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news & notes

February 21, 1992 Volume 2, Number 22

The Rockefeller University



Floyd Ratliff, David Rockefeller, and Torsten Wiesel (left to right) chat after Ratliff's lecture Wednesday. More photos, page 4.

Gala celebrates union of science, art

The marriage of science and art was celebrated at The Rockefeller University Wednesday, Feb. 19, when Professor Emeritus Floyd Ratliff introduced *Paul Signac and Color in Neo-Impressionism*, his 317-page work just published by The Rockefeller University Press.

Ratliff's presentation at 5:30 P.M. in Caspary Auditorium on "The Theory of Color and the Practice of the Artist" was followed by a reception hosted by Board of Trustees' Executive Committee Chairman David Rockefeller and President Torsten Wiesel. In addition to distinguished scientists from Rockefeller and other

institutions, the guests included prominent figures such as Joan Didion, John Gregory Dunne, Joan Kennedy, Norman Mailer, Terry Southern, Edward Said, Hedda Sterne, Jean Stein, Saul Steinberg, Jean Strouse, Rose Styron, and Katrina vanden Heuvel. (See photos, page 4.)

Featured in the February 10th issue of *Publisher's Weekly*, Ratliff's book marks the debut of The Rockefeller University Press's 1992 list. Ratliff's examination of divisionism—the artistic technique behind Neo-Impressionism—shows how Signac's scientific grasp of color led to artistic innovation.

Nutrition workshops to teach healthy eating, living

In recognition of National Nutrition Month, which will be ushered in with the first days of March, The Rockefeller University Hospital Dietary Service is offering a series of nutrition education workshops focusing on weight management to The Rockefeller University community.

"The workshops will focus on diet, exercise, and behavior modification," said Cindy Seidman, director of Dietary Service. "The core curriculum of the workshops will be based on guidelines from the U.S. Department of Agriculture, the National Cancer Institute, and the American Heart Association."

The series, beginning March 10, will consist of six workshops, each one and a half hours, led by Seidman and Research Nutritionist Jolanta Diakun, who are both registered dietitians. The workshops will be held Tuesdays at 5:15 P.M. (with the exception of one class to be held Wed., April 1) in Hospital 128.

Participants in the workshops will learn how well their diets correspond with recommended dietary allowances with the help of a computer-assisted program. The workshops will also introduce participants to a variety of low

RU withdraws waste petition, asks community leaders to help

President Torsten Wiesel informed officials of Community Board No. 8 Wednesday that he is withdrawing a petition the university made in 1988 to the U.S. Nuclear Regulatory Commission concerning disposal of low-level radioactive wastes.

The petition has been the subject of discussion before two community boards in recent weeks.

Wiesel told Christopher Collins, chair of Board No. 8, and Neil V. Getnick, chair of the board's Environmental and Sanitation Committee, that his decision came following an internal review of the issue from two standpoints:

• "The critical need of hospitals and biomedical research institutions in New York City to provide for the safe disposal of low-level radioactive wastes generated in biomedical research.

• "How our neighbors perceive our petition."

For several years, beginning in the early 1980s, the university conducted extensive scientific and technical studies of the problem of low-level radioactive wastes, Wiesel explained, and concluded that its

proposed method for disposal was safe. On the basis of these studies, the NRC was petitioned in 1988.

"However," Wiesel said, "it is clear that some members of our community remain concerned, perhaps because the issues need to be discussed more thoroughly in the community.

"I hope that you will join with us in addressing the increasingly serious problem of how to dispose of low-level radioactive wastes so that a satisfactory solution can be found. I believe that the views of community members are an important part of that solution. This is not an open-ended question. As you may know, the repositories for this waste across the nation are extremely limited—there are only three, in Nevada, Washington, and South Carolina—and one or even all could close as early as next year. Clearly a solution must be found soon.

