Spring 2011

Mayo Alumni

Innovation fuels invention
Curious minds collaborate to commercialize discovery

mayo.edu/alumni
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Mayo Clinic has a rich past. Its future is poised to be no less rich. Mayo’s new strategy focuses on being available and relevant here, there and everywhere. This issue of Mayo Alumni features a good sampling of this strategy — the growing relationship with Arizona State University, the Proton Beam Therapy Program and how it will affect the future of cancer care, the Office of Intellectual Property and how it speeds inventions to reach patients and physicians across the globe, the closer integration of Mayo Health System, and the consolidation of Mayo’s websites into a unified home page.

As Mayo continues to extend its reach and share its knowledge and expertise to improve health, interactions will occur via the Internet, in person at a Mayo Clinic or Mayo Health System campus, through licensed technology and products developed at Mayo Clinic, and in myriad other settings. Whether Mayo is providing leading-edge cancer treatment in Arizona or contributing to a physician in another country being able to remotely monitor a patient, the future is very promising. I’m excited to watch it unfold.

S. Mark Laney, M.D.
President and CEO
Heartland Health
St. Joseph, Mo.

Join the Mayo Clinic Alumni Association live, from Athens

If you’re not able to join the Mayo Clinic Alumni Association for its international CME meeting in Athens, Greece, May 23–26, you can still get in on the action. The Alumni Association will be posting interviews with speakers, and highlights of conference discussions, lectures and participants on its new blog.

“The blog reflects our commitment to share current Mayo news and information with our alumni,” says Alumni Association Board Secretary/Treasurer Eric Edell, M.D. “Alumni will see Mayo Alumni magazine and other news content come to life through video and other interactive features, and will be able to share content with their friends and colleagues.” Visit the Alumni blog at http://alumniblog.mayo.edu.
In 2000, Charles Bruce, M.D., a consultant in the Division of Cardiovascular Diseases and professor of medicine at Mayo Clinic in Rochester, began running. He’d been unable to keep up with his young daughter and embarked on a fitness mission. He found a running partner in colleague and friend Paul Friedman, M.D., also a consultant in the Division of Cardiovascular Diseases and professor of medicine. The two run three to four miles together most weekday mornings. Their fitness time turned into brainstorming time.

“Running is easier if I can talk to pass the time, but Paul and I ran out of things to talk about,” says Dr. Bruce. “We’re both pretty imaginative, so we agreed to discuss problems we encounter in practice and ways we could solve them. Mayo encourages innovation, discovery and collaboration, which often occur in unexpected ways. I’m from South Africa where you could have an idea, but there were no resources to develop it. At Mayo Clinic, ideas are taken seriously and resources are available to bring concepts to fruition and help patients in practical ways. Paul and I used our runs to bring to life an idea I’d had for a while.”

Dr. Bruce revealed that he had long wished there were a long-term, unobtrusive, wearable monitor for heart patients to alert them or their caregivers when a problematic symptom occurred.

“My mother had atrial fibrillation,” says Dr. Bruce. “Shortly after I finished medical school, my mom had a stroke and died soon thereafter. I always wondered if the stroke and her death could have been prevented. Paul and I discussed the monitoring device and quickly ran with the idea.

Mayo Clinic’s Office of Intellectual Property

Bringing inventive ideas to life

At least once a day, a Mayo Clinic physician, scientist or employee submits an idea for a new invention to Mayo’s Office of Intellectual Property. How do these ideas become reality? Mayo Alumni presents the story of one invention to show the robust tradition of discovery, innovation and teamwork at Mayo Clinic.

In 2000, Charles Bruce, M.D., a consultant in the Division of Cardiovascular Diseases and professor of medicine at Mayo Clinic in Rochester, began running. He’d been unable to keep up with his young daughter and embarked on a fitness mission. He found a running partner in colleague and friend Paul Friedman, M.D., also a consultant in the Division of Cardiovascular Diseases and professor of medicine. The two run three to four miles together most weekday mornings. Their fitness time turned into brainstorming time.

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We would not be realizing this invention — a viable patient-centered commercial product — without Mayo Clinic’s guidance."

