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# BenchMarks 2009, April 17

The Rockefeller University

SCIENCE FOR THE BENEFIT OF HUMANITY

# BENCHMARKS

THE COMMUNITY NEWSLETTER OF THE ROCKEFELLER UNIVERSITY

FRIDAY, APRIL 17, 2009

FROM MIKE YOUNG

## Science and the stimulus

*Editor's note: Paul Nurse has asked Mike Young, vice president for academic affairs, to author this month's president's column, about how the federal stimulus package will affect the university. Dr. Young has been following developments at the National Institutes of Health that may influence the university's grant revenue.*

The American Recovery and Reinvestment Act of 2009, which Congress passed in February to help stimulate the economy, includes the largest allocation of funds for scientific research that the National Institutes of Health has ever received. Over the next two years, approximately $8 billion in special funding will be directed to scientists at the more than 3,000 institutions that conduct NIH research — including Rockefeller University.

Gila Budescu, the university's director of sponsored research and program development, has been tracking developments related to the stimulus program with an eye toward identifying grant opportunities for Rockefeller researchers. The availability of this funding has the potential, at least in the short term, to ease some of the difficulties that have developed in the university's budget as a result of the economic crisis that began last fall.

At this point, it looks like the majority of the NIH stimulus funding will be spent in two ways: through the existing Research Project Grant Program (often referred to as the R01 Program) and through supplemental grants.

Let's start with the R01s. The NIH's oldest grant program, historically used to fund large multiyear health-related research projects, R01s already make up a sizeable portion of the university's financials: About half of the $64 million Rockefeller received from the NIH in 2008 was via 104 individual R01 grants. Investigators propose specific projects they wish to pursue and submit budgets outlining the costs involved; the projects are then peer reviewed and those judged especially meritorious are funded. The grants

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BENCHMARKS

**Paul Nurse,** President
**Jane Rendall,** Corporate Secretary
**Joe Bonner,** Director of Communications

**Zach Veilleux,** Executive Editor
**Talley Henning Brown,** Associate Editor

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FINANCE

## University raises $29 million in new gifts

by ZACH VEILLEUX

Five new private gifts, totaling over $29 million, will allow the university to launch several new programs and will help provide flexible financial support during the current economic downturn. The gifts, ranging in size from $3 million to $10 million, are positive news for the university and come at a time when the markets continue to be volatile.

"With these gifts, we have now raised $55 million in the current fiscal year and a total of $537 million toward our $750 million goal in the Campaign for Collaborative Science," says Marnie Imhoff, vice president for development. "Taken together, these gifts underscore the tremendous commitment our benefactors continue to make to the university even under difficult economic circumstances."

"I'm grateful to our donors for their support and very pleased about the initiatives that these gifts make possible," says Paul Nurse, the university's president.

The new gifts are:

**$5 million from the Simons Foundation.** The Simons Foundation — the philanthropy founded by mathematician, hedge fund manager and Rockefeller University trustee Jim Simons and his wife, Marilyn — in November pledged $5 million to Rockefeller and the same amount to the Institute for Advanced Study in Princeton, New Jersey, to establish a joint program. Designed to foster collaboration among biologists, mathematicians, physicists and computer scientists exploring quantitative and theoretical approaches to biological problems, the program will support faculty members, fellows, visiting professors and a program of conferences, workshops and seminars to be shared between the two institutions. The first joint appointment, Rockefeller professor Stanislas Leibler, was announced in April (see "Simons gift to fund Institute for Advanced Study collaboration," page 2).

**$10 million from the Simons Foundation.** In December Jim and Marilyn Simons pledged an additional $10 million to help the university through the current financial challenges, and subsequently suggested to Dr. Nurse that this gift be used to launch a new fund, called the Fund to Sustain Scientific Excellence at Rockefeller University. The Board of Trustees agreed to set a $50 million goal for the fund, to which Chairman of the Board Russ Carson has designated $10 million of his $25 million Campaign gift. The fund will allow the university to move ahead robustly with its scientific agenda despite the economic downturn and, in conjunction with cost-cutting measures, help sustain the university's balance sheet during these difficult economic times.