"While we search for a common solution to this critical problem, I believe it serves all parties best if The Rockefeller University withdraws its NRC petition, and it will do so immediately. Meanwhile, I will work with you and other community leaders to move the process ahead."

In an earlier letter to Getnick, Wiesel addressed concerns that the university waited until the last moment to respond to a board request:

"You ask why my letter of Feb. 5 was sent just hours before the

See *University*, page 2

Community board 'praises' RU

During the public session of the Community Board No. 8 meeting Wednesday night, Doron Weber, The Rockefeller University manager of public affairs—who was appointed to represent the university in its dealings with the community—read out President Torsten Wiesel's letter to the board. Later in the meeting, the board voted to pass a five-point resolution which "praised" the university for its decision to withdraw and for its commitment to working with the community.

2 Symposium to examine quantum theory and reality

3 Rockefeller scientists battle resurgent TB



Cindy Seidman (left) and Jolanta Diakun, both registered dietitians, will lead the nutrition education workshops to begin in March.

Symposium at RU to examine quantum theory and reality

In conjunction with the New York Institute for the Humanities at New York University and the New York Academy of Sciences, The Rockefeller University physics laboratories will sponsor a symposium, "Quantum Theory and Reality," in memory of John S. Bell Thurs., Feb. 27, in Caspary Auditorium.

The late John S. Bell was one of the leading expositors and interpreters of modern quantum theory. Bell's theorem forms the basis for the ongoing experimental tests of the conceptual foundations of quantum mechanics.

The symposium will proceed as follows:

- At 9:00 A.M., physicist and author Jeremy Bernstein will present personal reminiscences of Bell.
- At 9:20 A.M., a 20-minute

videotape will be shown of Bell discussing, in nontechnical terms, the conceptual problems of quantum mechanics.

- In the morning, Daniel Greenberger of City College (9:40 A.M.) and N. David Mermin of Cornell (11:00 A.M.) will discuss recent generalizations of Bell's theorem.

- In the afternoon, Kurt Gottfried of Cornell (1:30 P.M.) and Philip Pearle of Hamilton College (2:30 P.M.) will describe distinct interpretations of the quantum formalism.

- Edward Fry of Texas A&M will give the last talk at 3:50 P.M. He will speak on work in progress on an improved experimental test of the Bell inequalities.

For further information about the symposium, contact Mark Rubin, x8841.

University withdraws waste petition

Continued from page 1

meeting when the university had been on notice for nearly a month. The answer is simply that while the university may have been notified, the matter was never brought to my attention, nor to the appropriate people on my staff. We are taking steps to assure that this internal communications pathway is improved. In that regard, I ask that any future correspondence be directed to me personally. Once I learned of the meeting, I took steps to understand the problem and formulate a reply as quickly as circumstances permitted. Our intention to take no action to pursue the petition was communicated informally somewhat earlier to a number of community officials."

In that letter to Getnick, Wiesel explained that as soon as he learned of this issue, just a few days prior to the community board's hearing on February 5, he took steps to educate himself and members of his new administration, including consulting with several community leaders. Wiesel told Getnick that at that time he could not responsibly withdraw the petition without fully understanding the implications to the university.

"I have made it a high priority for the university to be a good neighbor," Wiesel said. "I intend as best I can to remedy any previous misunderstandings that may have arisen and to include the community in future university decision-making that affects our neighbors."

Photo to the editor



This shimmering reminder of fall was sent to *News&Notes* by Constantine Pavlides, assistant professor in the Asanuma lab.

Corners



The library offers a quiet landscape of books, wood, and marble.

Letter to the editor:

On Feb. 5, the Environment and Sanitation Committee of Community Board 8 organized a meeting about Rockefeller University's plans to incinerate low-level radioactive waste. Curious as to what this was all about, we attended the meeting and were surprised at what we learned about the plans. Why does the university want to burn low-level radioactive waste in a densely populated area like ours? Unfortunately, nobody could provide the audience with an answer, because the administration of the university was not represented, despite the many requests of the community board. Instead, the university chose to send a written statement (see the front page of *News&Notes* of Feb. 7), just a few hours before the meeting was due to take place.

