan Technological University
Harbor Branch Oceanographic Institution at Florida Atlantic University
Harvard Museum of Comparative Zoology
Hatfield Marine Science Center
Helminthological Society of Washington
Herpetologists' League
Human Anatomy and Physiology Society
iDigBio
International Association for Bear Research and Management
Kewalo Marine Laboratory, University of Hawaii at Manoa
Moss Landing Marine Laboratories
National Association of Biology Teachers
National Association of Marine Laboratories
National Tropical Botanical Garden
NC State University/Center for Marine Sciences & Technology
Oregon State University Herbarium
Organization of Biological Field Stations
Paleontological Society
Phycological Society of America
Sam Noble Oklahoma Museum of Natural History
Society for Conservation Biology North America
Society for Integrative and Comparative Biology
Society for Mathematical Biology
Society for the Study of Amphibians and Reptiles
Society for the Study of Evolution
Society of Environmental Toxicology and Chemistry
Society of Systematic Biologists
Soil Science Society of America
Southwestern Association of Naturalists
State University of New York College of Environmental Science and Forestry
The Field Museum of Natural History
University of California Davis Bodega Marine Laboratory
University of North Carolina at Chapel Hill Institute of Marine Sciences
University of Wisconsin - Madison, Department of Botany

US Regional Association of the International Association of Landscape Ecology
Whitney Laboratory for Marine Bioscience, University of Florida
Wisconsin State Herbarium