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The Rockefeller University

SCIENCE FOR THE BENEFIT OF HUMANITY

BENCHMARKS

THE COMMUNITY NEWSLETTER OF THE ROCKEFELLER UNIVERSITY

FRIDAY, DECEMBER 3, 2010

FROM BARRY COLLER, PHYSICIAN-IN-CHIEF

The hospital turns 100

This year marks the 100th anniversary of The Rockefeller University Hospital, a unique institution that played a prominent role in biomedical discovery in the 20th century.

When the hospital opened its doors in 1910 it became the country's first clinical research hospital. A hospital unlike any other United States institution at the time, it was devoted to clinical investigation and what is now called translational research, with bidirectional studies leading to new approaches to diagnosing, treating and preventing disease.

We take the link between science and medicine for granted today, but for nearly all of the 200,000 years of human life on earth we lived in a prescientific era. Our ancestors blindly grappled with disease as best they could, learning slowly by trial and error. By about the time the Rockefeller Hospital opened, they had succeeded in increasing life expectancy at birth by about 15 years, from 35 to just under 50 years of age. In striking contrast, in the last 100 years the systematic application of the scientific method to medicine has increased life expectancy to nearly 80 years, thus adding another 30 years of life. So while it took 200,000 years to gain 15 years of life in the mostly prescientific era, it took just 100 years of the current scientific era to achieve another 30.

A remarkable number of the discoveries that produced this amazing accomplishment were made at this very small institution. This is, of course, a testament to the brilliant scientists and physician-scientists who performed the pioneering research and helped to translate it into improved methods to prevent, diagnose and treat disease. But it is equally a testament to David Rockefeller and the other members of the Rockefeller family who literally

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BENCHMARKS

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

Zach Veilleux, Executive Editor

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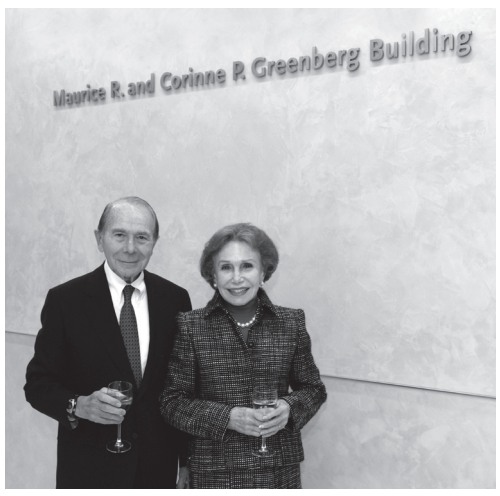
CAMPUS NEWS

Centerpiece of CRC to be called Greenberg Building



PHOTOS: HEATHER LASZLO AND ZACH VEILLEUX

Grand opening. Trustees, donors, faculty and building occupants celebrate the opening of Smith Hall and the Greenberg Building, named for Maurice and Corinne Greenberg (bottom left).

The Collaborative Research Center's newly opened seven-story "bridging" building, designed to link Smith and Flexner Halls and house meeting rooms and informal spaces for collaboration, has been named in honor of Rockefeller University Emeritus Trustee Maurice Greenberg and his wife, Corinne.

The Greenbergs have a long history of supporting the university, both personally and through The Starr Foundation, which Mr. Greenberg chairs. The Starr Foundation donated $50 million to support collaborative science at Rockefeller, including the construction of the new building and the accompanying extensive renovations of Smith and Flexner Halls. The bridging building will be officially known as the Maurice R. and Corinne P. Greenberg Building.

With approximately 180 people now occupying the newly renovated space in Smith, and the Greenberg building buzzing with activity, the Collaborative Research Center is now fully open and operational. The first lab to make the move, Robert Darnell's, arrived on the third floor of Smith just before the July 4 holiday. Over the summer, 10 additional labs made the move, as well as the Spectroscopy Resource Center, the central glasswashing facility and Lab Safety's waste handling function. Three more labs will move in within the next few months, including new faculty member Gaby Maimon (see story, below) in January and new president Marc Tessier-Lavigne in March.

"We're pleased to say that the first phase of the CRC project was completed on time and well under budget," Paul Nurse, the university's president, said at the building's dedication ceremony, held November 12. "The scientists who have moved in are reporting that the laboratories are functioning well and they are benefiting from the open design of the Greenberg building, which allows them to easily interact with other scientists." The November 12 dedication was attended by approximately 200 people, including university trustees and major benefactors to Rockefeller's Campaign for Collaborative Science.

The new CRC coffee cart on the A level is also open, serving a selection of snacks, sandwiches, salads and hot and cold beverages from 8:30 a.m. to 6:30 p.m., and meeting rooms are available for booking in the university's room reservation system.

