

3-18-1993

NEWS AND NOTES 1993, VOL.3, NO.24

The Rockefeller University

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Recommended Citation

The Rockefeller University, "NEWS AND NOTES 1993, VOL.3, NO.24" (1993). *News and Notes 1993*. Book 9.
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Trustees to host panel on NYC science and business

Is New York City still a leader in biomedical science and technology? What role can institutions such as The Rockefeller University play in revitalizing the city's economy? A public discussion to be held in Caspary Auditorium on Wed., Mar. 24 from 5:00 to 6:30 P.M. will address these questions, focusing on how New York City can remain competitive and what it can do to strengthen the links between research and industry.

The event will be hosted by The Rockefeller University Board of Trustees and moderated by Alair Townsend, a trustee who is publisher of *Crain's New York Business*. President Torsten Wiesel will be on hand to introduce the program.

The speakers at the seminar will be:

- John W. Rowe, president of The Mount Sinai School of Medicine and Mount Sinai Medical Center. Rowe will pro-

vide special insights from his position as chair of the Commission on Biomedical Research and Development of the New York Academy of Medicine, which called for action to stimulate health-related research and business.

- Stanley Brezenoff, executive director of The Port Authority of New York and New Jersey. Brezenoff will speak about the Authority's economic development efforts, including a new study to identify opportunities to strengthen the biomedical complex in the region.

- W. Bowman Cutter, III, deputy assistant to President Clinton for economic policy. Cutter will bring a national perspective to the relationship between scientific and technological endeavors and the growth of the economy.

The event is free and open to the public. For more information, contact Sandra Walsh, x8072.

Sherrie Nicol, Crain Communications, Inc.



Trustee Alair Townsend will moderate a seminar, entitled "The Business of Science: Can New York City be Competitive?" to be held at the university on Wed., Mar. 24.

Friday lecturer to speak on protein breakdown

Alfred L. Goldberg, professor of cellular and molecular physiology at Harvard Medical School, will speak on "Selective Degradation of Abnormal Proteins in Cells: From *E. coli* to Antigen Presentation" at the Friday lecture today (Mar. 19).

In his lecture, Goldberg will discuss the biochemical mechanisms by which animal and bacterial cells selectively degrade proteins with highly abnormal conformations. The pathway of degradation involves new types of enzyme complexes.

Proteins are broken down in most infections and chronic illnesses, explained Professor Jan Breslow, who is hosting the event. "The wasting away of muscle tissue so often seen in chronic illnesses such as cancer is an example of such protein breakdown," he said. "Goldberg has pioneered the research on mechanisms for protein breakdown in systems as diverse as *E. Coli* and humans."

After receiving his B.A. (1963) and Ph.D. (1968) from Harvard University, Goldberg was a post-doctoral fellow of the National Research Council's Air Force Office of Scientific Research and a fellow of the Medical Foundation, Inc. He also taught at Harvard University, Harvard Medical School, and Radcliffe College. In 1969, Goldberg became assistant professor in physiology at Harvard Medical School; in 1977, he was named professor of molecular and cellular physiology.

A member of the American Physiological Society, the American Society of Biological Chemists, the Society of Cell Biology, and the American Society of Microbiologists, Goldberg has served on several editorial boards, including those for the *Journal of Biological Chemistry*, the *New England Journal of Medicine*, and *Physiological Reviews*. He has been chairman of the Medical Advisory Board of Biogen Research Corp. and a member of the Japanese Technology Evaluation Center.

The lecture will be held at 3:45 P.M. in Caspary Auditorium. It will be preceded by tea at 3:15 P.M. in Abby Aldrich Rockefeller Hall.

RU staff keep university open while 'storm of century' rages

While hurricane winds and blinding snow closed down much of New York City over the weekend, The Rockefeller University campus was kept open by the dedicated efforts of dozens of staff, some of whom stayed overnight at the university so they could do their jobs.

Staff from Custodial Services worked through the peak of the storm—which brought below-freezing temperatures, 10 inches of snow, and gusts of wind up to 70 miles per hour—to clear the drives and walkways. The snow plow broke down under the strain of the task, and much of the snow had to

be removed by shovel.

