

MIT Washington Office

The Massachusetts Institute of Technology (MIT) Washington, DC Office was established within the Office of the President in 1991. The office reports to MIT's president, and also works closely with the vice president for research. The staff during the 2010–2011 academic year included: William Bonvillian, director; Abby Benson, assistant director; Amanda Arnold, senior legislative assistant; Helen Haislmaier, program coordinator; and Lisa Miller, office representative.

The mission of the Washington Office is to support the science advocacy activities of the president and other senior MIT officials and faculty in Washington, DC, and to support MIT's historic role in Washington, as one of the nation's premier research universities in providing leadership on national science and technology issues. The Washington Office contributes to a steady flow of information and ideas between MIT and Washington institutions, including executive branch offices, departments, and agencies, Congress, and university, industry, and science organizations. The appendix to this report provides an overview of MIT engagement this year among MIT administration, faculty, and staff, and Washington, DC officials.

Summary

Below is a summary of the major efforts undertaken by the Washington Office in the period July 1, 2010 through June 30, 2011.

Congress and the Administration—Research and Development Support and Innovation Policy

MIT efforts this past year with the Administration and Congress focused around two parallel but related efforts: continued federal research and development (R&D) support, and innovation policy.

Federal Research and Development Support

There has been a new federal focus this year on deficit controls. This is taking place while the federal budget deficit is approaching an annual level of over a trillion a year and the total federal debt is ballooning from \$8 trillion in 2006 to \$14 trillion in 2011. This is compounded by, and concurrent with, entitlement programs led, by Medicare, that are sharply expanding for the foreseeable future due to baby boom demographics. This issue of debt was forcibly adopted by the Tea Party movement as the Republican Party gained control of the House of Representatives in 2011. Nearly half the members of the Republican majority of the House were freshmen, many with strong Tea Party ties and limited experience in government, who sought a sharp reduction in the federal government's role. In contrast to FY2009 and FY2010, when federal R&D received an unprecedented boost due to the economic stimulus funding of those years, the above developments led to an effort to justify federal support of R&D as a needed element of future U.S. economic growth. This growth is seen as vital to the future revenues that the federal government will need to emerge from its deficit spiral. The MIT Washington office worked with other universities and with industry in making that case. As part of that effort, President Hockfield met with a series of business groups about this

issue, encouraging them to bring their voices into this debate. The groups included leaders of the Business Roundtable, the National Association of Manufacturers, and the Semiconductor Industry Association.

Innovation Policy

In parallel to the efforts on overall federal R&D support, MIT worked on three key areas of national innovation policy. These cross-disciplinary initiatives aimed to contribute to critical areas of national concern and policy where MIT science and technology policy efforts could make a significant contribution. They also underscored the importance of science and technology in resolving national issues.

President Hockfield's work in this area, combined with the work of the Institute, focused on three key pathways: a new initiative around manufacturing innovation; an expanded effort around convergence (the integration of physical and engineering sciences with life science); and a continuation of MIT's important energy technology initiative. The MIT Washington Office provided extensive support for each of these efforts.

Regarding manufacturing, President Hockfield initiated a major MIT study, modeled on the MIT "Made in America" study of the late 1980s that had helped the U.S. respond to the manufacturing challenges of that era with Japan and Germany. The new study, called "Production in the Innovation Economy" (PIE), is led by a cross-disciplinary MIT faculty group. A study plan has been formulated and initial funding from foundations has been obtained. Meanwhile, on June 24, President Hockfield was named by President Obama as the co-chair of a new initiative called the Advanced Manufacturing Partnership (AMP). She shares the co-chair position with Andrew Liveris, CEO of Dow Chemical. AMP is a partnership among universities, industry, and major federal R&D agencies to work to restore U.S. manufacturing leadership. Both PIE and AMP reflect a major MIT focus on advanced manufacturing.

Regarding convergence, which is the merger of life, engineering, and physical sciences to create new advances in health research, a faculty group issued a major white paper in January 2011, which explored the policies needed to implement this interdisciplinary approach. The white paper was discussed at a January 4, 2011 standing room only forum hosted by the American Association for the Advancement of Science (AAAS) in its auditorium. The event featured MIT faculty members and policy leaders. Subsequent efforts included briefings for congressional staff on the white paper; ongoing meetings with constituencies interested in the issue; and work on a possible National Academy workshop on convergence. Work in this area is discussed in more detail below.

Regarding MITEI, this year saw the release of two major MIT policy studies, *The Future of Natural Gas* and *The Future of the Nuclear Fuel Cycle*. The Washington DC Office also helped highlight the work of researchers at MIT involved in DOE research initiatives, including the Advanced Research Projects Agency–Energy (ARPA-E), Energy Frontier Research Centers (EFRCs), and Energy Innovation Hubs. There was continued expansion of energy research at MIT and extensive faculty participation in energy policy meetings in Washington, including congressional testimony. The Washington Office also helped to coordinate the transmission of expert MIT advice to federal officials on the Deepwater Horizon and Fukushima disasters.

Research and Development Agency Engagement

The Washington Office, working with a series of faculty engagement committees organized around major R&D agencies and issues, supported activities in the following areas:

- *Energy*: The Washington Office continued to bring research results and policy ideas emerging from MITEI and other federally supported research at MIT to the Department of Energy (DOE) and policymakers in Washington. Accomplishments of note include highlighting MIT's two Energy Frontier Research Centers on Capitol Hill and responding to the DOE Quadrennial Technology Review request for information. Additional accomplishments include facilitating the release of the latest MITEI policy reports, *The Future of Natural Gas* and *The Future of the Nuclear Fuel Cycle*. The Washington Office also facilitated agency and congressional briefings for those MITEI reports. Additionally, the office obtained congressional support for an Energy Efficiency Buildings Hub proposal to the DOE.
- *NIH*: The Washington Office continued efforts to encourage the National Institutes of Health (NIH) and other agencies to support convergence of the life, engineering, and physical sciences as a critical avenue for future advances. In addition to multiple briefings, the Washington Office provided support for the release in January 2011 of the MIT white paper on convergence, which was titled, *The Third Revolution: The Convergence of the Life Sciences, Physical Sciences, and Engineering*. The Washington Office also scheduled follow-on congressional briefings. The research was led by Institute Professors Phillip Sharp and Robert Langer, with significant support from Tyler Jacks, Paula Hammond, and Robert Urban, as well as for a recent article in *Science* by Phillip Sharp and Robert Langer.
- *NASA*: The Washington Office continued its support of MIT faculty responding to the Administration's efforts to re-orient NASA into an advanced technology agency and to enable new approaches to space exploration and science. Efforts included organizing congressional briefings, meetings, and discussions with NASA officials about the future of NASA appropriations and funding allocations. In addition, the MIT Washington Office worked to develop a university coalition in support of funding for NASA's Space Technology Program, which then sent two letters to Congress advocating for the program. Efforts also included garnering congressional delegation support for the Institute's proposal to establish a new, nonprofit organization to be known as the International Space Station Institute to manage the space station laboratory.
- *Defense*: Secretary of Defense Bob Gates, in his final year in that post, continued to support increases in defense basic research. Many universities continued to support these efforts.

Citizen Scientists at MIT

The MIT Washington Office continued its efforts of supporting several student-inclusive programs, including: the MIT summer intern programs; the annual Independent Activities Period "boot camp" course on science and technology policy for MIT students; the annual Congressional Visits Day for science funding advocacy for MIT students; and

invitations for policymakers to come to MIT for meetings and speaking opportunities. Although foundation support ended this year for MIT's annual congressional and executive branch staff seminar program, planning is underway for an alternative program in the form of a new congressional staff course on science and technology policy to be taught by MIT faculty in Washington, DC. All of these efforts are discussed in detail below.

Connecting with the Policy Agenda in Washington, DC

Innovation and Competitiveness

Science Support

The second half of 2010 in Washington was dominated by the mid-term elections and growing public outcry on federal spending levels. Neither chamber of Congress completed consideration of FY2011 appropriations bills before the end of FY2010, so Congress enacted a series of continuing resolutions (CRs) to carry spending over at FY2012 levels until the next Congress. The final CR of the 111th Congress, which passed in late December, funded the government until March 4, 2011, setting up the new Congress to influence final FY2011 spending. With a Republican-controlled House heavily influenced by the fiscally conservative Tea Party, and a slimmer Democratic majority in the Senate, there was increased attention on rescissions, targeted cuts, and/or across-the-board funding reductions for the remainder of the fiscal year.

The House of Representatives started the 112th Congress by passing an early resolution pledging to reduce FY2011 non-security discretionary spending to FY2008 levels. This pledge was built largely on a campaign promise to cut \$100 billion from the budget in FY2011. This promise, however, assumed a full-year budget would be enacted. This was not the case, as the CR funded the government for the first five months of the year and resulted in even deeper cuts for the remaining seven months.

In early February, House Budget Committee chairman Paul Ryan (R-WI) announced that the proposed discretionary spending cap for FY2011 would be \$1.055 trillion, \$74 billion below President Obama's FY2011 budget request, and \$35 billion below the FY2010 level. That same day, House Appropriations Committee chairman Harold Rogers (R-KY) released spending limits assigned to each of the 12 House appropriations subcommittees. Because these allocations were to be implemented over the less than seven remaining months of FY2011, the percentage reduction over that period would be considerably larger than it appeared.

Also in early February, President Obama issued his FY2012 budget request. This request proposed freezing domestic discretionary spending for the next five years, but maintained strong funding for research and development, which was in line with the Administration's stated priorities (see Table below). The President's State of the Union address also called for continued support for investment in scientific research, particularly "biomedical research, information technology, and especially clean energy technology." In the speech, President Obama also called for the preparation of 100,000 new teachers in the science, technology, engineering, and mathematics (STEM) fields over the next 10 years.