The pair discussed the idea with their colleagues in the Division of Cardiovascular Diseases and Mayo’s Division of Engineering. The concept of an atrial fibrillation detector came to life and resulted in an invention disclosure to Mayo’s Office of Intellectual Property (OIP) in 2001. The inventors include Drs. Bruce and Friedman, Virend Somers, M.D., Ph.D., a consultant in the Division of Cardiovascular Diseases and the Division of Nephrology and Hypertension and professor of medicine, and Kevin Bennet, chair, Division of Engineering.

The OIP evaluates invention concepts from a patentability and commercialization perspective. The OIP marshals technology development and commercialization resources, encompassing patent law, academia and industry connections.

“The Office of Intellectual Property is the invention licensing arm of Mayo Clinic,” says Steve Van Nurden, chair. “We help physicians, scientists and all Mayo employees who have medically oriented invention ideas in assessing the value of their ideas and, when possible, helping bring their inventions to patients and providers across the globe. bodyguardian represents innovation and collaboration within Mayo’s integrated clinical and engineering practices, and collaboration with industry in the United States and Europe.”

The invention team developed the initial concept into a broader vision of a platform for unobtrusive, comprehensive, wireless and interactive remote health monitoring. After 10 years of the team’s effort on the project, the OIP filed a patent for the bodyguardian technology in 2010.

“The technology could not have come this far without the magnificent teamwork of the many staff within Mayo’s divisions of Cardiology and Engineering,” says Dr. Somers.

The bodyguardian remote monitoring system includes:

- A wireless monitor that can measure heart rate, ECG, respiratory rate, body movement or position using on-body sensors with wireless connectivity to off-body sensors that can measure blood pressure and weight
- A basic communications hub and data infrastructure
- A programmable detection algorithm for medical conditions including congestive heart failure, heart rhythm disorders and sleep apnea

The product’s hardware and software have been tested in clinical trials, and bodyguardian will continue to be tested throughout 2011.

The remote monitoring system enables continuous or intermittent physiologic monitoring and recordings to detect abnormalities before they lead to clinically significant medical concerns. The recorded information is fed into algorithms, giving the patient’s health care provider the ability to see how the patient is doing, even though the patient may be hundreds of miles away. When the patient experiences changes, such as weight beyond a threshold amount and an increased resting respiratory rate, the algorithms prompt the patient and provider to adjust medication dosages. This physician-directed patient self-management approach helps to maintain wellness by frequent adjustments in evidence-based medical therapy, without the need to travel to the provider’s office.

“The system is analogous to the blood glucose measurement by a patient with diabetes, under the overall care and management of a physician,” says Dr. Bruce. “When the patient has a clinically relevant event condition, bodyguardian communicates wirelessly with a smartphone, provided to the

- bodyguardian users receive a smartphone, which serves as their communication hub. It stores data, sends messages and reminders, provides coaching suggestions and allows the patient to deliver information.
bodyguardian’s remote monitoring technology

- Benefits Mayo Clinic patients
- Extends Mayo’s reach
- Extends Mayo’s patient base
- Fosters ongoing relationships with patients, their families and health care providers
- Fosters independence in patients
- Reduces health care costs

bodyguardian inventor-collaborators Paul Friedman, M.D. (left, foreground), and Charles Bruce, M.D. — holding the device — were assisted by a team from the Office of Intellectual Property, including (background, clockwise from left) Steven Van Norden, Andrew Danielson, Tim Largo and DeJae Ladewig.
bodyguardian has applications for sleep and activity monitoring as well as implications for helping people maintain healthy, independent living.” — Charles Bruce, M.D.

For the last decade, a multidisciplinary team has advanced bodyguardian to its current status. Today, the team is focused on refining and validating the technology for use with congestive heart failure patients outside of the hospital environment. Mayo has licensed the technology to Preventice Inc., a Mayo startup company, and contributed research resources as part of the agreement with this company. Future use exceeds a single condition or disease. The technology has been designed to be part of an adaptable platform to manage a range of conditions.

“bodyguardian has applications for sleep and activity monitoring as well as implications for helping people maintain healthy, independent living,” says Dr. Bruce. “Mayo Clinic has the internal resources to fundamentally affect how we deliver health care in the future. The algorithms incorporated into this product exploit Mayo’s rich heritage in clinical and research expertise and give Mayo the capability to deliver health care anywhere in the world. This is a good example of extending medical intelligence to contain health care costs and extending certain health care resources to better serve our patients, wherever they may be in the world.”

