

3-20-1992

## NEWS AND NOTES 1992, VOL.2, NO.26

The Rockefeller University

Follow this and additional works at: [http://digitalcommons.rockefeller.edu/news\\_and\\_notes\\_1992](http://digitalcommons.rockefeller.edu/news_and_notes_1992)

---

### Recommended Citation

The Rockefeller University, "NEWS AND NOTES 1992, VOL.2, NO.26" (1992). *News and Notes 1992*. Book 10.  
[http://digitalcommons.rockefeller.edu/news\\_and\\_notes\\_1992/10](http://digitalcommons.rockefeller.edu/news_and_notes_1992/10)

This Book is brought to you for free and open access by the The Rockefeller University News and Notes at Digital Commons @ RU. It has been accepted for inclusion in News and Notes 1992 by an authorized administrator of Digital Commons @ RU. For more information, please contact [mcsweej@mail.rockefeller.edu](mailto:mcsweej@mail.rockefeller.edu).

# news & notes

March 20, 1992 Volume 2, Number 26

The Rockefeller University



Timmy Shea (left) and David Brooks served complimentary Irish coffees Tuesday in celebration of St. Patrick's Day and the anniversary of the Faculty and Students Club.

## Club toasts 34th anniversary

By Olivia Gushin

In celebration of St. Patrick's Day Tuesday, many at The Rockefeller University wore green, ate corned beef and cabbage, and otherwise touted their Irish ancestry (real or borrowed). Others observed a different, but equally festive, occasion: the 34th anniversary of the Faculty and Students Club.

According to Timmy Shea (himself of Hibernian descent), who has managed the club for the past eight and a half years, until 1958 only non-alcoholic punches were served at university functions. Legend has it that David Rockefeller, attending a party, looked around for something to make a toast with. When nothing suitable was found, the idea for the Faculty and Students Club—a place where students and faculty can relax and unwind—was born.

The club was ready for business before its liquor license was granted. During this "dry" time it was known as the "bottle club." Members brought their own bottles, which

they left (properly labeled with the owner's name) at the bar, while the club provided ice and mixers. The club finally did receive its liquor license.

In days past, as today, a core clientele frequented the club. Detlev Bronk, president of the university from 1953 to 1968, regularly presided over a table. Those wishing to discuss university business with him could do so, provided they had observed the club's formal dress code.

This year, the club's St. Patrick's Day festivities began at noon with the annual Corning Ware party. Since the university uses Corning products in such volume, the glass company held the annual party for its salespeople here. After 4 P.M., when the club opened to university clientele, patrons received a complimentary Irish coffee. A buffet was provided by Food Services.

Shea called the St. Patrick's Day crowd "greater than average." As usual, Irish whiskey was one of the most popular drinks.

## A weighty matter

### RU awarded grant to study obesity

The Development Office has announced a new grant from the New-York based Herman Goldman Foundation that will help support research on nutrition conducted by Jules Hirsch, physician-in-chief of The Rockefeller University Hospital, and his colleagues in the Laboratory of Human Behavior and Metabolism.

The \$40,000 gift will enable Hirsch's team to continue its work on the relationship of energy metabolism and appetite regulation to obesity. Researchers in the Hirsch lab use a variety of complementary clinical and basic research approaches to gain a deeper understanding of the biochemistry, neurobiology, and molecular and cellular biology of obesity. Among the topics of research in the lab are the hereditary nature of obesity and the reasons why different people accumulate and retain fat in different parts of the body.

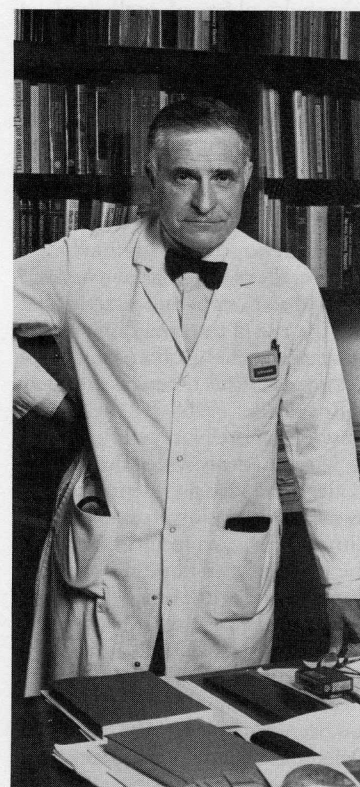
"I am very grateful to you and your fellow directors at the Herman Goldman Foundation for your recent grant," President Torsten Wiesel wrote to Stanley Klein, president of the foundation. "Your steadfast commitment to the work of Dr. Hirsch and his associates has been a great source of encouragement to this university in past years. Now, with the help of this generous gift, ongoing investigations on nutrition will continue to break new ground."

