



SCIENCE FOR THE BENEFIT OF HUMANITY

THE ROCKEFELLER UNIVERSITY *now*

NEWS FOR BENEFACTORS AND FRIENDS OF THE UNIVERSITY • FALL 2011

MESSAGE FROM CHAIRMAN RUSSELL L. CARSON

The University's eight-year Campaign for Collaborative Science concluded on June 30, 2011, raising \$628 million in new gifts and pledges during the tenure of President Paul Nurse. The Campaign exceeded its \$500 million goal and achieved all that we set out to do, and more. The generosity of our benefactors was extraordinary. This issue of our newsletter celebrates and acknowledges those whose support is helping to advance Rockefeller's work. As you read these pages, I hope you take pride in the Campaign's accomplishments, including our new Collaborative Research Center on the north campus and the 12 laboratory heads we recruited over the last eight years.

The conclusion of our Campaign coincided with a turning point in the University's history. In the 2010–2011 academic year, we said goodbye to a superb president and welcomed an exceptional scientific leader to campus as his successor. Paul Nurse became president of the Royal Society in London, and Marc Tessier-Lavigne, a leading neuroscientist and the former chief scientific officer of Genentech, succeeded him in mid-March. In this issue, you will learn more about Marc and his research program in brain development and repair.

Finally, I want to express profound appreciation again to all of you whose support and commitment have made the achievements celebrated in these pages possible.

Sincerely,

DONORS CONTRIBUTE \$628 MILLION CAMPAIGN FOR COLLABORATIVE SCIENCE EXCEEDS \$500 MILLION GOAL



photo: Jeff Goldberg/Esto

The Rockefeller University Campaign for Collaborative Science has concluded, surpassing its \$500 million goal with new gifts and grants totaling \$628 million. Launched to raise support for the initiatives of the Strategic Plan that was developed at the beginning of Paul Nurse's presidential tenure, the eight-year Campaign secured all of the funds needed to meet the plan's goals. These included the recruitment of 12 new faculty members and the construction of the Collaborative Research Center, the centerpiece of the University's efforts to expand resources for collaborative science on campus.

"Our trustees and friends have been extraordinarily supportive of our Campaign, especially in years of economic uncertainty," says Trustee **Judith Berkowitz**, chair of the board's Development Com-

mittee. "Because of their commitment and generosity, the future of the University looks brighter than ever."

Of the \$628 million contributed to support the Campaign, \$152 million came in the form of flexible funding to help underwrite the cost of constructing the Collaborative Research Center. Members of The Rockefeller University Board of Trustees contributed a significant portion of the unrestricted funds. Campaign gifts to the University's endowment totaled \$125 million.

David Rockefeller, honorary chairman and a trustee of the University for over 70 years, committed more than \$100 million to the Campaign, making the largest single private gift in the University's history. **The Starr Foundation** made several grants, including one of \$50 million, the largest foundation grant ever received at Rockefeller. Lead Campaign

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HOSPITAL CENTENNIAL CAMPAIGN RAISES MORE THAN \$34 MILLION FOR TRANSLATIONAL RESEARCH



New York Mayor **Michael Bloomberg**, with President **Paul Nurse**, presents a proclamation designating October 7, 2010, "The Rockefeller University Hospital Day in New York."

Rockefeller's hospital, which opened its doors in 1910, was the country's first clinical research hospital—and the birthplace of clinical research in the United States. A hospital unlike any other at the time, this facility was devoted to clinical investigation and to translating laboratory discoveries into new approaches to diagnosing, treating, and preventing disease.

Scientific advances over the decades have opened previously unimagined therapeutic possibilities. Entering its second century, the Rockefeller hospital is more vital and productive than ever. Today, more than 160 clinical studies and protocols are under way at the hospital, and investigators are studying a multitude of diseases and health conditions, including cancer, heart disease and stroke, HIV/AIDS, alcoholism and drug addiction, obesity, and aging.