**$3.18 million from the Raymond and Beverly Sackler Foundation.** The gift, made November 12, will endow new postdoctoral fellowships as well as help pay for visiting professors in the Center for Studies in Physics and Biology, which relies heavily on private donations for its funding. Of the gift, $180,000 will be spent this year to support postdoctoral positions; the remaining $3 million will endow two fellowships in perpetuity. Raymond Sackler and his wife, Beverly, support scientific research through their foundation at universities worldwide; they are perhaps best known for endowing the Raymond and Beverly Sackler International Prize, awarded each year to a physicist or chemist. A plaque recognizing the Sacklers' gift, which is in honor of their sons, Richard and Jonathan Sackler, will designate the Raymond and Beverly Sackler Laboratories of Biomedicine and Biophysics on the first floor of the Detlev W. Bronk Laboratory.

**$6 million to establish Presidential Fellowships in honor of John C. Whitehead.** More than 135 friends and colleagues of John C. Whitehead, a member of the university's Board since 1989, have contributed $6 million to endow several independent fellowships named in his honor. Mr. Whitehead himself made a generous commitment to the effort.

The Presidential Fellowships, which were originally proposed in the university's 2005 strategic plan, expand campus wide a program originally begun in the Center for Studies in Physics and Biology. "The John C. Whitehead Presidential Fellows will not

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CAMPUS NEWS

## Harvard biochemist named visiting scholar

by TALLEY HENNING BROWN

Jack Strominger, a Harvard University biochemist and winner of the Lasker Award for discoveries involving key immune system structures, has joined The Rockefeller University as a visiting scholar for the month of April. On sabbatical from his post in the faculty of arts and sciences at Harvard College (as well as at the Dana-Farber Cancer Institute), Dr. Strominger is based in the laboratory of Sherman Fairchild Professor Michel C. Nussenzweig, whose research on dendritic cell function parallels Dr. Strominger's work.

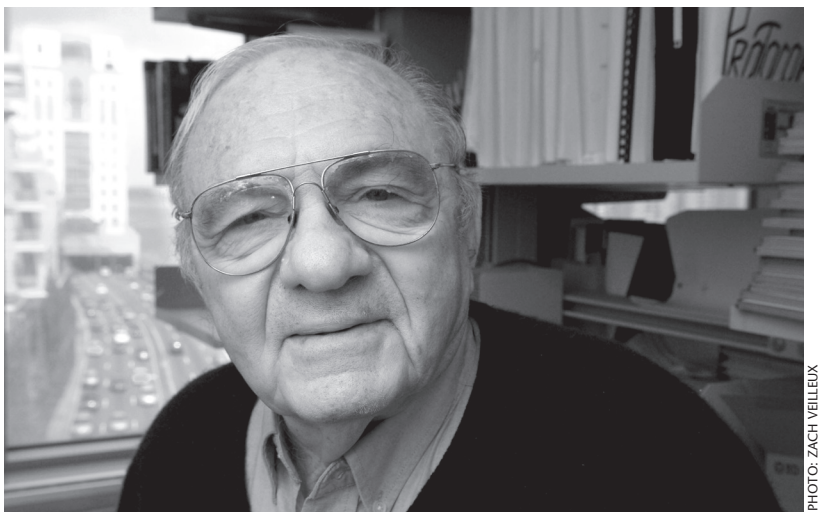

PHOTO: ZACH VEILLEUX

Dr. Strominger, who holds degrees from Harvard and Yale Universities and whose academic career has included Washington University School of Medicine in St. Louis and the University of Wisconsin Medical School, has been a member of the Harvard faculty since 1968. His research involves the structure and function of major histocompatibility complex (MHC) proteins, whose job is to present both foreign and self-antigens to T cells to strengthen the immune system's ability to recognize (and thus tolerate) friendly, endogenous antigens while eliminating pathogenic ones.