On February 19, 2011, the House passed their version of a full-year FY2011 CR (H.R.1), which contained \$61 billion in cuts, including significant cuts to research agencies across the government. The DOE Office of Science would have been particularly hard hit, with an 18% reduction from FY2010 levels. In addition, the legislation would not have funded the growing shortfall in the Pell Grant program, which would have resulted in a significant reduction in the maximum grant for the coming academic year. While it was not expected that H.R.1 would make it through the Senate, the bill was a strong signal of the intentions of the House Republican majority to seek major cuts to discretionary spending.

Just before the CR ran out on March 4, 2011, Congress approved a two-week CR that funded federal agencies at their FY2010 levels, minus \$4 billion in cuts, which were mostly gained by eliminating earmarks and programs already identified for cuts in the President's FY2012 budget request. Just before that CR ran out, Congress approved another short-term measure with another \$6 billion in cuts. Research agencies were again largely protected in this measure. Finally, on April 14, 2011, Congress approved a CR that would fund the government for the remainder of the fiscal year. This package reduced spending by about \$38.5 billion from FY2010 levels, including a 0.2 percent across-the-board cut in non-security discretionary programs. The administration's efforts to preserve strong research funding were successful in this bill, which included relatively modest cuts to basic research programs at most of the major federal agencies. The bill also preserved the maximum Pell Grant award at \$5,550.

With FY2011 finally settled, both sides of Congress then turned to consideration of FY2012 spending. House leadership announced early in the year that they intended to pass their 12 appropriations bills in a timely fashion, and, as of the end of July, they had passed seven of these bills. The Senate was less active on the appropriations front, choosing to wait to act until a larger deficit reduction agreement was reached. Driving this deficit reduction discussion was the federal debt limit, which the secretary of the treasury stated would be reached in early August.

The month of July was dominated by bipartisan negotiations among House and Senate leadership and the White House on how to raise the debt ceiling and address the federal deficit. These talks focused on discretionary spending, the category to which research is drawn from, as well as the spending categories of entitlements and taxes, which remained politically controversial issues because the parties were reluctant to offer up cuts.

The MIT Washington Office was involved throughout the year in efforts with interested industry segments and universities and to persuade Congress and other policymakers of the links among R&D, innovation, and economic and scientific advance. As noted in the summary above, President Hockfield met with industry and congressional leaders throughout the year to make this case.

**Summary of Federal Research and Development Funding, in Millions of Dollars,
FY2010–FY2012**

Appropriations Subcommittee and Program	FY2010 Enacted	FY2011 Agreement (without 0.2% cut to non- defense)	FY2012 Presidential Request
Commerce-Justice-Science			
National Science Foundation (NSF)	6,926	6,873	7,770
NSF R&RA	5,563	5,56	625.3
NSF HER	872	862.7	911
National Aeronautics and Space Administration (NASA), Science Mission Directorate	4,469	4,945	5,000
NASA, Aeronautics Research Directorate	497	535	569
NASA, Space Technology	275	—	1,024
NASA, Education Programs	180	145.8	138
National Oceanographic and Atmospheric Administration	4,853	4,600	5,498
National Institute of Standards and Technology (NIST), Technology Innovation Program	69.9	44.9	75
NIST, Manufacturing Extension Program	124.7	128.7	142.6
NIST, Competitive Construction Grant Program	20	0	—
Defense			
Department of Defense Basic Research (6.1)	1,820	1,950	2,079
Energy and Water Development			
Department of Energy (DOE), Office of Science	4,904	4,884	5,416
DOE, Office of Science, Energy Frontier Research Centers	—	—	100
DOE, Advanced Research Projects Agency for Energy	—	180	550
DOE, Cross-Agency Energy Innovation Hubs	66*	—	146**
DOE, EERE	2,242	1,835	3,200
Labor-Health and Human Services-Education			
National Institutes of Health	31,168	30.7	31,829

Source: Association of Public and Land Grant Universities.

*For three hubs

**For six hubs

Reauthorization of the America COMPETES Act

The Washington Office worked closely with our joint university and industry association, the Task Force on American Innovation, as well as higher education associations and scientific societies to support reauthorization of the America COMPETES Act during the 111th Congress. The bipartisan America COMPETES Act, originally signed into law by President Bush in 2007, outlined a doubling path for research funding at the DOE Office of Science, the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST) over a seven-to-ten-year period. The funding for DOE Office of Science and NSF was authorized to double over seven years. (The funding for NIST was authorized to double over ten years. DOD basic research, NASA science, and NIH were not included in this legislation, although DOD Secretary Gates, a participant in the NAS Gathering Storm report of 2006, has led an effort at DOD for significant increases in basic defense research, detailed below.) The 2007 COMPETES Act also authorized major science, technology, engineering, and mathematics (STEM) education efforts and funded a new DOE initiative, the Advanced Research Projects Agency–Energy, modeled after the successful Defense Advanced Research Projects Agency (DARPA) for translational research in the Department of Defense. The COMPETES Act authorized funding for FY2007 through FY2010, prompting consideration of its reauthorization in early 2010. Generating support for the Act’s reauthorization has helped in making the case for the need for continued federal R&D investment and led to significant increases in R&D funding in those agencies over the past four fiscal years.

As reported in last year’s annual report, reauthorization of COMPETES was a particular priority for House Science and Technology Committee chairman Bart Gordon (D-TN), who announced early in 2010 that he would retire at the end of the 111th Congress. The House Science Committee held over 20 hearings throughout February and March 2010 and marked up the bill in late April. Thus began a complicated and partisan effort to pass the bill, H.R. 5116, on the House floor. After several failed attempts to get the legislation through, primarily due to mounting concern over federal spending, Chairman Gordon successfully shepherded the bill through the House where it passed at the end of May with a vote of 262 to 150 (17 Republicans voted for the bill and no Democrats voted against it). As a result of concessions made by Chairman Gordon to ensure passage, the authorization levels in the bill came out slightly less than the track outlined in the original legislation, and lasted only through FY2013 versus the original five-year authorization envisioned by Chairman Gordon. The House bill was supported in letters signed by some 750 business associations, companies, science and university groups, and universities, including the Chamber of Commerce, the National Associations of Manufacturers, the Business Roundtable, and the Semiconductor Industry Association.

In the Senate, Senators Jeff Bingaman (D-NM) and Lamar Alexander (R-TN), leaders of the 2007 Act, helped lead a bipartisan effort to reauthorize a narrower version of the bill. The Senate Commerce Committee held two hearings in late July, and approved by unanimous voice vote their version of the bill, S. 3605, with bipartisan support from Chairman Rockefeller (D-WV) and Ranking Member Hutchinson (R-TX). All the Republican committee members present supported the bill. The bill continued

sustained authorization increases for the NSF and NIST for FY2011 through FY2013, similar to the House-passed levels. The bill also contained several STEM and innovation programs and an acknowledgment of the contribution of the National Aeronautics and Space Administration (NASA) and National Oceanic and Atmospheric Administration (NOAA). Support for the DOE Office of Science and most NSF education programs were not included in committee-considered bill due to jurisdictional issues, but they were added to the bill before it reached the Senate floor later in the year.

The mid-term elections kept Congress away from Washington throughout the fall, but America COMPETES was considered by the Senate during an unusually productive lame duck session in December. On December 17, 2010, by unanimous consent, the Senate approved a three-year reauthorization of the America COMPETES Act. The measure then returned to the House where it was approved with a vote of 228 to 130, with 16 Republicans voting for the bill and no Democrats voting against it. President Obama signed the bill into law on January 4, 2011.

The pressure to deal with the nation's major budget deficits shifted congressional attention away from the COMPETES Act in the first half of 2011. However, the advocacy effort it generated, including through the industry-led Task Force for American Innovation, helped encourage Congress to sustain R&D funding and avoid significant reductions in FY2010 and FY2011.

MIT Innovation Policy Initiatives

As noted, MIT focused this year on three major innovation policy efforts: advanced manufacturing; convergence of the life, engineering, and physical sciences; and energy technology. The MIT Washington Office provided extensive support for each of these efforts.

Efforts in advanced manufacturing came out of faculty-led forums that President Hockfield hosted on campus concerning this topic and related innovation topics in March 2010. (See highlights of these on [MIT TechTV](#)). A major MIT study, modeled on the MIT "Made in America" study of the late 1980s that helped the U.S. respond to the manufacturing challenges of that era with Japan and Germany, was subsequently initiated by President Hockfield. The "Production in the Innovation Economy," study is co-chaired by Institute Professor Phillip Sharp and professor Suzanne Berger, with professor Olivier de Weck as the study's executive director, and includes a total of 18 faculty members. These faculty members come from diverse backgrounds ranging from engineering, science, and economics, to political science and computing. A [study plan](#) has been formulated and initial funding from foundations has been obtained. Meanwhile, President Hockfield, in part because of MIT's growing leadership in manufacturing policy issues, was asked by President Obama in June to become co-chair, along with Andrew Liveris, CEO of Dow Chemical, of a new presidential initiative, the [Advanced Manufacturing Partnership](#) (AMP), a partnership between universities, industry and major federal R&D agencies. That new initiative, designed to restore U.S. manufacturing leadership, was [announced](#) by President Obama, joined by President Hockfield and Andrew Liveris, and other university, industry and agency leaders, at Carnegie Mellon University in Pittsburg on June 24, 2011.

The other major innovation policy efforts this year concerned convergence, or the merger of life, engineering, and physical sciences to create new advances in health research and energy technology

Energy

The Washington Office continued to bring research results and policy ideas emerging from MITEI and other federally supported research initiatives at MIT to both the DOE and policymakers in Washington. As discussed above, funding for energy research faced real challenges in the FY2011 appropriations process. While the Administration continued to follow through on pledges of increased support for energy research and the development of a “green economy,” this attention often resulted in energy programs being targets for Republicans who were focused on cutting federal spending.