A fundraising initiative launched in conjunction with the hospital's Centennial raised more than \$34 million to support clinical and patient-oriented research at the University. Of this sum, \$23 million was raised in the six months preceding the landmark anniversary in October 2010, when a black-tie dinner dance brought nearly 350 benefactors and friends to campus. Among the guests was Mayor **Michael Bloomberg**, who read a proclamation recognizing the hospital's historic importance and accomplishments—and designating October 7, 2010, "The Rockefeller University Hospital Day in New York."

In addition, Physician-in-Chief **Barry Collier** accepted a gift from the University's trustees honoring the hospital's physician-scientists and staff—an 1892 first

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TRANSFORMATIVE SCIENCE TOPS TESSIER-LAVIGNE AGENDA PRIORITIES EMERGE AS PRESIDENT ENGAGES CAMPUS CONSTITUENCIES

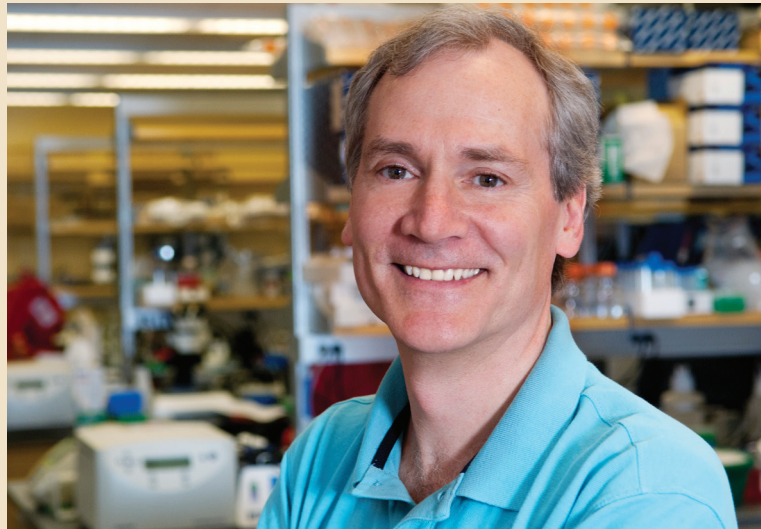
THE ROCKEFELLER UNIVERSITY IS A LEGENDARY PLACE that has had an outsized impact, especially considering the small size of the faculty,” said President Marc Tessier-Lavigne at a town hall meeting on campus shortly after his arrival in March. “What’s even more fascinating is not just that the institution has been successful, but that it has sustained this success over time. The act of creating something truly novel occurs so rarely that it is seldom followed by another such act. That’s why we are all fascinated with individuals and institutions that can reinvent themselves again and again, the way Rockefeller has.”

As Dr. Tessier-Lavigne sees it, Rockefeller has been a scientific powerhouse for more than a century because its leaders have performed an amazing balancing act. Staying true to the founders’ vision, they have—with enormous success—reinvented the institution repeatedly to meet new challenges. Thus, when the University invited him to become its tenth president, “the draw was irresistible,” he said. He could not pass up the chance to be part of Rockefeller’s history and to take on the challenge of building on its extraordinary record of transformative science.

Rockefeller’s commitment to translating basic discoveries into medical applications also attracted Dr. Tessier-Lavigne. “Over the course of my career, my initial interest in basic biological processes has grown into an equally strong interest in disease processes and in the medical applications of basic science,” he said. A prominent neuroscientist whose research has advanced the understanding of Alzheimer’s disease and a host of other conditions that affect the brain and nervous system, Dr. Tessier-Lavigne has increasingly worked to bring basic and translational science closer together.

In 2003, he moved from an academic position at Stanford University to an executive position at Genentech, one of the world’s leading biotechnology companies. There, as he directed disease research and drug discovery in cancer, immune disorders, infectious diseases, and neurodegenerative diseases, he maintained his own laboratory.

