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Message to Members

A Nonpartisan Resource: S&T in the 2012 Presidential Election

Dear Colleagues,

The most prominent issues in the U.S. presidential election next month are critical to personal and economic well-being nationally and internationally: economic competitiveness and innovation; STEM education and workforce development; climate and energy; health and medical research; and global security.

To track candidates’ views on the role of science in addressing these issues, the AAAS Office of Government Relations has developed a website (http://elections.aaas.org) that offers objective reports on the presidential candidates’ positions and statements -- and their potential impact on S&T policy and R&D funding. The site is continually updated and includes selected news articles, polls, events listings, and other information resources. It is designed to engage not only scientists and engineers, but also business people, journalists, educators, students, and the public.

The website also features a side-by-side comparison of the presidential
candidates' answers to science policy questions posed by the independent initiative ScienceDebate.org. Thousands of scientists and concerned citizens were invited to submit topics that should be debated during the campaign. ScienceDebate then worked with leading U.S. science and engineering organizations, including AAAS, to arrive at a consensus on the 14 questions that were posed.

Also key in the debates is how the Republican and Democratic Party platforms address science. AAAS's MemberCentral has posted the platforms and related links at [http://membercentral.aaas.org/blogs/capitol-connection/science-political-party-platforms](http://membercentral.aaas.org/blogs/capitol-connection/science-political-party-platforms).

Looming over the presidential election is profound uncertainty about the U.S. budget and the threat of "sequestration," which would force severe automatic cuts in federal spending in January 2013. The AAAS R&D Budget and Policy Program has released a comprehensive -- and alarming -- analysis of the impact of these cuts on federal investment in R&D by specific government agency and individual state (see News, below).

We urge all members to be informed and involved in the upcoming election, as the presidential candidates and the U.S. Congress propose policies that impact science and technology, and research and development and their uses in solving critical national and international problems.

Sincerely,

Alan I. Leshner, CEO, AAAS

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**News to Note**

**New AAAS Report: U.S. Scientific Research Could Be Crippled by Looming Budget Cuts**

Unless the U.S. Congress and the President work together during the post-election Congressional session to prevent automatic budget cuts in January, key areas of science could be crippled and 19 states, including California, Maryland, Virginia, and Texas could lose billions of dollars in funding. "Federal R&D and Sequestration in the First Five Years," a new analysis from the AAAS R&D Budget and Policy Program authored by director Matt Hourihan, shows that if agreement on some package of increased revenue and/or reduced spending to lower the deficit is not reached, across-the-board cuts of about 8 to 10 percent would be split between defense and non-defense discretionary spending. Non-defense R&D budgets would drop to the lowest point in a decade or more, and NIH alone could lose $11.3 billion in funding. [Read more](http://www.aaas.org/2012/11/01/news/new-aaas-report-u-s-scientific-research-could-be-crippled-by-loomi) and access the full report, which details how sequestration will affect each science funding agency and the impact on current and future research initiatives.
Two Op-Eds Address Science as the Fuel for Industry and Economic Growth
Science and technology play a key role in economic growth internationally, "as they are the seed corn of innovation," writes AAAS CEO Alan I. Leshner in a 27 September op-ed commentary published in the German newspaper Die Zeit. Noting that the European Union recommends that member states invest 3 percent of gross domestic product in R&D by 2020, he warns that possible budget cuts in the U.S., particularly a "sequestration" measure, "would inevitably be felt by American industry and the broader global scientific community as innovations, patents, and publications begin to dwindle." The commentary is in advance of the annual Falling Walls Conference to be held 9 November in Berlin. Leshner is a featured speaker at the meeting, which presents global research on the future of science and society. Read more and access the full commentary.

Golden Goose Awards Highlight Benefits of Basic Research
The new awards are seen as an exceptional vehicle for informing the public about the strong benefits of basic research. They answer the mocking Golden Fleece Awards, which were issued by Senator William Proxmire from 1975 to 1988 as a derisive citation of what he saw as frivolous government spending, including federally funded research.

