

4-12-1996

NEWS AND NOTES 1996, VOL.6, NO.24

The Rockefeller University

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news & notes

April 12, 1996 Volume 6, Number 24

The Rockefeller University

At the Cohn forum

Adjunct examines effects of plentiful science prizes

Harriet Zuckerman, vice president of the Andrew W. Mellon Foundation, will discuss "The Proliferation of Prizes" at the final talk of the Zanvil A. Cohn Forum on Health Affairs Tues., Apr. 23.

"Harriet Zuckerman has brought her insight and considerable acumen to bear in analyzing the effects of the proliferation of rich prizes awarded to scientists," said Alexander Bearn, chair of the forum's selection committee. "Her questions about the effects of such prizes promise a compelling and provocative lecture."

An adjunct faculty member in

See **Zuckerman**, page 2



Harriet Zuckerman, a sociologist who serves as vice president at the Mellon foundation, is an adjunct in the Lederberg lab.

2 On-line at the library

3 Women in science

4 Cardiovascular colloquium

University participates in national Take Our Daughters to Work Day

The university will honor the fourth annual Take Our Daughters to Work Day Thurs., Apr. 25 with a morning-long program introducing girls ages 11 to 17 to women and researchers on campus.

"We invite university parents to bring their daughters to campus to participate," said Gabrielle Riera, director of events and community relations. "Rockefeller has not only women scientists but many professional women who work at unusual, interesting jobs. We hope meeting them will encourage our young visitors to turn their current interests into experiences that will help them develop satisfying careers."

Riera and Kara Marshak, personnel assistant, will welcome visitors in Cohn Library at 9:00 A.M., and the program begins at 9:30 A.M. Lynne Claye, postdoctoral fellow in Professor Mary Jeanne Kreek's Biology of Addictive Diseases Laboratory, will give a tour of the lab, overviewing its clinical, molecular biology, neurobiology, and chemistry research.

Next, Assistant Professor Ali

Hemmati-Brivanlou will screen a short video on growing a tadpole from a single frog egg and give a tour of the room housing frogs. Art curator Cynthia Altman will discuss her work, and Sonia Lupien, guest investigator in the McEwen lab, will give a lunchtime lecture on why she became a scientist. Parents and participants may join the lunch, after which the official program ends and guests may return to their parents' labs and offices.

Because of safety concerns, campus organizers request that program participants working in labs obtain approval from lab heads. Young visitors should be closely supervised at all times.

Organized by the Ms. Foundation for Women, the nationwide event is one facet of the foundation's commitment to girls, which includes public education campaigns about their health, research on their unmet educational needs, advocacy with public-policy makers on their behalf, and sponsorship of nonprofit programs serving them.

Call Marshak, x8300, to register and for a final schedule of events.

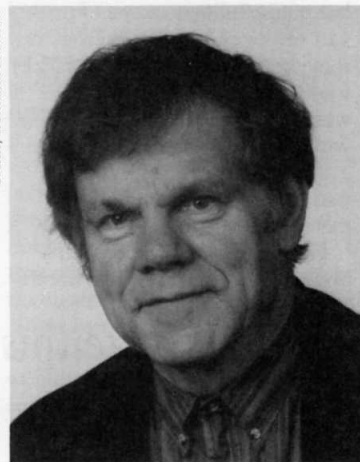
Breakfast at Rockefeller



Rockefeller University Council members Lydia and Robert Forbes (second and third from left) hosted a breakfast at which Professor and Howard Hughes Medical Institute investigator Jeffrey Friedman (second from right) spoke on "Learning to Read Our Genes: The Promise of Genetic Research." About 60 council members and guests attended the lecture, held Tues., Apr. 9 in Abby Aldrich Rockefeller Dining Room. Friedman provided an overview of the recently established Starr Center for Human Genetics, which he directs, its scientists, and their research interests. He also updated the audience on his work with the hunger hormone leptin, using it as a case study to illustrate how discovery of a gene can provide insights into the biology, pathology, and therapy of major medical disorders. President Torsten Wiesel (left) followed the talk by moderating a question and answer period, while remarks by Richard M. Furlaud, chairman of the university Board of Trustees, concluded the event.

Seek and ye shall find

Friday speaker to discuss molecules that guide neural connections



Courtesy of Friedrich Bonhoeffer

Friedrich Bonhoeffer earned a doctorate in nuclear physics, studied viral nucleic acids as a postdoc, and worked on bacterial genetics and DNA replication before turning to neurobiology.

Friedrich Bonhoeffer, director of the Max Planck Institute for Developmental Biology in Tübingen, Germany, discusses "How Retinal Neurons Become Connected with Their Targets in the Brain" at the Friday lecture today (Apr. 12).

Bonhoeffer studies how different brain regions form specific connections with each other during development of the nervous system. He and his colleagues focus on the retinotectal projection, a model system for studying the problem of axon guidance and target recognition. The retinotectal projection is set up by the retinal axons, which grow to their primary target in the brain, the optic tectum, where they form a topographic map. Because axons from different regions of the retina must recognize specific regions in the tectum, multiple guidance factors and cell recognition molecules are thought to be involved in this process.

