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# BENCHMARKS

THE COMMUNITY NEWSLETTER OF THE ROCKEFELLER UNIVERSITY

FRIDAY, NOVEMBER 6, 2009

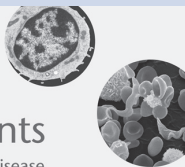
## ANNOUNCEMENTS

**Short sharp science.** Communications and Public Affairs has added a Twitter feed to the university's social media presence (see Rockefeller's Facebook profile and YouTube channel). To stay up-to-date on the latest findings from Rockefeller labs, visit [twitter.com/RockefellerUniv](http://twitter.com/RockefellerUniv).

**2009 golf outing raises \$1,000.** The seventh annual event, held at the Split Rock Golf Course in the Bronx on October 1, raised money for the Child and Family Center. The winners included: Joe O'Connor of Turner Construction, a first place score of 77; Alex Kogan, associate vice president for physical facilities and housing, in second place with 82; and Dock Master John Borsavage in third place with 88. Finance Office controller Mike Vitale had the longest drive and the record for being closest to the pin. The honor of most honest golfer went to Francis Vecchione of Granary Associates. Proceeds will go toward CFC supplies and equipment.

**Lecture series are in full swing.** The university's year-long lectures, including the Monday and Friday Lectures, began in September. The Insight Lecture Series begins November 23 with a talk by Jeffrey D. Sachs, director of The Earth Institute at Columbia University. For more information on upcoming speakers, visit [featurevents.rockefeller.edu](http://featurevents.rockefeller.edu).

**Holiday Lectures are December 28.** This year's Holiday Lectures on Science for High School Students will be given by Associate Professor F. Nina Papavasiliou. The subject of the lectures is "Battle of the Mutants: Using Genetics as a Weapon to Fight Disease."



## Battle of the Mutants

Using Genetics as a Weapon to Fight Disease

Monday, December 28, 2009

Announcements for this page may be submitted to [thenning@rockefeller.edu](mailto:thenning@rockefeller.edu).

## BENCHMARKS

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**Joe Bonner**, Director of Communications

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

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## CAMPUS NEWS

# Labs take shape in Collaborative Research Center

A little over two years after the jackhammers and bobcats first went to work on Smith Hall, the end is in sight, and the work on the Collaborative Research Center has progressed both on time and on budget. By late October, work crews from Turner Construction and its subcontractors were installing the last of the lab benches in the renovated floors of Smith Hall (top) and were beginning finishing work in the atrium (bottom left) and meeting rooms of the bridging building. The building's mechanical systems, now fully installed, will undergo a battery of tests during the winter months to ensure they work at peak capacity and efficiency. Smith and the bridging building are expected to be open by next summer.

At the Comparative Bioscience Center (bottom right), most of the laboratory and office spaces are now in the final stages of finishing work, with electricians, plumbers and HVAC specialists making their last connections. After Turner hands over the finished building to Rockefeller in mid-December, staff from Planning and Construction, Plant Operations and the CBC will conduct final tests of its systems in preparation for move-ins beginning in February.

For more photos and video of the construction progress, visit [crc.rockefeller.edu](http://crc.rockefeller.edu).



PHOTOS: ZACH VELLEUX

## FACULTY NEWS

# High honors for Friedman, Fuchs

The scientific community's spotlight was focused on Rockefeller University at the start of this academic year when two faculty members — Marilyn M. Simpson Professor Jeffrey M. Friedman and Rebecca C. Lancefield Professor Elaine Fuchs — each received two highly prestigious prizes. In June, Dr. Friedman received the Shaw Prize in Life Science and Medicine and in September he was awarded a share of the Keio Medical Science Prize, one of Japan's highest scientific awards. Last month, United States President Barack Obama presented Dr. Fuchs with the National Medal of Science, the nation's highest scientific honor,

and she was also awarded the L'Oréal-UNESCO Award in Life Sciences, which honors exceptional women scientists.