Why was this done? It gave the impression that the university has something to hide, and raised the question as to why the university's application to the Nuclear Regulatory Commission had not been withdrawn, if in fact the application will not be pursued (as the university states). Above all, with this action, the university lost most of the remaining confidence of the residents, and damaged its credibility and reputation. Since Rockefeller is part of this neighborhood, we think it should have a good and undisturbed relationship with the residents living in this area.

Therefore, we would like to urge the

administration of this university to explain its point of view on this matter in an open and frank way, so that open wounds with the community can be healed and a discussion about this incinerator can be held.

Boudewijn de Jonge and
Peter Matthews
Post-Doctoral Fellows
and Neighborhood Residents

Editor's Note: See page 1 for the university's position on these matters.

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Rockefeller researchers battle TB

by Susan Blum

Tuberculosis (TB) used to be the number-one killer in the United States. From the late 1940s on, however, the incidence of the disease steadily declined due to the advent of effective antibiotics and improvements in sanitation and housing conditions.

Now the 40-year reprieve is over. For the past four years, the incidence of TB has been on the increase; last year, about 25,000 new cases were reported in the United States. As bad as the news of resurgence is, it gets even worse: for the past year and a half, reports have been increasing of antibiotic-resistant strains of TB. Some are resistant to every anti-TB drug now in use.

The resistant strains have been found in sixteen states, but the two worst outbreaks so far have occurred in Miami and New York State. In Miami, a strain of TB spread through an AIDS clinic; in New York, through a number of prisons. All those who have died from the drug-resistant infection had immune systems compromised by AIDS or cancer; a number of health care workers with intact immune systems have also been exposed.

"Non-compliance" is a problem

Resistant strains develop because of what doctors call "non-compliance." When people infected with TB fail to finish their full course of treatment, the hardiest bacilli—those which have escaped the drugs' initial onslaught—thrive and multiply.

As in the past, the majority of TB cases occur among the poor and the disadvantaged. But unlike the past, TB patients are no longer confined in sanatoria until they have finished their therapy. Rather, they are expected to complete their treatment on an outpatient basis. Many are homeless people, or alcoholics, or intravenous drug abusers, for whom the motivation to complete therapy is essentially nil. For instance, "the non-compliance rate at Harlem hospital is 90 percent—higher than in most underdeveloped countries except India," said Professor and Senior Physician Zanzvil Cohn, an expert on TB at The Rockefeller University.

Once established, the drug-resistant pathogens, like all TB bacilli, are spread by coughing. The most likely sites for their transmission are places where lots of people are gathered in close proximity, such as clinics, prisons, and shelters. There, too, people are gathered

whose immune systems are often compromised from infection with HIV or other illnesses or conditions. The toll of TB on people with AIDS is tremendous. "The mortality rate of AIDS patients infected with drug-resistant TB is about 85 percent. The disease takes a very fulminant course, killing the patients between four and sixteen weeks after they realize something is wrong," Cohn said. Mortality rates for AIDS patients infected with non-resistant strains are about 60 percent.

At the moment, Cohn said, the risk of becoming infected with a drug-resistant strain of TB is greatest for people whose immune systems are compromised or for those who are in close, continual contact with them, such as health care workers and prison guards. According to Cohn, "If you're healthy, you're not going to be exposed just by riding the subway or walking down the street." He said the risk may increase if the number of infected people grows.

TB affects many countries

The advent of drug-resistant strains has shaken the United States out of its long complacency about TB. But for most of the world, TB has never disappeared. According to the World Health Organization, eight million new cases are reported each year, and three million people die from the disease. "TB has always been a terrible problem in underdeveloped countries," Cohn said, pointing out that it kills more people than any other infectious disease, including malaria.