“Genentech was appealing because of its deep commitment to innovative research that has the potential to create breakthrough therapies for unmet medical needs. It also has a vibrant and exciting scientific culture that fosters intellectual freedom.”



At Rockefeller, as he did at Genentech, President Marc Tessier-Lavigne maintains a neuroscience laboratory while leading a major scientific enterprise.

In these ways, Genentech resembles Rockefeller, where Dr. Tessier-Lavigne has now established his Laboratory of Brain Development and Repair. Indeed, coming to Rockefeller feels like a natural progression for the new president. He said, “Basic and translational research depend on one another, and in many areas I believe we still don’t have the basic insights on which clinical work can build. That’s why places like Rockefeller are so important to our ability to tackle disease.”

Like his predecessor, Paul Nurse, Marc Tessier-Lavigne affirms the principles that have historically contributed to Rockefeller’s greatness. “The University will continue to hire scientists who are focused on pivotal problems and capable of making transformative discoveries—and it will support them to the

full, a commitment that involves providing significant research funding. It will also seek to maintain and enhance the highly interactive and collaborative research atmosphere that has been so important since Rockefeller’s founding.”

Although strategic planning for the new administration is at an early stage, some priorities have emerged. To develop scientific talent for the future, the open recruitment of tenure-track faculty—so successful during the tenure of Paul Nurse—will continue. (Open recruitment seeks the most gifted and innovative scientists across many fields, rather than attempting to fill slots in a particular discipline.) More targeted recruitment of mid-career scientists is also under serious consideration.

At the same time, Rockefeller must redouble its efforts to attract more women faculty candidates as well as underrepresented minorities. “We have ten exceptional women among our 74 laboratory heads,” said Dr. Tessier-Lavigne, “but that is just 13 percent.” Increased representation of women and minorities is essential not simply as a matter of fairness and equity. Diversity is also a means of strengthening the University’s educational programs by providing a wider variety of role models for students. In fact, faculty recruitment and improving faculty diversity go hand in hand with another key priority, maintaining the excellence of the graduate program.

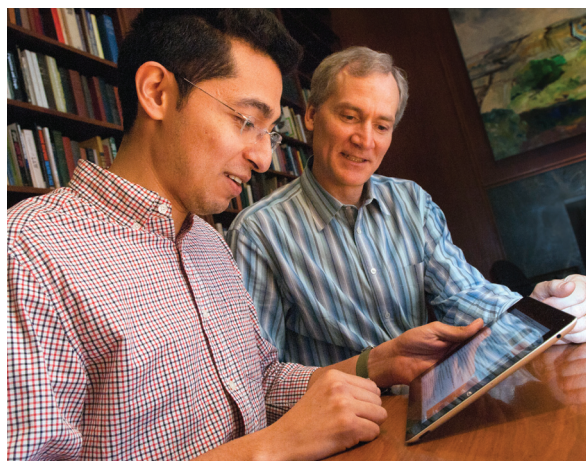
Finally, Dr. Tessier-Lavigne is committed to maximizing the scientific impact of the Rockefeller hospital. “We’re in a golden age of translational research. The advances in biological science over the past decades mean that we can tackle disease systematically and broadly, in the same way that basic scientists like to tackle fundamental mechanisms,” he said. The University is uniquely positioned for that.

During 2011–2012, Dr. Tessier-Lavigne is consulting with members of the Rockefeller community—beginning with the heads of laboratories and executive leadership, and then more broadly with scientists, students, postdoctoral fellows, and staff—to develop his administration’s Strategic Plan. Completion of the plan is tentatively scheduled for June 2012.

NEW TESSIER-LAVIGNE LAB FOCUSES ON BRAIN DEVELOPMENT AND REPAIR

Since he first encountered neuroscience as a Rhodes Scholar at Oxford University, Marc Tessier-Lavigne has been fascinated with the formation of the brain’s neural circuits. During this process, several hundred billion nerve cells must be connected in an intricate and precise pattern in order to function properly. The formation of these connections—the neural circuits—during embryonic development is what ultimately allows the brain to perceive, remember, and issue commands to the rest of the body. Dr. Tessier-Lavigne has devoted much of his scientific career to understanding how nerve cells “know” where to go in the creation of these connections.