The President’s FY2012 request for DOE research was strong, with the Office of Science seeing an overall increase of 9% to \$5.4 billion. The DOE Department of Energy Efficiency and Renewable Energy (EERE) saw an increase of 44% to \$3.2 billion, and the ARPA-E request almost doubled from the previous year request to \$550 million. The Office of Science also proposed the following: three additional energy innovation hubs (materials, batteries, and grid) at \$20 million each, continued support for existing EFRCs, and a strong increase in the graduate fellowship program.

Department of Energy Initiatives

The Washington Office continued its support of several DOE “front end” research initiatives, including the ARPA-E, EFRCs, and Energy Innovation Hubs.

ARPA-E—The Advanced Research Projects Agency–Energy was initially authorized in the America COMPETES Act of 2007 to fill the gap between DOE basic and applied research by accelerating new technologies. MIT has been extremely successful in ARPA-E awards, with five primary awards and several sub-awards going to MIT researchers, and numerous companies with MIT affiliations also receiving awards. MIT faculty and students participated in ARPA-E’s annual summit held in Washington in late February and early March 2011. At this summit, MITEI director Ernie Moniz spoke at this summit on the Future of Natural Gas report. Likewise, Yet-Ming Chiang, MIT professor and lead scientist for 24M Technologies, Inc., an ARPA-E awardee, spoke about advanced batteries. ARPA-E faced an uphill battle in FY 2011, as it did not have an annual appropriation from FY2010 upon which to build during the spending negotiations. However, it ultimately received an annual appropriation of \$180 million in the final CR.

Energy Innovation Hubs—In FY2010, Congress approved funding for three Energy Innovation Hubs: Modeling and Simulation for Nuclear Reactors, Fuels from Sunlight, and Energy Efficient Buildings. MIT partnered with Oak Ridge National Laboratories in a successful bid for the Nuclear Hub. MIT also participated in a proposal for the Fuels from Sunlight Hub that was led by the University of Colorado and National Renewable Energy Laboratory, however this hub was ultimately awarded to a California-based team. In 2010, MIT led a multi-state New England proposal for the Energy Efficient Buildings Hub that would have brought \$129 million to the New England region

over five years. The Washington Office helped arrange briefings and letters of support from members of the New England congressional delegation, however this hub was ultimately awarded to a Pennsylvania-based team.

The President's FY2011 request included funding for one additional Energy Innovation Hub on batteries and energy storage, which was not funded in the final CR agreement. As mentioned above, the President's FY2012 budget included funding for three new hubs: batteries and energy storage, critical materials, and grid. The House approved funding for two of these hubs—batteries and energy storage and critical materials—at \$20 million each in its FY2012 considerations. We expect these hubs will also receive some level of support in the Senate.

Energy Frontier Research Centers (EFRCs)—Located in DOE's Basic Energy Sciences (BES) program, EFRCs were first requested in President Obama's FY2009 budget request. EFRCs focus on basic research in fundamental areas critical to energy science advancement. Congress provided \$100 million for the EFRCs in the FY2009 omnibus appropriations and added additional \$277 million in funding in ARRA. The FY2011 DOE request included \$40 million in funding for six to ten additional EFRCs, which was not approved by Congress. The FY2012 request included follow-on support for the existing EFRCs, but does not include funding for additional EFRCs. MIT is the home to two EFRCs as lead institution, and MIT faculty members participate in several more. In May, the DOE held an EFRC summit where leaders and students of EFRCs from across the country convened in Washington, DC. Faculty and students from both MIT EFRCs attended the conference. The MIT Washington Office helped to coordinate a reception on Capitol Hill highlighting the EFRCs and arranged for briefings with Senator Scott Brown's personal staff, as well as with professional staff from the Senate Energy and Natural Resources Committee and the House Science, Space, and Technology Committee.

DOE Quadrennial Technology Review—On June 16, 2011, MIT submitted comments to the DOE in response to their request for information on the DOE Quadrennial Technology Review. The comments were submitted for MIT by Claude Canizares, vice president for research, and Ernie Moniz, director of the MIT Energy Initiative. The MIT Washington Office assisted in [policy](#) development and drafting.

Energy Legislation

The prospects for enacting a comprehensive energy and climate package in the Congress dimmed considerably this year with changeover in the makeup of both the House of Representatives and the Senate. Both chambers have instead considered individual, smaller pieces of legislation affecting the energy space, but none of these has been particularly relevant to R&D. The Deepwater Horizon spill in 2010 and the Fukushima disaster in 2011 brought significant attention to both deepwater drilling and the need for technology improvements, as well as nuclear power. The Washington Office helped coordinate communication between MIT experts and officials in Washington in the aftermath to both of these disasters.

Washington Engagement on Energy

The Washington Office helped coordinate two major report rollouts over the past year the [Future of Natural Gas Report](#) and the [Future of the Nuclear Fuel Cycle](#) report. The official rollout of the Future of the Natural Gas report took place at a packed house at the National Press Club on Friday June 25, 2010, while the Future of the Nuclear Fuel Cycle report was officially rolled out at the Center for Strategic and International Studies on September 16, 2010. Both rollouts were accompanied by briefs for officials at the DOE, Executive Office of the President (including the Office of Science and Technology Policy, Council on Environmental Quality, and the Office of Management and Budget), staff for the Massachusetts Congressional Delegation, and professional staff for the House and Senate Appropriations Committees, the Senate Energy and Natural Resources Committee, and the House Science, Space, and Technology Committee.

Other Energy-Related MIT Visits in Washington

- On July 28, 2010, professor Thomas Malone visited Washington to brief congressional and administration officials on his Climate CoLab project, which is a “collective intelligence” approach to climate policy issues that invites users to an interactive website to propose policies on climate using computer modeling and commentary system software. Professor Kerry Emanuel briefed staff from the House Science, Space, and Technology Committee; the House Committee on Global Warming; the Senate Energy and Natural Resources Committee; and the DOE.
- On March 30, 2011, Professor Emanuel testified before the House Science, Space, and Technology Committee on climate change, a topic of much interest in the Republican-controlled House of Representatives.
- Professor Miklos Porkolab, director of MIT’s Plasma Science and Fusion Center, visited Washington, DC on April 7, 2011 with leaders of several other major DOE-funded fusion programs to brief professional committee staff for the House and Senate Appropriations Committees; House Science, Space, and Technology Committee; and Senate Energy and Natural Resources Committee on major fusion projects.
- Professor Ernie Moniz testified three times before Congress on March 30, 2011 before the Senate Appropriations Committee, Subcommittee on Energy and Water Development, on Fukushima and Directions for U.S. Nuclear Power.
- Throughout the year, President Hockfield and Vice President for Research Canizares met with DOE officials and congressional staff and members to discuss energy research and policy, with a particular focus on sustained and predictable increases in energy R&D. The agendas for these meetings were informed through quarterly meetings with the DOE Engagement Group on campus.

DOE Officials Visiting MIT

- Dr. Steve Koonin, under secretary for science at DOE, visited MIT on September 22, 2010 to give a lecture on the subject of energy innovation as a part of the Hoyt C. Hottel Lecture Series hosted by the Department of Chemical Engineering.

- Dr. Arun Majumdar visited MIT on October 13, 2010 to meet with various MITEI officials and energy researchers (including ARPA-E-funded performers), to give a luncheon talk to the MIT Energy Club, and to keynote a MITEI-hosted salon with local energy sector industry partners.
- On April 15, 2011, Environmental Protection Agency (EPA) administrator Lisa Jackson visited MIT to give the 11th Annual Henry W. Kendall Memorial Lecture.
- The Department of Energy chief financial officer Steve Isakowitz, ARPA-E program director Dave Danielson, and acting assistant secretary for energy efficiency and renewable energy, Henry Kelly, all visited MIT on May 3, 2011 to participate in activities associated with the MIT Clean Energy Prize.

Life Science, Biomedical Research, and Convergence

NIH Budget and New Directions

Restructuring at NIH—The National Institutes of Health Scientific Management Review Board (SMRB), a panel of outside scientists and NIH institute directors whose task is to find ways to streamline NIH’s structure, voted on December 7, 2010 to create the National Center for Advancing Translational Science (NCATS). The mission of NCATS is “to advance the discipline of translational science and catalyze the development and testing of novel diagnostics and therapeutics across a wide range of human disease and conditions.”

The decision to create NCATS was based on an SMRB working group summary from November 2010 concluding that NIH needs to do more work on translational medicine and therapeutics. However, a 2006 law that created the SMRB also capped the total number of NIH institutes and centers at the current number of 27, which means that to create one will mean eliminating another. As a result, the National Center for Research Resources (NCRR) is slated to be dismantled. One large chunk of NCRR funding, NIH’s Clinical and Translational Science Awards (CTSAs), a \$490 million program that supports clinical research at about 60 medical centers, and makes up 40% of the NCRR budget, is slated to go to NCATS. The new center would also house several other existing programs at NIH, including the \$113 million Molecular Libraries screening program, a \$25 million effort called Therapeutics for Rare and Neglected Diseases (TRND), and the Cures Acceleration Network (CAN), a drug-development support program that was created by the health care reform bill but not yet funded by Congress.

According to the plan, other formerly NCRR components, such as disease model resources, would be disbursed among the National Institute of General Medical Sciences, NIH’s imaging institute, and its institute for minority health research. The bulk of NCRR’s portfolio—including primate models, biomedical technology, and the IDEA grants for states with little NIH funding —will go into an “infrastructure unit” in the NIH Office of the Director. While efforts to dismantle NCRR are underway, a budget amendment to include NCATS in the FY2012 President’s Budget has not yet been submitted; therefore plans to establish NCATS by October 1, 2011 seem unlikely.