Office of Intellectual Property

Mayo Clinic’s Office of Intellectual Property helps to find business opportunities for discoveries and inventions made by Mayo physicians and employees — a bridge between discoveries and the marketplace. The office has licensed and commercialized thousands of inventions, which provide a significant flow of income to support education and research programs.

“The Mayo Clinic Model of Care integrates patient care with research and education, which helps to enrich the practice of medicine with new ideas,” says Steven Van Nurden, chair, Office of Intellectual Property. “Mayo Clinic has a rich tradition of ingenuity. Discoveries and inventions by Mayo Clinic staff have generated royalty income for Mayo and its many gifted inventors. For more than 25 years, our inventions have helped Mayo become one of the most successful academic technology commercialization offices in the United States. These advances enhance clinical practice at Mayo Clinic, improve our competitive advantages and help to benefit people around the world.”

Staff members in the Office of Intellectual Property have backgrounds in science, technology, business and law, and they cultivate contacts with potential collaborators in medical science, health-related fields and startup venture investors. When necessary, they also call upon outside expertise to determine if a Mayo invention can be patented and commercialized. Some discoveries take the form of conventional licensing agreements, and others become technology-based ventures. Mayo invests its own funds in new medically related startup companies when certain criteria are met.

Facts about the Office of Intellectual Property

- Receives more than one new idea per day from Mayo inventors.
- Filed 293 patent applications in 2010.
- Filed 3,461 patent applications since 1986, resulting in more than 1,159 patents issued and more than 629 active license agreements.
- Commercialized 1,895 technologies since 1986.
- Developed 49 startup companies.
Mayo Clinic’s Internet presence has a new face, with its three websites — mayoclinic.com, mayoclinic.org and mayoclinic.edu — represented by a new single home page. Visitors to the sites see the same home page and can access health, patient care, research, education and medical professional-specific information from this common page.

The new landing page is a first step toward designing and building “My Mayo Clinic Web Experience,” a project focused on creating a unified, dynamic and personalized Mayo Clinic Web experience across shields, campuses and business units. Mayo Clinic’s Global Products and Services is responsible for the blueprint and construction of this multi-phase project that will lead to a single, integrated Web presence for Mayo Clinic.

In 2010, the three sites had a total of more than 228 million visits.
Mayo Health System has been part of Mayo Clinic since 1992. And now, its importance to the organization has been recognized with a new identity. In May 2011, Mayo Health System will become Mayo Clinic Health System.

The change is subtle but significant. “The health system has developed into more than a confederation of groups, and this new identity is an expression of how our entire organization is changing,” says Robert Nesse, M.D. (FM ’80), CEO, Mayo Health System. “We are an important, strategic part of Mayo Clinic. We’re working much more closely together as an integrated practice. The new identity also reflects how we intend to work together in the years to come as we develop the health care system of the future.”

Mayo Clinic and Mayo Health System continue to collaborate on determining how best to distribute specialists, improve access for specialty care, share resources, develop best practice models, leverage Mayo Clinic knowledge for rural communities, create a seamless patient experience and develop medical homes.

“Mayo Health System delivers high-quality, multi-specialty care, as adapted to the community care level in an integrated system,” says Dr. Nesse. “Through Mayo Health System, Mayo Clinic has an opportunity to be completely relevant to community and regional care, and lead the nation in health care reform. Mayo Health System provides an ever-evolving laboratory for the transformation of outpatient medicine. Enterprise-wide, we’ll be a stronger organization by being even more relevant in our local communities.

“The Mayo Clinic Board of Governors demonstrated its commitment to the strategy of a common brand, which will enable us to better respond to a changing marketplace, growing competition and evolving health care reform. This change will help to create a single practice that cares for patients throughout their lives and communicate that we’re a single organization.”

New Mayo Health System identity reflects strategic integration

Mayo Health System CEO Robert Nesse, M.D., and his administrative partner Mark Koch.
The new Mayo Clinic Health System logo includes Mayo’s three shields. “This visual symbol is a powerful statement of the health system’s role in extending Mayo Clinic care throughout our region,” says Robert Nesse, M.D., CEO, Mayo Health System.