Since 1977, the Herman Goldman Foundation has made a total of \$575,000 in grants to The Rockefeller University. The awards have gone to Professor Emeritus Edward Ahrens for his research on

the relationship between cholesterol metabolism and coronary heart disease; to former Rockefeller Professor Jack Fishman for his work on the role of steroid hormones in endocrine-related cancer; and to Hirsch for his continuing work on nutrition.

"I was delighted to learn of this recent grant," Hirsch said. "Private grants such as this are particularly helpful in maintaining the environment and resources essential to our work. Such support helps us to maintain the freedom and flexibility necessary to respond to priorities that may emerge unexpectedly."

The Herman Goldman Foundation was established in 1942 by Herman Goldman, a prominent New York City attorney and tax expert. Since its incorporation in 1943, the foundation has made grants totaling over \$23 million to a wide variety of organizations concerned with furthering health, social justice, education, and the arts.



Inghert Gnutner

## Wiesel to address academy meeting

President Torsten Wiesel will present an overview of his work, "Neural Mechanisms of Visual Perception," at the fifth annual meeting of the American Academy of Arts and Sciences (AAAS) Mon., March 23, at 6:45 P.M. in Caspary Auditorium.

Introductory remarks to the

lecture will include a brief report of academy activities by Leo Beranek, president of the AAAS. Professor Joshua Lederberg, former president of university, will introduce Wiesel as speaker.

The lecture is open to Rockefeller faculty, staff, and students.

A grant from the Herman Goldman Foundation will help support research on nutrition conducted by Jules Hirsch (above) and his colleagues.

2 RU Press director, designer resign

3 Time flies in RU 'copper room'

4 Musicians set tempo in Faculty Records



## Book explores origin, impact of natural sciences

The latest addition to Barnes & Noble Bookstore on Fifth Avenue is *The Science Matrix: The Journey, Travails, Triumphs* (Springer-Verlag New York) by physicist and former Rockefeller University President Frederick Seitz.

Seitz's book contains 12 interrelated essays dealing with the historical background of modern science and its influence on diverse issues such as human perception of the natural world and the evolution of technology. "The primary object of this small book is to emphasize in a somewhat personal way how the natural sciences arose and what they mean to our present civilization—with all their positives and negatives," writes Seitz in the preface.

Essays in *The Science Matrix*, several of which have appeared elsewhere in a different form, include "The Brain Matrix: Our Window on the World," "Technology Without Modern Science," and "Crucial Steps in the Evolution of Science," a historical chapter which Seitz considers pivotal in the book. It describes five steps which have led to today's powerful scientific edifice. It starts with the work of the Greeks in the heyday of Athens, emphasizes the important role of other cultural groups, including Indian, Egyptian, Moslem, Jewish, and Persian scholars, and finally leads into the successes and struggles which arose once the great classical scientific texts, nurtured and consolidated by the Moslems, were transferred to the Christian world in the Middle Ages.

Other essays deal with fraud in science, the psychological reaction to the discovery of radioactivity, and the rise of the environmental movement, among other subjects.

Prior to Seitz's tenure as president of Rockefeller (1968-78), he was president of the National Academy of Sciences, dean of the Graduate College and vice president for research at the University of Illinois. He was a faculty member at the University of Illinois, Carnegie Institute of Technology, The University of Pennsylvania, and the University of Rochester, as well as a research physicist at the General Electric Research Labs. Seitz also has been a member of the National Defense Research Committee, a consultant to the U.S. Secretary of War, director of training at the Oak Ridge National Laboratory Clinton Laboratories, and a science advisor to the North Atlantic Treaty Organization.

## Press director, designer to leave university—and NYC

Martha Kellar, director of The Rockefeller University Press, resigned her position Tuesday and announced she will leave this June. She will marry this summer and move to New Mexico.