The MIT Washington Office has been closely monitoring developments around restructuring at NIH. During discussions about NCATS with campus leadership and faculty, it has become clear that NCATS could be a useful proving ground for the convergence approach, noted in above sections and discussed in detail below, at NIH. As part of the effort to embed convergence at NIH, the Washington Office reached out to various programs slated to become a part of NCATS. Many of these programs are housed in the NIH Chemical Genomics Center (NCGC) led by Dr. Chris Austin. The Washington Office has developed a strong working relationship with Dr. Austin. He and several of his deputies visited campus on May 20 to participate in meetings with Institute Professor Phillip Sharp, as well as professors Tyler Jacks, Paula Hammond, and Robert Urban about the promise of convergence.

The MIT Washington Office worked with MIT experts and other universities, to look for ways to assure that the dismantling of NCCR does not adversely affect research infrastructure funding. The Washington Office also looked for ways in which restructuring at NIH could mean opportunities for promoting convergence-based research.

Emerging Opportunities: Food and Drug Administration and Health Care Delivery

As part of the ongoing convergence efforts, the MIT Washington Office has engaged with the Food and Drug Administration (FDA) on related issues. These include regulatory science and the role FDA must play in the third revolution of biomedical research and the next generation of medicine, such as personalized medicine. As part of these efforts, the MIT Washington Office has developed a working relationship with Vicki Seyfert-Margolis, senior science advisor to FDA Commissioner Hamburg.

The MIT Washington Office worked to coordinate a visit by Dr. Seyfert-Margolis to campus in June 2011 where she met with several groups. She met with faculty at CSAIL regarding the growing capability to mine public, anonymized FDA data. She also met with faculty at the David H. Koch Institute for Integrative Cancer Research, including Institute Professor Sharp, Professor Jacks, and Koch Institute director Robert Urban about the convergence model in action. Additionally, she met with the NEW Drug Development ParaDIGmS team at the Center for Biomedical Innovation (CBI). Finally she met with Vice President for Research Canizares to discuss potential for enhanced collaboration between the FDA and MIT.

In concert with faculty on campus, the MIT Washington Office continued to grow engagement with agencies in Washington on the many issues of research and innovation associated with the science of healthcare delivery in the 21st century. As part of this effort, MIT joined the Personalized Medicine Coalition this year, led by Gigi Hirsch at the CBI. The Washington Office also advocated participation in another next-generation health advocacy organization called United for Medical Research (UMR). Amanda Arnold, the senior legislative assistant in the MIT Washington Office now serves on the steering committee for UMR.

Comments Submitted

Throughout the year, the MIT Washington Office has worked closely with MIT faculty and the President Hockfield's office to coordinate and submit comments on issues closely related to MIT research interests.

Comment on Guide for the Care and Use of Laboratory Animals—The MIT Washington Office coordinated and submitted comments to NIH on May 24, 2011 regarding the proposed adoption and implementation of the *Guide for the Care and Use of Laboratory Animals: Eighth Edition*. Those comments were submitted at the request of MIT faculty and leadership to support the detailed commentary of the National Association of Biomedical Research, the American Physiological Society, as well as the coalition letter sent by the Council on Government Relations (COGR), Association of American Universities (AAU), and the Association of American Medical Colleges (AAMC). MIT's comments are available upon request to the Washington Office.

Notice of Proposed Rule Making (NPRM) on Health and Human Services (HHS) Conflicts—MIT also signed on to efforts by AAMC, AAU, Association of Public and Land-Grant Universities (APLU), and COGR regarding comment in response to the May 21, 2011 announcement in the Federal Register of an HHS Notice of Proposed Rulemaking on financial conflicts of interest, which outlines several items, including: the HHS plans to amend the regulations to expand and add transparency to investigator disclosure of significant financial interests; the HHS plans to enhance regulatory compliance and effective institution oversight and management of investigator's financial conflicts of interests; and the HHS plans to enhance NIH's compliance oversight. This particular NPRM has been held up by President Obama's January executive order to review excessive, inconsistent, and redundant government regulations. The MIT Washington Office continues to monitor these potential regulations closely. This submission is available upon request to the Washington Office.

August 13, 2010 Submission Regarding the National Nanotechnology Initiative (NNI) Strategic Plan 2010—In August 2010, in a field that affects NIH interests as well as efforts at other R&D agencies, the MIT Washington Office worked with MIT faculty and staff, including Dave Shaver, Mordy Rothschild, and Joel Volkman, to coordinate and submit a response to the July 6, 2010 request for information from the National Science and Technology Council and the Office of Science and Technology Policy's July 6, 2010 RFI regarding the NNI strategic plan. These comments were widely distributed across the Washington, DC community. Recipients included the Massachusetts Congressional Delegation, the House Science Committee, the Office of Science and Technology Policy at the White House, and agency contacts at NIH, DOE, and DOD. The submission is available upon request to the Washington Office.

Convergence

MIT's faculty engagement group on life science issues, in coordination with President Hockfield and with support from the MIT Washington Office, has worked this past year to articulate a new policy framework that could be the basis for further life science research support. This rationale is also aimed at supporting increases for NIH funding

based on the concept that a new revolution in life science research is emerging from the convergence of physical, engineering, and life sciences.

In late 2009, the National Academies issued a report on the future of the life sciences, *The New Biology for the 21st Century*, that articulated how life sciences and convergence can benefit four major societal challenges: energy, food, environment, and health. As a follow-on to that report, the MIT Washington Office worked with a faculty team on campus to draft a white paper on convergence, [The Third Revolution: The Convergence of Life Sciences, Physical Sciences, and Engineering](#).

This white paper on convergence was released on January 4, 2011, at the American Association for the Advancement of Science (AAAS) auditorium in a joint [MIT/AAAS launch event](#). The event included two panels and was moderated by Dr. Alan Leshner, AAAS chief executive officer and executive publisher of *Science*. The first panel discussion, titled “The Promise of Convergence,” included Institute Professors Phillip Sharp and Robert Langer, and professors Tyler Jacks and Paula Hammond. The second panel discussion, titled “The Future of Biomedical Research and Medicine in the Age of Convergence,” included FDA commissioner Margaret Hamburg; Alan Guttmacher, director of NICHD at NIH; Thomas Kalil, deputy director for policy at the White House Office of Science and Technology Policy; and Keith Yamamoto, of University of California San Francisco and chair of the National Academies of Science Board on Life Science.

Following the event, MIT faculty, including Institute Professors Phillip Sharp and Robert Langer and professor Paula Hammond were joined by UCSF professor Keith Yamamoto in a series of briefings to staff at the Office of Management and Budget, the House Science Committee, and at an open Senate briefing hosted by the Senate Committee on Health, Education, Labor, and Pensions. This launch event, and the meetings that followed, helped to build interest in Washington for the opening of the David H. Koch Institute for Integrative Cancer Research on campus on March 4, 2011. The MIT Washington Office, along with MIT’s Office of Community and Government Relations, worked to invite our congressional delegation. Senator Scott Brown (R-MA) travelled to campus and spoke at the opening, along with Harold Varmus, director of the National Cancer Institute (NCI) at NIH.

As a follow-on to the launch event and accompanying report, *Science* requested that Institute Professors Sharp and Langer author an article explaining the concept of convergence for the Policy Forum section of the journal.

In addition to the launch event and the article in *Science*, the MIT Washington Office is supporting NIH and MIT campus efforts to bring together the National Academies, spearheaded by the Board on Life Sciences, for a workshop on convergence. Institute Professor Sharp is leading this effort at MIT. A thought summit is currently being arranged for September 30, 2011, where a task statement and a rough agenda will be envisioned. The goal is to finalize the work statement and agenda by fall 2011 in order to enable a potential National Academies workshop on convergence in spring 2012.

In total, the MIT Washington Office has coordinated and/or conducted 30 individual briefings on convergence with senior leaders in the Senate HELP Committee, the House Science Committee, the Joint Economic Committee, and the Massachusetts delegation, (including staffers in Senators Kerry and Brown's offices, as well as staffers in Congressman Capuano's office), various institutes at NIH, (including the Office of the Director, National Cancer Institute, National Institute of Biomedical Imaging and Bioengineering, National Institute of Allergy and Infectious Diseases, National Institute of Child Health and Human Development, and National Human Genome Research Institute), leaders at FDA and NSF, as well as local interest groups, including United for Medical Research, Personalized Medicine Coalition, Federation of American Societies for Experimental Biology, BIO, Health and Medicine Council of Washington, FasterCures, Association of American Universities, and Association of Public and Land-grant Universities, among others.

The MIT Washington Office overall provided continuing support for the convergence agenda of the NIH faculty engagement group, and companion efforts by President Hockfield and research leaders at MIT to articulate this issue.

Defense Research and Development

DARPA Focus on Breakthrough Research—Efforts this past year have included an ongoing outreach effort with the new Defense Advanced Research Projects Agency leadership, which has continued to signal a return to DARPA's historic breakthrough research model. DARPA also continued to promote potential transformative technologies. As part of that refocus, on March 24, 2010, MIT hosted, at DARPA's request, the first of a new DARPA seminar series, on possible biological science applications and models for cyber security defense. In March 31, 2011, MIT again hosted a workshop/seminar that DARPA termed an "ideas summit" at Endicott House on opportunities for biofabrication that featured a number of MIT faculty members, including Institute Professor Sharp and other thought leaders. DARPA has subsequently developed a research initiative in this emerging field of "living foundries."

Defense Basic Research Funding—When he came to DOD, former defense secretary Robert Gates advocated for basic research funding at the Pentagon in the FY2009 budget, calling for a significant increase over the following five years. His FY2009 proposed DOD budget was consistent with this position, calling for an increase in the overall basic research budget (defense research category "6.1") for FY2009. In FY2010, the Obama Administration continued his initiative and Congress provided an appropriation of \$1.82 billion, which rose to an appropriation of \$1.95 billion for FY2011. Overall Defense Department basic research across the services was again increased by the Administration's FY2012 budget to \$2.079 billion for Defense 6.1 programs, which constituted an approximately \$200 million increase over the FY2010 Administration request.