FACULTY RECRUITMENT

New faculty member studies decision-making in flies

by ZACH VEILLEUX

Understanding how fruit flies decide when to veer right and when to veer left is important work, not because it will help protect overripe bananas, but because it could lead to insights into how other organisms, including humans, make complex behavioral decisions.

Gaby Maimon, who has been appointed Rockefeller's newest assistant professor and will open the Laboratory of Integrative Brain Function on January 1, has devoted his research program to figuring out how decisions, such as the decision about which way to navigate, are made in the tiny brains of *Drosophila melanogaster* flies. Using fluorescence microscopy and glass capillaries pulled to ultrafine tips, Dr. Maimon has developed a unique system that enables him to record the electrical activity of specific neurons in the fly brain as it flies. The setup allows him to understand what's going on in the brain as the fly is exposed to — and reacts to — various stimuli.

His work falls somewhere between the

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PHOTO COURTESY GABY MAIMON

Four new trustees join board

by JOSEPH BONNER

The Board of Trustees elected four new members at its fall meeting on November 17: Holly S. Andersen, H. Rodgin Cohen, Surya N. Mohapatra and John M. Shapiro. The Board now numbers 40.

Dr. Andersen is associate professor of medicine, attending cardiologist and director of education and outreach for The Ronald O. Perelman Heart Institute at The NewYork-Presbyterian Hospital and Weill Cornell Medical College. A graduate of Dartmouth College, she graduated with honors from the University of Rochester School of Medicine, where she was elected to the Alpha Omega Alpha Honor Society and awarded the Janet M. Glasgow Memorial Achievement Award from the American Medical Women's Association. Dr. Andersen completed her internship, residency and fellowship at the NewYork-Presbyterian Hospital and Cornell Medical College where she additionally served as the chief medical resident. She founded and chairs the David E. Rogers Memorial Research Award competition for the medical house staff at Weill Cornell, and a visiting professorship for integrative medicine is endowed in her name there. Castle Connolly and *New York Magazine* have selected Dr. Andersen as one of New York's best doctors.

"I am extraordinarily excited to join Rockefeller's Board," says Dr. Andersen. "The university is one of the pre-eminent academic medical institutions in the world and I am optimistic about its future. I am looking forward to strengthening the tri-institutional partnership." Andersen's early scientific training was in neuroscience, and she is particularly interested in working with president-elect Marc Tessier-Lavigne.

Mr. Cohen is a partner at Sullivan & Cromwell LLP. He was chairman of the firm from July 1, 2000 through December 31, 2009 and has served as its senior chairman since January 1, 2010. The law practice focuses primarily on regulatory, acquisition, corporate governance and securities matters for major U.S. and international banking and financial institutions. Mr. Cohen has acted in most of the major U.S. bank acquisitions and recent government-sponsored and capital-raising efforts and provides corporate governance advice to a large number of financial and non-financial institutions. He has played a singular role in the market events that have changed the face of the financial services industry and economy, for which *The American Lawyer* ranked Mr. Cohen number one among its 25 "Dealmakers of the Year" in 2009, noting that "he was Wall Street's go-to lawyer during the most important months for the American banking industry since the Great Depression." In March 2010, Mr. Cohen was recognized as one of the "Decade's Most Influential Lawyers" by *The National Law Journal*.

PHOTO: ZACH VEILLEUX

Trustee orientation. Paul Nurse with Ajit Jain, elected March 10, and Holly Anderson at a September 23 "orientation" at which trustees meet faculty and administration and learn about Rockefeller's research and operations.

"I know of no other organization that does more good for more people," Mr. Cohen says of Rockefeller.

Dr. Mohapatra has over 25 years of broad experience in the healthcare industry, including cardiovascular research, design, manufacturing and marketing diagnostic imaging equipment and managing diagnostic testing. He is currently chief executive officer and chairman of Quest Diagnostics, an organization he joined in 1999. Prior to joining Quest, Dr. Mohapatra served as senior vice president and member of the executive committee of Picker International, a manufacturer of advanced medical imaging technologies which is now part of Philips Medical Systems. Dr. Mohapatra received a B.S. in electrical engineering from Sambalpur University, India; an M.S. in medical electronics from The University of Salford, England; and a Ph.D. in medical physics from the University of London. He is the author of several publications and patents and is also a board member of ITT Corporation.

"I am very honored and consider it a great privilege to be asked to get involved in this preeminent research institution as a trustee," says Dr. Mohapatra. "Few institutions are as celebrated as Rockefeller University in the biomedical sciences, and I look forward to working with its distinguished scientists, leaders and fellow trustees."

