

BENCHMARKS

THE COMMUNITY NEWSLETTER OF THE ROCKEFELLER UNIVERSITY

FRIDAY, NOVEMBER 25, 2011

ANNOUNCEMENTS

Holiday party is December 8. After a two-year hiatus, the university-wide holiday celebration is back. All are invited to Weiss Café from 3:30 to 5 p.m. for food and beverages.

Happy anniversary. At an afternoon reception on October 27, the university celebrated employment anniversaries for 147 members of the community who had reached 10 years of service in 2009, 2010 or 2011. For a list of the names of the 10-year honorees, see benchmarks. rockefeller.edu/anniversary. Employees who have reached longer milestones will be recognized in the spring.

Bags for sale. Rockefeller reusable shopping bags are available for \$3.25 each from the Weiss and CRC coffee carts. The sturdy, lightweight nylon bags are the size of a plastic grocery bag and fold into an attached pouch for storage. Carry one on your errands to help reduce waste.

Holiday Lectures are December 27. This year's Rockefeller University Holiday Lectures on Science for High School Students, begun in 1959 by Alfred E. Mirsky, a biochemist and university librarian, will feature Sarah Schlesinger and Marina Caskey from Ralph Steinman's lab. About 400 students from schools around the city attend the lectures each year. This year's lectures are entitled "Not Just Another Macrophage: How Ralph Steinman's Controversial Discovery of the Dendritic Cell *Slowly* Transformed Immunology." Tickets are required. For more information, call Gloria Phipps at x8967.



TUESDAY, DECEMBER 27, 2011

Not Just Another Macrophage

How Ralph Steinman's controversial discovery of the dendritic cell slowly transformed immunology

Announcements for this page may be submitted to zveilleux@rockefeller.edu.

BENCHMARKS

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BenchMarks is published monthly and is distributed on the campus of The Rockefeller University. It is produced by the Office of Communications and Public Affairs. The Rockefeller University is an affirmative action/equal employment opportunity employer. © 2011 The Rockefeller University.

Printed with vegetable-based inks on recycled paper made from 100 percent postconsumer waste.

OBITUARY

Nobel laureate Ralph Steinman dies at 68

by ZACH VEILLEUX



Laboratory legacy. The microscope with which Ralph Steinman made his discovery of dendritic cells in 1972.

Ralph Steinman, an immunologist who spent his entire career at Rockefeller and died just days before the Nobel Prize committee announced his name, passed away on September 30 after a four-and-a-half year battle with pancreatic cancer. Dr. Steinman, who discovered dendritic cells with Rockefeller immunologist Zanvil Cohn in 1972, spawned an entire branch of immunology devoted to understanding how the immune system is coordinated and how it learns to recognize infectious microorganisms and tumor cells. His recent work led to the development of an experimental human vaccine for HIV which began clinical testing last year.

Born in Montreal, Canada, in 1943, Dr. Steinman developed an interest in science at a young age, and he pursued it at McGill University and then Harvard Medical School. Although he trained to be a physician, he was drawn to research, and ultimately to Rockefeller, where he joined the laboratory of Dr. Cohn and James Hirsch — the Laboratory of Cellular Physiology and Immunology — in 1970. It was just a few years later that he made the landmark discovery that would define his scientific career.

Immunologists at the time had known there must be a cell that acted as a coordinator of the immune system — that would collect antigenic substances from foreign invaders such as bacteria and viruses and present them to B cells and T cells that carry out the dirty work of destroying the unwelcome guests. Scientists assumed this was primarily the work of macrophages. But while investigating the production of antibodies in the spleen, Dr. Steinman noticed an unusual cell that acted like a macrophage but didn't look like one.

"Ralph coined the term 'dendritic cell'

in 1973 because he thought the cells he discovered looked sort of like bare tree branches," says Carol Moberg, a senior research associate who has worked in Dr. Steinman's lab since 1987. "But over the years he often suggested alternate labels. He proposed 'novel cell' for its independence, 'antigen presenter,' 'sentinel,' 'orchestrator,' 'controller,' 'nature's adjuvant' and, possibly inspired by his granddaughter's favorite movie, *Ratatouille*, 'a pilot light for a kitchen of fantastic immunological chefs.'"