Dr. Strominger's lab isolated and then, with his Harvard colleague Don Wiley, solved the structures of both class I and class II MHC proteins (the antigen-presenting classes) and the peptide complexes they bind to, work that garnered him the 1995 Albert Lasker Basic Medical Research Award and the Japan Prize. This discovery eventually led to the development of a drug currently in clinical trials for the treatment of multiple sclerosis. Following upon his award-winning discovery, Dr. Strominger also elucidated the structural features that enable a single MHC molecule to bind to a large variety of different peptides.

More recently, Dr. Strominger's lab has been focused on the maturation process of human immature dendritic cells, which exist in the central nervous system as microglia, a kind of sleeper cell, undifferentiated and waiting to be called to action by the presence of a foreign antigen. Because dendritic cells — first discovered in 1973 by Rockefeller University professor Ralph M. Steinman — are the main antigen-presenting cell in the immune system, effective immune response depends in part on how they mature. Dr. Strominger also investigates immune cells in the preg-

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## New gifts (cont'd from page 1)

be confined to an individual lab but will determine their own research and collaborate across the campus," says Dr. Nurse. "The idea is to recruit to campus the very best and brightest to tackle challenging questions in biomedical research." The Whitehead Fellowships were announced at an event to honor Mr. Whitehead on April 2.

**$5 million from the Heilbrunn family.** Helaine Lerner and Joan Rechnitz, the two daughters of the late Robert and Harriet Heilbrunn, university benefactors for more than a decade, have committed $5 million to endow a new center for research nursing at The Rockefeller University Hospital. The gift, pledged in December, acknowledges both the hospital's home as the birthplace of the field of clinical research nursing and its ongoing prominence in the profession today.

"Research nurses must focus on both patient care and conducting scientific research at the highest standard," says Melissa Offenhartz, the hospital's director of nursing and patient care services. "The Heilbrunn Family Center for Research Nursing will support training and provide much-needed resources for this important profession."

## Simons gift to fund Institute for Advanced Study collaboration

The Rockefeller University and the Institute for Advanced Study in Princeton, New Jersey, have established a joint initiative in biology supported by a $10 million gift from The Simons Foundation, a philanthropy established by mathematician and hedge fund manager Jim Simons, a Trustee of The Rockefeller University, and his wife Marilyn. The initiative, which builds on the complementary strengths of the institute and the university, will involve biologists, mathematicians, physicists and computer scientists exploring quantitative and theoretical approaches to biological problems.

To develop interactions and collaborations, the Institute for Advanced Study and Rockefeller will make joint appointments, including visiting professors and graduate and postdoctoral fellows, fund early stage high-risk projects and set up an annual joint conference as well as regular seminars, workshops and lectures.

"This unique initiative, which draws on the strength of both Rockefeller and the Institute for Advanced Study, will open new doors to studying complex biological problems," says Paul Nurse, Rockefeller University's president. "By combining techniques from several different scientific disciplines, the effort will be well positioned to make breakthroughs in how we understand key processes of life and disease."

Rockefeller University's Stanislas Leibler, head of the Laboratory of Living Matter at Rockefeller, has been appointed to a joint professorship as part of this initiative. Leibler is interested in the quantitative description of biological systems, both on cellular and population levels. He held academic appointments at the Centre d'Études de Saclay, in France, and Princeton University before joining Rockefeller University in 2001 as Gladys T. Perkin Professor. In 2003, he was appointed one of the first Tri-Institutional professors at Rockefeller, Weill Cornell Medical College and the Sloan-Kettering Institute. He also is a member of the university's Center for Studies in Physics and Biology, which promotes experimental collaborations to study both the physical properties of biological systems and the application of physical techniques to the modeling of biological networks.