Mayo Health System today
- 800 physicians
- 17 hospitals
- 70 sites in Minnesota, Wisconsin and Iowa

Communities with MHS physicians, clinics, hospitals and/or management services agreements
Communities with an MHS organization’s site headquarters
In February 2011, Mayo Clinic and Arizona State University (ASU) signed an agreement that represents a formal commitment to broaden and deepen their collaboration in health care, medical research and education. The two organizations have collaborated during the past eight years on efforts that include a joint nursing education program, research projects, joint faculty appointments and dual-degree programs. The new agreement sets an ambitious vision for an enhanced level of future collaboration, cooperation and partnership. To date, these activities have been primarily limited to Mayo Clinic in Arizona, but new programs may span all Mayo campuses in all three shields — research, education and patient care.

“For Mayo Clinic, this will mean engagement with ASU at all levels across the entire organization,” says John Noseworthy, M.D., Mayo Clinic president and CEO. “Together with ASU, we will design and implement new ways to deliver high-value health care. This deepening relationship is an example of our new strategic direction in action. We will take teamwork to new heights with our combined complement of assets.”

The collaborations draw from the major strengths of each organization — ASU’s recognized leadership in basic research and advanced programs in biodesign and biotechnology, and Mayo’s extensive clinical experience, medical education programs and research, which spans basic science, laboratory-based clinical investigation, clinical trials and population sciences.

In the first significant development from the enhanced collaboration, ASU will relocate its Department of Biomedical Informatics to the Scottsdale campus of Mayo Clinic. ASU faculty, staff and students will complete the move by late summer 2011.

Biomedical informatics is a burgeoning field at the intersection of information science, computer science and health care. It deals with the resources, devices and methods needed to optimize the acquisition, storage, retrieval and use of health and biomedical information to enhance patient care and human health. At Mayo Clinic, the use of bioinformatics spans the patient care spectrum from individual patient care, such as working with genomics data to create treatment plans,
focus with Arizona State University is our collective ability to redesign medical education in ways that align with the future of health care delivery.”

The closer ties between Mayo Clinic and ASU are expected to lead to new, cutting-edge collaborations. “This is the doorway to create more exciting opportunities between ASU and all of Mayo Clinic,” says Keith Frey, M.D., vice chair, Executive Operations Team, chief medical information officer at Mayo Clinic in Arizona and faculty member of the Department of Biomedical Informatics at Arizona State University. “We hope to take two very successful and smart organizations and do more together in integrating scientific research with a world-class medical organization to accelerate new treatments from bench to bedside, enabling us to affect patient care in meaningful ways.”

to applying data from population groups to research or public health issues. The new arrangement will allow ASU’s Biomedical Informatics program to serve as an informatics engine for practice enhancement and safer, high-quality patient care across Mayo Clinic.

“To advance biomedical informatics education and research, we need to be embedded in a clinical environment,” says Sethuraman “Panch” Panchanathan, Ph.D., chief research officer at ASU. “Mayo provides access to world-class physicians and research, which will provide extraordinary opportunities for ASU faculty and students to work in one of the top clinical facilities in the country and advance education, research and training in biomedical informatics.”

Victor Trastek, M.D., vice president of Mayo Clinic and CEO of Mayo Clinic in Arizona, says, “An important area of
Proton beam therapy will complement Mayo’s leading-edge cancer program.
How can Mayo Clinic provide safer, more effective cancer treatment and reduce costs?

Mayo Clinic leaders have been seeking to answer this question for the past several years. In November, one solution was announced: Mayo will establish the Mayo Clinic Proton Beam Therapy Program, with new facilities on the Minnesota and Arizona campuses.

As part of Mayo's national three-site cancer center in Minnesota, Arizona and Florida, this new program will use intensity-modulated proton therapy — specifically, pencil beam scanning — offering a more precise form of therapy that allows greater control over radiation doses, shorter treatment sessions, longer survival and fewer side effects.

Great news for cancer patients, but will it be affordable in the long run?

“Yes,” quickly answers Robert Foote, M.D., chair, Department of Radiation Oncology, Mayo Clinic in Rochester.

