

Vice President for Research and Associate Provost

The Office of the Vice President for Research and Associate Provost serves the MIT community by providing opportunities for interdisciplinary research through support of interdisciplinary laboratories, centers, and projects. The office also supports graduate students and postdoctoral scholars and is highly engaged in oversight of research policy issues. The office was involved in a number of activities in 2004–2005.

Continued regulatory proposals and concerns caused us to be even more focused on research policy issues. We collaborate with the associate provost and the vice president for federal relations on many issues, including proposed changes in export control regulations and restrictions on research participation and publication. Many of these activities are coordinated by the Association of American Universities or the National Academies. The vice president for research participated in one National Academy study on international student and scholar visa policies; the resulting report is available online at <http://www.nap.edu/books/0309096138/html>. We have continued to work with the Research Policy Committee on a communication and education effort toward improving understanding of the impacts of restrictions on government grants and contracts and export control issues. Our research policy guidelines can be found at the MIT Office of Sponsored Programs website at <http://www.osp.mit.edu/>.

Our work with the dean for graduate students includes an annual review of graduate student cost of living and an analysis of the cost to support graduate students on research grants and contracts. Our recently formed Association of Postdoctoral Scholars has helped us with our Research Practice Seminars, where we meet and discuss ethical and moral dilemmas in research, mentoring, and scholarship.

This year was a very productive and positive one for interdisciplinary laboratories and centers at MIT. Our Center for Environmental Health Sciences was awarded a five-year competitive renewal from the National Institute for Environmental Health Sciences. The Francis Bitter Magnet Laboratory underwent a major renovation in order to house a new 900MHz magnet due to arrive in fall 2005. This will provide a unique facility for advanced nuclear magnetic resonance.

The Institute for Soldier Nanotechnologies has had a very good year with many research accomplishments as well as extensive outreach activities. The second annual Soldier Design Competition was very successful and attracted more teams with higher levels of success. Many of the designs are being developed for deployment in the field.

The appointment of Professor Ernie Moniz as codirector of the Laboratory for Energy and the Environment provided important interdisciplinary leadership for both the laboratory and the Institute's energy initiative announced in President Hockfield's inaugural address. Professor Moniz is cochairing the new MIT Energy Research Council with Professor Robert Armstrong, head of the Department of Chemical Engineering. The council is charged with recommending both research directions and organizational developments that will enhance MIT's contribution to resolving global energy challenges. Our Plasma Science and Fusion Center has remained one of the

world's leading research centers for plasma fusion science and technology, and is likely to be centrally involved in the International Thermonuclear Experimental Reactor, now set to be built in France. New research activities at the Nuclear Reactor Laboratory are propelling it to a position of national leadership.

The Broad Institute continues to lead research efforts bringing new genomic tools to the practice of medicine. The Institute eagerly awaits the spring 2006 completion of its new building at 7 Cambridge Center.

We have engaged new leadership for the Computational and Systems Biology Initiative with Professor Paul Matsudaira assuming the helm after the great vision and launch provided by Professor Peter Sorger. This initiative continues to attract dozens of faculty, students, postdoctoral scholars, and research staff from across campus to tackle complex problems in biology. Their [annual symposium](#) is repeatedly oversubscribed and is defining the systems biology discipline. Next year's program, Systems Biology of the Stem Cell, is already generating much interest.

Our Clinical Research Center is benefiting from the new leadership from Professor John Gabrieli and Dr. Ravi Thadani of Massachusetts General Hospital.

In addition to excellence in research, our interdisciplinary laboratories and centers have been fully engaged in educational outreach activities. The laboratories and centers provide a unique venue for outreach and have created and participated in very successful programs. Notably, the Center for Environmental Health Sciences, Haystack Observatory, and the Center for Materials Science and Engineering have outstanding programs for middle, high school, and community college students. MIT Sea Grant's Sea Perch program, the Plasma Science and Fusion Center's Mr. Magnet program, and the Broad Institute's participation in MIT's Minority Introduction to Engineering and Science Program add to the meaningful experiences MIT provides for hundreds of youth each year. A few of these activities are described on the MIT K-12 Educational Outreach Programs website at <http://web.mit.edu/outreach/>.

The reports that follow provide more in-depth information about MIT's interdisciplinary labs and centers.

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