Dr. Friedman's awards recognize his research on obesity, a significant global health problem. His discovery of and groundbreaking research with the hormone leptin has provided a genetic explanation of obesity and has challenged the popular belief that willpower causes people to be obese. The Shaw Prize, which comes with \$500,000, is widely known as the "Nobel Prize of the East."

Dr. Fuchs, along with eight other laureates, received the National Medal of

Science from President Obama at a White House ceremony on October 7. She is the 14th Rockefeller scientist to receive the award since it was established in 1959. Additionally, she is one of five women representing five continents who were awarded with the L'Oréal-UNESCO prize.

Dr. Fuchs was honored for her pioneering research in mice that has increased our understanding of the basis of inherited diseases in humans, and her contributions to our understanding of the biology of skin and its disorders, particularly her investigations with adult skin stem cells, cancers and genetic syndromes.



"The truth is you do science — at least I do science — mostly for moments when you see something in a way you didn't before, or learn something new. You have that experience all the time in science and I would say certainly the discovery of leptin was quantitatively greater than what I've experienced in other instances. If I ever stop experiencing that sense of excitement I probably ought to think about doing something else. I haven't gotten to that point yet."

"When we say the system that leptin regulates is complex, in a sense what we are saying is that behavior is complex, because leptin is not the only thing that drives feeding behavior. On the other hand, the ability to now study a behavior in response to a single stimulus — like giving leptin — gives us an opportunity in the future perhaps to really dissect, in greater detail and with a greater level of understanding, how we decide whether or not to go foraging."

"I never really thought I would stick with studying skin, but there were so many fascinating questions. How can the outer surface of our skin, and our hair, be generated from the same cells? I find that remarkable. What a structural feat, to create two different tissues with completely different organization, completely different features, yet it all comes from one single layered epithelium on the surface of the embryo."

"I called my mom, who is now close to 88. I said, 'Would you like to make a trip to the White House?' And this was kind of interesting because she basically had indicated to me that she didn't think she was ever going to travel again, that at her age it was just too much of a hassle. Of course, that was to come to New York City. This was to come to the White House and she immediately said 'Absolutely, I'm not going to miss this for anything!'"

## Cost containment measures

This message is reprinted from a letter sent to campus via e-mail on October 28.

As part of the cost containment initiative that the administration launched as a consequence of the economic downturn, we have recently examined the range of events held annually on campus. We have decided to make some changes, with the aim of cutting back on our spending. We will be canceling some events and reducing the scale of others, particularly in the provision of catering.

First of all, we have decided to suspend the Holiday Party this year, and may also have to do this again for 2010. Departments and laboratories may still wish to hold their own small parties during the holiday season, but if they do so I request everyone to bear in mind the need to keep costs down as much as possible.

Instead we plan to combine the annual Employee Recognition event, usually held in the spring, with a campus-wide celebration of the significant prizes and awards received by members of the Rockefeller community over the past year. Several members of the faculty have won important science prizes in recent months and I will be very pleased to welcome everyone on the campus to a combined, larger event to celebrate these and to acknowledge the hard work and dedication of the many members of the university. This event will be held on April 21 at 3 p.m.

Later in 2010 we will hold the Anniversary Retirement Dinner, another event at which we have the opportunity to show our appreciation of the extraordinary service of long-serving members of the community.

We reviewed the various events around Convocation and have decided to suspend the Honorary Degree Dinner for this year. The honorary degree recipients will instead be recognized at the luncheon held to celebrate the new graduates on Convocation day. The campus-wide reception on the Peggy Rockefeller Plaza, held in the afternoon after the graduation ceremony, will go ahead, but on a reduced scale.

A number of smaller events were reviewed; some will be subject to certain cost-saving changes:

- At the Monday Lectures we will no longer serve refreshments. Cookies and coffee will continue to be offered prior to the Friday Lectures.
- At the biannual meetings of the Academic Senate we will serve water, coffee and tea only.
- At the monthly HOL Forum we will provide soft drinks only. Catering arrangements for the monthly Nontenured HOL Forum remain unchanged.
- Human Resources-managed

events such as Take Your Child to Work Day and the Art Show remain in place as these provide a relatively inexpensive opportunity for members of the community to share aspects of their lives with their colleagues and families.