“Proton beam therapy is the future of radiation therapy. It is rapidly becoming the standard of care for certain cancer patients,” says Dr. Foote. When a Mayo Clinic team led by Dr. Foote began researching proton beam therapy, the cost of building the machines and the infrastructure to house them seemed to be a barrier.

But the less costly alternative — intensity-modulated X-ray therapy — delivers a low to moderate dose of radiation to a large volume of the patient's body and a lower dose to the cancer compared to pencil beam scanning proton beam therapy. This may result in increased toxicity and less effective cancer control, meaning short- and long-term side effects and cancer recurrence that would cost additional health care dollars to treat.

The Mayo Clinic Proton Beam Therapy Program will feature a two-story tall rigid steel gantry that weighs 90 to 150 tons. The gantry rotates around the patient, allowing the proton beam to be focused at the tumor from different angles. The first treatment rooms in Rochester are expected to be open by late 2015.
Charged particle therapy delivers highly energized particles to treat solid tumors. The proton is the charged particle most commonly used.

Conventional radiotherapy utilizes a beam of X-rays to destroy cancer cells in the body by causing DNA damage that leads to cell death. As X-rays pass into the body, they begin to deposit their energy in healthy tissues even before reaching the tumor. After passing through the tumor, the X-rays continue through the body, affecting not only the cancer cells but also healthy tissues along their path, resulting in undesirable acute and late side effects for the patient. Consequently, physicians often must limit the dose delivered by X-rays to minimize acute and late adverse effects to the healthy tissues surrounding the tumor.

Charged particles deposit the majority of the dose in the tumor and then they stop, eliminating the exit dose. The entrance dose also is low compared to X-rays. The location in the body where the dose is deposited depends on the energy of the charged particle. The higher the energy, the deeper it travels; the lower the energy, the more superficial the dose deposition. This physical characteristic is known as the Bragg Peak, and it limits the dose of radiation delivered to the normal organs surrounding the tumor (a much lower entrance dose and no exit dose). Healthy tissues, therefore, incur less damage. Patients experience fewer acute toxicities, less suffering and fewer late effects, such as organ dysfunction and radiation-induced malignancies. The costs associated with treating acute and late side effects are reduced.

**How does it work?**

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**FIGURE 1**

The Bragg Peak of Protons

**FIGURE 2**

Proton Deposition Curve

X-ray Deposition Curve

**Figure 1** presents a graphical representation of the pristine Bragg Peak of protons.

**Figure 2** shows the proton beam covering the tumor and the reduction in the entrance and exit dose for protons versus the X-ray dose curve, as shown by the shaded area.
“Mayo Clinic’s exploration of proton beam therapy revealed that this would potentially result in fewer complications while delivering higher doses of radiation therapy to the cancer, leading to better outcomes for patients,” says Dr. Foote. “It was clear that proton beam therapy would be in the best interest of Mayo Clinic patients.”

Mayo Clinic radiation oncologists will use various factors to determine which patients will be best treated by intensity-modulated X-ray therapy and which will be best treated by proton beam therapy, including the patient’s age, severity of co-morbid illnesses, cancer type, sensitivity to radiation therapy and anatomic location of the cancer.

Treatment safety and efficiency also will help reduce costs, according to Michael Herman, Ph.D., chair, Division of Medical Physics, Mayo Clinic in Rochester. “The precision of this therapy will allow us to create programs requiring fewer patient visits for some types of cancer,” says Dr. Herman.

“Instead of 30 to 45 treatments using conventional X-ray technology, patients may be able to have the same level of cancer control with as few as five to 20 treatments. Currently in the United States, insurers pay a per-treatment cost, and that can be significant, without considering the additional costs to patients and their family and friends in terms of time away from work, transportation, housing, food and other out-of-pocket expenses.”
Pencil beam scanning offers cutting-edge treatment

According to the National Association of Proton Therapy, nine proton beam therapy centers are in operation, two are under construction and two more facilities are planned. But only one proton beam center currently offers pencil beam scanning and in only one of its four rooms. Mayo Clinic plans to use pencil beam scanning in all eight of its new treatment rooms when the facilities in Rochester and Arizona are fully operational in 2016.