Coincidentally, the art director of the Press, Corrine O'Neill, also resigned Tuesday. O'Neill will move to Chicago later this spring, accompanying her husband, a corporate lawyer who has been transferred.

Kellar joined the Press in 1978 as production editor. She left to go to Palo Alto, California to be production editor at Annual Reviews, Inc. She returned to the Press a decade ago, rising through the ranks from production-editorial manager of the Journals Division to director.

As director, Kellar is publisher of five scientific journals: the *Journal of Experimental Medicine*, *Journal of Cell Biology*, and *Journal of General Physiology*, all owned by the university, and the *Journal of Clinical Investigation* and the *Biophysical Journal*, which are published by the Press but owned by professional societies.

Kellar has also revitalized the Press's Book Division. Professor Emeritus Floyd Ratliff's work on the theory of color and Neo-Impressionism was launched recently; a book by Professor and Dean Bruce McEwen and former New York Times Science Writer Harold Schmeck will appear later this year; and other books are also in progress.

She has also worked to improve the use of computers at the Press and has taken a number of preliminary steps to bring scientific publishing to desk-top terminals.



Martha Kellar

Kellar is a Phi Beta Kappa, magna cum laude graduate of Mount Holyoke College.

O'Neill joined the Press in January 1990, as a designer. She previously worked in the design department at Mobil Oil Company. She holds a B.F.A. in Art History from the University of California, Los Angeles, and an M.S. in Communications Design from Pratt



Corrine O'Neill

Institute. In addition to handling all the design projects for the Press, she redesigned *News&Notes*, was art director for *Search*, redesigned the catalogue *Scientific and Educational Programs*, and designed numerous brochures, pamphlets, and other printed pieces.

A search process is being organized for both positions.

## Social workers build ties among institutions

In honor of Social Work Month, The Rockefeller University Social Work Unit cosponsored a lecture with The New York Hospital, Memorial Sloan Kettering Cancer Center, and The Hospital for Special Surgery last Monday. The talk, given by Professor Frederic G. Reamer of Rhode Island College, addressed the topic of ethical practice in today's high-tech, cost-containment climate.

"The planning of the event took about three months," said Lanie

Fleischer, social worker at the Hospital. "Working together built stronger ties among the social work departments of our neighboring institutions."

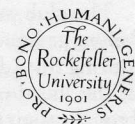
Those who attended the lecture included Elizabeth Gorman, recreational therapist; Gladys McMilleon, Hospital volunteer and administrative secretary in the Chait lab; Rose Schaffer, Hospital volunteer, and Elina Suzuki, administrative assistant in the Social Work Unit.

## Corners



The last official day of winter yesterday (March 19) blanketed the campus with snow.

*News&Notes* is published each Friday throughout the academic year by The Rockefeller University, 1230 York Avenue, New York, NY 10021. Phone: 212-570-8967.



Torsten Wiesel, President  
Alfred G. Kildow,  
Assistant to the President  
for University Communications  
Doron Weber, Manager of Public Affairs

Mika Ono, Editor  
Corrine O'Neill, Design  
Robert Reichert, Photography

Ideas and submissions can be sent interoffice (Box 68), by electronic mail (*newsno*), or by fax (212-570-7876).

The Rockefeller University is an equal opportunity employer and has an affirmative action program to increase the employment of women and members of protected groups at all job levels.