DOD Guidance on Basic Research Publication—Responding to growing tendencies at DOD to limit publication of basic research, under secretary of defense Ashton Carter, acting on behalf of Secretary Gates, at the end of May 2010 issued a memorandum to the military services and the defense agencies reiterating that the publication of fundamental

research results should remain unrestricted. This effort was led by the director of defense research and engineering, Dr. Robin Staffin, who visited MIT in both 2010 and 2011 for meetings with MIT researchers. The DOD document reinforced guidance issued in 2008 by then under secretary John Young, and reaffirms the commitment of Pentagon leaders to compliance with National Security Decision Directive 189. This 2010 memorandum represents an important step in resolving ongoing issues that university researchers have had with the Defense Department, including the inclusion of clauses in subcontracts from industry prime contractors to universities that unnecessarily restrict publication of DOD research results. Research director Staffin continued this year to seek input from universities to ensure that the directive is being complied with.

Robotics R&D—Through CSAIL, MIT has been engaged in an industry-university initiative, with leadership from Carnegie Mellon and Georgia Tech, on robotics R&D, supported by the MIT Washington Office. The initiative built support for an inter-agency robotics evaluation process, which also involved DOD, the major federal robotics R&D supporter. As a result, on June 24, 2011, President Obama announced an inter-agency robotics initiative involving four R&D agencies and the White House OSTP.

Space

An Evolving Vision for the Agency

With the end of the space shuttle program in July 2011, the future of human spaceflight is very much in question. Throughout the last year, the MIT Washington Office continued to build on the 2009 report drafted by professor David Mindell, “The Future of Human Space Flight,” as well as the efforts of the Augustine Committee in 2009, on which professor Ed Crawley served as a key member. The recommendations submitted through these efforts, most notably the flexible path for NASA, were included in the President’s FY2011 Budget. In this budget request, President Obama proposed these dramatic changes to NASA’s programmatic activities by canceling the Constellation Program, funded since 2006 to develop next generation human spaceflight capabilities. The passage of the NASA Authorization Act in the fall of 2010 ratified many of the proposed changes, though the process has met with significant congressional discontent.

President Obama’s FY2012 budget request would provide NASA with \$18.724 billion, which is the same as the FY2010 enacted level. The request would freeze NASA’s budget over the next five years (FY2012 – FY2016). This budget would, however, implement the Authorization Act while maintaining NASA’s new priorities in technology development and commercial space flight. Additional information on the NASA budget is available at <http://www.nasa.gov/news/budget/index.html>.

NASA is currently working to develop a plan for the development of the Space Launch System (SLS), which is —the heavy-lift launch vehicle Congress directed NASA to develop in last year’s NASA Authorization Act. While Congress requested that the SLS be operable for 70-100 tons by 2016, (and 130 tons eventually), NASA is aiming for a 2017 test flight. NASA Administrator Bolden also continues to reinforce his support for greater reliance on commercial spaceflight moving forward. The NASA Appropriations process for FY2012 is still in development.

Key Space Initiatives

Space Technology—The President’s FY2012 budget request proposes \$1.024 billion for Space Technology, a program first proposed in the FY2011 request and authorized in the NASA Authorization Act of 2010. Space Technology builds on the current Innovative Partnerships Program for universities and industry to develop advanced technologies in areas such as communications, sensors, robotics, materials, and propulsion. This program also coordinates NASA’s Small Business Innovation Research program, proposed at \$177 million; promotes Crosscutting Space Technology Development, proposed at \$433 million; and in FY2012 will also incorporate the Exploration Technology Program, proposed at \$261 million (up 72 percent from FY2010).

In order to support this technology program, the MIT Washington Office worked with MIT faculty and Bobby Braun, director of the program at NASA, to organize and engage a group of 14 universities to send two separate letters to relevant House and Senate members and staff in support of the program. The first letter was sent in September 2010, and the second letter was sent in May 2011. These letters are available upon request from the Washington Office. The MIT Washington Office has worked to grow this coalition of parties interested in supporting technology development capabilities at NASA. Work in this advanced technology area, in the view of MIT experts, is crucial to NASA’s ability to undertake complex manned-space missions in the future.

Support for NASA ISS NL Proposal—In collaboration with MIT faculty, the MIT Washington Office coordinated a letter of support in May 2011 from the Massachusetts delegation, including Senators Brown (R-MA) and Kerry (D-MA), and Congressman Capuano (D-MA), in support of MIT’s proposal to establish a new, nonprofit organization to be known as the International Space Station Institute, to manage research and education on the International Space Station National Laboratory. This letter is available upon request from the Washington Office. Ultimately, a Florida consortium was awarded the contract for the lab management entity.

This past year has presented an important, and historical, set of transitions for NASA. Legislative results this coming year will determine whether efforts to refocus the agency on its technology leadership mission will be implemented. In conjunction with MIT faculty, the MIT Washington Office provided support to MIT efforts to bring MIT expertise to bear on these issues, and other emerging issues within the NASA portfolio.

Transportation

On February 2, 2011, MIT’s acting dean of engineering, Cynthia Barnhart, accompanied by Rebecca Fearing, the executive director of Transportation@MIT, visited Washington to educate federal officials on the broad scope of transportation research conducted by MIT. The Washington Office arranged meetings with Sarah Dunham, director of the Transportation and Regional Programs Division at the EPA; Sharon Burke, assistant secretary for operational energy at the DOD; Henry Kelly, the principal deputy assistant secretary for EERE at the DOE; Peter Appel, director of the Department of Transportation (DOT), and officials at the DOT research directorate. The Washington Office plans to arrange similar meetings in the future with congressional staff, as reauthorization of comprehensive transportation legislation develops.

Homeland Security

On March 14, 2011, Janet Napolitano, secretary of homeland security, visited MIT to give a Compton Lecture entitled “The Future of Science as Public Service.” Secretary Napolitano’s visit was part of a broader effort on the part of the Department of Homeland Security to identify ways to educate and inspire the next generation of homeland security professionals. During her visit, Dr. Napolitano visited with researchers from MIT’s Lincoln Laboratory and Computer Science and Artificial Intelligence Laboratory, and hosted a roundtable with 20 students drawn from across the Institute.

The Washington Office also helped to coordinate an advocacy effort with its industry, scientific society, and university partners in support of the DHS Science and Technology directorate, which faced significant funding cuts in the FY2012 House bill.

Higher Education

The Obama Administration continued its major campaign, Restore America’s Leadership in Higher Education, with a goal of the U.S. having the highest proportion of students graduating from college in the world. The President’s plan also envisions a strengthened role for community colleges and other opportunities to offer a broad range of traditional and non-traditional students with high-demand skills and education for emerging industries.

Department of Education Efforts Toward Increased Transparency and Accountability

As part of President Obama’s agenda, the Administration has been looking closely at the for-profit education sector, and particularly at concerns about increased student enrollment in for-profit schools; the amount of debt that students at for-profit schools take on; and the disproportionately high number of these students who default on loans from for-profit schools. Last fall, the Department of Education issued a series of regulations on “Program Integrity” in an effort to “strengthen federal student aid programs at for-profit, non-profit, and public institutions of higher education by protecting students from aggressive or misleading recruiting practices, providing consumers with better information about the effectiveness of career college and training programs, and ensuring that only eligible students or programs receive such aid.”

The regulations were shaped during a negotiated rulemaking that focused on 14 specific issues. The [final regulations](#), published in two parts in October 2010, are scheduled to go into effect on July 1, 2011. This final regulatory package addressed 13 of the 14 issues in their entirety and partially addressed the last issue, which involved the definition of gainful employment.

The higher education community in Washington tracked three items of particular concern in this regulatory package: state authorization, the definition of a credit hour, and gainful employment. The state authorization provision would require schools with distance education programs to be authorized by each state in which students participating in those programs live, placing a significant burden on institutions.

While MIT does not currently have applicable distance learning programs, this could affect MIT's future planning for such programs. The state credit hour provision would federalize the basic concept of credit hour, thus limiting flexibility of institutions and accrediting organizations.

The six president-level higher education associations appealed to Congress and the Department of Education to have the state authorization and credit hour regulations repealed, arguing that "given the almost total lack of evidence of a problem in either the credit hour or state authorization context, we see no basis for issuing two regulations that so fundamentally change the relationships among the federal government, states, accreditors, and institutions." The associations also supported legislation introduced by Representative Virginia Foxx (R-NC), chair of the House Committee on Education and the Workforce, Subcommittee on Higher Education and Workforce Training, with the purpose of "prohibit[ing] the Department of Education from overreaching into academic affairs and program eligibility under title IV of the Higher Education Act of 1965." (H.R. 2117). To date, none of these efforts has been successful.

During the public comment period for the program integrity regulations, the department received over 90,000 comments on the "gainful employment" provision alone, prompting them to put off issuing the final regulations. On June 3, 2011 the department finally released the long-awaited final regulations. While the higher education associations generally supported the intent of this regulation, they did appeal to the department to recognize the difference in programs that require a bachelor's or associate's degree to qualify for and the complexity of implementing the guidelines in the time prescribed by the department. These regulations would affect 40,000 undergraduate certificate, post-baccalaureate certificate, and graduate and professional certificate programs in a wide variety of fields.

As part of MIT's involvement in these issues, on July 28, 2010, MIT's dean of undergraduate education, Dan Hastings, visited Washington to meet with Eduardo Ochoa, Department of Education assistant secretary for postsecondary programs, and James Kvall, deputy under secretary of education, to appeal to the department to not take a one-size-fits-all approach in its efforts to improve transparency and accountability. During this same visit, Dean Hastings also met with Linda Slakey, director of undergraduate programs at NSF, and Stefan Bertuzzi, also of NIH, to learn about a then-new joint NSF-NIH program to track the outcome of federal research spending, called STAR Metrics.