In fact, it was the Cohn-Steinman lab's awareness of the problem of TB abroad that led them to start their own studies of the disease. About two years ago, in Nepal, they were pursuing their long-standing interest in leprosy by investigating the effects of an immune modulator called IL-2 on the disease. "In Katmandu, 80 new patients were visiting the TB center each day," Cohn said. "That made a tremendous impression on us." The researchers realized that a deadly combination was in the making in Southeast Asian countries—where TB is endemic and AIDS is growing—and in Africa, where both AIDS and TB have already strongly taken root. "It was clear to us that something was also going to happen in the United States. And it has," said Cohn.

Research takes unique tack

The Rockefeller lab is one of the few in the country to be pursuing



Zanzvil Cohn studies tuberculosis, the incidence of which has begun to increase in the United States after a 40-year decline.

TB studies, and the only one, to Cohn's knowledge, to be taking the two-pronged approach of conducting both laboratory and clinical studies.

In The Rockefeller University Hospital, the team is pursuing two kinds of studies. One aims to address the problem of how to fight TB when an important aspect of immunity, known as cell-mediated immunity, is depressed. Depressed cell-mediated immunity is characteristic of people with AIDS, but not limited to them. "Some TB patients who are HIV-negative may be immunodepressed in some parameters due to alcoholism, drug addiction, homelessness, or poor nutrition," Cohn said.

Researchers in the lab had previously shown that an immune-system booster known as recombinant human IL-2 can have dramatic effects in the treatment of leprosy, and subsequent studies have also indicated that a longer-acting derivative of IL-2 enhances cell-mediated immunity in some AIDS patients. "Now we want to know, if we give IL-2 to TB patients with certain parameters of immunodepression, whether we can facilitate their recovery with the usual drug regimen," Cohn said.

The other clinical study focuses on thalidomide. Previous research done in the lab showed that thalidomide can selectively inhibit TNF-alpha in the treatment of leprosy. TNF-alpha is a potent substance produced by a type of immune cell called the macrophage. Some TNF-alpha is vital for the body's defensive maneuvers, but too much can be harmful or even deadly. Common effects of TNF-alpha production include fever, severe weight loss, and profound debilitation. TB patients have very high levels of TNF production, which may hasten their decline and even their death. The Cohn-Steinman team plans to study whether thalidomide given in conjunction with other drugs may enhance patients' outcomes.

Laboratory studies are focusing on

the basic pathobiology of the bacillus that causes TB. "Very little has been learned about the bacillus since the advent of antibiotics in the 1940s," Cohn said, decrying the "medieval character" of research on the disease. Fortunately, he added, "between 1940 and 1990 there has been a tremendous increase in our knowledge about cell-mediated immunity." These advances promise to shed light on the molecular mechanisms underlying the pathogen's ability to cause disease and to develop resistance to drugs.

For instance, Professor and Senior Physician Ralph Steinman and his colleagues are attempting to understand how immune cells are triggered into action by dendritic cells, a class of immune system cells he discovered. And Steinman and Associate Professor Gilla Kaplan are collaborating on studies to elucidate the cell biology and immunology of the interaction of the bacillus with human immune cells known as monocytes. "Our belief is that by understanding cells and their products, we will be able to modulate the immune response," Cohn said.

Perhaps as important as the data resulting from these studies will be the new experts trained in the process of gleaning it. "Currently there are very few young people involved in the study of TB," Cohn said. In the lab of the Rockefeller researchers, however, there are doctoral students, M.D.-Ph.D. students, and post-doctoral fellows from the United States and abroad. As they complete their studies, these young scientists will spread out across this country and overseas, where they will establish their own research programs as well as collaborate with ongoing studies conducted by the Rockefeller researchers in countries such as Thailand, India, and the Philippines. Such international cooperation is crucial to conquer worldwide a medical problem the United States can no longer afford to ignore.