For most of the 1970s, dendritic cells were, to put it mildly, underappreciated. Dr. Steinman himself was initially unaware of the significance of his finding. However, his dedicated examinations of the cell over the next several years revealed not a minor player but one that had been quietly running the show the whole time. Dr. Steinman showed that dendritic cells, not macrophages, are the main T cell-stimulating cells, and later demonstrated that they also stimulate B cells and NK cells. And the field of immunology reacted with silence and occasional ridicule.

"The idea that a new type of immune cell could be found in 1973 — in the era of molecular cell biology — simply by looking down a microscope seemed far-fetched, and the early criticism was relentless," recalls Michel Nussenzweig, Dr. Steinman's first student and current head of Rockefeller's Laboratory of Molecular Immunology. "This put Ralph in the position of being not only the dendritic cell's discoverer, but its advocate and cheerleader, and he spent much of his energy in those early years lobbying his colleagues to recognize its importance. That he ultimately succeeded is a testament to his forceful personality, energy and persistence."

Dr. Steinman pursued the promise of

dendritic cells for the rest of his career, and he built a great many collaborations with immunologists and scientists working in other fields. His *in vivo* studies in the 1990s found that immature dendritic cells position themselves at places in the body that are most vulnerable to invasion by microbes — the skin, the nasal passages and throat, the intestines, the genitals — and wait until they are needed. Then, as soon as a dendritic cell takes its first antigen prisoner, an incredible maturation process takes place in which its armor is strengthened and its antigen-presenting and signaling capabilities increase.

More recently, he focused a great deal of attention on the promise of dendritic cells to treat and prevent disease. The ability of dendritic cells to defend the body against autoimmunity might be channeled for use in the treatment of allergies, transplantations and autoimmune diseases like type 1 diabetes, multiple sclerosis and psoriasis. Moreover, the techniques developed by Dr. Steinman to work with dendritic cells effectively in a test tube have enabled the development of therapeutic dendritic-cell vaccines for various types of cancer and preventive vaccines for HIV.

"Ralph was led by the science and although he had his biases and direction, he always let the data drive things," says Maggi Pack, a senior research associate who worked with Dr. Steinman for over 33 years. "He was objective, optimistic and never seemed to get discouraged."

Eventually, with persistence, Dr. Steinman won not only the respect of his field, but also their commendation. In recent years he was the recipient of several of the most prestigious prizes in biomedicine, including the Gairdner Foundation

continued on page 4

Fundraising campaign concludes with \$628 million

by ZACH VEILLEUX

The Rockefeller University Campaign for Collaborative Science, the fundraising effort launched to raise support for the initiatives of the strategic plan developed at the beginning of Paul Nurse's presidential tenure, concluded in June having raised \$628 million in new gifts and grants — far surpassing the \$500 million goal set in 2003.

"The university has had tremendous success raising money to pay for the ambitious proposals laid out in Paul's plan, and it's because of the generosity of the many donors who contributed to this campaign that Rockefeller is fiscally strong," says Russell C. Carson, chair of the Board of Trustees. "We are well-positioned to write the next chapter of the university's history, under the leadership of Marc Tessier-Lavigne."

The most visible element of the recent campaign is the construction of the 125,000 square foot state-of-the-art Collaborative Research Center. Gifts to the campaign have also helped to support the university's year-to-year operations, allowed for the recruitment of 12 new faculty members and funded numerous other initiatives, including an expanded fellows program and new resource centers. In addition, campaign gifts to the university's endowment have strengthened its long-

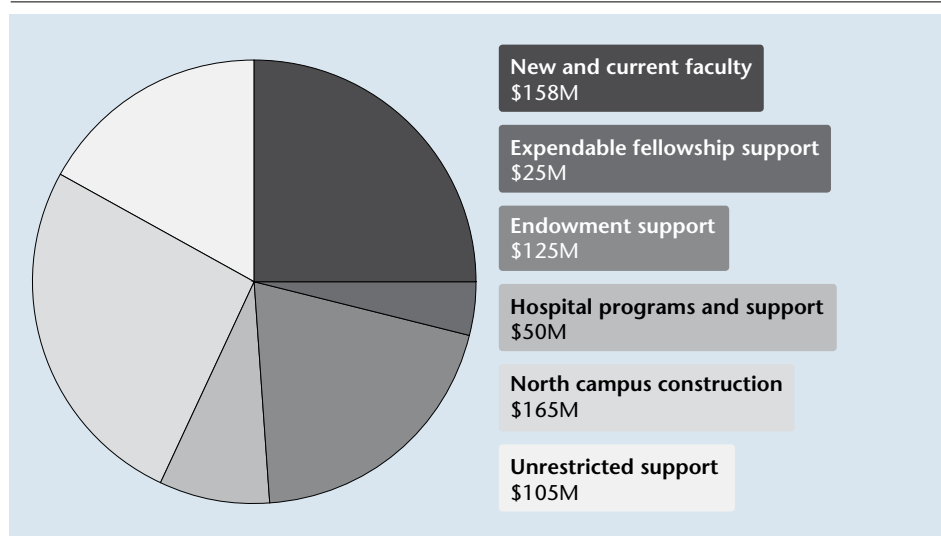
term financial outlook. (See chart, right.)