"Custodial made a supreme effort to get the snow cleared," said Thomas Mineo, director of Custodial Services. "Sixteen of our staff worked on Saturday, and twelve on Sunday. Some—including Pablo Asencio, Huascar Matos, Arquelio Negron, Armando Alequin Rosas, and Miguel Torres—slept here because they were afraid that if they left they wouldn't be able to get back, and the campus would be completely snowed under."

Banquet Manager Jose Villatoro

and Chef Cliff Sussman of Food Services also felt compelled by circumstances to sleep at the university. Villatoro said: "I couldn't take the chance of going home and not making it back to the university. I had 200 people from the Walsh Society who were expecting coffee service at 7:30 A.M. on Saturday morning. That's a lot of coffee."

While Sussman managed to get a room in Scholars Residence Friday night, all the extra rooms at the university were filled by the time

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2 ROCKEFOLLIES: let the show begin

3 Institute director speaks on AIDS

4 New court sport is fast and furious



Mika Ono Benesky

Lancelott Cameron, Cesar Yopez, and Hector Rosario (from left to right) of Custodial Services shovel one of The Rockefeller University drives last Sunday.



Bozenka Glatt, a participant and organizer of ROCKEFOLLIES 93, puts up a poster advertising the talent show. The poster was designed by Jacques Soisson, a well-known French painter.

New talent to perform on RU stage

What do a one-act play, a karate demonstration, and a Swedish folk song and dance number have in common? They will all be featured in ROCKEFOLLIES 93, this year's university talent show to be held on Tues., Mar. 23.

"The diversity of the acts will make this year's show special, and we're excited that, for the first time, the president of the university, Torsten Wiesel, will introduce the show," said Yvonne Holland, research assistant in the Knight lab who is one of the organizers of the event. "The ROCKEFOLLIES is a lot of fun because you get to see the hidden talents of people at the university, some of whom you work with every day. We have many new performers this year."

Bozenka Glatt, administrative assistant to Professor Mitchell J. Feigenbaum, is one of the first-time ROCKEFOLLIES participants. She is producing a one-act play called *The Temp* by Roy Friedman. Glatt is working with three professional actors and a director to stage the comedy.

"Anyone who has had a secretary, or who has been a secretary should get a good laugh," said Glatt. "The author drew on his own experiences as a temporary worker when writing the piece."

Glatt has also recruited the rhythmic gymnastics team which she coaches at a local Czech and Slovak community center to present one number. "The girls are excited about it," she said. "We have been practicing very hard."

Isaiah Curry, waste handler in Laboratory Safety who performed once before in the talent show, will bring a different form of athletic prowess to the production.

"My club will be demonstrating karate," said Curry, who has a first-degree black belt in the Shorei-kan style. "We'll give some group

demonstrations, and my teacher and I will do one advanced routine together. We may break some boards. The last time we performed, the audience loved it."

Other highlights will be:

- Seth Darst, assistant professor and head of lab, playing piano;
- Alan Wallis, research technician in the Friedman lab, playing guitar;
- Dorothy Meyer, retired secretary, reading poetry;
- Hideya Fukuzawa, postdoc in the Chua lab, performing chamber music;
- Reuben Hersh, visiting professor in the logic group, playing piano while his granddaughter, Laura, dances; and
- Holland and her group performing Swedish folk songs and dances.

ROCKEFOLLIES 93 will begin at 7:00 P.M. in Caspary Auditorium. Tickets, which are \$5 each, will be sold at the door and in the lobby of Tower on Mon., Mar. 22 and Tues., Mar. 23 from 11:30 A.M. to 2:30 P.M.

Club celebrates 35th St. Patrick's Day



The Rockefeller University Faculty and Students Club celebrated its 35th birthday on Wednesday, St. Patrick's Day. A cake with green frosting helped Bartender Dave Brooks, Assistant Secretary Angie Dohnert, and Club Manager Tim Shea (left to right) mark the occasion.