Studies have shown that axons from the temporal retina are specifically repelled and guided by factors present in the rear half of the tec-

See **Bonhoeffer**, page 4

Desperately seeking a datum? RU Library observes Library Week with lessons on electronic databases

Rockefeller University Library staff will demonstrate electronic databases, products, and resources in observance of National Library Week Mon., Wed., and Fri., Apr. 15, 17, and 19 from noon to 2:00 P.M. in the 2nd floor of Welch Hall.

"We are incorporating wonderful new technologies and information banks into our program of services, but taking full advantage of these vast troves of information requires some knowledge," said Pat Mackey, librarian. "Please drop by. We want everyone to feel comfortable with these electronic resources, even as we continue to provide traditional services and print materials."

During the lunchtime open house, educational services librari-

an David Man will give virtual tours of resources such as:

- full text issues of *Nature* on CD-ROM;
- *Cambridge Scientific Abstracts* databases, which cover the aquatic, biological, and environmental sciences;
- *Medline/Current Contents*;
- *Methods in Enzymology*, a CD-ROM comprehensive index;
- the on-line *Oxford English Dictionary*;
- *Science Voyager*, a CD-ROM scientific dictionary and encyclopedia;
- the World Wide Web, with attention to the RU Library home page, other library home pages, the Internet edition of *The New York Times*, and *Mapquest*, an interactive atlas.

For love of tennis

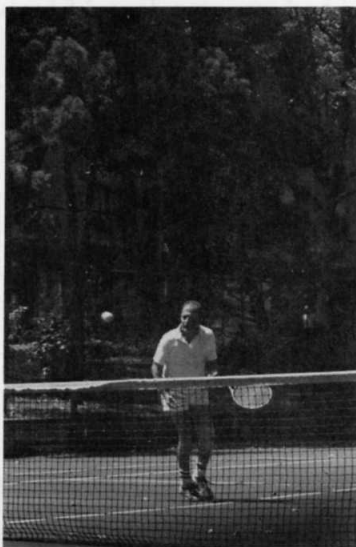
Spring will overcome winter, and the Rockefeller tennis court is ready, its surface swept and net taut.

Rules for tennis court usage are:

The court may be used by all members of the university community and their spouses. Each person may sign up for one hour of play per week by presenting an ID card and giving his or her name, department or office, and extension.

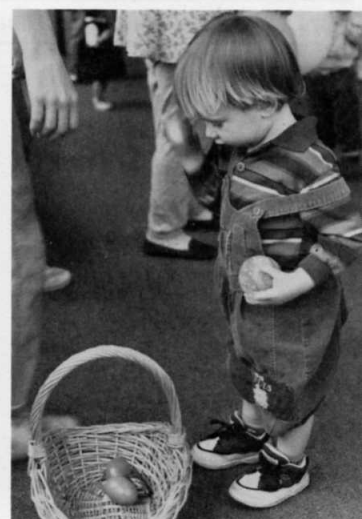
Hours for play are 6:00 A.M. to 9:00 P.M. seven days a week.

Players must reserve the court in advance on sign-up sheets at the security desk in Founder's Hall. Sign-up sheets for a seven-day period open every Monday at noon. Players may reserve court time anytime between noon and 4:00 P.M. Monday through Friday.



Lawrence Sirovich, visiting professor in the Feigenbaum lab and adjunct in the Knight lab, rushes in for a net shot.

Getting a handle on the Easter holiday



On Easter Sunday (Apr. 7), the Playroom Committee of Scholars Residence held an egg hunt, moved indoors to the 38th floor because of cold and rainy weather. More than 90 children sought plastic and candy eggs, colored paper Easter eggs, and ran egg-on-spoon races. One child added to the festivity of the annual Rockefeller event by bringing a real rabbit. "It was chaos, but fun, and anytime we have an event like this, you get a real sense of the community spirit," said Leslie Aitchison, a volunteer organizer.

Zuckerman

(continued from page 1)

the Lederberg lab, Zuckerman received her A.B. from Vassar in 1958 and her Ph.D. from Columbia University in 1965. She remained at Columbia until 1992, stepping down as professor of sociology after having served as department chair from 1978 to 1982. She joined the Mellon foundation in 1991. Zuckerman has written several books on various aspects of the sociology of science and scientists, including *Scientific Elite: Nobel Laureates in the United States* (revised edition issued 1996) and *The Outer Circle: Women in the*

Scientific Community.

The late Professor Zanvil A. Cohn established the forum in 1992 as a venue for informal discussion of important issues in health research and policy.

The talk will take place at 5:30 P.M. in Abby Aldrich Rockefeller Dining Room. Sherry will be served at 5:00 P.M. All are welcome.