Mr. Shapiro is managing director of Chieftain Capital Management, Inc., an investment firm which he cofounded in 1984. Previously, he worked at Central National Corporation and Merrill Lynch & Co. Mr. Shapiro serves as chairman of the board of Lawyers for Children, is a member of the board and executive committee of The American Jewish Committee and The American Academy in Rome, a trustee of The Washington Institute for Near East Policy, a member of The Committee on Prints and Illustrated Books for The Museum of Modern Art, and a member of the Campaign Council for Wesleyan University. He previously served as president of the UJA-Federation of New York, and as president of The Dalton School in New York City. Also, he has been a board member of The Classic Sports Network and The Children's Museum of New York. Mr. Shapiro received a B.A. from Wesleyan University and an M.B.A. from Columbia.

"I am excited for the opportunity to have a front row seat at one of the great research institutions in the world," says Mr. Shapiro. "I am looking forward to working with a high caliber board."

Hospital centennial (continued from page 1)

created so many of the unique American models of philanthropy, as well as the university's devoted supporters who honor the Rockefeller family's legacy by creatively building on, and adapting, those models to our fast-changing world. Over the past year, they have given more than $34 million in support of the hospital and the university's clinical and translational research program (see "Hospital centennial campaign raises over $34 million," right).

In my view, what has made this institution so great for more than a century is the faculty and staff's uncompromising commitment to excellence in every aspect of this institution. Our teams of investigators follow the scientific path no matter where it leads, and perform difficult, long term studies designed to address the most fundamental questions in biomedical science.

During the past year, we have celebrated the hospital's faculty, staff, students, nurses, patients and donors — all of whom have made critical contributions to the success of this unique institution — with several successful events. Last February, we revealed a new plaque in the hospital celebrating the 1944 discovery by Avery, MacLeod and McCarty of DNA as the molecule of heredity. This April, we hosted a research nursing symposium to honor the hospital's nursing staff. On October 7, we held a gala to honor the faculty and staff of the hospital, as well as our generous roster of donors who have made contributions to the hospital's research over the years. More than 350 people attended the event, including many of our trustees and benefactors as well as local officials and members of the press.

On October 18 we held a hospital staff appreciation event in Welch Hall, which was attended by many of the roughly 80 nurses, computer specialists, pharmacists, administrators and other personnel who keep the hospital running, as well as university faculty and staff who they work with. Finally, on October 29, we held a daylong scientific symposium to celebrate the ongoing research and collaborations currently under way at the hospital. Speakers included Eric Lander of the Broad Institute of MIT and Harvard, Donald Capra of the Oklahoma Medical Research Foundation, Daniel Rosenblum of the National Center for Research Resources at the National Institutes of Health, and Rockefeller's own Jean-Laurent Casanova, Leslie Vosshall and Charles Rice.

In addition to these events, we have created a Web site (centennial.rucares.org) featuring vignettes of 100 of the most important scientific discoveries made at the hospital that have resulted in improved medical care. There's also a 12-minute video that explores the hospital's mission and features some of its current research.

The revolutionary idea on which the hospital was founded is as alive today as it was in 1910. More and more, both basic scientists and physician-scientists are exploring medical applications of their discoveries. In fact, currently a total of 25 laboratories are conducting human subject protocols, including many basic science laboratories. The hospital's expert and dedicated staff provide a supportive infrastructure to ensure the safety of our research volunteers and the highest scientific quality of the studies; to facilitate the research of these gifted investigators; and to train the next generation of clinical research leaders. We now have three vibrant translational research educational programs: the Clinical Scholars master's degree program for physician-scientists; the Certificate in Clinical and Translational Science program for basic scientists, postdocs and both Ph.D. and M.D.-Ph.D. students; and the new Transition to Scientific Independence program for K-awardees and other graduates of our Clinical Scholars program.

The centennial celebration has inspired us to rise to the challenges that still remain: 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, because they are lived in good health.

Hospital centennial campaign raises over $34 million

A fundraising campaign launched in conjunction with the Rockefeller University Hospital centennial celebration has raised $34.6 million. The gifts, from 175 donors and ranging in size from a few thousand dollars to $10 million, will go to maintain clinical and patient-oriented research at the hospital and to support specific laboratories and research programs.

Twenty-three million dollars of the total was raised in six months leading up to a black-tie dinner held in celebration of the hospital's centennial on October 7. Attended by 350 benefactors, friends and faculty members of the university, the dinner dance included speeches by hospital leaders and the debut of a 12-minute film on the hospital's history. "The materials produced for the centennial dinner, including the film and an essay by Professor Emeritus Jules Hirsch chronicling the hospital's first 50 years, were designed to highlight the institution's mission and accomplishments, and will continue to broaden public awareness of the hospital," says Marnie Imhoff, vice president for development.