- Proposals for symposia, such as the very successful Evolution Symposium held in 2008, will still be considered.
- Reductions have been made in the on-campus events (not related to fundraising) attended by the Board of Trustees.
- Provision of catering at meetings organized by the university administration held over the lunch period has been reduced or eliminated.

These changes will take effect from November 1.

During this period of considerable economic difficulty, it is important that we exercise restraint in all areas of our spending. But there is a balance that we can achieve: While acknowledging the need for austerity, we wish to celebrate the achievements of Rockefeller, its dedicated staff and its remarkable faculty. Most importantly, we also need to manage the operations of the university in a way that enables it to continue to function at the highest standard.

## Alumnus Robert Sapolsky honored with 2008 Lewis Thomas Prize

by TALLEY HENNING BROWN



PHOTO: BRUCE GILBERT

It is a rare child who dreams of growing up to be a mountain gorilla. When, for young Robert Morris Sapolsky, such lofty aspirations proved less than feasible, he decided on the next most exciting life — becoming a scientist. Upon graduating with a Ph.D. from The Rockefeller University in 1984, Dr. Sapolsky began what would become a lifelong, passionate pursuit studying the baboons of the East African Serengeti Plain. The fruit of that labor, a book aptly titled *A Primate's Memoir: A Neuroscientist's Unconventional Life Among the Baboons*, has won numerous awards. At a ceremony in Caspary Auditorium on June 2, Rockefeller added to the acclaim with the 2008 Lewis Thomas Prize for Writing about Science.

Dr. Sapolsky's devotion to science was germinating long before his graduate studies in Bruce S. McEwen's neuroendocrinology laboratory. As a boy growing up in New York City, he frequented the American Museum of Natural History and found himself endlessly fascinated by the dioramas, in particular the African mountain gorillas. Evincing that same boyish enthusiasm, *A Primate's Memoir* spells out in humorous, sometimes excruciating detail his unprecedented experiences living with and studying the baboons and the conclusions he has drawn from them about humans and our relationship to our fellow animals.

"Robert reveals to the reader a consanguinity not only between animal and human societies but, equally as prescient, between peoples who live at divergent ends of the cultural spectrum," said Rockefeller president Paul Nurse, speaking at the prize ceremony this summer. "He writes with a humor that is simultaneously self-deprecating and reverent of humanity, reflected in all its foolish bravado, its daring inventiveness, its humbling fellow-feeling."

Established in 1993 by The Rockefeller University Board of Trustees, the prize is named after its first recipient — writer, educator and physician-scientist Lewis Thomas. The award honors "the rare individual who bridges the worlds of science and the humanities — whose voice and vision can tell us about science's aesthetic and philosophical dimensions." Past recipients of the award include Jared Diamond, Oliver Sachs, Edward O. Wilson and Richard Dawkins.

Dr. Sapolsky is also the author of four other award-winning books and over 400 scientific papers and is a frequent contributor to popular periodicals. In addition to his role as research associate at the Institute of Primate Research of the National Museums of Kenya, Sapolsky is an expert on the effects of stress on the brain and holds the John A. and Cynthia Fry Gunn Professorship in the departments of biological sciences and neurology and neurological sciences at Stanford University and the department of neurosurgery at the Stanford School of Medicine. In addition to the Lewis Thomas Prize, Sapolsky has received a Presidential Young Investigator Award from the National Science Foundation and a John D. and Catherine T. MacArthur Foundation Fellowship.

## Environmental health and safety program wins award

by TALLEY HENNING BROWN

Probing the depths of human disease often means being up close and personal with hazardous materials. Even so, Rockefeller University has been named one of the safest campuses in the country. In New Orleans this July, Amy Wilkerson, associate vice president for research support, accepted on behalf of The Rockefeller University an Award of Honor from the Campus Safety, Health and Environmental Management Association (CSHEMA). One of only two such awards conferred this year, the honor recognizes the university's comprehensive safety program.