“Pencil beam scanning is better for patients. It’s more efficient and more accurate,” says Dr. Herman. He explains that the device delivers a 5–10 millimeters-wide pencil-sized beam that precisely “paints” a tumor by sweeping the beam with magnets and changing its energy, targeting the radiation dose only where it is needed. “Older proton beam systems use larger, scattered beams that are bigger than needed and not shaped to match the tumor. This requires shields and additional custom hardware to protect the area we don’t want affected by radiation for each patient. The hardware itself creates scattered radiation that reaches the patient. The fact that this hardware is customized for each patient requires manual adjustments that prolong the treatment time.

“The potential benefits of pencil beam scanning to pediatric patients in particular are significant because their growing organs incur the greatest long-term detrimental effects from conventional X-ray therapy.”

Mayo ‘uniquely qualified’

Mayo Clinic’s focus on patients, and its commitment to teamwork, will contribute to the proton beam program’s success in providing safe and affordable care, according to John Noseworthy, M.D., president and CEO.

“Mayo is uniquely qualified and capable of applying science, engineering and teamwork to offer this innovative cancer treatment to patients,” says Dr. Noseworthy. “Proton beam therapy will be integrated into our team approach of clinical practice by combining it with the very best surgical procedures and medical therapies — part of a cancer center within Mayo’s full-service medical center. This benefits patients by having access to a full complement of medical providers at any time. We’re excited about this development in our already rich heritage of pioneering combinations of surgery, chemotherapy and radiation therapy in the treatment of cancer.”

Proton beam therapy will be an additional treatment tool that will be incorporated into Mayo Clinic’s national three-site cancer center’s integrated system of providing care, conducting research and educating the next generation of physicians and other care providers.

Dr. Foote acknowledges the support and teamwork provided by physicians, scientists and administrators — including Mayo Clinic alumni — at other academic medical institutions during Mayo’s exploration of proton beam therapy.

“When a leader at The University of Texas MD Anderson Cancer Center, which opened a proton beam therapy center in 2006, was asked for a response to our program announcement, he said, ‘The enemy is cancer. We are happy more people will have a better tool to fight cancer,’” says Dr. Foote.

“We’re excited to be able to offer this therapy for our patients with cancer,” says Dr. Foote. “Now the hard work of making it a reality begins.”

Steven Schild, M.D.
Mayo Clinic Proton Beam Therapy Program At A Glance

- Includes facilities on Mayo’s campuses in Minnesota and Arizona, with four treatment rooms at each location.
- The Arizona program will be located east of the Mayo Clinic Specialty Building on the Phoenix campus. Steven Schild, M.D., is chair of the Department of Radiation Oncology at Mayo Clinic in Arizona.
- The Rochester facility — the Richard O. Jacobson Building — will be located at the corner of Second Street N.W. and First Avenue N.W. Robert Foote, M.D., is chair of the Department of Radiation Oncology at Mayo Clinic in Rochester.
- Design of the facilities will begin soon and will occur simultaneously. The first treatment rooms in Rochester are expected to be open by late 2015. The third treatment room will open six months later, and the fourth room six months after that. The system installations will be staggered, with Rochester 10 to 12 months ahead of Arizona.
- Total capital cost for the two proton beam facilities is slightly more than $369 million.
- Estimated patient totals are 2,480 per year when both facilities are fully operational.

- Conditions to be treated include some head and neck, breast, gastrointestinal, lung, spine and prostate cancers; and tumors in or near the eye.
- The program will contribute to advancing the science of pencil beam scanning. Patients will be part of a registry that will allow Mayo Clinic to track them into the future, determine which patients gain the most benefit and incorporate the findings into new care models and services for cancer patients. Mayo Clinic will collaborate with other academic medical centers to study the safety and efficacy of proton beam therapies.
- Projected employment is more than 250 new staff members, including 19 physicians and 19 physicists at the two facilities when fully operational.
- The program will be fully integrated into Mayo Clinic’s three-site cancer program. Mayo Clinic Cancer Center, a National Cancer Institute-designated comprehensive cancer center, has locations in Phoenix/Scottsdale, Ariz.; Jacksonville, Fla.; and Rochester.

The Arizona Proton Beam Therapy Program will be located east of the Mayo Clinic Specialty Building on the Phoenix campus. Patients in Florida will have access to Mayo proton beam facilities in Arizona and Minnesota.