Gala draws artists, scientists to celebrate book published by RU Press

Robert Reichert



Nicola Khuri, Joan Kennedy, and Robert Millman (left to right) chat at the celebration of Floyd Ratliff's *Paul Signac and Color in Neo-Impressionism* just published by The Rockefeller University Press.



Norman Mailer, Jean Stein, and Norris Mailer (left to right)

Robert Reichert



Martha Kellar, Paul Rosen, and Gunilla Feigenbaum (left to right)



Floyd Ratliff (right) autographs his book.

Potpourri

Sunday Film

Personal Services (1987, Terry Jones), starring Julie Walters, is a scathing social satire based on the memoirs of a notorious British madame who catered to the highly specialized tastes of her doting, upper-class clientele. The film, which will be shown on Sun., Feb. 23, at 7:30 P.M. in Caspary Auditorium, is open to the Tri-Institutional and Animal Medical Center communities.

Tri-Institutional Noon Recital

Before she performs at Carnegie Hall Feb. 25, pianist Babette Hierholzer will perform at today's (Feb. 21) Tri-Institutional Noon Recital. Hierholzer has won numerous first prizes in international competitions—including the Steinway Piano Competition Berlin seven times—and has recorded with MARUS/EMI Electrola. The recital in Caspary Auditorium will include works by Wolfgang Amadeus Mozart, Johannes Brahms, Felix Mendelssohn, and Domenico Scarlatti. Admission is free and open to the Tri-Institutional community.

Award

Professor Paul Greengard has been granted the National Institutes of Health's (NIH) MERIT Award, which provides up to ten years of support in two segments. According to the NIH, "the objective of the MERIT award is to provide long-term stable support to investigators whose research competence and productivity are distinctly superior."

Free baseball caps

The Sweat Shirt Shop will give away free Rockefeller University baseball caps with every purchase until the end of March. The shop is open Tuesdays from 11:30 A.M. to 1:30 P.M.

Appointments

Adjunct Faculty: James Kocsis, Kreek lab; and Daniel Rosenberg, Kappas lab.
Visiting Professor: Eric Siggia, Feigenbaum lab.
Postdoctoral Fellows: Joseph Bisaha, Breslow lab; Eva Rozdzinski, Tuomanen lab; and Dexter Sun, Ding-E Young lab.
Guest Investigators: Pedro

Persechini, Ding-E Young lab; and Yasunori Yamaguchi, Steinman lab.

Departures

Assistant Professor: Gerald Thiel, Greengard lab.

Adjunct Faculty: Robert Jones, Kappas lab.

Research Associates: Giovanni Migliaccio, Blobel lab; and Uma Santhanam, Tamm lab.

Postdoctoral Associates: Hugo Bergen, Pfaff lab; Shu-Hong Hu, Burley lab; Jill Inverso, G.A.M. Cross lab; Tohru Yoshimura, Manning lab; and Yoh Wada, Edelman/Cunningham lab.

Postdoctoral Fellows: Katharina

Bauer, Blobel lab; Patricia Glennon, Hayre Lab; Susan Martino-Catt, Chua lab; Michael Meisterernst, Roeder lab; and Jorg Stockhaus, Chua lab.

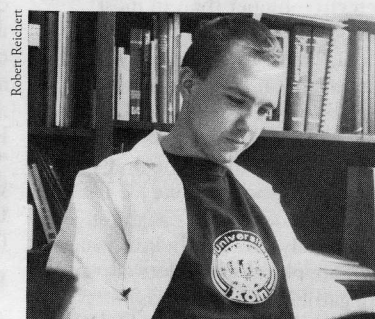
Guest Investigators: Henrik Albeck, Kreek lab; and Jonathan Wagg, Cranefield/Gadsby lab

Who's Who?

A caption in last week's issue of *News&Notes* misidentified David Wilson, a third-year student who is one of the organizers of the first-year journal club, as Gunnar Dietz, a first-year student who recently presented an article at the journal club.



David Wilson



Gunnar Dietz