Established in 1954, CSHEMA is the leading professional environmental health and safety organization for the college and university sector. As part of its mission to encourage creative problem solving and address emerging health and safety challenges among member institutions, CSHEMA instituted its awards program in 1972. Applicant institutions are evaluated on a point system; the Award of Honor, which requires a score of 90 percent or higher, is CSHEMA's highest. Rockefeller University, a member since the early 1980s, applied for the first time this year.

In a nutshell — the instructions for the award application comprise 13 pages — CSHEMA looks for proof that a comprehensive environmental health and safety program is in place and covers and supports all members of the applying institution; that the program addresses all government regulations and issues particular to the institution; and that the policies are adequately enforced and measurably successful in achieving their stated goals. Additionally, CSHEMA requires proof that an appropriate level of resources is devoted to environmental health and safety issues. The application process is essentially a detailed internal audit followed by an external audit by the award committee. In many ways, this combination of internal and external audits is analogous to how universities review other programs, such as financial systems.



On the safe side. The Office of Laboratory Safety and Environmental Health, from left to right: James Gugluzza, Amy Wilkerson, Anthony Santoro, Rebecca Lonergan, Frank Schaefer, Anthony Harper, Gaitree McNab, Beth Fitzgerald and Elsie Calo.

Award applicants shoulder a heavy burden of proof because campus safety involves more than just protective clothing in the lab and round-the-clock security detail. As the thousand-plus pages of Rockefeller's CSHEMA application show, every detail from the type of seal used on a centrifuge to how to handle an aerosol can to what may or may not be poured down a drain is important in maintaining a safe workplace for employees. Furthermore, the expanding climate of ecological consciousness and the increasingly complicated governmental regulations circumscribing research institutions have created a situation that requires sophisticated tools and regulatory expertise to navigate. The university's approach to all of these issues was spelled out by the team led by Ms. Wilkerson and Laboratory Safety and Environmental Health Associate Director Frank Schaefer, who compiled information on how the university addresses injuries and illness, fire and life safety, environmental management, biological safety, radiological safety, chemical safety, government relations and emergency

preparedness.

"To win the award, the university had to demonstrate not only that we have the right policies," says Ms. Wilkerson, "but that we actually implement them, provide training and guidance, that our personnel work safely and that we are an environmentally conscious community."

The completed application, which went to CSHEMA in February, took several months to compile and involved collaborative efforts by LS&EH, the Comparative Bioscience Center, Financial Administration, Food Services, the hospital, Human Resources, Occupational Health Services, Planning and Construction, Plant Operations and Security.

"This was a great effort for us on many levels and it also gave us the opportunity to do our own audit of our whole program," says Beth Fitzgerald, assistant to the associate vice president for research support and the main point person on the CSHEMA application. "To have a jury of your peers tell you you're doing a great job is even better."

PHOTO: ZACH VILLEUX

## Tenure awarded to RNA researcher Thomas Tuschl

by THANIA BENIOS

Biochemist Thomas Tuschl, head of Rockefeller University's Laboratory of RNA Molecular Biology, has been awarded tenure and promoted to professor. Dr. Tuschl, who studies the mechanisms by which RNA can regulate genes, has been instrumental in uncovering the intricate roles played by microRNAs in gene expression. The new appointment, approved by the Board of Trustees earlier this year, was effective July 1.

Dr. Tuschl, who received his Ph.D. in chemistry from the University of Regensburg, in Germany, came to Rockefeller as an associate professor in 2003, following a postdoc at the Massachusetts Institute of Technology and a position as junior investigator at the Max Planck Institute for Biophysical Chemistry in Goettingen, Germany. He is also a Howard Hughes Medical Institute investigator, a position he has held since 2005.

Dr. Tuschl's research focuses on RNA interference (RNAi), the process by which small RNA molecules interfere with gene expression. For many years, RNAs were seen simply as vehicles that transport genetic information from the nucleus to the

site of protein synthesis, but it has become obvious that particular small RNA molecules can regulate this process in a gene-specific manner.