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

In all, more than 4,000 donors made nearly 12,000 gifts to the university. Among them were 92 gifts of at least \$1 million, including 11 gifts of \$10 million or more. David Rockefeller, honorary chair and a trustee of the university for over 70 years, committed more than \$100 million to the campaign, making the largest single private gift in the university's history. The Starr Foundation made several grants, including one of \$50 million, the largest foundation grant ever received at Rockefeller.

"The university is blessed with benefactors who are passionate about science and who understand that an investment in science at Rockefeller can yield incalculable benefits to human health," says Vice President for Development Marnie Imhoff. "In addition, many of our friends have been generous with their time as well as their financial resources. The univer-

Campaign gifts by broad purpose: \$628M



sity's Board of Trustees, The Rockefeller University Council and the Committee on Trust and Estate Gift Plans, as well as active volunteer groups such as *Women & Science*, *Parents & Science* and *Bridges to Better Medicine*, have all been essential to the success of the campaign."

The Campaign for Collaborative Science was the most ambitious fundraising effort in the university's history. "Philanthropy to Rockefeller was taken to an entirely new level," notes Trustee Judith

Berkowitz, chair of the Board's development committee. "Our trustees and friends have been extraordinarily supportive of our campaign, especially in years of economic uncertainty. Because of their commitment and generosity, the future of the university looks brighter than ever."

Dr. Tessier-Lavigne is currently working closely with a campus committee to draft a new strategic plan for the university, and a new fundraising campaign linked to its proposals will be unveiled in 2012.

Small 2011 surplus to help plug future deficits

University's \$325 million operating budget closes with \$1 million to spare

by ZACH VEILLEUX

Strong fundraising, access to federal stimulus funds and better-than-expected royalty income led the university to close the 2011 fiscal year with a \$1.1 million surplus, but the approved 2012 budget is in a deficit position, according to Jim Lapple, vice president for finance.

"The university's financial picture was stable in 2011 — our faculty competed strongly for federal stimulus grants and we had an excellent year for fundraising — but we are continuing to feel the effects of the 2009 economic turmoil," says Mr. Lapple. "For that reason, with the Board's approval, we have aggregated the fiscal year 2011 surplus with surpluses from fiscal years 2009 and 2010 in a reserve fund that will be used to address projected shortfalls in future budgets."

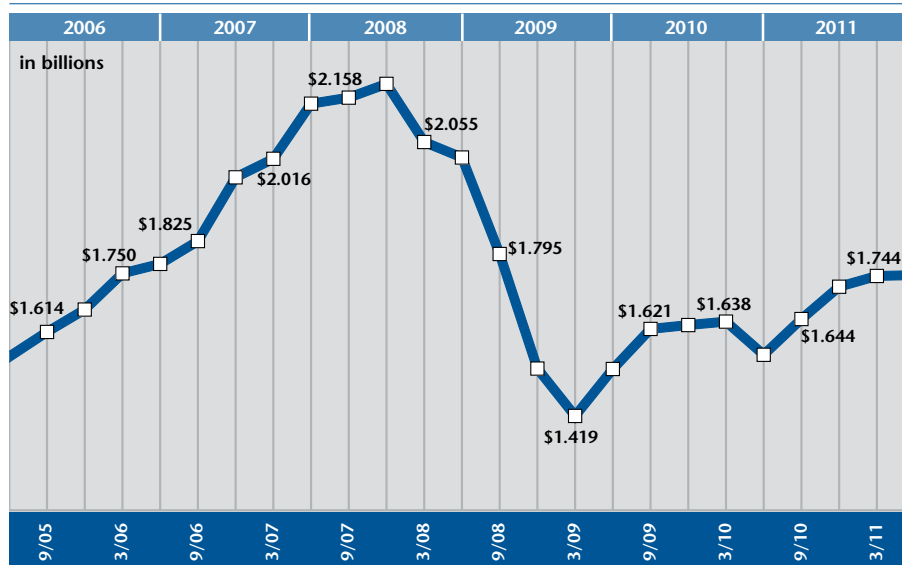
This reserve fund, now totaling nearly \$16 million, will be critical to help stabilize the university's budget as spending from the endowment continues to decrease, Mr. Lapple says. Spending from the endowment — which accounts for approximately one-third of the university's overall revenue — is based on a formula that considers the 12 most recent quarterly average market value figures. "Because the formula incorporates