A series of annual conferences will be established as part of this initiative, to be named in honor of Joshua Lederberg, a Nobel laureate in physiology or medicine and Rockefeller's president from 1978 to 1990, and mathematician John von Neumann, a faculty member at the Institute for Advanced Study from 1933 to 1957. Drs. Lederberg's and von Neumann's work on artificial intelligence, expert systems, self-reproduction and computational aspects of biological systems will serve as a model for this initiative to explore quantitative and theoretical approaches in biology.

## Science and the stimulus (continued from page 1)

provide not only direct costs to the investigators for things like equipment, salaries and supplies, but also indirect costs for the university, which helps support the expenses involved in maintaining laboratory space and providing administrative staff.

The NIH plans to spend about $7 billion of its stimulus funding on R01s. In keeping with the intent of the stimulus act — to provide support that will help keep people employed and sustain local economies — they will focus on projects that they believe can make significant advances in a two-year time frame. Most of the funding will go to grants that have been previously reviewed but were not awarded because of earlier budget constraints. This will have an important side effect: As the backlog of outstanding unfunded grants shrinks, opportunities for new applications should improve. It is estimated that about 14,000 prior applications will now be funded.

The second stream of funds will be in the form of supplemental grants, which will offer new support to extend NIH-funded research projects that are already under way. The idea here is to accelerate the pace of scientific progress that is already starting to pay off. As a practical matter, it could help with the purchase of new equipment and extend funding for postdocs who are unable to move to new positions. Many of these awards will be specific to the particular NIH institutes; those already holding NIH grants should check with the relevant institute to learn about specialized supplemental opportunities that may be available.

Several other smaller programs are also part of the stimulus act. A small amount of additional money — some $100 to $200 million — will go to fund new two-year "challenge grants," which will support high-risk, cutting edge projects with short durations. (Though the challenge grant program has been widely advertised, its impact is in fact likely to be small, as only about 200 applications will be funded and the competition ranges over 200 areas.) There is also some funding available for things like specialized improvements to shared facilities and the purchase of high-end instruments. In addition, there's $2 billion in stimulus funding going to the National Science Foundation, which they intend to use to accelerate the funding of highly rated grant proposals that are already in the queue.

It's still a bit early to know what the impact of all this will be at Rockefeller, though it seems likely that some grants that might otherwise not have been funded this year will be. Gila and her staff are working with principal investigators to identify opportunities to apply for supplemental funding and to expedite applications that can be conducted within a two-year time frame.

## Visiting scholar
(continued from page 1)

nant uterus that participate in the process that allows the mother to accept a fetus that would otherwise be identified by the immune system as foreign since it contains paternal antigens.

Rockefeller University's Visiting Scholars Program aims to foster collaborations and encourage innovative discourse by bringing outside specialists to campus for short stays. In addition to his role in the Nussenzweig lab, Dr. Strominger has hosted two seminars, and is meeting with scientists, postdocs and students from several labs.

"Rockefeller University is a very exciting place scientifically now. Immunological tolerance, which is what I'm working on, is a field to which both Michel Nussenzweig and Ralph Steinman have made major contributions," says Dr. Strominger. "I'm also really enjoying being in New York City, which is where I lived until I was almost 17, but I have not spent more than a week here since."

# Milestones

**PROMOTIONS, AWARDS AND PERSONNEL NEWS**

### Awarded:

**Nadya Dimitrova,** a 2009 Harold M. Weintraub Graduate Student Award from the Fred Hutchinson Cancer Research Center. One of 13 awardees, Ms. Dimitrova was chosen for her work on repair mechanisms of double-strand breaks. The award offers an honorarium to advanced graduate students for the quality, originality and significance of their thesis research. Ms. Dimitrova, who is a graduate student in Titia de Lange's Laboratory of Cell Biology and Genetics, will participate in a scientific symposium at the Hutchinson Center in Seattle on May 1.