Working with the fruit fly *Drosophila melanogaster*, Dr. Tuschl and his colleagues showed that long double-stranded RNAs generate short double-stranded RNAs called small interfering RNAs (siRNAs), and that these short molecules mediate RNAi gene silencing. Dr. Tuschl then became

the first to show that this gene-silencing machinery exists in mammalian cells, a discovery that helped create an entire industry of producing small RNAs and exploring their therapeutic applications.

Once Dr. Tuschl and his colleagues saw that this small RNA machinery could

selectively turn off genes in mammals, including humans, they further dissected its mechanism of action by identifying

which proteins these small RNAs recognize. Building off their work and that of others, they then identified the now well-known molecules called microRNAs, the natural small RNA occupants of the RNA silencing machinery, and ultimately went on to create a microRNA atlas that defines microRNA gene expression in both

healthy and diseased tissues.

"It was a very intense time in the field," says Dr. Tuschl. "It was very competitive, trying to get the first key findings defining the biochemistry of RNA interference and understand how small RNAs could connect with diseases and be put to use clinically."



Researchers, including Dr. Tuschl, have since discovered some 500 microRNAs in human cells that have been shown to play key roles in a host of diseases ranging from Alzheimer's disease to cancer. "We now believe that the RNA interference caused by microRNAs is actually one of the most important mechanisms in gene expression," says Tuschl. "A more precise understanding of the role of RNAs in the cell could also provide a novel approach to new therapies."

"Rockefeller is known for its bold and innovative research," says Rockefeller president Paul Nurse. "And Tom has not only flourished in this environment but has become an influential leader and pioneer in his field."

Dr. Tuschl has received numerous awards, including the Ernst Jung Prize for Medicine in 2008, the Max Delbruck Medal and the Karl Heinz Beckurtz Award in 2007, and in 2003 the Wiley Prize in Biomedical Sciences from the Wiley Foundation, the New York City Mayor's Award for Excellence in Science and Technology and the Newcomb Cleveland Prize from the American Association for the Advancement of Science.

### CAMPUS NEWS

## New measures tighten ship on security protocols

by TALLEY HENNING BROWN

At the gates, behind the cameras and at every electronic lock, campus security is watching. And since last winter, they've been watching a little more closely. In an effort to patch gaps in the university's

security protocols, Director of Security James Rogers, in conjunction with Plant Operations and Laboratory Safety and Environmental Health, has in the past few months implemented several new initiatives

designed to better protect the community and increase emergency preparedness. "We don't want to change the mind-set or the free-and-easy access to the campus, but we do want to keep everyone safe," says Mr.

Rogers. "So our goal with these initiatives has been to make them as unnoticeable as possible." Visit the newly revamped Security Web site for more information: [www.rockefeller.edu/security](http://www.rockefeller.edu/security).



**Stricter ID checks.** Guards manning the campus gates typically stop people they don't recognize. But in order to better verify everyone who enters the campus, Security has been working with Development, Communications and Public Affairs and other offices to refine entrance procedures for guests. Identification cards have recently been issued, for example, to trustees and to attendees of the weekly Tri-Institutional Noon Recitals, and attendees of other public events will be required to show personal identification at the gate. "If someone with criminal intentions were to be watching our gates, we want them to see that we're checking everyone," says Mr. Rogers.



**New parking permits.** The old parking stickers, which were affixed to vehicle windows, have been replaced with new hangtags that can be more easily seen by Security personnel. In addition, temporary parking permits are now issued to approved visitors who park temporarily on campus. Speed bumps have also been installed at the 64th and 66th Street

gates to remind drivers to move slowly and to help ensure the safety of campus and neighborhood pedestrians.



**Upgraded security cameras.**

Though the campus has had cameras in key locations for years, new surveillance equipment has been added in especially sensitive locations, and old cameras have been upgraded to digital, less-obtrusive dome-shaped models. Additionally, the perimeter closed-circuit television

system, put in place by previous security director Joseph Nekola, has been migrated to a new platform that offers an easier user interface.