At the dinner, the university's Board of Trustees presented the hospital's physician-scientists and staff with an 1892 first edition of *The Principles and Practice of Medicine*, by Sir William Osler, a classic medical text which played a key role in the founding of the university and its hospital. The dinner also featured a proclamation presented by New York Mayor Michael Bloomberg declaring October 7, 2010 "The Rockefeller University Hospital Day in New York."

New security measures to address recent computer thefts

by ZACH VEILLEUX

A series of recent criminal incidents on Rockefeller's campus this fall, one of which resulted in a breach of sensitive data, has led the university's administration to tighten security at the 64th Street gate, plug holes in its surveillance network and formalize an existing data ownership policy. The incidents, all three of which involved unauthorized individuals entering campus, resulted in the thefts of computers and cash; there were no injuries.

The first incident, which occurred sometime over the Labor Day holiday weekend, was reported on September 7, when personnel working in the Bronk building separately notified Security that two computers were missing: a 20-inch iMac desktop and a Mac Mini. Two building occupants that had been working on September 6 later told Security they had encountered an unfamiliar person in the building. A review of security camera tapes, however, was inconclusive.

"It's likely that whoever stole the computers managed to exit the building without passing a security camera, which was possible in Bronk," says Jim Rogers, director of security.

In the second incident, a security officer on a regular patrol in Welch Hall encountered a man sleeping in a storage room on the first floor of the library at 8 a.m. on a Sunday. Although he claimed to be a Hunter College student who had been let in by a friend, Security was not able to substantiate his story and he was escorted from the campus. The same man returned three days later, attempting to enter at the 67th Street gate without showing ID; after being confronted by the guard on duty, he fled north on York Avenue.

Finally, on October 16, a student working on the 10th floor of the Weiss building called Security at 12:45 p.m. to report a suspicious person. She later discovered that $50 was missing from her pocketbook. Although Security responded and searched the building, he was not found. This time, security camera tapes were helpful.

"After reviewing the tapes, we were able to determine that he entered the campus via the 64th Street gate, slipping in after somebody opened the gate to leave," says Mr. Rogers. He is then seen entering Weiss on the second floor, and leaving, about six minutes later, from the first floor. He fled by climbing over the fence near the chiller plant.

In all three cases, Security notified the NYPD and filed reports. In the case of the stolen computers, Security also notified the information security team in IT, which is standard practice when information resources are compromised. Information security personnel conduct their own investigation whenever equipment potentially containing sensitive university data is reported lost or stolen.

Marty Leidner, chief information security officer for the university, and his team spoke with the heads of the two labs involved and performed a series of forensic tests on data that had been backed up from the machines. "We found the names and social security numbers of approximately 30 people, mostly from fifteen-year-old documents relating to NIH grants," says Mr. Leidner. Although the NIH stopped asking for social security numbers in 2001, it's not uncommon for such sensitive personal data to exist in old documents that have long been forgotten deep within the file structures of computers, Mr. Leidner says.

"One of the best things people can do to safeguard this type of sensitive data is to keep their systems cleared of outdated and unnecessary documents," Mr. Leidner says. "Deleting unneeded documents is the simplest solution, but if users want to archive their old data, we have a variety of methods that can help them do so safely, including hardware and software encryption tools." IT also has software available that can help search for and redact certain types of personal information.

While it's unlikely that the thief who took the computers was interested in their data, in most states law requires that breaches of sensitive data, including social security numbers, be reported, and that the victims be notified. To satisfy those requirements, the university's General Counsel's office reported the incident to the appropriate state agencies and sent a letter to the affected individuals explaining the situation and offering to pay for identity monitoring service.

"We're fortunate that this incident was relatively small and did not involve patient data," says Mr. Leidner. "But it's a wake-up call to what could happen." As a result, the university's administration has formally adopted a data classification and ownership policy (available at it.rockefeller.edu/dataownership), which clarifies how certain types of data must be protected and emphasizes the responsibility of users to protect that data.

The university is working to install additional cameras in Bronk and has closed the 64th Street gate to both incoming and outgoing traffic during nights and weekends. "While we recognize this decision is an inconvenience for some, this gate is the weakest point in our perimeter security and we have now seen that it is the preferred point of entry for people who are looking to cause mischief," says Mr. Rogers. "The only way to make it more secure when we can't have a guard available is to disable it altogether." Those who need to enter or leave the south campus between 6:30 p.m. and 5 a.m. and on weekends may do so using the turnstile adjacent to the 64th Street guard's booth and the CBC or loading dock.