The Rochester Proton Beam Therapy Program — the Richard O. Jacobson Building — will be located at the corner of Second Street N.W. and First Avenue N.W. The first treatment rooms are expected to be open by late 2015.
As legislators look for ways to cut federal spending and chip away at the national deficit, one area of concern to Mayo Clinic and academic medical centers across the country is National Institutes of Health (NIH) spending. The NIH is a major source of funding for medical research at Mayo and other research centers.

In recent months, Mayo leaders have actively reached out to key elected officials to share Mayo’s concerns about proposed cuts to research funding. Patricia Simmons, M.D., medical director for Government Relations, Mayo Clinic, wrote “A Perspective from Mayo Clinic” that outlines Mayo’s concerns and recommendations. This document, shared with congressional representatives, appears at right.

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The Importance of National Institutes of Health Funding

Recently the U.S. House of Representatives approved a Continuing Resolution that would cut 2011 funding for the National Institutes of Health (NIH) by $1.6 billion. This is 5.2 percent below the current level, reducing the budget for medical research to $29.4 billion.

Medical research should not be viewed as an expense to the Federal government, but rather it should be viewed as an investment in our nation’s health and economy. NIH-funded research happens in all 50 states and benefits all Americans. It improves the nation’s health and benefits the economy in both the short and the long term. More than 83 percent of NIH funding is spent in communities across the nation, building the economy and creating jobs at more than 3,000 universities, medical schools, teaching hospitals, and other research institutions nationwide. A sustained commitment to a robust level of federally funded research helps keep the U.S. competitive globally.

More than 41 percent of Mayo Clinic’s research budget comes from NIH funding. In 2010, Mayo Clinic received over $221 million in NIH funding, which supported research in cancer, cardiology, diabetes, aging and more. In addition, the jobs of more than 3,200 Mayo Clinic researchers and allied health professionals are supported in part by NIH funding.

In Minnesota, an estimated 16 to 18 jobs are created for every $1 million spent on medical research. These NIH cuts could mean a loss of $11.5 million at Mayo Clinic and 184 professionals who would have to stop their current research this year.

Support Strong Medical Research Funding

The goal of research at Mayo Clinic, and at institutions across the country, is to generate new knowledge that can be delivered into the clinical practice to help patients. Knowledge and innovation are vital components of a patient-centered, high-value health care system as they allow us to continuously develop health care of the future.

Mayo Clinic encourages all members of Congress to support continued strong funding of the NIH by opposing any budget cuts to the National Institutes of Health and other sources of federally funded medical research.

Patricia Simmons, M.D.
Medical Director of Government Relations
Mayo Clinic
March 3, 2011
Mayo Clinic Alumni Association | 67th Meeting

Sept. 21–24, 2011
Sawgrass Marriott
Golf Resort & Spa
Ponte Vedra Beach, Fla.

The Mayo Clinic Alumni Association’s 67th Meeting promises a program packed with Mayo-specific and national initiatives and developments — from updates about what Mayo is planning at Mall of America to what the federal government is achieving with health information technology.

Meeting highlights

- Where the Past Meets the Present
  Research symposium
  Raymond Pruitt Lecturer: Daniel Brat, M.D., Ph.D., Professor and Vice Chair, Translational Programs, Department of Pathology and Laboratory Medicine, Emory University School of Medicine

- Innovation Into Action
  Interactive program focusing on topics representing Mayo’s three shields
  Moderators: Nicholas LaRusso, M.D., and Gianrico Farrugia, M.D.

- Innovating to Create a High-Value Health Care System
  Keynote speech with Q&A, moderated panel discussion and group discussion
  Information about health care reform, implementation of the Affordable Care Act and establishment of Accountable Care Organizations. Includes a panel of national experts discussing activities and innovations intended to advance the creation of a high-value health care system. An interactive discussion segment allows attendees to share ideas about how to spread innovations that will improve patient care.

- Achieving the Promise of Health Information Technology
  Hear from the Office of the National Coordinator for Health Information Technology about critical HIT topics and progress toward achieving its potential to transform the health care delivery system. Q&A session allows attendees to ask questions of national HIT leaders.

- 16 medical specialty breakout sessions

- Mayo Clinic: There and Everywhere
  Interactive program highlighting Mayo initiatives
  Moderator: C. Michel Harper, M.D.