In the early 1990s, as an assistant professor at the University of California at San Francisco, Dr. Tessier-Lavigne discovered the existence of netrins, a small family of proteins that play a key role in steering the developing brain cells where they need to be. This discovery sparked immediate worldwide interest and gave birth to a new field of neurobiology. Dr. Tessier-Lavigne continued to make major contributions to that field as a professor and Howard Hughes Medical Institute Investigator, first at UCSF and Stanford Uni-



Graduate student Joseph Luna shares his research with Marc Tessier-Lavigne. In May 2011 Mr. Luna received the David Rockefeller Fellowship, established by alumni to recognize exceptional promise as a scientist and a leader.

versity, and then in the lab he maintained at Genentech while overseeing the work of dozens of other laboratories at the company.

In 2009, findings published by his Genentech research team suggested that the harmful neuronal loss

that characterizes Alzheimer’s disease is related to the routine elimination of redundant neurons that occurs during the brain’s embryonic development. This discovery introduced a new theory about the causes of Alzheimer’s and produced insights that have led to fresh approaches in drug discovery for this disease. Dr. Tessier-Lavigne’s investigations have also provided important insights into such degenerative conditions as Parkinson’s disease, multiple sclerosis, and amyotrophic lateral sclerosis (ALS, or Lou Gehrig’s disease), as well as spinal cord injury and a number of developmental disorders.

In his Rockefeller lab, Dr. Tessier-Lavigne continues to build on these discoveries. His research is not the only new neuroscience program on campus. His wife, Dr. Mary Hynes, a neuroscientist from Stanford, is now a research associate professor at Rockefeller, conducting studies related to Parkinson’s disease. Furthermore, five of the new laboratory heads recruited over the last eight years conduct studies in areas of neuroscience, including 2005 Rockefeller alumna Vanessa Ruta, who returned to the University on September 1, 2011, as a laboratory head.

WELCH HALL RESTORATION LAUNCHED

HISTORIC BUILDING TO BE REVITALIZED AS CENTER OF CAMPUS LIFE

A gracious structure built in 1929 to house Rockefeller's library and dining room, Welch Hall was the heart of campus life from the 1930s to the 1960s. Much of Rockefeller's culture of excellence took shape in its magnificent rooms, in particular the legendary dining hall where the scientific staff came together for lunch—and animated conversation—every day for decades. Some of the finest minds in the history of biomedicine would gather there to learn about each other's work and discuss the research advances and discoveries that were transforming the life sciences in this golden era. Many of those breakthroughs were made at Rockefeller, by the very scientists whose critical faculties were sharpened through daily discussion and debate with their distinguished peers in Welch Hall.

Now, a \$15 million gift from Trustee Robert Bass and his wife, Anne, has enabled the University to launch a renovation project that includes the restoration of the building's handsome rooms and the creation of new study areas and a state-of-the-art scientific library facility. Once restored, Welch will again become a nexus of intellectual and social activity on

campus. To recognize the generosity of Mr. and Mrs. Bass in making this revitalization possible, the University is establishing the Anne T. and Robert M. Bass Center for Community Life in Welch Hall.

Essential to the Welch Hall revitalization is the construction of new and improved entrances to the 82-year-old building—part of a larger design that will link Welch and the adjacent Founder's Hall with the University's newest laboratory complex, the Collaborative Research Center (CRC). In 2013, when the Welch Hall project is completed, the Bass Center and the Rita and Frits Markus Library will be entered through a redesigned lobby in Founder's Hall, which will provide a convenient central rendezvous point for members of the campus community.

The University has embarked on a major initiative to raise funds for this \$50 million project. Those desiring more information may contact Marnie Imhoff, Vice President for Development, at (212)327-8682, for a pictorial brochure that includes a list of naming opportunities. Among the opportunities is the Great Hall (the former dining room), which will provide an elegant setting for board meetings, lectures, large dinners, and other special occasions.