**Elaine Fuchs,** a MERIT (Method to Extend Research in Time) Award from the National Institute of Arthritis and Musculoskeletal and Skin Diseases, of the National Institutes of Health, for an ongoing project on cell adhesion and cytoskeletal dynamics in skin.

### Named:

**Sean F. Brady,** a Howard Hughes Medical Institute Early Career Scientist. Chosen from among more than 2,000 applicants, Dr. Brady is one of 50 researchers named in the inaugural competition. The Early Career Scientist program, launched in 2008, was created to support the work of exceptional researchers who are at the early stage of their careers and thus vulnerable to funding challenges. Dr. Brady, who studies the therapeutic potential of naturally occurring small molecules as head of the Laboratory of Genetically Encoded Small Molecules, will receive a six-year HHMI appointment and full funding, including salary, benefits and a research budget.

### Promoted (academic appointments):

**Hiroyuki Takai,** to research assistant professor, de Lange Lab.

**Christine Trumpfheller,** to senior research associate, Steinman Lab.

### Hired:

**Laurent Abel,** visiting professor, Casanova Lab.

**Claudio Alarcon,** postdoctoral associate, Tavazoie Lab.

**Maria Alcaide,** visiting student, Nurse Lab.

**Sandrine Anne,** postdoctoral associate, Hatten Lab.

**Jessica Barson,** visiting student, Leibowitz Lab.

**John Biggins,** postdoctoral associate, Brady Lab.

**Peter Bredenbeek,** visiting associate professor, Rice Lab.

**Jamain Bristow,** nursing assistant, Hospital Nursing Outpatient.

**Katherine Cundey,** member of the adjunct faculty, Breslow Lab.

**Batya Davidovici,** instructor in clinical investigation, Krueger Lab.

**Sara Davis,** assistant, Casanova Lab.

**Brooke Delaney,** administrative assistant, Casanova Lab.

**Nichole Diaz,** research assistant, Allis Lab.

**Julien Dumond,** foreign research intern, Libchaber Lab.

**Denisoon Espinoza,** laboratory helper, Fuchs Lab.

**Hannah Foote,** research assistant, Coller Lab.

**Gisa Gerold,** postdoctoral fellow, Rice Lab.

**Vicki Giuggio,** associate editor, *JEM*, The Rockefeller University Press.

**Stefanie Grosswendt,** foreign research intern, Tuschl Lab.

**Volker Hovestadt,** foreign research intern, Tuschl Lab.

**Stephan Kutik,** postdoctoral associate, Blobel Lab.

**Urs Langen,** foreign research intern, Nussenzweig Lab.

**Yinyin Li,** postdoctoral associate, Chait Lab.

**Chen Luxenburg,** postdoctoral associate, Fuchs Lab.

**Parag Mukhopadhyay,** postdoctoral associate, Sakmar Lab.

**Yelena Nemirovskaya,** laboratory administrator, Casanova Lab.

**Sarah Puhr,** research assistant, Vosshall Lab.

**Keith Purpura,** member of the adjunct faculty, Sakmar Lab.

**Katherine Ross,** grants management specialist, Sponsored Research and Program Development.

**Arina Samarina,** visiting fellow, Casanova Lab.

**Timothy Sheahan,** postdoctoral associate, Rice Lab.

**David Shechter,** postdoctoral associate, Allis Lab.

**Nicole Steinbach,** foreign research intern, Vosshall Lab.

**Heiko Stemmann,** postdoctoral associate, Freiwald Lab.

**Hien Tran,** postdoctoral fellow, Tavazoie Lab.

**Marieke van de Belt,** foreign research intern, Rice Lab.

**Qiufan Wang,** postdoctoral associate, Krueger Lab.

**Zhigang Yi,** postdoctoral associate, Rice Lab.

**Qixiang Zhang,** research assistant, Brivanlou Lab.

**Xiaozhu Zhang,** animal technician, Greengard Lab.

This publication lists new hires, awards and promotions. Staff promotions are listed yearly; academic promotions and appointments are listed monthly.