Charity drive puts pennies to good use

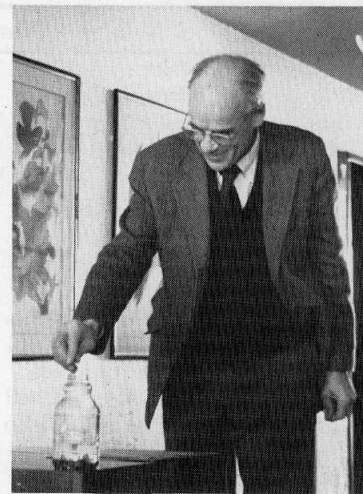
Now is the time to put all those pesky, one-cent, copper coins to good use. The Rockefeller University Children's School will be collecting pennies for Common Cents, a charity that directs penny donations to programs for the poor, homeless, and unemployed, until Fri., Mar. 26.

"I hope we can show the powerful effect of pooling resources and directing these toward a good cause," said Helaine Meyers, a teacher at the Children's School. "In addition, the program will allow us to broach the delicate topic of homelessness and hunger, and turn it into a constructive project. In my opinion, it's never too early to show children that they can make a difference."

Marjorie Goldsmith, director of the school agrees: "I think it's important for all of us—both children and adults—to know we have some control over our environment. The idea is to instill an early sense of empowerment over aspects of our world that are sad or unfair."

Meyers had the idea of having the four, five, and six year olds participate in the program while organizing the 100th Day of School Party. Preparations taught the children about the value of the number 100, and how to count a wide assortment of items, such as peppercorns, drops of water, kernels of popcorn—and coins. "The children realize that while there is very little one can do with a single penny, 100 pennies or 200 pennies have value," said Meyers.

The Common Cents program was founded in 1989 by a New York playwright and author of children's books, Theodore Gross, who realized that he could put idle pennies to work if he collected them



Senior Research Associate Peter Sellers makes a contribution to Common Cents.

from enough people. With help from two friends, Gross collected \$2,000-worth of pennies from three neighboring apartment buildings and donated them to the Coalition for the Homeless. Since then, Common Cents has become an incorporated public charity that has collected over \$205,000. Donations, directed to over 28 relief agencies, have helped to pay for meals for the hungry, a summer camp for homeless children, a used-coat drive, and blankets for newly housed families.

Rockefeller pennies will be collected at the following locations: the Tower cafeteria and 17th floor dining area, the Founder's Hall security desk, the Office of the President (Caspary 203), and Plant Operations (Boiler House 105).

News&Notes is published each Friday throughout the academic year by The Rockefeller University, 1230 York Avenue, New York, NY 10021. Phone: 212-327-8967.

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Institute director speaks on effects of AIDS on immune system

by Susan Blum

How does AIDS wreak its havoc? Despite the tremendous progress that has been made in understanding this deadly disease, fundamental questions about its effects on the immune system remain unanswered. Some of these questions were addressed in a recent Friday afternoon Rockefeller University lecture by Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases of the National Institutes of Health. Fauci's lecture focused on the role played by lymphoid organs such as the lymph nodes in the progression of the disease from initial infection to full-blown AIDS.

In Fauci's view, the role of the lymphoid tissues helps explain a paradox that has puzzled AIDS researchers. From the outset of infection with the HIV virus—the virus that causes AIDS—the functioning of the immune system is impaired, and there is a reduction in the number of helper T cells, the crucial white blood cells that orchestrate a wide range of immune system responses. Yet, aside from a brief period following initial infection, the amount of free HIV virus and HIV-infected helper T cells circulating in the blood appear to be low until the last, catastrophic phase of the disease.

Paradox is only apparent

Why, then, is the immune system so depleted? Fauci reported research in his lab and elsewhere indicating that the paradox is more apparent than real. In fact, he said, there is a great deal of HIV in the body from the outset of infection. But in the long period of "clinical latency"—during which the patient feels well and is asymptomatic—

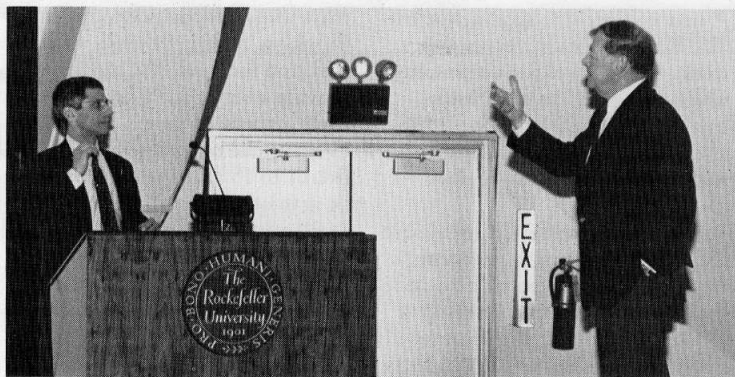
much of the HIV is trapped in the lymphoid organs, rather than circulating in the blood.