Above, Welch Hall's North Garden will be a verdant plaza adjacent to the Collaborative Research Center. Top inset, one

of the beautiful architectural details that, after restoration, will continue to evoke the building's distinguished history.

(continued from front page: Hospital Centennial Campaign)

edition of *The Principles and Practice of Medicine* by Sir William Osler. Dr. Collier explained to the guests that this classic medical text played a key role in the University's founding, convincing John D. Rockefeller's philanthropic advisor, the Reverend Frederick Gates, that an institute dedicated to the scientific study of disease should be established in the United States.

Dr. Collier also pointed out that, since the hospital was founded, the average human life expectancy has increased from under 50 years to nearly 80 years—and that many discoveries contributing to this remarkable achievement were made at the Rockefeller hospital. He concluded, "Today, we dedicate ourselves to the new challenges that lie ahead: bringing the medical benefits of science to all people, worldwide; continuing to push the limits of human life expectancy; and ensuring that the extra years of life we have fought so hard to attain are vibrant ones."



Dr. Barry Collier opens the board's gift to the University's physician-scientists at the Hospital Centennial Celebration. Trustee Judith Berkowitz and Chairman Russell Carson presented the rare first edition of a classic medical text that was important to the founding of Rockefeller.

(continued from front page:
Donors Contribute \$628 Million)

donors also included Christopher H. Browne and Andrew Gordon, Russell and Judith Carson (through the Carson Family Charitable Trust), James H. and Marilyn H. Simons (through the Simons Foundation), Marjorie A. Matheson, Anne T. and Robert M. Bass, and Henry R. and Marie-Josée Kravis.

The Campaign's success was celebrated at the November 2010 dedication of the Collaborative Research Center (CRC), which included an open house in the Maurice R. and Corinne P. Greenberg Building. This new glass structure is designed to link the CRC's two laboratory buildings, Smith and Flexner halls. Guests had the opportunity to tour the Greenberg Building and newly renovated laboratories in historic Theobald Smith Hall. The ongoing Flexner Hall renovation is slated for completion in 2012.

The creation of the CRC is but one of the goals that were set out in the Strategic Plan at the beginning of the Campaign for Collaborative Science. All of the plan's other goals were also met, as described below:

Twelve new laboratory heads were recruited, including nine early-career investigators. These faculty members represent some of the most creative and innovative scientists working in biomedicine today. Their investigations are shedding light on a wide range of diseases and medical conditions, including autism, cancer, digestive disorders, and HIV/AIDS, to name but a few. Their studies are also pointing the way toward improved medical interventions, for example, new therapies for cancer and other conditions, as well as new treatments for serious global health problems such as tuberculosis and infections caused by drug-resistant bacteria.

Expanded opportunities for scientists-in-training have been provided by a number of means, including the creation of new fellowships, clinical scholarships, and lecture series, as well as a variety of programmatic initiatives.

The Presidential Fellows Program is supporting a new cadre of exceptional independent post-doctoral investigators to work at the frontiers of biology, chemistry, physics, and mathematics through the John C. Whitehead Presidential Fellowships, the Leon Levy Presidential Fellowships in Neuroscience, and the Raymond and Beverly Sackler Postdoctoral Fellowships.

The University's collaborative culture has been enhanced through the creation of new programs, including interdisciplinary centers and other initiatives in scientific areas of particular promise, as well as seminars, retreats, visiting professorships, and lecture series. All of these ventures foster more intellectual exchange and promote collaboration between faculty members and laboratories working in diverse fields. Inter-institutional collaboration and cooperation have also been strengthened.

The Rockefeller University Now is published by the University's Development Office.

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For further information about The Rockefeller University, please visit our Web site www.rockefeller.edu or call (212) 327-7168.