# RU researchers measure fleeting moments in 'copper room'

By Susan Blum

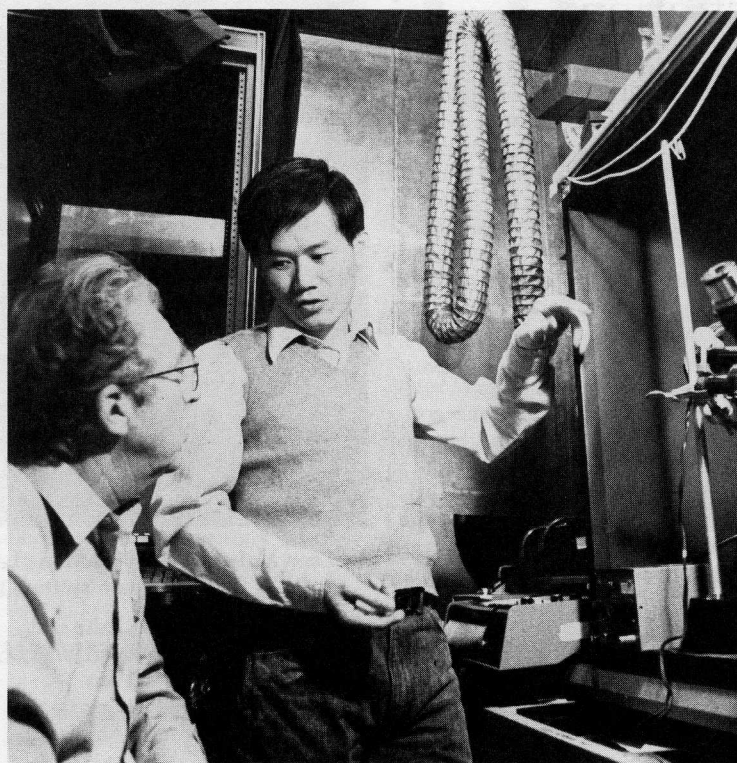
Time flies, especially in the Mauzerall lab. There, the passage of one moment to the next is measured not in hours, minutes, or seconds, but in fractions of seconds so infinitesimally small they boggle the mind of the average clock watcher. Researchers in the lab can log time in billionths or even trillionths of a second, known as nanoseconds or picoseconds, respectively. Within these time frames, the investigators measure correspondingly minute electrical potentials—some as small as microvolts, or millionths of a volt.

Measurements on these scales are required for the scientists to investigate the movement of electrons into and across membranes. Such "electron transfer" lies at the heart of some of life's most fundamental processes. In photosynthesis, for instance, the electromagnetic energy of the sun is converted by plants into chemical energy stored in organic molecules and oxygen. This transformation is driven by the transport of electrons from protein to protein embedded in labyrinthine membranes. Electron transfer across membranes is also fundamental to respiration, the process by which all the "parasites" of photosynthesis—from bacteria to humans—burn up the chemical energy produced by plants.

But it's not all life in the fast lane in the Mauzerall lab. Sometimes the researchers slow down to an easier pace, measuring time in microseconds, or millionths of a second, and voltage by the millivolts, or thousandths of a volt. Such are the measurement scales for some of their studies investigating the flow of ions, or charged molecules, across membranes. Like electron transfer, the movement of ions is a fundamental aspect of life: All living cells depend on the controlled flow of ionic currents across their membranes.

## Precision is key

In all research activities involving measurement, scientists aim for the greatest possible precision with the least possible error, distortion, and "noise." The smaller the measurement, the greater the impact will be of any distortion or interference. At the minuscule measurement scales of the Mauzerall lab, the potential for noise and distortion is obvious, especially given the nature of the instruments the researchers employ. One of their pulsed lasers, for instance, puts



David Mauzerall (left) and Kuo-Chu Hwang conduct experiments in a chamber totally sheathed in copper. The room enables researchers to optimize the exactitude of their measurements.

out a powerful discharge of 30,000 volts.

This is why, to optimize exactitude, many experiments in the lab on the second floor of Flexner are conducted in the "copper room," a chamber totally sheathed in copper. This copper cocoon conducts all incoming electromagnetic fields around the room's perimeter and away from the interior. "It's basically the same principle as sitting in a car that's struck by lightning," said Kuo-Chu Hwang, a postdoc in the lab. "The charge goes through the metal, rather than through you."

The room was built about 15 years ago by David Mauzerall, Gwynn Ballard, then a postdoc who is now on the faculty at Yale, and Timothy Marinetti, now an associate professor in the Mauzerall lab. The researchers chose to build the room rather than purchase a prefabricated one because, Mauzerall said, "even back then such a room would have cost ten or fifteen thousand dollars. We simply couldn't afford it."

Instead, the three became experts in the art of coppersmithing. They learned how to price copper, cut it, and shape it as required with rubber mallets. Once all the forms were cut, Ballard spent two weeks soldering the seams together. "You can't have any open edges at all," Mauzerall explained. "Openings act just like radio antennae."

Those were not the best two weeks of Ballard's life, Mauzerall recalled. Every surface in the room was reflective—except for the postdoc. "Poor Ballard was the only 'black body' in the room," recalled Mauzerall. "All the heat generated by the heavy soldering iron went straight into him."