Key players in this viral trapping are the follicular dendritic cells. Found in a region of the lymph node called the germinal centers, these cells snare HIV. According to Fauci, as long as the germinal centers remain intact, much of the HIV in the body is sequestered in the lymph nodes. There, helper T cells that reside within the nodes or migrate through them also accumulate, and may be infected with HIV.

Eventually, through mechanisms that are still unknown, the follicular dendritic cells begin to die and the architecture of the germinal centers starts to break down. "Over a period of time, the trapping mechanism becomes less and less efficient, until finally there is a spillover of virus into the blood circulation, a loss of HIV-specific immune responses, and a loss of the ability to respond to other pathogens," Fauci said.

Helper T cells are not the only cells involved in this progressive immune-system debilitation. Because the follicular dendritic cells are integrally involved in activating B cells—the cells that make antibodies—their destruction may contribute to the general breakdown of immune system functioning. The eventual result of all this immunological decline: full-blown AIDS, which produces a catastrophic susceptibility to infections that can be fatal to a person without a functioning immune system.

Among the Rockefeller scientists who attended Fauci's lecture and who discussed shared research interests with Fauci earlier in the day was AIDS investigator Professor Ralph Steinman.



Professor and Vice President for Medical Affairs Zanol Cohn (right) thanks Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases of the National Institutes of Health, after his recent lecture.

Research conducted in the late 1970s by Steinman and his colleagues, including Professor and Vice President for Medical Affairs Zanol Cohn, was among the first to show that viruses can be found with ease in the germinal centers of lymph nodes. The trapping mechanism results from the ability of the follicular dendritic cells to bind viruses and other antigens that are complexed with specific antigens.

Studies point to new questions

In an interview after Fauci's lecture, Steinman commented that, as in much AIDS research, the results of Fauci's most recent lymphoid tissue studies open up many questions for further investigation. For example, how infectious is the viral load found in the lymphoid tissue? And by what pathways might it infect other cells to cause disease?

The strategies whereby "antigen presenting cells" might transmit HIV remain to be elucidated. These cells include the follicular dendritic cells and other immune system components such as macrophages and dendritic cells.

(Despite the similarity in name, dendritic cells are completely different from follicular dendritic cells. Studies by Paul Cameron, a postdoctoral associate in the Cohn-Steinman lab, have already shown how dendritic cells can efficiently transmit the virus to helper T cells, leading to their death.)

Yet another question is the mechanism by which the intricate architecture of the lymph nodes is destroyed. "It's a problem of carts and horses," Steinman said. Germinal centers cannot form without the assistance of T cells, though the mechanism underlying this dependence is incompletely understood. Does the destruction of the T cell system lead to the destruction of the germinal center, including the follicular cells, or does the destruction of the germinal center lead to the release of virus and the loss of T cells? "We understand how T cells can be destroyed, so we can understand the T cell being the 'horse' in the demise of germinal centers," Steinman continued. "We don't understand how the follicular cells could be the horse, but that remains to be studied."

Ultimately, many of the answers to questions such as these will rely on studies directly involving patients infected with HIV. That was the case in the research reported by Fauci, and it is true of the AIDS research conducted at The Rockefeller University Hospital. "A lot of the clues about the course of AIDS, and about ways to resist it, come from studying patients," Steinman said. He emphasized that clinical research facilities such as The Rockefeller University Hospital are the ideal environment for such patient-oriented investigations, which enable researchers to move from the bench to the bedside with unparalleled freedom.

RU staff keep campus running during weekend blizzard

(continued from page 1)

Villatoro made his plans. He ended up sleeping on a couch which he brought from a storage area into his office.

In addition to serving guests at official events on campus, Food Service staff made coffee and sandwiches for the workers from Custodial who were clearing the snow. The efforts of Security Department personnel and Hospital staff also helped keep the university open over the weekend.

While official university events were held despite the blizzard, one casualty of the storm was a student party celebrating the Brazilian

Carnival. A sound system from Long Island could not be brought into the city.