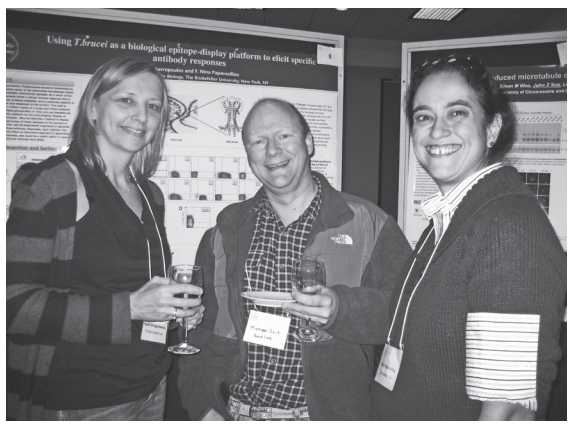
"Although we have relatively few incidents on campus, it's important to remember that we are in a big city and all types of crimes do occur," says Mr. Rogers. "People should be vigilant and notify security promptly when they see unfamiliar or suspicious people in their lab or on their floor. Security is a shared responsibility and the members of our community are in the best position to know when something's amiss."

Interdisciplinary retreats bring Rockefeller labs together on research

by BRETT NORMAN

Last month, the heads of 11 Rockefeller laboratories and researchers working in them gathered at a conference center in Tarrytown, New York, for a weekend retreat focused on genome integrity. From mass spectroscopy to cell cycle and telomere maintenance studies, the scientists shared their expertise, hoping to gain insight from different perspectives that could inform work in their respective fields or launch new collaborations.

The Anderson Cancer Center Retreat, chaired by Leon Hess Professor Titia de Lange, stems from one of the planks of Rockefeller's strategic plan, developed after President Paul Nurse arrived in 2003, to foster more interaction among the diverse labs at the university and seed new collaborations. It's one of four ongoing or planned retreats, each organized to converge different perspectives on their topics: genome integrity, chemical and structural biology, neuroscience and infectious diseases. Funding for the retreats comes primarily from gifts donated to enhance collaborations. The schedules include time for presentations and poster sessions, as well as meals and social events that allow scientists to talk informally.



In retreat. Agata Smogorzewska, Michael P. Rout and Nina Papavasiliou at the Anderson Cancer Center retreat in November. Scientists from 11 labs attended the event.

"Paradigm-changing discoveries happen at intersecting fields of research," Dr. Nurse says. "Through this program of regular retreats, which began several years ago but is now fully up and running, we have sought to foster more frequent interactions with scientists in different areas of research."

According to researchers who attended the retreat at the Tarrytown House Estate and Conference Center last month, it's been effective. "Scientifically, I've gotten more out of this retreat than I have out of any other single thing at Rockefeller, apart from lab work," says Lance Langston, a postdoctoral fellow who attended the first Anderson retreat in 2007 and has returned every year since. "I think it's truly valuable. Even if you don't end up with direct collaborations per se, you find new ways to improve what you're doing from different perspectives, things you wouldn't necessarily think of until you get outside of your box."

Dr. Langston, who studies the DNA replication fork in Michael O'Donnell's lab, works on the same floor of Weiss Research Building as Beatrix Ueberheide, a postdoctoral associate in Brian T. Chait's lab. Although they run into each other in the halls frequently, neither knew exactly what the other person studied until they heard the research presentations at the retreat. "You get completely different perspectives on your work, and that's powerfully motivating, questions that would not come from people in your own field," Ueberheide says.

The Anderson retreat was the first of this academic year. It will be followed in late spring by the Pels Family Chemical and Structural Biology Retreat, chaired by Howard C. Hang, and the Neuroscience Retreat, chaired by Leslie B. Vosshall. The newest addition is the Infectious Disease Biology Retreat, which will debut in September 2011, chaired by F. Nina Papavasiliou. The Neuroscience Retreat is the largest with about 150 attendees, about twice the size of the others, but each includes participants from at least 10 labs at Rockefeller. In total, more than 70 percent of the labs on campus will have participated in these retreats, Dr. Nurse says.

"Getting people away from their laboratories and out of their routines is what makes these retreats work," says Dr. Nurse, who has attended all four annual Anderson retreats held since 2007. "Once researchers learn about what their neighbors are working on, they often see opportunities for furthering their work that would never have been considered otherwise."

Karolinska collaboration program is revived

by ZACH VEILLEUX

The university has restarted a dormant program begun in the early 1980s to fund exchanges between Rockefeller University and the Karolinska Institute in Sweden. Under the terms of new agreements signed with Karolinska in June, selected postdocs and technical staff from Rockefeller will be able to travel to Sweden for experimental work and training, and a lecture program will be established that will fund travel for Rockefeller and Karolinska faculty members to speak at each other's institutions.