But the sweat equity has proved to be an investment well made. Over the years, numerous experiments have been conducted in the room. Many of them involve measurements of electron or ion movement within or across self-assembling lipid bilayers. These bilayers—double sheets of fatty molecules—serve as models for the membranes of living cells.

## Novel technique is used

One set of experiments using the copper room was recently completed by Michael Drain, a former postdoc now working with Nobel laureate Jean-Marie Lehn at the Universite Louis Pasteur in Strasbourg. The experiments employed a novel technique developed by Drain and Bernd Christensen, another former Mauzerall postdoc. Dubbed "photogating," the technique allowed Drain to study the kinetics of ionic flow across a membrane without the distortions and ambiguities introduced by applying current to the membrane.

As an alternate source of energy,

Drain used the electromagnetic radiation from a pulsed laser. When porphyrin molecules embedded in the membrane absorbed the laser radiation, they lost electrons and became positively charged. These charged porphyrin molecules caused the photogating effect, which controlled the flow of positive and negative ions through the membrane. Among the results of these experiments were insights into how ion-conducting channels might have evolved, and into how large, charged molecules such as proteins may cross cell membranes.

Even more recently, the copper room has been the site for a series of experiments conducted by Hwang. His work may have set a new world record, having measured the charge of less than a million electrons in a time frame of five nanoseconds.

## Postdoc probes 'buckyballs'

The experiments involved studding the lipid bilayers with "buckyballs," the 60-carbon structures that are one of the three known major forms of carbon. (Graphite and diamonds are the other two.) Discovered in 1985 and named after Buckminster Fuller, buckyballs have been intriguing scientists ever since with their wide range of physical and chemical properties. It was the electronic and structural similarities between buckyballs and porphyrins—both are extremely symmetrical—that prompted researchers in the lab to embark on the studies.

Now Hwang and Mauzerall believe they have found the first solid evidence that 60-carbon buckyballs and their close cousins, made up of 70 carbons, can serve as electron acceptors in two different "states"—in their lowest, most stable energy levels and in a higher-energy configuration. They also found that C60 and C70 molecules can act as electron shuttles across a lipid bilayer. Very preliminary results also suggest that C60 may dramatically increase the flow of ions across a membrane.

The work with buckyballs is just the latest manifestation of the lab's long-standing interest in the electron transfer reactions involved in photosynthesis, respiration, and a wide range of other biological processes including vision. Ultimately, the research may also be applied to improve the efficiency of solar energy cells and to create new types of conductive polymers. But elucidating the details of these discoveries will take some time, the researchers said. Exactly how many picoseconds that might add up to is anyone's guess.



## Jazz musicians set tempo in RU's Faculty Administration

Those who want to see top jazz musicians can frequent clubs such as the Blue Note, Village Vanguard, Fat Tuesdays, Sweet Basil, and Bradleys—or they can visit Founder's Hall 103. Noted musicians Leon Maleson, database coordinator, and Maria Lazzaro, assistant administrator, both work in Rockefeller University's Faculty Administration.

Bassist Maleson came to The Rockefeller University as temporary help four years ago. "I only planned to work at Rockefeller one week," he said, "but once I got here I really liked it. I work on a flexible schedule that doesn't conflict with my performances. And I've enjoyed the work itself—it has been fascinating to learn about computers."

Maleson often wears black clothing to the office, as this enables him to go straight from campus to his performances in Broadway shows. ("The only choice is which black shirt to wear today," he commented. "It makes it really easy to pick what to wear in the morning.") He currently plays on the *Will Rogers Follies* and subbed for *The City of Angels* until it closed. In addition, Maleson is a regular on the New York jazz circuit where he has played with such famous musicians as Ron Carter, Richie Cole, Dexter Gordon, Milt Jackson, Elvin Jones, Stanley Cowell, Jack Wilson, Archie Schepp, and Ran

Blake. Next Tues., March 24, Maleson will play at J's at Broadway and 97th St. with pianist and singer Daryl Sherman.

"While musically I prefer playing in the clubs, the shows pay better than most jobs—and they are steady," he said. "Jazz musicians can work every day of the week at the top clubs in New York—the top jazz city in the world—and still not make a very good living."