a time lag of three years, the declines we suffered in fiscal year 2009 will still be most significantly felt in fiscal year 2012 and beyond," Mr. Lapple says.

The university's fiscal year 2011 revenues, which totaled \$325.3 million, come from three primary sources: grants and contracts from the government and private sources; income from the university's endowment; and private fundraising efforts. Although spending from the endowment was down significantly, reflecting steep losses suffered in 2009, an especially good year for private fundraising made up some of the difference (see chart, below left). Government grants were up compared to previous years as a result of federal stimulus spending, and private grants were down slightly. Income from other sources, including license and royalty fees paid for the use of university-owned intellectual property, was also up.

On the expenditures side of the ledger (see chart, below right), which totaled \$324.2 million, fiscal year 2011 saw an uptick in research spending — the destination of those stimulus dollars — and debt service, which rose, as expected, because of bonds issued to finance a

Endowment market value: FY2006 to FY2011

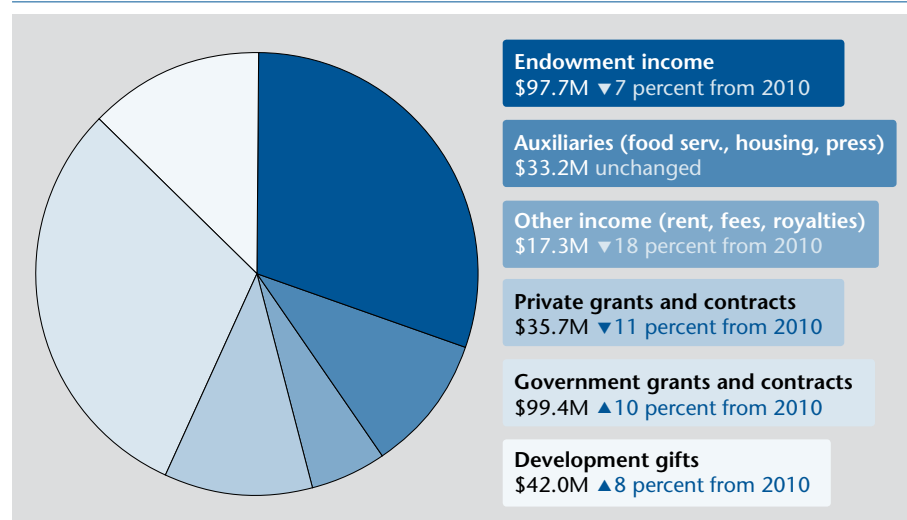


portion of the construction of the Collaborative Research Center. Administrative costs held steady.

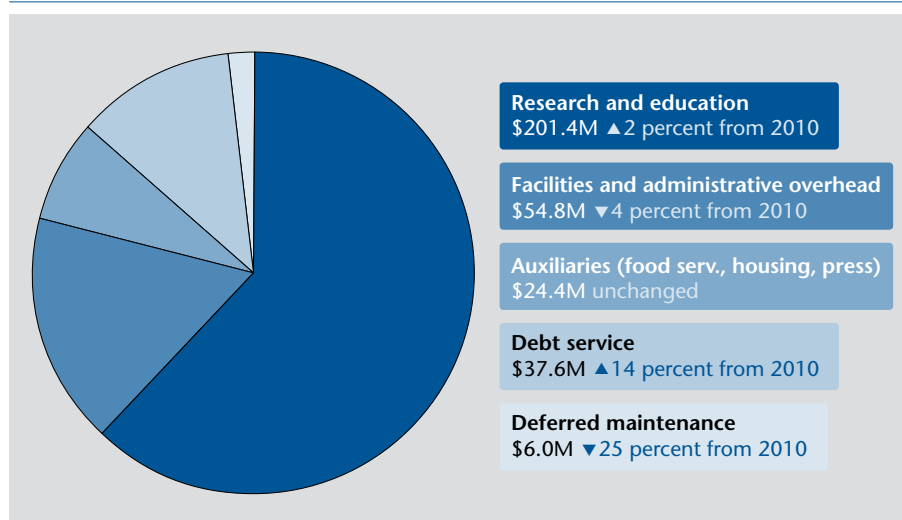
In fiscal year 2012, the university is projecting a \$6.9 million deficit despite the fact that expenditures will be down significantly, to just \$305.6 million. "As with fiscal year 2011, the main factors