Op Ed: "It's Time to Get Serious about Science"
Although some public officials are quick to parody quirky-sounding science, basic research projects such as the study of the nervous system of the jellyfish or the microstructure of coral have produced exceptional innovation, write U.S. Representative Jim Cooper and AAAS CEO Alan I. Leshner in a mid-September commentary in The Washington Post. The new Golden Goose Awards, backed by a bipartisan group of lawmakers and a coalition of science, business, and education leaders, honor the basic research that is critically important to U.S. economic growth -- and is now at risk in today's climate of economic challenges and budget-cutting pressures. Read more and access the full commentary.

First Award Winners Announced
During a ceremony on Capitol Hill, eight scientists, including four Nobel Prize winners, were honored by a bipartisan group of members of Congress and leaders of scientific and research organizations, including AAAS. The scientists' seemingly odd federally funded research yielded major discoveries. The study of the microstructure of tropical coral led to the development of an ideal bone grafting material, commonly used in surgery today. The research into how certain jellyfish glow in the dark resulted in numerous medical research advances and methods used in the pharmaceutical and biotechnology industries. The invention of laser technology, which at the time had no known application, later led to much of modern technology. Read more and access videos of the awards event and interviews with the prizewinners.

U.S. Senator Cites Partisanship Risk to Research
Speaking during the orientation held for the 40th class of AAAS Science & Technology Policy Fellows, Senator Jeff Bingaman (D-New Mexico) called on the new Fellows to help restore the traditional bipartisan support in Congress for science and engineering research that has waned as cooperation between the political parties becomes increasingly hard to find. The Senator told the Fellows, who are beginning work in policymaking with executive branch agencies or in Congressional offices or committees: "You'll be well-positioned to facilitate bipartisan discussions that we need to be having on a daily basis about how we can continue to advance science and engineering innovation in the national interest." This is particularly important as many members of Congress now believe that any new investment in research needs to be paid for by cutting research elsewhere -- losing sight of the contributions to the U.S. economy that have "far exceeded the cost to the government," he stressed. Read more.

AAAS Analyzes Satellite Images of Syrian Conflict
High-resolution satellite images of Aleppo, Syria captured on 9 and 23 August largely corroborate on-the-ground reports of heavy-artillery assaults by the Syrian army in civilian neighborhoods, according to an analysis by the Geospatial and Human Rights Project at AAAS. The independent analysis, completed at the request of Amnesty International USA, appears to reveal tanks and armored vehicles on city streets, burned industrial buildings, scorch marks from fire and explosions, and probable shell craters. The clashes between government forces and rebels have been described by the International Committee of the Red Cross as a civil war and combatants are therefore subject to international humanitarian laws enshrined in the Geneva Conventions. Read more and access the full geospatial image analysis.

AAAS Releases Guide to Supporting Interdisciplinary Research and Education
Solving complex problems, from fighting disease to harnessing sustainable energy sources, requires the collaboration of scientists who can bring sets of tools, techniques, and perspectives from different disciplines. The new AAAS guide, Facilitating Interdisciplinary Research and Education, written in partnership with the University of Colorado Biofrontiers Institute, encourages these diverse collaborations. The authors developed the guidelines following a workshop last year of 150 educators, program managers, policy experts, and researchers. Read more and download the full report.

Capitol Hill Briefing: Translational Medicine Can Improve Drug Development
Experts at a recent congressional briefing organized by AAAS stated that the current U.S. drug development system is an unsustainable model. While the number of new drugs getting to market has not risen for decades, the costs have skyrocketed. The discipline of translational medicine, which builds on discoveries by a broad range of researchers and moves them closer to patients by creating novel therapeutics and diagnostics, can become a bigger player in drug development, the experts agreed. Greater investment in biomedical and academic infrastructure to train a more robust workforce is necessary to harvest this potential, the briefing participants said. Read more and access a video of the discussion.

L’Oréal USA and AAAS Honor Five Women Scientists
Five exceptional postdoctoral researchers -- a synthetic biologist, physicist, geneticist, paleoanthropologist, and biochemist -- have won the 2012 L'Oréal USA Fellowships for Women in Science. The fellows were selected from nearly 300 candidates representing 26 scientific disciplines in a peer-review process led by AAAS, which also provides professional development workshops and help in building networks with accomplished female leaders in corporate, academic, government, and scientific enterprises. The award recognizes early-career U.S.-based researchers judged on exceptional academic records, intellectual merit, research proposals with potential for scientific advances, and letters of recommendation. Read more about the program and the winners.