**Patrol verification.** In the old days, Security personnel on their nightly rounds had to insert a special key located on each floor of each building into a portable time-keeping device in order to generate a record of their patrol (the "watch-clock" boxes containing the keys can still be seen in some buildings). That system, unused

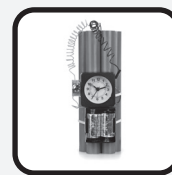
for many years, has now been replaced with one based on radio frequency ID chips like those used to deter shoplifting. Guards now scan small plastic discs, deployed across campus, with an electronic wand. The new technology, called a proxiguard tour system, provides supervisors with an electronic record of who patrolled each floor and when.



**Emergency response planning.**

With the help of the New York Fire Department, all 22 campus buildings have been relabeled at main entrances with addresses (1230 York Avenue is in fact an umbrella address used mainly for mail delivery) in order to provide easier access to municipal emergency personnel. On March 13,

Security, Plant Operations and Lab Safety hosted FDNY officials in a mock incident response in Weiss Research Building, and provided them with information describing the locations of various hazardous substances used on campus. "The FDNY has legitimate concerns about the potentially volatile aspects of what we do here," says Mr. Rogers. "But what was more troubling to them was simply not knowing how we operate, and the steps we've taken have clarified things for everyone."



**Counter-terrorism training.** As a result of requests by Security personnel, new training programs have been instituted in terrorism and ecoterrorism awareness, detecting hostile surveillance and other topics. Official protocols for situations including bomb threats, missing children and local or widespread blackouts have also been reappraised and codified.

### CAMPUS NEWS

## New library Web site launches

by TALLEY HENNING BROWN

The university's library has a rich history — it has been the campus repository for scientific journals and textbooks since it opened in 1906. But while once it was mostly accessed via a reading room on the first floor of Founder's Hall, today the gateway to that repository is primarily an electronic one. As part of a refurbishment and modernization plan outlined in 2006, the Rita and Frits Markus Library and Scientific Information Commons last month launched its revamped Web site, complete with a more streamlined user interface and new, more comprehensive archival and research tools. Working with teams in Information Technology and the Office of General Counsel, the library staff is positioning the new site to address challenges that are particular to research communities in the age of new media.

The site's new home page puts the most heavily used tools front and center, and divides all the library's electronic resources into three categories: Resources, which includes the main search and archiving tools; Services, for the library's acquisitions and other material-related requests; and Communications, where users can find information about library events and news.

The library has also launched four new online services, accessible via the Web site. DSpace, an open-source software that facilitates sharing of digital files, will allow users to archive and organize text files, images, moving images, audio files and data sets in one central, Rockefeller-owned repository. Research Portals, an offering still in development, gathers subscription and Web-based resources according to research area.

The Immunology, Virology and Microbiology Research Portal, for example, offers antibody databases, profiles of microorganisms and links to associations that track the latest HIV research or emerging infectious diseases. Pubget, a biomedicine-specific search engine with a growing collection of nearly 20 million research articles, provides journal subscribers immediate access to entire articles at the click of a button, one step faster than PubMed, which serves mainly as an abstract database.

PubSubmit, on the other hand, helps researchers with their own articles. In the spring of 2008, the National Institutes of Health instituted the Public Access Policy, requiring that all papers resulting from NIH-supported research be made publicly accessible by submission to PubMed Central, the National Library of Medi-

cine's digital archive of research literature. PubSubmit allows Rockefeller investigators to hand off their journal articles, at which point the library and legal office together review each paper for compliance to NIH guidelines, submit it to PubMed Central and obtain its resulting PMC identification number.

"We purposely placed PubSubmit at the top of the library home page, using big blue buttons that can't be missed," says Layne Johnson, former scientific informationist at the library. "We've programmed that spot on the home page with a great deal of flexibility so that in future, as new regulations and new needs arise, we can develop new tools like PubSubmit that are specifically geared to the needs of the Rockefeller research community, and they'll be just one click away."