are stimulus funding, which is tapering off, and endowment income, which will decline eight percent, from \$97 to \$89 million," says Mr. Lapple. "Since this is the last year in which the endowment losses from 2009 will be felt, we expect that endowment spending will stabilize, or potentially increase, in future years."

FY2011 total revenues: \$325.3M ▼1 percent from fiscal year 2010



FY2011 total expenditures: \$324.2M ▲2 percent from fiscal year 2010



Flexner and Welch Halls now fully gutted



New planters enhance pedestrian safety

Hundreds of pedestrians enter campus via the 66th Street gate each day. So do more than 200 cars, several dozen delivery vehicles and a steady stream of bicycles. It's a lot of traffic for a ten-foot wide driveway and two narrow sidewalks.

In response to complaints about conflicts between the entrance's two-legged and four-wheeled users, the university has recently made several structural changes to the sidewalks and landscaping just outside the main gate. The work, which was restricted to university-owned property immediately adjacent to the city's sidewalk, is to make it easier for pedestrians to get on and off of campus without interfering with vehicular traffic.

"The purpose of the new design is to encourage pedestrians coming onto campus to enter through the pedestrian gates, and not to walk in the driveway," says Alex Kogan, associate vice president for plant operations, which was responsible for the work. "This will help improve safety and security for everyone."

Two planters lining both sides of the driveway are to divert foot traffic away from the street and onto the sidewalks. Meanwhile, ramps have eliminated the step at both pedestrian entrances, to make it easier for those with strollers or suitcases. Still to come: a new speed hump, shorter and wider than a speed bump, to force drivers to pass through the gate slowly.

"Wherever you have cars and people competing for the same space you have the potential for an accident, and in this case blind spots created by the brick pillars make the situation worse," says Jim Rogers, director of security. "The new landscaping is helping to keep people separate from cars and trucks, and is reducing the likelihood of a serious incident."



Although the removal of concealed asbestos caused some delays last spring, the reconstruction of Flexner and Welch Halls is still on schedule, with work on both projects expected to be complete by the end of fall 2012.

In Flexner, framing and utility work (top) is now underway on several floors. Heads of the laboratories that will be housed in the renovated space have had the opportunity to fine-tune the designs for their spaces. Heavy equipment to handle climate control and ventilation systems is being delivered over the next several weeks, and finishing work including flooring, cabinetry and fixtures is expected to begin in the spring.

The major work in Welch Hall is now taking place on the A and B levels (above left), which have been stripped

down to exposed steel so that new concrete floors could be poured — over the years, many modifications had been made to parts of the basement, leaving a confusing warren of rooms that were not even all on the same level. In the stairwell and main reading rooms, protective plywood (above right) has been laid to preserve the marble and paneling while work on the floors, windows and ceilings progresses. Outside, the painstaking piece-by-piece repair of stonework and masonry is nearly complete.

"Both projects are proceeding as planned, and we are getting to the point where we are able to visualize how these gracious spaces will be transformed," says George Candler, associate vice president for planning and construction.

CAMPUS NEWS

University helps found New York Genome Center

by JOSEPH BONNER

The Rockefeller University, with 10 of the country's leading medical and research institutions, has joined the New York Genome Center (NYGC), which will become one of the largest genomic facilities in North America. The consortium establishes an unprecedented, large-scale collaborative venture in genomic medicine.

The NYGC is a nonprofit, academic consortium, similar to the New York Structural Biology center, but on a larger scale and with a broader scope, says Robert B. Darnell, Robert and Harriet Heilbrunn Professor. Dr. Darnell was a member of the founding board of directors and is now a member of the NYGC's executive board of directors.

Each founding academic institution contributed \$2.5 million, and in return receives reagents and equipment at the lowest possible cost, access to cutting edge technology and priority access to bioinformatics and computational scientists. In addition, scientists and physicians from member institutions will share diverse clinical and genomic data to discover the molecular underpinnings of disease, identify and validate biomarkers and accelerate development of novel diagnostics and targeted therapeutics to improve clinical care. The center will begin operations as early as spring 2012. Its 120,000-square-foot facility, designed by Elkus Manfredi Architects, will be located in Manhattan.