Financial Aid

The Washington Office tracked administration and congressional actions affecting financial aid throughout the year. Given its size and recent growth, the Pell Grant program was specifically targeted during efforts to reduce federal spending. For example, the House of Representatives passed a FY2012 budget resolution in June 2011 that proposed cutting the \$5,550 Pell Grant maximum award by almost half to help close the federal deficit. While the higher education community continues to advocate for full funding for the Pell Grant program, the six president-level higher education associations have been working closely with the Department of Education and

legislators to identify possible solutions to narrow the growing gap in support facing the Pell Grant program.

On June 14, 2011, MIT's executive director of Student Financial Services, Betsy Hicks, visited Washington, DC to participate in a Perkins Loan Dialogue hosted by the Department of Education. The Perkins Loan program was set to expire this year, but a recent legal interpretation by the department has extended the program until 2014. The dialogue provided the opportunity for many schools to provide critical feedback for the Administration to consider in refining its legislative approach to preserving the Perkins program. The meeting also helped to develop a platform for future advocacy efforts.

Health Care

The Patient Protection and Affordable Care Act (PPACA-H.R. 3590) contained a number of provisions of concern to research universities. One issue that remains of concern to MIT, and the higher education community in general, is language in the final bill that potentially affects the ability for colleges and universities to provide high-quality, low-cost group health insurance plans for students and others. Recognizing that a true fix to the problem would likely come through regulations, the higher education associations appealed to the Department of Health and Human Services asking to work together to ensure its concerns were met. In February 2011, HHS issued a notice of proposed rulemaking on student health plans. The president-level higher education associations commented on these rules in April 2011, citing concerns with provisions related to the definition of student health care coverage, self-funded student health coverage, guaranteed availability and renewability, annual and lifetime limits, coverage of preventative services, and choice of health care professional. These regulations are still under consideration at HHS.

Taxes

The Washington Office tracked several legislative tax packages of interest to universities throughout the year, with primary attention focused on those affecting the education tuition deduction, the Individual Retirement Account (IRA) charitable rollover, and the research and development tax credit, all of which were set to expire on December 31, 2009. Both the House and the Senate considered numerous tax packages in 2010, however these provisions were not extended until the lame duck session at the end of the 111th Congress. On December 17, 2010, the President signed into law the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010. This bill contained two-year extensions (in some cases, retro-actively) of all the higher education-related tax benefits, including the following:

- The American Opportunity Tax Credit (AOTC)
- Sec. 127 (employer-provided education assistance) for both graduate and
- Undergraduate course work
- Improvements made in 2011 to the student loan interest deduction (SLID)
- Increased contribution level in 2011 of Coverdell ESAs

- An extension of the R&D tax credit
- The IRA charitable rollover
- The above-the-line tuition deduction
- New Market Tax Credit

As many of these provisions face expiration again and taxes and revenues have become a major piece of the larger debt ceiling/deficit reduction debate, we anticipate increased activity in this area later in 2011 and 2012.

Labor Legislation

The newly Republican-controlled House has put a damper on efforts to move labor legislation through Congress. The Washington Office, however, did track National Labor Relations Board (NLRB) actions that would affect unionization of graduate teaching assistants and research assistants.

In June, 2010¹, the NLRB regional office in Manhattan issued a decision in the *New York University (NYU) vs. United Autoworkers (UAW)* case regarding teaching assistants. The acting director dismissed the students' petition to form a union because of the 2004 Brown University precedent, but also declared that teaching and research assistants at NYU might be formally considered its employees. The case will now go to the full NLRB for a hearing.

Immigration

Despite being a priority of the Obama Administration, partisan politics continued to block the way for comprehensive immigration reform over the last year. The one piece of immigration legislation that did move in late 2010 was the Development, Relief and Education for Alien Minors Act (The "DREAM Act"). This legislation would provide certain undocumented alien students (who graduate from U.S. high schools, who are of good moral character, who arrived in the U.S. as minors, and who have been in the country continuously for at least five years prior to the bill's enactment) the opportunity to earn conditional permanent residency. Various versions of this bill have made their way through Congress in recent years, with the most recent attempt being considered in the lame duck session in December 2010. The House approved the bill on December 6, 2010 with a vote of 216-198, but the bill died in the Senate with a 59 to 40 vote, just short of the 60 votes need to break a filibuster. New versions of the DREAM act were introduced in both the House and the Senate in January 2011, however both legislative packages have stalled in Committee. The Washington Office will continue to work with the Chancellor's Office to track relevant immigration bills.

Patent Reform

Major patent reform legislation has been pending for six years in Congress, featuring a divisive battle with large information technology firms contending against biotechnology firms and smaller entrepreneurial firms. While significant differences remain among these groups, in the past year biotechnology firms believed they resolved with Senate staff some of their major concerns about Senate damages provisions. The

debate then shifted to large companies versus small companies and inventors, both sides having very different perspectives on this legislation. With universities actively engaged through the Bayh-Dole Act in patenting, a number of schools share many of the concerns of the latter group.

House and Senate Passage of Patent Bills

On June 23, 2011, the U.S. House of Representatives passed the America Invents Act, H.R. 1249, by a 304-117 vote. The vote followed the U.S. Senate's March 2011 95-5 vote for S.23, the Patent Reform Act of 2011, but differences between the two bills must be reconciled before becoming law. The Senate version is more widely supported by universities as it is based more on the April 2009 Manager's Amendment reported out of the Senate Judiciary Committee. That Senate substitute amendment provided a compromise position on several provisions, and gained momentum as various associations signed on in support, including AAU, ACE, APLU, AAMC, AUTM, and COGR.

The Last Obstacle—While both the House and Senate versions would shift the U.S. patent system from a first-to-invent system into a first-inventor-to-file system, the House bill differs from the Senate on the issue of fee diversion, because a provision enabling the U.S. Patent and Trademark Office (USPTO) to keep the funds it collects as fees, to enable it to catch up with its patent filing backlog, was removed by House Budget and Appropriations chairmen. Instead of allowing the USPTO to keep and use the fees it gathers, the House bill calls for fees to be deposited into an account called the U.S. Patent and Trademark Office Public Enterprise Fund to which only USPTO would have access, although it would still be subject to the appropriations process. While agreement has been reached on many of the other provisions, this discussion of USPTO fee diversion is still contentious between the House and Senate.

Patent Agency Engagement

USPTO Leadership—Over the last year, MIT has engaged with USPTO director David Kappos through vice president for research and associate provost Claude Canizares. This happened with support from the MIT Washington Office, to offer comments and advice when requested.

Small Business Administration (SBA)—The Office of Advocacy at the SBA held an event, the Small Business Patent Reform Roundtable, on April 27, 2011. Amanda Arnold, senior legislative assistant, attended with Tena Herlihy, MIT counsel. Main topics included a discussion about the remaining contentious sections of the Patent Reform bill at the time, including first inventor to file; grace period provisions; prior user rights; and post-grant review.

MIT Statement on Patent Reform

The MIT Washington Office worked closely with campus experts to evaluate the Senate Patent Reform compromise Manager's Amendment, the resulting Senate bill, and the subsequent House bill. At this point, the MIT group finds that the Senate version represents an acceptable compromise on patent reform. The House version is also approaching an acceptable compromise, and some key issues were corrected when

a final floor amended version was offered and passed. Now that both the Senate and House passed patent reform legislation, this legislation is closer to becoming law than it has been over the last six years.

In May 2011, the MIT General Counsel's Office developed an updated MIT Statement on 2011 patent reform legislation. The document outlines individual provisions including Supplemental Examination; Inter Partes and Post Grant Reviews; First Inventor to File; and, Damages, Willful Infringement and Venue. The MIT Washington Office distributed the document widely to university counterparts, including AAU, APLU, COGR, and AUTM, as well as the Massachusetts Congressional Delegation. The MIT Statement on 2011 patent reform legislation is available upon request from the Washington Office.

Skolkovo Graduate Program in Russia

In the course of the year, the MIT Washington Office assisted MIT officials in arranging discussions with federal officials concerning MIT's potential joint effort with the Skolkovo Foundation in Russia in forming a graduate science university there. The office arranged briefings by vice president for research and associate provost Claude Canizares (on August 20, 2010 and March 16, 2011) and by Vice President and General Counsel Greg Morgan (on April 20, 2011) with senior officials in the State Department, Defense Department, and on the House and Senate Foreign Relations Committees. In addition, the office supported President Hockfield in her meeting with under secretary of state William Burns on this issue (on November 18, 2010). The State Department officials, led by the under secretary, strongly encouraged MIT to undertake this engagement with Russia as a way of strengthening U.S. ties there, and the defense and congressional officials were also supportive.

Developing MIT Citizen Scientists

This effort, which began on a small scale in the spring of 2006 and expanded since then, aims to take advantage of MIT talent to provide opportunities for faculty and graduate and undergraduate students to serve as "citizen scientists." The MIT Washington Office has supported a series of program elements, discussed below, which have expanded in subsequent years.

Science and Technology Public Policy "Boot Camp" course for MIT Students in IAP— Bill Bonvillian, director of the MIT Washington Office, working with a committee of graduate students affiliated with the "Science Policy Initiative" (SPI) student group, conducted again this year an intensive "boot camp" course, with 18 class hours over four days during IAP. This S&T Policy Boot Camp program began in 2007 and has been offered as an intensive short course six times thus far at MIT. The program includes a closing session with a panel of MIT faculty experienced with Washington, speaking about their public policy experience. This year's focus was on MIT technology transfer policy.

In addition, this year 20 of the students participating in the "boot camp" course came to Washington for the Congressional Visits Day organized by leading national science and engineering groups to advocate research funding and support. Participating MIT students attended briefings on agency R&D funding and pending congressional issues,

and the MIT Washington Office taught a morning class on congressional advocacy. The group then visited 34 congressional offices, including the Massachusetts delegation.