For Maleson, the rewards of being a musician lie not in the fame, and certainly not in the fortune, but in the music itself. "Some wonderful music has been made in clubs with no one there," he said. "It is so rare to make really great music in a creative way; when that happens it is something special."

When Faculty Administration needed a new administrative assistant about a year and a half ago, Maleson recruited fellow jazz musician Lazzaro, a saxophonist, for the position.

Like Maleson, Lazzaro often goes straight from work at Rockefeller to her gigs, which include performances with her own group, the Maria Lazzaro Bill Mobley Quintet; an all-woman swing group, the Kit McClure Big Band; and a meringue band, Las Chicas de New York.

Unlike Maleson, who focused on music from an early age, Lazzaro rediscovered music in college, after giving it up for a number of years. "I was working in the basement of



Leon Maleson (left) and Maria Lazzaro often go straight from work at RU's Faculty Administration to their evening performances.

the Reed College library," she said, "writing papers and reading Hume and Kant. My boyfriend was studying music and playing jazz, and it seemed like a lot more fun than what I was doing."

After graduating from Reed with a B.A. in philosophy, she studied music at the New England Conservatory for a year, then went on to earn a four-year degree from the Berklee College of Music in performance studies. Although she had at first thought of music as a hobby, after she graduated she found that music had become her calling. She established a successful career as a free-lance jazz musician in Boston, then in New York.

Recently Lazzaro recorded "Some Like it Hot" and completed a 10-day tour of Japan with the Kit McClure Big Band. "We were very well received in Japan," she said. "We played in a lot of small clubs. Unfortunately, as we played almost every night, I didn't get too much time to be a tourist."

Lazzaro will soon go on maternity leave from Rockefeller, as her first baby is due in early April; her performance schedule may have to slow down for a while as well. Among Lazzaro, her husband (a trumpeter), and musical friends and coworkers such as Maleson, the new baby is sure to receive an excellent musical education.

## Potpourri

### Recital

In celebration of Women's History Month, Tri-Institutional Noon Recital and The Rockefeller University Women's Association will co-sponsor a performance by the all-woman Cavani String



The Cavani String Quartet will perform today (March 20) in celebration of Women's History Month.

Quartet in Caspary Auditorium today (March 20) at noon. The group will play pieces by Franz Joseph Haydn and Ludwig van Beethoven. Since its formation in 1984, the group has won the prestigious Naumburg Chamber Music Award and received first place in the Cleveland Quartet and Carmel competitions, among others. It was selected by Musical America for its "Young Artists of 1989" roster, and awarded special recognition in 1990 from the governor of Ohio for its outstanding achievements. The members of the quartet—violinist Annie Fullard, violinist Susan Waterbury, violist Erika Eckert, and cellist Merry Peckham—are on the faculty of the Cleveland Institute of Music.

**Former RU V.P. to head academy** The New York Academy of Sciences has named Rodney W. Nichols as its new chief executive officer, effective April 1. Nichols

served as vice president during the presidency of Frederick Seitz, and executive vice president during the presidency of Joshua Lederberg. Nichols is currently a scholar-in-residence at the Carnegie Corporation of New York.

### Children's School benefit

The Walt Disney film, *The Black Cauldron*, will be shown in Caspary Auditorium, Sat., March 21, at 4:00 P.M. A \$3.00 donation to benefit the Children's School is requested.

### Former employee writes guide

Bill Griesar, who worked in the Kappas lab for several summers while attending Brown University, has published *The Underground Guide to University Study in Britain and Ireland* (Intercultural Press, Inc., Yarmouth, Maine), a practical handbook for American students studying in Britain or Ireland. Griesar spent his junior year abroad

at the University of Sussex. He now directs the West Coast office of the Beaver College Center for Education Abroad.

### Talk and workshop on violets

The Rockefeller University Women's Association will sponsor a talk and workshop by Roger Casciano on growing African Violets Tues., March 24, at noon in Nurses Residence 110B. All members of the Rockefeller community are invited. Participants are invited to bring lunch; coffee, tea, and cookies will be provided.

### Omission

Last week's *News & Notes* article on the new zebrafish facility neglected to mention that the research on the migration of LHRH-producing neurons and on Kallman syndrome was conducted by Assistant Professor Marlene Schwanzel-Fukuda.