The Karolinska Institute, located outside Stockholm, is one of Europe's most prestigious biomedical research universities. Its focus on basic and translational research and long tradition of making fundamental discoveries in biology make it a natural counterpart to Rockefeller. Over the years there have been many cross-continental interactions and collaborations.

"Rockefeller and the Karolinska Institute have a history of useful exchanges, and the newly revived programs will build on that, enabling members of both scientific communities to once again work collaboratively within a special system of support," says Mike Young, vice president for academic affairs.

The original Rockefeller exchange program with Karolinska was begun nearly three decades ago with the establishment of the Gunnar and Lillian Nicholson Exchange Fund for Biomedical Scientists. In 1982, Mr. Nicholson, a Swedish immigrant to the U.S. who made his fortune in the paper industry, bequeathed funds to endow the annual exchange of selected scientists between the two institutes in perpetuity. Over the years, the program has taken many forms, including occasional lectures and symposia, stipends that paid for Rockefeller faculty, students and postdoctoral researchers to spend time at Karolinska, and fellowships that brought members of the Karolinska community to Rockefeller. Torsten Wiesel, president emeritus of Rockefeller and an alumnus of Karolinska, has played a role in bringing the two institutions together over the years.

Since 2004, however, the program has been inactive, and funding for the exchanges has accrued without being spent.

The new agreements, facilitated by Dr. Wiesel and signed this summer by Rockefeller President Paul Nurse and Karolinska President Harriet Wallberg-Henriksson, specify that the exchange will consist of three components. A lecture program will pay travel expenses for one Karolinska faculty member to speak at Rockefeller and for one Rockefeller faculty member to speak at Karolinska each year. The speakers, who will also spend two to five days meeting with faculty and students and giving informal presentations, will be chosen by the host institute from a list of between five and 10 candidates nominated by their faculty.

Under the postdoctoral fellowship program, a one- to two-year fellowship will be awarded to a student from each institute every other year to study and conduct research at the other institute. Students or newly appointed postdocs at either institute may apply for the program, and applicants will be selected by a faculty committee. "This component of the exchange program has already begun, with Rockefeller and the Karolinska Institute making their first calls for postdoctoral applicants," Dr. Young says.

Finally, the Nicholson Exchange Program will provide support for short term technical and research exchanges by scientists at many levels, including doctoral students, research assistants and resource center personnel. The visits can last between one and 12 weeks, depending on the scope of the work proposed.

MILESTONES

PROMOTIONS, AWARDS AND PERSONNEL NEWS

Awarded:

Jan L. Breslow, the 2010 Research Achievement Award from the American Heart Association. Dr. Breslow is Frederick Henry Leonhardt Professor and head of the Laboratory of Biochemical Genetics and Metabolism. The award was presented November 14 at an American Heart Association meeting in Chicago.

Marguerite Mangin, a Legion d'Honneur from France, the country's highest decoration. Dr. Mangin, academic programs director in the President's Office and a senior research associate in Thomas P. Sakmar's Laboratory of Molecular Biology and Biochemstry, received the award from Paul Nurse, himself a recipient of the Legion d'Honneur, at the French Consulate in New York on November 23.

Elected:

Jeffrey M. Friedman and **Elaine Fuchs**, to associate members of the European Molecular Biology Organization, which promotes excellence in and helps shape the direction of molecular life sciences in Europe. Dr. Friedman is Marilyn M. Simpson Professor and head of the Laboratory of Molecular Genetics; Dr. Fuchs is Rebecca C. Lancefield Professor and head of the Laboratory of Mammalian Cell Biology and Development. Seven current members of the university's faculty are now EMBO members.

Published:

Man and Woman: An Inside Story, by **Donald W. Pfaff**. The book, a description of how genetic and environmental factors produce small sex differences in certain abilities and huge sex differences in feelings, in pain and in suffering, suggests that gender roles operate at many different levels to influence behavioral mechanisms. Dr. Pfaff is head of the Laboratory of Neurobiology and Behavior.

Promoted (academic appointments):

Rossana Henriques, to research associate, Chua Lab.

Hired:

Alexander Abadir, research assistant, Nussenzweig Lab.

Angelie Aldeguer, research assistant, Fuchs Lab.

William Bachmann, executive assistant, Investments.

Michal Domanski, visiting student, Rout Lab.

Jie Fan, postdoctoral associate, Blobel Lab.

Yaron Fuchs, postdoctoral associate, Steller Lab.

Christian Gaebler, visiting student, Ravetch Lab.

Yuval Itan, postdoctoral associate, Casanova Lab.