Meanwhile, the SPI has expanded its membership, drawing on additional students who participated in the boot camp, and has continued its programs at MIT. As noted, this group has been supporting the boot camp course, the Congressional Visits Day effort, a series of luncheon discussion sessions with MIT faculty working in innovation and policy areas, and a wide range of [other activities](#). The MIT Washington Office plays an advisory and support role with the SPI.

Program for MIT Summer Interns—MIT supports summer intern programs at government agencies and NGOs for MIT undergraduates, Technology and Policy Program (TPP) students, and student interns at the DOE. Over the past five years, an enhanced program was started, led by the MIT Washington Office, to increase the exposure of MIT summer interns to senior science policymakers in Washington. In the summer of 2007, the program was expanded to include TPP students as well as undergraduates. In 2008, MIT interns at a new program at DOE were included as well. The 2011 program included meetings for interns with science and technology leaders at major agencies, including such leaders as NSF director Subra Suresh, and a seminar session on science and technology public policy conducted by the director at MIT's Washington Office. Helen Haislmaier, program coordinator in the Washington Office, coordinated many of these events.

Science Fellows in the Washington Office—As a part of the Program for MIT Summer Interns, two students from MIT worked in the summer of 2011 as science fellows in the MIT Washington Office. This program has been running for the past five summers at the Washington Office. This summer, the MIT students worked on analyzing and preparing papers on manufacturing R&D, progress on NASA's decadal missions, and merit review at the NSF. They also helped the office follow congressional hearings and markups and executive branch policy developments. These students were joined by an additional intern, who was not an MIT student; this intern tracked and developed reports for the office on issues related to health and biomanufacturing.

MIT's Washington Office continues the tradition of the summer program year-round with semester-long fellowships with students from American University's Government Semester Program. Coordinated by Amanda Arnold, senior legislative assistant, these students benefit from the mentoring of the MIT Washington staff. This year-round program enhances MIT's engagement with science policy by training a new generation of science policy analysts, and expands the capability of the MIT Washington Office to track ongoing research initiatives and events around Washington, DC.

MIT's Annual Congressional/Executive Branch Science and Technology Policy Seminar—For the first time in 17 years, and because of a cancellation of Kauffman foundation funding, MIT was not able to host a science seminar for senior congressional and executive branch staff working in S&T-related areas. The MIT Washington Office is working on a substitute program, a course for senior congressional staff on innovation policy to be

held on Capitol Hill for possible initiation next year. This will be led by MIT faculty and will include outside panels of experts.

MIT Alumni Association Policy Advocacy Initiative—The Washington Office engaged with the MIT Alumni Association to consider educating alumni about policy advocacy. This effort would educate interested MIT alumni on a range of R&D and education policy issues and help enable them to reach out to federal, state, and local legislators and other policy makers. The assistant director of the Washington Office will continue to serve on the MIT Alumni Association working group to develop this effort.

MIT Speaker's Program—Working with MIT faculty and administrators, the MIT Washington Office has supported an expanded program of bringing policy leaders to meetings and speaking events at MIT. Those coming to MIT this year included, in the order of appearance: Pat Gallagher, under secretary of NIST; Arun Majumdar, ARPA-E director; John Holdren, OSTP director science and technology advisor; Dorothy Robyn, DOD deputy under secretary; Dr. Robie Samanta Roy, senior staff of the Senate Armed Services Committee; Janet Napolitano, secretary of homeland security; U.S. Senator Scott Brown (R-MA); William Lynn, deputy secretary of defense; U.S. Congressman Ed Markey; Ray Mabus, secretary of the Navy; Steven Chu, secretary of energy; FDA commissioner Margaret Hamburg; Lisa Jackson, EPA administrator; Steve Isakowitz, DOE chief financial officer; Robin Staffin, DOD director of basic research; Dr. Chris Austin, director of the NIH National Chemical Genomics Center; and Dr. Vicki Seyfert Margolies, senior FDA advisor.

The Appendix provides a list of meetings by MIT administrators and faculty in Washington supported by the Washington Office, MIT faculty who testified in Washington, and senior government officials who visited MIT in the July 2010 to June 2011 period.

Representing MIT in Advocacy Coalitions and Working Groups

The Washington Office engages on a constant and ongoing basis in the activities of major Washington-based organizations and coalitions, particularly the higher education organizations that work in support of the federal investment in university research and education. The office also has provided leadership this year on key committees of the AAU, APLU, the Science Coalition, and United for Medical Research.

The groups listed below: provide support for a common R&D, education, and science agenda supported by MIT, and require ongoing participation in frequent meetings and working sessions.

- Association of American Universities and its Council on Federal Relations
- Association of Public and Land-Grant Universities, and its Council on Government Affairs
- Coalition for Plasma Science
- Fusion Energy Sciences Day

- New England Council
- Research!America
- The Ad Hoc Group for Medical Research
- The Ad Hoc Tax Group
- The American Council on Education
- The Council on Competitiveness
- The Council on Government Relations
- The Council of Graduate Schools
- The Coalition for National Science Funding
- The Coalition for National Security Research
- The Energy Sciences Coalition
- The National Association of Independent Colleges and Universities
- The National Association of State Universities and Land-Grant Colleges, and its Council on Governmental Affairs
- The Personalized Medicine Coalition
- The Science Coalition
- The Science, Engineering and Technology Working Group
- Space Grant Day
- The STEM Education Coalition
- Task Force on American Innovation (the industry-university-science association working group on science R&D funding)
- United for Medical Research

APPENDIX

Faculty Meetings in Washington, DC

MIT Faculty/Staff	Date	Topic	Meeting
Daniel Hastings	7/28/10	Increased college education access, the role of community colleges with four-year colleges, and the applicability of open courseware to help with these issues; NSF's evolving research portfolio; the use of Star Metrics to identify ways of tracking federal research results	Eduardo Ochoa, Department of Education, assistant secretary for postsecondary programs and deputy under secretary of education, James Kvaal; Linda Slakey, who directs education programs at NSF; Stephen Bertuzzi of the NIH, who is working with Julia Lane and others at NSF
Thomas Malone and Robert Laubacher	7/28/10–7/29/10	A “collective intelligence” approach to climate policy issues, inviting users to an interactive website to propose policies on climate using computer modeling and commentary system software	Senate Energy Committee staff; House Global Warming staff; House Science Committee staff; Senator Kerry's staff; Henry Kelly, DOE principal deputy assistant secretary for EERE
Claude Canizares	8/2/10	MIT-Russian MOU/ briefings on the status of the Skolkovo collaboration; NASA technology agenda	Jason Bruder (Senate Foreign Relations); Brian Forni (House Committee on Foreign Affairs, Europe Subcommittee); Acting Assistant Secretary Van Diepen and Secretary Gottemoeller, State Department Bureau of International Security and Nonproliferation; Robert Braun, NASA chief technologist; Robie Samanta Roy, Senate Armed Services
Claude Canizares	9/2/10	Highlight the importance of funding the space technology program; innovation and entrepreneurship	Tom Cremins (Senate Committee on Commerce, Science and Transportation); Pam Whitney (House Subcommittee on Space and Aeronautics; National Advisory Council on Innovation and Entrepreneurship
Susan Hockfield	9/13/10	STEM education	The Brookings Institute
Ernie Moniz, Charles Forsberg, and Mujid Kazimi	9/16/10	Nuclear fuel cycle	Senator Bingaman (D-NM), chairman, Senate Energy and Natural Resources, plus two open briefings for Senate and House staff
Marc Kastner	9/28/10	US-EU Summit on Science, Technology, Innovation and Sustainable Economic Growth	The Woodrow Wilson International Center for Scholars and the Howard H. Baker Jr. Center for Public Policy
Susan Hockfield	11/18/10	Importance of research education to innovation and economic growth	Representative Frank Wolf (incoming chairman of the Commerce, Justice, Science Appropriations Subcommittee); Representative Tom Price (head of Republican Study Committee and incoming head of the Republican Policy Committee for 112th Congress

Susan Hockfield	11/18/10	Importance of innovation and the need for adequate funding for several new DOE initiatives, including ARPA/E, EFRC's, Energy Innovation Hubs, and Office of Science graduate fellowships	Representative John Olver
Susan Hockfield	11/18/10	MIT's possible program with the Kosovo Foundation in Russia	William Burns, under secretary for political affairs, U.S. State Department and former U.S. ambassador to Russia, and his senior staff
Ernest Moniz	11/30/10	Led the presentation of a report by PCAST on ways to advance new energy technologies.	PCAST members
Claude Canizares	12/3/10	Energy R&D funding and contracting/oversight mechanisms for ARPA-E awards; the role MIT could play in encouraging young technical talent to work at DHS	Arun Majumdar (director of ARPA-E) and Shane Kosinski (deputy director for operations at ARPA-E); Alice Hill (special counselor to the secretary of homeland security) and Tara O'Toole (under secretary for science and technology at DHS)
Phillip Sharp, Tyler Jacks, Paula Hammond, and Robert Langer	1/4/11	Launch MIT white paper on Convergence: "The Third Revolution: The Convergence of the Life Science, Physical Science and Engineering"	Panel forum at AAAS with Dr. Alan Leshner (AAAS CEO); Dr. Margaret Hamburg (FDA commissioner); Dr. Alan Guttmacher (director of NICHD at NIH); Thomas Kalil (deputy director for Policy, OSTP); Dr. Keith Yamamoto (UCSF and chairman of NAS Board on Life Science); meetings at OMB and briefings for both Senate and House staff
Cynthia Barnhart and Rebecca Fearing	2/2/11	Review of MIT's transportation initiative research activities, focusing on energy efficiency systems and discussed possible collaborations.	Sarah Dunham (director, Transportation and Regional Programs Division, EPA); Sharon Burke (DOD's assistant secretary for operational energy); Henry Kelly (principal deputy assistant secretary for EERE at DOE and Peter Appel (director, research directorate at DOT)
Claude Canizares	2/2/11	DOD and MIT efforts on manufacturing technology and policy	Ken Gabriel (DARPA deputy director); Dave Honey (DDR&E research director; Marilyn Freeman (the Army's chief scientist); Brett Lambert (the secretary's director of industrial policy and deputy under secretary)
Claude Canizares	3/16/11	Skolkovo update; discuss current projects and future plans	State Department; board members of United for Medical Research
Susan Hockfield	3/17/11	Concerns about R&D reductions proposed in Congress	Leaders of the Business Roundtable; Technology CEO Council; Senator Orrin Hatch (R-UT); Representative Michael Capuano (D-MA); Staff director of the Senate Energy Committee