CHALLENGE GRANT WILL ADVANCE STUDY OF BREAST CANCER CREATION OF NEW RESEARCH FUND WILL MARK 15TH ANNIVERSARY OF *WOMEN & SCIENCE*

To celebrate the 15th anniversary of the *Women & Science* initiative, the Helena Rubinstein Foundation and Trustee Marlene Hess have committed \$500,000 each to establish a \$1 million challenge grant to raise support for breast cancer research at Rockefeller. “I am impressed by the University’s deep bench of cancer researchers, and by the strength of breast cancer studies on campus,” says Rockefeller president Marc Tessier-Lavigne. “Twenty of our 74 laboratory heads are associated with the University’s outstanding Anderson Center for Cancer Research, and many labs have breast cancer research projects under way. The creation of new resources for breast cancer research is an appropriate way to mark this milestone in the history of *Women & Science*.”

Funds raised by the challenge will be used to create the *Women & Science Fund for Interdisciplinary Research on Breast Cancer*, designed to fuel leading-edge breast cancer studies at Rockefeller. According to the University’s Leon Hess Professor, Titia de Lange, who leads the Anderson Center, “Some of the most innovative and imaginative work on breast cancer is being done by Rockefeller scientists, using a multiplicity of approaches.” Among these investigators are two recently recruited young laboratory heads. Assistant Professor Agata Smogorzewska focuses on several genes associated with inherited predisposition to breast cancer, and she is seeking to uncover additional genes that increase the likelihood of breast tumors. Sohail Tavazoie, the Leon Hess Assistant Professor,

“Some of the most innovative and imaginative work on breast cancer is being done by Rockefeller scientists, using a multiplicity of approaches.”



Deborah Zoullas (left), a director of The Helena Rubinstein Foundation, and Trustee Robin Neustein (right) engage in conversation with Leon Hess Professor Titia de Lange at the 2011 *Women & Science* Spring Lecture and Luncheon. Dr. de Lange, whose work has implications for understanding cancer, will be the featured speaker at the May 2012 lecture, marking the 15th anniversary of *Women & Science*.

studies the molecular basis of metastasis, in research that has important implications for the diagnosis and treatment of breast tumors and other common forms of cancer.

A complex disease with many different subtypes, breast cancer is still a relative mystery. Too often, treatment is a matter of trial and error, as physicians and patients try to find the most beneficial therapy with the fewest detrimental side effects. Developing much-needed new approaches to diagnosis and treat-

ment depends on the sort of fundamental research under way at the University. Rockefeller scientists have already identified promising targets for entirely new chemotherapies and metastasis inhibitors. They are designing novel diagnostic tools that may revolutionize cancer treatment, as well as vaccines to boost the immune response against breast cancer. The new breast cancer research fund will provide resources for many more promising studies in this area of investigation.

The amount raised for the *Women & Science Fund for Interdisciplinary Research on Breast Cancer* will be announced at the 15th Annual *Women & Science Lecture and Luncheon* on Thursday, May 10, 2012. The featured speaker will be Dr. de Lange, who is widely recognized for her discoveries about DNA repair and telomeres, the structures that cap and protect the chromosome ends. This research has led her to undertake a series of investigations aimed at improving breast cancer diagnosis and therapy.



RALPH STEINMAN, a Rockefeller University professor who discovered the immune system’s dendritic cells, was named a recipient of the 2011 **NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE**. Tragically, on September 30, two days before the prize was announced, Dr. Steinman passed away after a courageous four-and-a-half-year struggle with pancreatic cancer. An experimental dendritic cell-based immunotherapy of his own design may have helped to extend his life. At an October 3rd press conference on campus, Dr. Steinman’s son, Adam, said, “It is very sad our dad won’t be here to see what dendritic cells do next, but it would be his greatest wish to see this incredible honor of the Nobel Prize build further momentum for research in the area to which he devoted his life.” Pictured is Dr. Steinman’s family, from left to right, daughter Lesley, wife Claudia, son Adam, and daughter Alexis.

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