"I spent the whole day on the telephone telling people that the party had been canceled," said Chris Bowler, postdoc in the Chua lab who was helping to organize the event. "Despite my efforts and the obvious inclement weather, a few die-hards still showed up—most notably some members of the Blobel lab who had slept through the whole storm."

The effects of the blizzard could still be felt several days later. Because of the snow drifts, some cars that usually park in the 66th Street lot had to be directed to

other locations, and hazardous driving conditions caused delays for some harried commuters.

Unlike the northeaster that hit the campus in December, the March storm caused minimal flooding and damage to the campus. One branch came down in front of Caspary Hall, but no trees were felled by the winds.

"Some of the hedges took a beating," said Jimmy Sullivan, supervisor of the Grounds Department. "But there was no major damage. The crocuses, which were planted in the fall, should be fine. You should be able to see them in a week or two, as soon as the snow melts."

'Fast, aggressive, and fun,' new sport combines volleyball and squash

A new competitive sport arrived at The Rockefeller University this week. Members of the community may now sign up to play "wallyball"—a combination of volleyball and squash—which is played without racquets on a squash court.

Assistant Professor Philip Mélése and Machinist Vadim Sherman of the Goulianos lab, both dedicated squash and volleyball players, had the idea of bringing the sport to campus when they saw the enthusiasm for volleyball at the dedication festivities last fall.

"I think this may be the answer for anyone looking for a competitive sport on campus other than squash or tennis," said Mélése, a Californian who played volleyball on the U.S. Nationals championship team for six years. Sherman, who played in national volleyball tournaments in Russia and now

plays wallyball competitively in Brooklyn, added: "It's fast, aggressive, and fun, and, like squash, can provide a very good workout in a short amount of time."

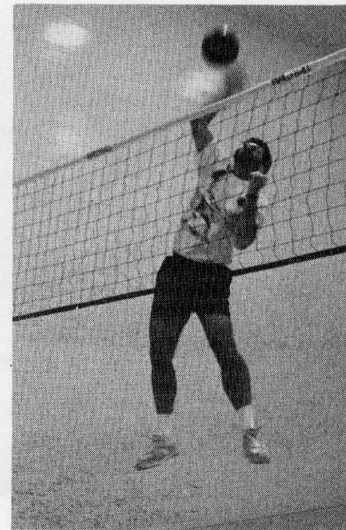
The game of wallyball is scored from 1 to 15 and a team must win by at least two points. According to Mélése and Sherman, the wally ball is a variant of the volley ball. Lighter, and slightly bouncier because it is made of rubber instead of leather, the wally ball ricochets off the walls of the squash court at lightening speeds. In fact, the ball is so fast, that players are encouraged to use a side or back wall to make a shot, otherwise, the ball will quickly go out of bounds. "I've seen one shot bounce three times from side wall to side wall," said Sherman.

According to Mélése, wallyball was probably developed by frustrated southern Californians who want-

ed to play their game on the East Coast. "The seasons are limiting here and gyms hard to come by," he said. "But there are plenty of squash and racquetball courts so the game was easily adapted."

Those interested in signing up for wallyball, which is played on the south squash court in the basement of Graduate Student Residence, may do so at the security desk in Founder's Hall. It is suggested that wallyball players use the court between 2:00 and 4:00 P.M., or after 6:00 P.M. A wallyball bag, net, and wally ball, purchased by the university for its members, as well as a set of rules, is available from Mélése.

An on-court demonstration of the game will be held on the south squash court today (Mar. 19), from 2:00 to 3:00 P.M. For more information, contact Mélése, x8821, or Sherman, x8829.



Assistant Professor Philip Mélése demonstrates wallyball, a new sport on campus.

Potpourri

Tri-Institutional Noon Recital

In celebration of Women's History Month, cellist Julia Lichten and pianist Joanne Polk will play works by Beethoven and Rakhmaninov at the Tri-Institutional Noon Recital today (Mar. 19) in Caspary Auditorium. Lichten has made guest appearances at the Marlboro, Taos, La Musica di Asolo, and Library of Congress music festivals, and has toured internationally under State Department sponsorship. Polk has performed in solo recitals with chamber ensembles and with orchestras in major concert halls including Alice Tully Hall. Today's concert, co-sponsored by The Rockefeller University Women's Association, is free. All are welcome.