Suzanne Berger and Olivier de Weck	3/28/11– 3/30/11	MIT's new PIE study on advanced manufacturing	Austin Goolsbee (White House Council of Economic Advisors); Phillip Coyle (associate director, OSTP) and staff; Howard Harary (head of NIST manufacturing lab); Joe Johnson and Dr. Winslow Sargeant (Small Business Administration); Dick Van Atta (Science and Technology Policy Institute); Dr. Eugene Gholz, Om Prakash and Neal Orringer, DOD Office of the Director, Office of Industrial Policy; Dr. Linder, Nancy Harned, and colleagues from ANSER, Service ManTech programs and OSD systems; Brian Toohey (Semiconductor Association); Jamie Link (DOD Industrial Technologies Program) and Leo Christodoulou (Defense Science Office); Paul Eremenko (DARPA Defense Manufacturing); Dr. Thom Peterson (engineering directorate at NSF)
Greg Morgan	4/20/11	Skolkovo collaboration	Zachary Lemnios, assistant secretary of defense for research and engineering, DOD; and Robin Staffin (director of defense basic research); Marik String, congressional staff, Senate Foreign Relations Committee; Vanessa Sinders (chief of staff) and Jeff Farrah (legislative assistant), Office of Senator Scott Brown; David Whiddon (House Committee on Foreign Affairs, Minority staff); Robie Samanta Roy (Senate Armed Services); Christina Tsafoulas (Representative Capuano)
John Deutch	4/26/11	White House DOD-DOE Forum/Energy Secretary Initiative	Bill Lynn (deputy secretary of defense); Dan Poneman (deputy secretary of energy); Jane Harman (head of Woodrow Wilson Center); John Podesta (head of the Center for American Progress)
Susan Hockfield	5/19/11	The importance of federal investments in R&D to economic growth and competitiveness; MIT's new manufacturing initiative; energy research coming out of MIT's Energy Initiative, the importance of convergence of the life and physical sciences and engineering and STEM reform	Senator Chris Coons (D-DE); senior staff from Senator Kerry's office; DOE chief financial officer Steve Isakowitz; Dr. Carl Wieman, associate director for science at OSTP; Mr. Norman Augustine, former CEO of Lockheed Martin
Marc Baldo and Gang Chen (MIT's EFRC directors)	5/24/11	Participated in first DOE EFRC annual summit and Hill meetings to discuss the importance of EFRCs	Senator Scott Brown's energy staff and professional staff on the House Science, Space and Technology Committee, and the Senate Energy and Natural Resources Committee

Claude Canizares	6/1/11	Health research/advocacy plans for NIH funding over the coming year; regulatory issues including IDC, cost sharing, troublesome clauses and export controls; NASA programs and the funding environment for science in FY2012	Leadership of UMR (Carter Eskew, Jessica Marcella, John Myers, and Kat Mavengere) and Carrie Wolinetz, AAU; Toby Smith, AAU; Richard (Dick) Obermann, Ed Fedderman, Pam Whitney, and Allen Li, (all professional staff on the House Committee on Science, Space, and Technology; Ann Zulkosky and other members of the professional staff on the Senate Commerce Committee
Angela Belcher and Eric Lander	6/28/11	Innovation and how the government can encourage economic success through new technology development	Hamilton Project of The Brookings Institute with Robert Rubin and Lawrence Summers
Richard Lester	6/29/11	Progress of the new Consortium for Advanced Simulation of Light Water Reactors	Senator Lamar Alexander (R-TN) and Senator Scott Brown (R-MA)

Federal/Executive Branch Officials—Visits to MIT

Government Official	Date	Topic	Meeting
Dr. Patrick Gallagher, NIST director and Mr. Marc Stanley (special advisor to the director)	9/27/10–9/28/10	Manufacturing technologies and innovation systems	Eric Lander; Rodney Brooks; Charles Fine and Richard Roth; Suzanne Berger; Sanjay Sarma; Susan Hockfield; Leon Sandler and William Aulet; Seth Teller; Angela Belcher
Dr. Arun Majumdar	10/13/10	Meetings with faculty (some ARPA-E funded projects); talk to MIT Energy Club; energy colloquium; dinner with MITEI External Advisory Board	T. Alan Hatton and Howard Herzog; David Perreault; Yet-Ming Chiang and Craig Carter; Gerbrand Ceder; Anthony Sinskey; Susan Hockfield, Ernest Moniz
Dr. John Holdren, President's science advisor and director of OSTP	10/25/10	Research at MIT at the Convergence of Life, Physical and Engineering Sciences; speech on campus	Sangeeta Bhatia, Paula Hammond, Mriganka Sur and Robert Urban
Jeff Farrah, office of Senator Scott Brown (R-MA)	10/28/10	Energy/DOD research	Melanie Kenderdine and Sarah Slaughter, MITEI; William Aulet, Entrepreneurship Center; John Joannopoulos, ISN
Dr. Dorothy Robyn, DOD's deputy under secretary of defense, installations and environment, and Dr. Jeff Marqusee, executive director of DOD's strategic environmental R&D program	12/17/10	Overview of Lincoln Lab and visit with MITEI and other faculty on energy technologies; lab tours	Robert Armstrong, Sarah Slaughter, Sanjay Sarma, Kripa Varinasi, Vladimir Bulovic, Don Sadoway; Susan Hockfield
Dr. Robie Samanta Roy, senior staff, Senate Armed Services Committee	1/20/11	IT developments; energy storage (with Dr. Chiang); manufacturing	ISN, CSAIL, Minerva Project, MTL Labs and Lincoln Lab; Yet-Ming Chiang; Sanjay Sarma

Senator Scott Brown (R-MA)	2/4/11	Importance of life science research and the regional biotech cluster to the Massachusetts economy; ISN; individual research projects	Susan Hockfield; John Joannopoulos; Robert Langer, Paula Hammond, Yet-Ming Chiang, and Angela Belcher
Dr. William Lynn, deputy secretary of defense, and deputy under secretary, Brett Lambert	2/18/11	Briefings on IT advances	Claude Canizares and researchers from CSAIL and the Media Lab
Rep. Ed Markey and Navy secretary Ray Mabus	3/4/11– 3/5/11	Energy policy	Lead speakers at annual MIT Energy Club Energy Conference
Senator Scott Brown (R-MA)	3/4/11	Saluting MIT R&D leadership and citing the new convergence model	Opening of Koch Institute for Integrative Cancer Research
Secretary of Homeland Security Janet Napolitano	3/14/11	Talk on DHS mission; meetings with MIT students and researchers	Speech introduced by President Hockfield; meetings with CSAIL and Lincoln Lab researchers
Steven Chu, U.S. secretary of energy; Cass Sunstein, head of White House Office of Information and Regulatory Affairs; Dr. Peggy Hamburg, FDA Commissioner, and, John Fernandez, head of the Economic Development Authority	3/29/11	Startup America Roundtable announcing “America’s Next Top Energy Innovator”; the need for sensible business regulations that limit the amount of paperwork firms must file; the role of FDA and EDA in supporting American entrepreneurship	Susan Hockfield, William Aulet, Elizabeth Reynolds and others
Lisa Jackson, administrator of the EPA	4/15/11	Henry W. Kendall Memorial Lecture on the role that technological innovations may have on the ability to change environmental policies and the role those policies can play in affecting innovation	
Steve Isakowitz (DOE CFO), Henry Kelly (acting assistant secretary for EERE at DOE) and Dave Danielson (ARPA-E program director)	5/3/11	Energy	Participated in the MIT Clean Energy Price Showcase and Award Ceremony
Dr. Robin Staffin, director of basic research, DDR&E, DOD	5/13/11– 5/14/11	MIT Manufacturing Initiative; Skolkovo Institute; META materials; synthetic biology; workshop on computer science advances	Suzanne Berger and Olivier de Weck; Greg Morgan; Nick Fang and Keith Nelson; Timothy Lu; Victor Zue/CSAIL

Leadership from the NIH Chemical Genomics Center, including Dr. Chris Austin (director of the NIH NCGC), Monique K. Mansoura (senior analyst, programs and planning at NIH NCTT), and John McKew, branch chief, NIH TRND.	5/20/11	The future of NCATS and the need for NIH to adopt the convergence model to achieve NCATS translational goals	Visited Koch Institute; Tyler Jacks; Phillip Sharp; Robert Urban
Dr. Vicki Seyfert-Margolis, advisor to FDA commissioner	6/16/11	FDA computing initiatives; FDA approval process and a possible role for MIT in upcoming FDA initiatives; Koch convergence research model; Convergence and personalized medicine; NEWDIGS program	Victor Zue and a group of CSAIL researchers; Claude Canizares; Robert Urban; Phillip Sharp; Gig Hirsch and CBI staff

Faculty Testimony in Washington, DC

MIT Faculty/Staff	Date	Topic	Committee
Robert Solow	7/20/10	Problems with DSGE general economics model	House Science Oversight Subcommittee
Michael Greenstone	7/27/10	Promoting a clean energy economy	Joint Economic Committee
Simon Johnson	8/3/10	Economic recovery	Senate Budget Committee
Ernest Moniz	3/30/11	Nuclear safety	Senate Appropriations Subcommittee on Energy and Water
Kerry Emanuel	3/31/11	Climate change	House Science, Space and Technology Committee