"In the decade since the human genome was sequenced, the application of high throughput sequencing and other genomic

tools has led to great advances in identifying the genetic drivers of several cancers and other diseases, and is dramatically accelerating the development of new drugs for these conditions," says Rockefeller President Marc Tessier-Lavigne. "The New York Genome Center will enable us to apply these powerful tools even more broadly to extend this success to many other diseases."

Joining Rockefeller are Cold Spring Harbor Laboratory, Columbia University, Cornell University/Weill Cornell Medical College, Memorial Sloan-Kettering Cancer Center, Mount Sinai Medical Center, New York-Presbyterian Hospital, New York University/NYU School of Medicine, North Shore-LIJ Health System, The Jackson Laboratory and Stony Brook University. The Hospital for Special Surgery is an associate founding member.

"The New York Genome Center represents the largest collaboration to date among New York City-based biomedical and clinical research organizations. It will position its institutional partners to be at the forefront of the rapidly evolving field of genomic science and enhance the city's position as one of the foremost centers for medical research," says Russell C. Carson, chair of Rockefeller's Board of Trustees, who also serves as chair of the New York Genome Center.

In addition to Mr. Carson, Dr. Tessier-Lavigne and Dr. Darnell, leadership of the NYGC includes Rockefeller Trustees James H. Simons and Anthony B. Evnin.

CAMPUS NEWS

Rockefeller walkers travel over 100,000 miles

New York is a walking city, especially here on the far East Side, two-thirds of a mile from the subway. Count all those steps — getting to work, to lunch, to the market — and the distance can really add up.

This summer, 189 university employees participated in the Global Corporate Challenge (GCC), a worldwide walking program in which participants are issued pedometers and record their daily step totals on a dedicated Web portal.

Over 16 weeks, the participants walked a total of 269,705,477 steps. That translates to 107,256 miles, or 4.3 trips around the world. They burnt 10,874,525 calories and, by choosing to walk instead of

drive, ride the bus or take an elevator, they prevented 14,270 pounds of carbon from entering the atmosphere. The average daily distance walked per person: 5.94 miles.

"Although we have sponsored walking programs at Rockefeller in the past, this was the first year that we joined an outside program and got the benefits of Web-based data tracking and incentives," says Ginny Hansen, director of benefits. "It was more fun for the participants, and GCC's data collection allowed us to see just how much of a difference the program can make in people's habits and in their health."

Registration for the 2012 program will begin in late April.

Where glass gets clean

www.rockefeller.edu/video/glasswashing



The university's newly refurbished Glasswashing Services center cleans, dries and sterilizes around 4,000 pieces of laboratory glassware from 52 labs each week. Watch this video to meet the workers and see how it's done.

Nobel laureate Ralph Steinman dies at 68 (continued from page 1)

International Award, the Albert Lasker Basic Medical Research Award and the Albany Medical Center Prize. And finally, this October 3, 38 years after his landmark publication, Dr. Steinman's phone rang at 5 a.m. with the news that he would receive one-half of the 2011 Nobel Prize in Physiology or Medicine — the ultimate recognition of his life's work and vindication for all those early years when only he and a few close collaborators believed in it.

Sadly, the news came three days too late for Dr. Steinman to hear it.

Diagnosed with pancreatic adenocarcinoma in March 2007, Dr. Steinman's original prognosis was poor. By the time it was detected — when Dr. Steinman went to see his doctor complaining of digestive distress and painless jaundice — the cancer had already spread beyond the pancreas. The one year survival rate for this type of cancer is just 25 percent and the average life expectancy about six months. But dendritic cells had the potential to fight exactly this type of aggressive tumor, and Dr. Steinman had access to brilliant collaborators and leading edge technology. He set about designing a course of therapy that he hoped would extend his life in a way that conventional chemotherapy might not be able to.

"He approached it the same way he approached any experiment," says Sarah Schlesinger, research associate professor and head of Dr. Steinman's clinical research program. "He worked with colleagues worldwide to arrive at a plan for treating the cancer, and he designed the therapy in a way that he hoped would allow us to learn something as he was being treated." The Rockefeller University Hospital established a new clinical protocol, IRB and FDA approval was obtained, and Dr. Steinman formally became a clinical trial of one.