Metropolitan Opera concert

Today (Mar. 19) is the last day to pick up tickets for the formal reception and benefit concert for the Metropolitan Opera on Sun., Mar. 21 at 8:30 P.M. in Caspary Auditorium. Five winners in the Eastern Regional Finals of the Metropolitan Opera National Council Auditions will perform. Tickets, \$20 each for members of the Rockefeller community, can be obtained from Sandra Walsh, Nurses Residence 211.

RU Concert Series

Clarinetist David Shifrin, violist Paul Neubauer, and pianist Anne-Marie McDermott will perform works by Mozart, Schubert, Debussy, and Schumann on Wed.,

Mar. 24, at 8:00 P.M. in Caspary Auditorium. Admission is \$17 per person, \$7 for Tri-Institutional graduate and postdoctoral fellows. Call Cathy Rogers, x8971, for information or reservations.

Retirement Support Group

The Employee Assistance Program Consortium (EAPC) is organizing a support group for those who are thinking about retirement or have recently retired. Topics to be discussed include planning for retirement, retirement facts and myths, aging and life stages, and family and community issues. Meetings are planned for Mar. 29, Apr. 5, Apr. 12, and Apr. 19. Call the EAPC, 746-5890, to make reservations.

PowerBook offer

To facilitate stock-rebalancing of



Clarinetist David Shifrin will be one of the performers at Wednesday's evening concert.

the Macintosh PowerBook 180 at Cornell University, Apple Computer is allowing institutional bulk orders (five or more units) of the computer directly from Cornell University for a limited time only. The computer is available with 4 megabyte RAM and an 80-megabyte or 120-megabyte hard disk. Shipping of regular orders of the PowerBook 180 is experiencing long delays; this special order would be subject to immediate delivery. Interested members of the Rockefeller community should contact Anthony Popowicz of Computing Services as soon as possible at x8112 or via e-mail (login tony).

Excel workshop

Computing Services will offer a two-part workshop in Excel 4.0 for the Macintosh and PC. It will be held on April 13, from 2:00 to 4:00 P.M., and April 14, from 2:00 to 4:00 P.M. A basic understanding of either Windows or the Macintosh is required. To register, leave a voice mail message at x8935. Your registration will be confirmed.

High school students

Bonnie Kaiser, coordinator of the Science Outreach Program, requests that lab heads who have high school students working in their labs contact her at x7431. Kaiser would like to welcome the students and ensure that they have filled out an application form, completed the lab safety course, and obtained a photo identification card.

Appointments

Adjunct Faculty: Jay Vlinsky, Cohn lab;
Visiting Professor: Reuben Hersh, H. Wang lab;
Visiting Associate Professor: Nils Roll-Hansen, Lederberg lab;
Research Associates: Joan Muller, Cohn-Steinman lab; Mercedes Sanchez, Nussenzweig lab; Benno Ter Kuile, Muller lab;
Postdoctoral Associates: Paul Andrew Haynes, G. Cross lab; Vanya Quinones-Jenab, Pfaff lab; Elsa Suh, Zabriskie lab; Jie Wang, Cohn lab; Xiaolan Wu-Peng, Pfaff lab;
Postdoctoral Fellows: Andreas Bet Manning lab; Anne Goriely, Desplan lab; Doris Kraemer, Blobel lab; Christoph Schumacher, Hanafusa lab; Bo Yu, Wright lab;
Guest Investigators: Elena Bourgansky, Zabriskie lab; Anke Hensiek, Fischetti lab; Hsien-Bin Huang, Greengard lab; Steven Moulding, Goulianos lab; Gheorghita G. Zbaganu, J. Cohen lab.

Departures

Postdoctoral Associate: Takashi Fujita, Baltimore lab
Postdoctoral Fellow: Alexander Van Der Krol, Chua lab
Guest Investigators: Rong-Xiang Fang, Chua lab; Lamia Guizani, Cohn-Steinman lab; Michio Ishibashi, Cohn-Steinman lab; Martin Schnorf, Chua lab; Cornelius Van Kessel, Cohn-Steinman lab; Albertha Welmens, Cohn-Steinman lab.