For information, visit mayo.edu/alumni.
Awards

Donald C. Balfour Mayo Clinic Alumni Association Award for Meritorious Research
Jonathan Johnson, M.D.
2011 Recipient
Fellow, Division of Pediatric Cardiology, Department of Pediatric and Adolescent Medicine, Mayo Clinic, Rochester
Major scientific contribution: Clinical outcomes and diagnostic strategies in pediatric cardiology patients with heritable ion channel disorders of the heart.
The annual Balfour Award, named in honor of Donald C. Balfour, M.D., recognizes research by a resident of Mayo School of Graduate Medical Education whose primary training is in a clinical field.

Edward C. Kendall Mayo Clinic Alumni Association Award for Meritorious Research
Jennifer Whitwell, Ph.D.
2011 Recipient
Research Associate, Aging and Dementia Imaging Research Laboratory, Department of Radiology; Assistant Professor of Radiology, College of Medicine Mayo Clinic, Rochester
Major scientific contribution: Neuroimaging biomarkers in neurodegenerative disorders, particularly the frontotemporal lobar degenerations (FTLD).
The annual Kendall Award, named in honor of Edward C. Kendall, Ph.D., recognizes outstanding research conducted by an individual whose primary appointment is in research.

Obituaries

Allan Hepburn, M.D. (NS ’56), died Nov. 15, 2010.
Thomas Kearns, M.D. (OPH ’53), died March 6, 2011.
Ralph Lev, M.D. (S ’54), died Feb. 20, 2011.
Eric Lofgren, M.D. (S ’55), died Dec. 6, 2010.
Robert Maciunas, M.D. (NS ’86), died March 1, 2011.
William Martinov, M.D. (S ’56), died July 19, 2010.
Clark Milikan, M.D. (N-PSY ’49), died Jan. 29, 2011.
Theodore Noehren, M.D. (I ’49), died Nov. 9, 2010.

Complete obituaries and the Update section, with alumni and staff news, are available on the Mayo Clinic Alumni Association website, mayo.edu/alumni.
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Mayo Alumni magazine is published quarterly and mailed free of charge to physicians, scientists and medical educators who studied and/or trained at Mayo Clinic, and to Mayo consulting staff. The magazine reports on Mayo Clinic alumni, staff and students, and informs readers about newsworthy activities throughout Mayo Clinic. Please send correspondence to: Mayo Clinic Alumni Center, Siebens 5-33, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905; or via e-mail to deboom.emily@mayo.edu; or telephone 507-284-4660; or fax 507-284-8713. Send address changes to the Mayo Clinic Alumni Center office at the preceding address or e-mail to mayoalumni@mayo.edu.

Mayo Clinic is committed to creating and sustaining an environment that respects and supports diversity in staff and patient populations.

Mayo Alumni magazine is published quarterly and mailed free of charge to physicians, scientists and medical educators who studied and/or trained at Mayo Clinic, and to Mayo consulting staff. The magazine reports on Mayo Clinic alumni, staff and students, and informs readers about newsworthy activities throughout Mayo Clinic. Please send correspondence to: Mayo Clinic Alumni Center, Siebens 5-33, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905; or via e-mail to deboom.emily@mayo.edu; or telephone 507-284-4660; or fax 507-284-8713. Send address changes to the Mayo Clinic Alumni Center office at the preceding address or e-mail to mayoalumni@mayo.edu.

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Board of Trustees honors new named professors

At its quarterly meeting in February, the Mayo Clinic Board of Trustees honored three new Mayo Clinic named professors.

Larry Baddour, M.D.
Division of Infectious Diseases
Department of Medicine
Mayo Clinic Rochester
HH Sheikh Khalifa Bin Zayed Al-Nahyan Professor of Infectious Diseases Honoring Walter R. Wilson, M.D.

Gary Sieck, Ph.D.
Department of Physiology and Biomedical Engineering
Mayo Clinic Rochester
Vernon F. and Earline D. Dale Professor

P. Leif Bergsagel, M.D.
Division of Hematology and Oncology
Department of Internal Medicine
David F. and Margaret T. Grohne Research Professor of Therapeutics for Cancer Research

For more information about these named professors, visit mayo.edu/alumni.