AAAS Mass Media Science and Engineering Fellows Intern at Major Newsrooms
This summer, a dozen budding scientists, engineers, and mathematicians covered dam explosions, breakthroughs in robotics, invasive species, science education, new drug delivery systems, and more. The fellows lent their talents to top news outlets, including Scientific American, the Philadelphia Inquirer, the Los Angeles Times, the Oregonian, and National Public Radio. In addition, two aspiring journalists spent the summer at Science as part of the Minority Science Writers Internship Program, under the guidance of the journal's editors and writers. Read more about the 2012 participants.

Capitol Hill Briefing: Treatments on the Horizon for Early-Onset Dementias
Dementias are usually considered a disease of the elderly, but detection in people who are younger than 65 is not uncommon, leading neurological specialists explained during a briefing organized by AAAS. Each type of dementia is triggered by different microscopic pathologies in the brain and disease-modifying treatments are emerging, the experts said. However, education on the extent and character of the various types is crucial to assure that cases are identified early enough for interventions that might help. Older patients with late-onset Alzheimer's typically show memory problems as the first symptoms, while in young-onset forms, symptoms include language difficulties, problems with executive function, and visual-spatial impairment. The series of three neuroscience briefings was underwritten by the Dana Foundation and moderated by AAAS CEO Alan I. Leshner. Read more and view presentation slides.

MemberCentral

Connect with colleagues at membercentral.aaas.org, the website for and about AAAS members with exclusive stories, photos, videos, webinars, and podcasts.

New on AAAS Member Central
A look at a STEM program developed by Vanderbilt University that is using digital tools such as Skype to "beam" scientists to rural classrooms

Science Careers

Science Careers, published by AAAS, offers many resources to help you advance your career. Whether you're seeking a new job, advice on career advancement in your chosen field, or ways to stay current on industry trends, you'll find helpful tools on the site -- all for free. Thousands of searchable jobs
from academia, industry, and government are available as well as job alert e-mails, career advice, a resume/CV Database, webinars, and more. Visit ScienceCareers.org today.

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**Member Benefit**

Announcing Our New Partnership with NASA Federal Credit Union  
AAAS is committed to offering you member benefits that fit your needs and make your membership more valuable. Like AAAS, NASA Federal Credit Union is dedicated to serving the scientific community, which is just one of the reasons we are embarking on this partnership. NASA FCU offers members better ways to save and smarter ways to borrow with friendly, professional service -- along with anytime, anywhere account access. Show support for the sciences and apply for your new AAAS Platinum Advantage Rewards or AAAS Platinum Cash Rewards Credit Card now.

**Announcements**

**Science & Diplomacy: New Issue Explores Role in the Middle East**

During a time of turmoil in the Middle East, including intense and sometimes violent protests focused on the United States, the new issue of AAAS's open-access quarterly publication explores how S&T engagement based on shared interests could help create a basis for improved relations. One article looks at promising opportunities for cooperation between U.S. and Yemeni researchers. A second discusses the productive use of "water diplomacy" between Jordan and Israel. A third offers a broad look at the need for science as a means for bridging cultures and improving human lives. An editorial focuses on the issues at the interface of science and foreign policy that will confront the U.S. and its leaders after the presidential election. Read more and access these and other articles in the new issue.

**Science Correspondent Jon Cohen Honored**

In recognition of exemplary coverage of a broad range of biomedical topics, Jon Cohen has won the 2012 Victor Cohn Prize for Excellence in Medical Science
Reporting. The award is administered by the nonprofit Council for the Advancement of Science Writing Inc. (CASW), which lauded Cohen's resourcefulness, unrelenting enterprise, brilliant marshaling of facts, and superb storytelling. The judges particularly noted the in-depth packages of stories Cohen had published in *Science* in advance of the major international biennial HIV-AIDS meetings -- the most recent describes efforts to stem the spread of HIV in ten U.S. cities. [Read more](#) and access the package (free with registration).