He had surgery (the tumor itself, once removed, was divided, preserved and sent to the labs of Dr. Steinman's contemporaries all over the world to be used as the

basis for individualized therapy) and received traditional chemotherapy, followed by a course of eight experimental immunotherapies in succession.

Dr. Steinman's life post-diagnosis was a relatively healthy one, a fact that he also attributed to his immunotherapy. He felt well most of the time, and continued to work until the very end. He was vigorous enough to travel to conferences, and spent a great deal of time and effort to

The potential of dendritic cell-based vaccines is just now becoming apparent and clinical trials to better understand their therapeutic effects have begun in only the past few years. "Although Ralph did not live long enough to see his discovery win the Nobel, he did live to see vaccines based on his discovery used in real human patients, something that did not occur until after his diagnosis," says Dr. Schlesinger. "He was thrilled to finally see the clinical impact of his work."

"I had the opportunity to meet Ralph a number of times over the years," says Russell C. Carson, chair of the university's Board of Trustees. "Each time I did so, I was struck by not only his obvious intelligence but even more so by what a nice person he was. He had a keen interest in other people and he enjoyed talking about a wide variety of subjects. I'm sure a large part of his success in the scientific community came from his intellectual curiosity and his ability to both learn from and mentor others."

"Ralph truly embodied the spirit of what sets Rockefeller apart," says Marc Tessier-Lavigne, the university's president. "He was a risk taker and a pioneer, who believed in his findings even when others did not, as well as a careful and precise scientist whose steadfast pursuit of the workings of dendritic cells led him to have an outsized impact on his field."

Dr. Steinman, a resident of Westport, Connecticut, is survived by his wife of 40 years, Claudia, and three children: Adam, a law professor who resides in Brooklyn; Alexis, a costume designer based in Los Angeles; and Lesley, a social worker and researcher at the University of Washington in Seattle. He had three grandchildren.

"It will be a long time, if ever, before we feel that Ralph isn't here," says Dr. Pack. "His presence has been so powerful and his legacy will be so strong that a part of him will always live with us at Rockefeller."



Dr. Steinman in 1971 (left) and in 2009.



PHOTOS: COURTESY STEINMAN FAMILY

ensure that everyone in his busy lab had a path forward after he was gone. He was reviewing data — he was always eager to review data — just days before his death.

"We'll never know for sure how much he was helped by the experimental therapies he received," says Dr. Schlesinger, who was closely involved in his care. "Scientifically it's just not possible to draw conclusions from a single patient. But he certainly enjoyed a longer and healthier life than the odds would suggest."

MILESTONES

PROMOTIONS, AWARDS AND PERSONNEL NEWS

Awarded:

Leslie B. Vosshall, the 2011 Gill Young Investigator Award from the Linda and Jack Gill Center for Biomolecular Science at Indiana University, Bloomington. The award recognizes exceptional scientists who have emerged as international leaders in cellular, membrane or molecular neuroscience. Dr. Vosshall is Robin Chemers Neustein Professor and head of the Laboratory of Neurogenetics and Behavior, as well as a Howard Hughes Medical Institute investigator.

Michael W. Young, the 2011 Louisa Gross Horwitz Prize from Columbia University. He shares the prize with Jeffrey C. Hall and Michael Rosbash for their work on the molecular basis of circadian rhythms, the first demonstration of a molecular mechanism for behavior. The Horwitz Prize recognizes outstanding basic research in the fields of biology or biochemistry. Dr. Young is Richard and Jeanne Fisher Professor and head of the Laboratory of Genetics.

Elected:

Cori Bargmann, associate member of the European Molecular Biology Organization, which promotes excellence in and helps shape the direction of molecular life sciences in Europe. Dr. Bargmann is Torsten N. Wiesel Professor and head of the Lulu and Anthony Wang Laboratory of Neural Circuits and Behavior, as well as a Howard Hughes Medical Institute investigator.

Marc Tessier-Lavigne, to the Institute of Medicine, the health and medicine branch of the National Academy of Sciences. Sixteen Rockefeller University scientists are Institute of Medicine members. Dr. Tessier-Lavigne is head of the Laboratory of Brain Development and Repair.

Elected:

Jeffrey M. Friedman, to the Rensselaer Polytechnic Institute Alumni Hall of Fame. Dr.