Natalia Ketaren, postdoctoral associate, Rout Lab.

Grant Martin, research assistant, Greengard Lab.

Zahrah Masheeb, research assistant, McEwen Lab.

Marian Mellen, postdoctoral associate, Heintz Lab.

Manuel Mueller, postdoctoral fellow, Muir Lab.

Thiago Oliveira, visiting student, Ravetch Lab.

Rita Pfeifer, foreign research intern, Steinman Lab.

Mark Rinaldi, human resources assistant, Human Resources.

Kathleen Rutkin, grants management specialist, Sponsored Research and Program Development.

William Schneider, postdoctoral associate, Rice Lab.

Lauren Sinnenberg, study coordinator, Steinman Lab.

Selamawit Tadesse, research support associate, Flow Cytometry Resource Center.

Angela Teixeira, research assistant, Steinman Lab.

Gianna Triller, foreign research intern, Papavasiliou Lab.

Kathaliya Wongsatittham, assistant to the associate vice president, Research Support.

David Wynne, postdoctoral associate, Funabiki Lab.

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

Gaby Maimon (continued from page 1)

traditional fields of behavioral neurophysiology and behavioral genetics. "In behavioral neurophysiology," Dr. Maimon explains, "you record electrical activity from neurons as animals perform specific tasks; in behavioral genetics you manipulate the expression of genes and look for an impact on behavior. Both fields have developed great insights, but what has been difficult is to connect how genetic manipulations affect behavior through the real-time physiology of neurons. Our system may be useful for bridging this gap."

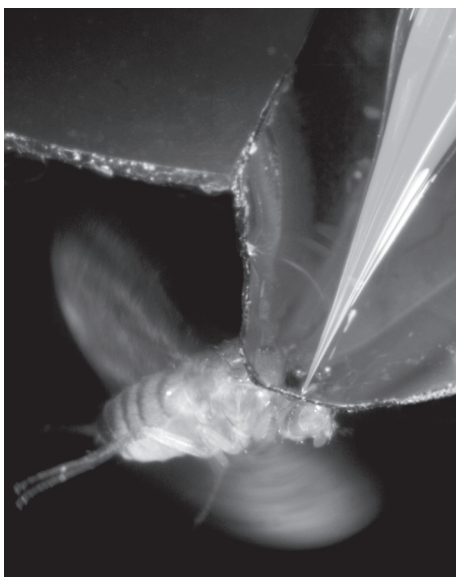
Dr. Maimon, who was born in Israel, received his undergraduate degree from Cornell University and spent a year as a predoctoral research fellow in an NIH ethology lab before entering graduate school at Harvard University. He received his Ph.D. in 2005 and moved to the California Institute of Technology as a postdoc.

It was at Caltech, in the lab of Michael Dickinson, where he developed the method for obtaining "patch-clamp" recordings of the electrical activity of neurons in behaving flies. In his technique, which took over a year to develop, the experimenter tethers a fly to a stage in order to allow for the placement of electrodes, while still giving the animal the freedom to fly in place, to walk on a treadmill or to groom. Maimon and his colleagues coax the fly into locomotion — with a puff of air, for instance — and record the activity of specific neurons as the fly decides how to react to visual stimuli presented on a panoramic display surrounding the animal.

At Rockefeller, Dr. Maimon hopes to use his methodology, along with the techniques of genetic manipulation and molecular biology, to further our understanding of the neuronal basis of behavioral choice, the neuronal basis of behavioral timing and the origin of behavioral variability — why different individuals make different decisions and why the same individuals make different decisions at different times.

"It is a pleasure to welcome Gaby to Rockefeller," says Paul Nurse, the university's president. "Gaby is doing fascinating work to understand how neurons are linked to behavior, and he has developed a unique and very innovative system for studying decision-making in a model organism. His research has the potential to help us understand better how and why our brains lead us to make the decisions we make."

"Better understanding the neural basis of behavior in a model organism such as the fly would be a great leap forward for understanding mammalian neurobiology as well," says Dr. Maimon. "All animals have certain needs — such as deciding when and where to move. We hope that work in flies will give us a blueprint for what it would mean to answer the same types of questions in bigger organisms. Ultimately understanding how flies control the initiation and timing of action may teach us something about how the human brain controls precisely timed behaviors like speaking and what goes wrong in disorders such as Parkinson's disease or Huntington's disease."



Pinpointing neurons. Dr. Maimon's technique allows him to record the activity of specific neurons in the fly brain as it reacts to visual stimuli on a panoramic screen.