**Neurobiologist Marlene R. Cohen Wins 2012 Eppendorf & *Science* Prize**

Recognized for her outstanding research contributions to the neural basis of internal mental states, Marlene Cohen has won the international competition for the 2012 Eppendorf & *Science* Prize for Neurobiology. The assistant professor in the Department of Neuroscience at the University of Pittsburgh said her research methods allow measurement of "the effect of internal states, not only on average over a long period of time, but on the moment-to-moment timescale that they actually affect behavior." The prize honors exceptional neurobiological research in the field of molecular and cell biology by a young early-career scientist, as described in a 1,000-word essay based on research performed within the last three years. [Read more](#), access the essays by the winner and the two finalists, and learn how to apply for next year's prize.

**AAAS Science & Technology Policy Fellowships: Applications Deadline 5 December**

Online applications are now open for 2013-2014 fellowships. Interested applicants are encouraged to start their application early and contact their references as soon as possible. The deadline for submission of all materials and letters of recommendation is 5 December, 5:00 p.m. U.S. Eastern Time. [More information](#).

**2013 AAAS Annual Meeting**

14-18 February, Boston, Massachusetts

*Theme: The Beauty and Benefits of Science*

Join thousands of leading scientists, engineers, educators, and policymakers at the 179th AAAS Annual Meeting. The program for 2013 will highlight the rich and complicated connections between basic and applied research, and how they bring about both practical benefits and the beauty of pure understanding. [Register today](#) to receive discounted rates on meeting registration and hotel reservation.

**2013 Meeting Schedule Now Online**

The full program schedule is now available. Please visit our [website](#) to browse the complete list of symposia and sessions.

**Call for Poster Submissions**

*Deadline 24 October 11:59 p.m. PT*

Full-time students may submit work recently performed while enrolled in an undergraduate, graduate, or doctoral degree program to the Student Poster Competition. Doctorates, post docs, and professionals have the opportunity to present research to the broad community of scientists attending the Annual
Meeting through the General Poster Session. Visit our website for poster submission guideline.

**AAAS Entry Point Program Accepting Applications for Summer 2013**
Entry Point refers undergraduate and graduate students with disabilities in companies, government agencies, and summer research programs that hire STEM interns for paid work in their fields. For more information about the program and to apply, go to [www.entrypoint.org](http://www.entrypoint.org). To find out about hiring an Entry Point Intern, email the program at [entrypoint@aaas.org](mailto:entrypoint@aaas.org).

**Undergrad Plant Biology Course Wins Science IBI Prize**
Going beyond common perceptions of plants as "green rocks" that are barely alive and not very interesting, freshmen taking a required plant biology course at New Jersey's Rider University are becoming connected to the scientific process as their appreciation for botany as an important experimental science grows along with the plants they nurture and study. The Personal Plant Project, which teaches students the importance of plants to a healthy planet and population, won the Science Prize for Inquiry Based Instruction (IBI), selected as an outstanding example of innovation in teaching introductory science courses at the college level. Read more and access the essay written by the course's creator Laura A. Hyatt in the 28 September issue of Science.

**U.S. Federal Workers Can Support AAAS through the CFC**
U.S. government employees can select AAAS on the Combined Federal Campaign's national/international list, supporting innovations in science, engineering, and technology to serve society around the world. Your donation through CFC helps to enhance science education, infuse policy issues like climate change with sound science, ensure national security, improve international relations, promote scientific integrity, and much more. The contribution period is 1 September to 15 December. **AAAS's CFC number is 10134.**

**Join the AAAS President's Circle**
AAAS's undertaking to advance science in the service of society is an enormous one, especially now as we are increasingly called upon by the administration and Congress, the science community, and the public to speak up for science on a host of global issues. You can help to ensure that the voice of science -- your voice -- is heard by becoming a part of the President's Circle today with a philanthropic contribution of $500 or more. You will receive updates about our activities and invitations to AAAS events. Visit us online at [www.tinyurl.com/dye8kn](http://www.tinyurl.com/dye8kn) or call +1-202-326-6636 for more information.

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**More About AAAS**

[AAAS News & Notes](http://www.aaas.org/newsandnotes) appears in Science in the last issue of each month.
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