Friedman, a 1977 graduate of RPI, is Marilyn M. Simpson Professor and head of the Laboratory of Molecular Genetics, as well as a Howard Hughes Medical Institute investigator.

Gaby Maimon, one of *Popular Science* magazine's "Brilliant Ten," a selection of promising young researchers under 40 who represent the best of what science can achieve. Dr. Maimon was profiled in the September issue of the magazine. He is head of the Laboratory of Integrative Brain Function.

Hired:

Bushra Amreen, research assistant, Konarska Lab.

Ursula Andreo, postdoctoral associate, Rice Lab.

Karen Andres, development assistant I, Development.

Sandra Appadu, visiting student, McEwen Lab.

Bartlomiej Blus, postdoctoral associate, Blobel Lab.

Cordula Boehm, visiting fellow, Rout Lab.

Pamela Carpentier, associate editor, *JCB*, Rockefeller University Press.

Zachary Charlop-Powers, postdoctoral associate, Brady Lab.

Gist Croft, postdoctoral associate, Brivanlou Lab.

Christopher Cush, mail room clerk, Mail Room.

Julien Dervaux, postdoctoral fellow, Libchaber Lab.

Margaret Ebert, postdoctoral associate, Bargmann Lab.

Caroline Eden, research assistant, Nussenzweig Lab.

Hampus Edgren, foreign research intern, Stebbins Lab.

Robyn Eisert, postdoctoral associate, Hang Lab.

Felix Evers, foreign research intern, Stebbins Lab.

Ingrid Fetter Pruneda, visiting student, Kronauer Lab.

Natalia Freund, postdoctoral associate, Nussenzweig Lab.

Maura Gilmartin, senior grants management specialist, Sponsored Research and Program Development.

Simona Giunta, postdoctoral associate, Funabiki Lab.

Jason Gray, postdoctoral fellow, McEwen Lab.

Qi Hao, visiting student, Kapoor Lab.

Margaret Herre, research assistant, Robert Darnell Lab.

Robert Houghtaling, special events coordinator, Communications and Public Affairs.

Karin Hultman, postdoctoral fellow, Strickland Lab.

Heeun Jang, postdoctoral associate, Bargmann Lab.

Yildiz Kelahmetoglu, research assistant, Greengard Lab.

Sarah Klass, administrative assistant, Leibler Lab.

Ralph Kleiner, postdoctoral fellow, Kapoor Lab.

Matthew Koletsky, research assistant, Allis Lab.

Carl Leonhardt, foreign research intern, Tuschl Lab.

Wei Li, postdoctoral fellow, Chua Lab.

Sean Low, postdoctoral associate, Hudspeth Lab.

Jose Marques Lopes, visiting fellow, McEwen Lab.

Henrik Molina, research assistant professor and director, Proteomics Resource Center.

Daniel Neer, office administrator, General Counsel.

Hanna Ning, foreign research intern, Krueger Lab.

Mary O'Donnell, human resources generalist, Human Resources.

Anna Olofsson, foreign research intern, Casanova Lab.

Kimberly Olsen, senior research associate, Tessier-Lavigne Lab.

Dominik Paquet, postdoctoral fellow, Tessier-Lavigne Lab.

Maria Pardos de la Gandara, postdoctoral associate, Tomasz Lab.

John Pena, visiting fellow, Tuschl Lab.

Alexander Petroff, fellow in physics and biology, Center for Theoretical Studies.

Vanessa Ruta, assistant professor and head of laboratory, Ruta Lab.

Sabrina Sell, visiting student, Nussenzweig Lab.

Ji-Seon Seo, postdoctoral associate, Greengard Lab.

Dese' Rae Stage, administrative assistant, Libchaber Lab.

Hanna Sundelin, visiting student, McEwen Lab.

Bryan Utter, postdoctoral associate, Fischetti Lab.

Maria Valerio, animal health technician I, Comparative Bioscience Center.

Ellen van Wilgenburg, visiting fellow, Kronauer Lab.

Shali Zhang, visiting medical student, Krueger Lab.

Pingzhi Zhao, visiting student, Chua Lab.

Orlee Zorbaron, laboratory administrator, Roeder Lab.

Promoted (academic appointments):

Stephanie Boisson-Dupuis, to senior research associate, Casanova Lab.

Edgar Charles, to assistant professor of clinical investigation, Rice Lab.

Ivan Marazzi, to research associate, Tarakhovskiy Lab.

Peter Stavropoulos, to research associate, Papavasiliou Lab.

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