WASHINGTON UPDATE

As Congress winds down its work to head out on the campaign trail, it has not finalized FY13 Appropriations bills, which fund research funding agencies, or addressed the “financial cliff” before the election. Congress has now decided that it will pass a continuing resolution to keep the government running at current budget levels until March 2013.

There is mounting concern and uncertainty over how “sequestration” cuts would proceed in January 2013 if they occur. Some analysis shows the dramatic impact sequestration would have on research agencies such as the National Institutes of Health, which could see a loss of some 700 grants.

As of the end of July, all 12 FY13 Appropriations bills have been drafted in the House, and all but the Interior bill have been drafted in the Senate, but most have not passed both houses.

- Labor-Health and Human Services-Education: The House bill caps the NIH budget flat-lined at $30.6 billion, which is $165 million below the Senate proposal. The new National Center for Advancing Translational Sciences would be level funded at $575 million; the Senate would provide $639 million to the center. The Health Resources and Service Administration would be cut $453 million below the FY12-enacted level, but the Centers for Disease Control would see an increase to $5.75 billion.
- Defense: The House provides more than $518 billion for the Department of Defense, more than $7 billion above the Senate version. The bill allocates $2.1 billion for basic research (6.1%), $4.5 million or 0.2% above the enacted 2012 level. The bill also provides $4.6 billion for applied research (6.2%), which is 5% below the FY12-enacted level, but the Centers for Disease Control would see an increase to $5.75 billion.

Somewhat surprisingly, overall research funding has been spared deep cuts so far in the FY13 Appropriations process. But researchers should assume agency budgets will remain flat until after the election when Congress will return for a lame-duck session where it will attempt to pass the Appropriations bills and address sequestration.

To learn more, contact Tim Leshan, VP for government relations, at northeastern.edu/governmentrelations/.

REALIZING HEALTHCARE AFFORDABILITY

Northeastern healthcare systems engineering program receives major innovation award

Healthcare reform has been the focus of intensive national debate, as policymakers work to control spiraling medical costs while extending coverage to millions of uninsured Americans. The recently upheld Affordable Care Act includes a wide variety of provisions designed to make medical care more accessible, affordable, and responsive to the healthcare needs of all Americans. These provisions include funding to develop and test new models of service delivery/payment improvements that promise rapid results to achieve these policy goals.

A recently announced award from the new Center for Medicare & Medicaid Innovation will fund Northeastern’s launch of a 3-year, $8 million demonstration project that integrates industrial and systems engineering (ISE) methods into healthcare delivery. Jim Benneyan (above), professor of mechanical and industrial engineering and director of Northeastern’s two established, federally awarded healthcare systems engineering centers, will direct the new center.

Benneyan explained that under the innovation award, Northeastern will establish a regional systems engineering extension center that will embed ISE improvement methods used in other complex industries into local healthcare organizations. Engineers and healthcare professionals will be cross trained in applying these methods to important healthcare problems, and will work together in engineer-clinician project teams, integrating industrial engineers directly into health systems.

The project will launch a network of similar centers across the country, starting in Massachusetts in year one and then expanding to Washington and North Carolina, where Northeastern has graduate campuses.

The appeal of these improvements is easily apparent to healthcare providers and insurers, who will be held more accountable for quality and cost of care as healthcare reform rolls out, and whose reimbursements will increasingly be tied to patient outcomes. “Our overall goal is to measurably demonstrate the value of this model to significantly lower costs, improve access, and achieve better outcomes, leading to better care and higher patient safety,” Benneyan described. The Center for Medicare & Medicaid Innovation estimates the projected 3-year savings from the project will be $60,780,907.
SNAPSHOT: RESEARCH YEAR IN REVIEW

Fiscal year 2012 was a record-breaking year for Northeastern University research, as reflected in the following metrics of research growth and impact:

- External awards exceeded $100 million
- Invention disclosures exceeded 100 (1 per every $1 million)
- Portfolio of 13 university spun out ventures, five launched in FY12
- Research Innovation and Scholarship Expo (RISE) submissions up 35% to 400

SELECTED FUNDED PROJECTS

Professors Lee Makowski and Dana Brooks, and associate professor Deniz Erdogmus, all in the Department of Electrical and Computer Engineering, have been funded by the National Science Foundation to advance imaging and signal processing for X-ray solution scattering from proteins, in order to better understand their conformational variety, which will improve functional understanding and potentially drug design.

Penny Beuning, associate professor of chemistry and chemical biology, was named an American Cancer Society Research Scholar for her work on tolerance to agents that damage DNA such as ultraviolet light, chemicals, and reactive oxygen species. The objective of her work is to understand how DNA polymerases that possess the ability to copy damaged DNA are able to distinguish between different types of damage. These findings will lead to a better understanding of how toxins in the environment lead to cancer.

Sri Sridhar, CAS Distinguished Professor in the Department of Physics, and collaborators from the Dana-Farber Cancer Institute, have secured funding from the Congressionally Directed Medical Research Programs. Their research will investigate a novel tumor therapy that combines sustained in-situ delivery of radiosensitizers to the prostate, resulting in highly efficient chemoradiation therapy with minimum toxicity and discomfort, compared with current prostate cancer treatments.

Heather Clark, associate professor of pharmaceutical science, has received a Young Faculty Award from the Defense Advanced Research Projects Agency to explore nanosensors for monitoring the behavior of electrical and chemical neurotransmitters between neurons in the brain.

Barry Bluestone, Stearns Trustee Professor and Director of the Dukakis Center for Urban and Regional Policy, and Stephanie Pollack, associate director of research, received a grant from the Barr Foundation to assist the Commonwealth of Massachusetts in developing a transportation finance campaign.