AWARDS AND HONORS

2010 Pearl Meister Greengard Prize awarded to pioneers of cancer genetics

by JOSEPH BONNER

Janet Davison Rowley and Mary-Claire King, pioneering cancer geneticists, are the recipients of the 2010 Pearl Meister Greengard Prize awarded by The Rockefeller University. Created to recognize the accomplishments of outstanding female scientists, the $100,000 prize was presented at a ceremony in Caspary Auditorium on November 16.

"Janet Rowley and Mary-Claire King have each made vital contributions to our understanding of cancer as a genetic disease," says Paul Nurse, the university's president. "Their work has advanced the science of genetics and improved medicine for the benefit of humanity."

Dr. Rowley, Blum-Riese Distinguished Service Professor of Medicine, Molecular Genetics and Cell Biology and Human Genetics at the University of Chicago, is regarded as a major champion of the modern cancer cytogenetics movement that helped open the field of molecular oncology. In 1972, Dr. Rowley discovered two recurring chromosome translocations involved in human cancer: the 8;21 translocation in acute myelogenous leukemia and the 9;22 translocation, which results in the Philadelphia chromosome seen in chronic myelogenous leukemia. Dr. Rowley's work provided evidence that genetic abnormalities are a critical factor in cancer and revolutionized cancer research and treatment. The success of the targeted cancer drug Gleevec, based on her discovery of the chromosome translocation in chronic myelongenous leukemia, is a notable outcome of Dr. Rowley's seminal findings.

Dr. Rowley earned her B.S. in 1946 and her M.D. in 1948 from the University of Chicago. In 1962, after a year as a research trainee in England, Dr. Rowley returned to the University of Chicago as a research associate in the department of medicine. She became an associate professor in 1969 and a full professor in 1977. In 1984, Dr. Rowley was named the Blum-Riese Distinguished Service Professor. She has been the recipient of numerous awards including the Albert Lasker Clinical Research Award, the National Medal of Science, the Gruber Prize in Genetics, the Presidential Medal of Freedom, the Jessie Stevenson Kovalenko Award from the National Academy of Sciences and the Award for Lifetime Achievement in Cancer Research from the American Association for Cancer Research.

Dr. King, American Cancer Society Professor of Medicine and Genome Sciences at the University of Washington, studies the genetics of complex, common human conditions. Her primary areas of interest are breast and ovarian cancer and genetic influences on major mental illness, especially schizophrenia. Her approach is to apply human genetics and genomics to the identification and characterization of critical genes in informative families and populations. Dr. King was the first scientist to show that breast cancer is inherited in some families as the result of mutations in the gene that she named *BRCA1*. This discovery and her subsequent research on the genetics of schizophrenia and of hearing loss have transformed the understanding of complex disease inheritance. Dr. King is also recognized as a pioneer in the development of DNA sequencing for human rights investigations. She has carried out identification of victims of human rights violations for the United Nations War Crimes Tribunal and served as consultant to the Commission on the Disappearance of Persons of the Republic of Argentina.

PHOTO: DARREN ORNITZ

Winning conversation. Janet Davison Rowley (left) and Mary-Claire King discuss the genetics of cancer with Paul Nurse following the presentation of the Pearl Meister Greengard Prize.

Dr. King received her Ph.D. in genetics from the University of California, Berkeley, in 1972. After completing a postdoc in cancer genetics at UC San Francisco, she returned to UC Berkeley in 1976 as professor of genetics and epidemiology. She accepted her current position as American Cancer Society Professor of Genetics and Medicine at the University of Washington, Seattle, in 1995. She has been an affiliate member of the Fred Hutchinson Cancer Research Center since 1998. Dr. King is a member of the National Academy of Sciences, the American Academy of Arts and Sciences and the Institute of Medicine and is a foreign member of the French Academy of Sciences. She is the recipient of the American Society of Clinical Oncology Basic Science Award, the American Cancer Society Medal of Honor for Clinical Research, the Weizmann Institute Award for Women and Science and the Gruber Prize in Genetics.

The Pearl Meister Greengard Prize was established by Paul Greengard, Vincent Astor Professor at the university and head of the Laboratory of Molecular and Cellular Neuroscience, and his wife, sculptor Ursula von Rydingsvard. Dr. Greengard donated the proceeds of his 2000 Nobel Prize in Physiology or Medicine to Rockefeller University and, in partnership with generous supporters of the university, created the yearly award. Named in memory of Dr. Greengard's mother, who died giving birth to him, the prize was founded to honor women who have made extraordinary contributions to biomedical science, a group that historically has not received appropriate recognition and acclaim.

Andrea Mitchell, chief foreign affairs correspondent at NBC News and host of the daily "Andrea Mitchell Reports" on MSNBC, was the guest speaker at this year's prize ceremony.