Leslie Aitchison



"We regret to inform you that your grant proposal has been turned down. However, we do sincerely grant you the best of luck in pursuing the mysteries of life with absolutely no money at all."

University travel agent offers information at reception

Zenith McCord Travel will host a reception Wed., Apr. 17 from 11:00 A.M. to 2:00 P.M. in Caspary Hall, Rooms 1A and 1B.

Zenith McCord Travel representatives will describe their services, which encompass handling airline reservations, car rentals, and other travel arrangements for individuals.

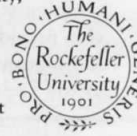
News&Notes is published each Friday throughout the academic year by The Rockefeller University, 1230 York Avenue, New York, NY 10021. Phone: 212-327-8967.

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Princeton geneticist expounds plan to forward women as scientific leaders

Shirley M. Caldwell Tilghman, Howard A. Prior Professor of the Life Sciences at Princeton University, discussed "Who Will Provide Scientific Leadership after 2000?" at the Zanvil A. Cohn Forum on Health Affairs Tues., Mar. 26. Here is a synopsis of her remarks, prepared by News&Notes.

I recently attended a workshop for senior women scientists to discuss strategies for ensuring that women will constitute a substantial proportion of the leadership in science in the 21st century. Held in October 1994 at Mills College, the workshop included leadership in science as well as in scientific organizations and institutions.

Pipeline solution proves a pipe dream

Traditionally, such workshops focus on the entry rate of women into the profession—the pipeline issue. In high school, only 35 percent of physics students, for example, are women. By graduation from university that number has been halved, to 16 percent. Ten percent of physics Ph.D. recipients are women, and only 3 percent of tenured physics faculty at research universities are women—a percentage that, startlingly, has not changed substantially over the last 50 years.

Even in the life sciences, where 44 percent of the Ph.D. recipients are women and the pipeline problem appears moot, troubling signs hint that priming the pump does not cure all ills. For example, in 1990, women on medical school faculties comprised 36.2 percent of the 30- to 39-year-old age group, but only 27 percent of them held tenure track positions. At every rank except instructor, in fact, the participation of women as a percentage of the workforce in the biological sciences falls below their representation in the population receiving advanced degrees.

This difference in the level of achievement of men and women cannot be explained completely by invoking a historical pipeline, as is clear from a study conducted by the American Association of Medical Colleges, which compared a cohort of male and female postgraduates from the class of 1976. Looking at their current positions, the study found women underrepresented in the senior ranks relative to their percentage at graduation.

These data also belied another common explanation for the low numbers of women at the senior level—that they drop out more fre-



Shirley Tilghman, an investigator of the Howard Hughes Medical Institute, reported to the Cohn forum the key recommendations of the first Women in Science Summit, a gathering of 52 women scientists in 1994 that sought to formulate ways and means to advance women's leadership in science.

quently. Dropout rates for men and women were equal, about 5 percent. Thus, women are not leaving science; they are just stuck at the lower rungs of its ladder.

Leadership is key

An underlying assumption at the Mills workshop was that progress in promoting women into leadership positions would have a positive effect on the pipeline in the long term. My own institution came to exactly this conclusion several years ago. After looking at its track record with junior women between 1970 and 1990, Princeton concluded that the "bottom-up" experiment had been done and had failed. They have implemented a top down approach, seeding a few senior women into each department who might change the climate for their junior colleagues. Although a second X chromosome by no means guarantees that someone will support women, in general it increases the odds.

But there are no magic cures, no quick fixes. Progress will come only where there is strong, committed, and vocal leadership. Why? Because the world runs by lists: lists for prizes, for speakers at meetings, for members of committees, and for editorial boards. And although I do not pretend to understand why, when men make lists, they think of men. Women, likewise, think of women. If men draw up the lists, the outcome is almost inevitable unless someone is thinking about the issue.

A classic example of this is the dramatic change in the number of women now in the Howard Hughes Medical Institute (HHMI). When I joined the HHMI in 1988, less than

10 percent of the investigators were women. As a result of the commitment of HHMI leadership to rectify this disparity, today the number of women investigators has almost doubled, and women advisers serve on all the boards.

The workshop also emphasized attention to the careers of young women. They must be given the same consideration as their male peers in all the ways in which our profession recognizes excellence: through invitations to speak at important meetings and serve on editorial boards and study sections. Of course, every senior woman recognizes that this kind of attention is a double-edged sword. As all of us became more sensitive to the importance of women's voices in peer review, the few candidates became overloaded. So we must use judgement and moderation in choosing those outside activities that increase our visibility.

A repugnant environment, an unwilling choice

Once women achieve faculty status, they are doing well in the life sciences. There is, however, a rather precipitous decline in the number of female life sciences Ph.D.s who seek and/or obtain tenure track positions in universities that occurs sometime during the postdoc years. In the past, I explained this as due to the daunting prospect of combining a research career with raising a family. Whether we believe its cause to be the environment or our genes, the greater responsibility for child-rearing continues to rest on women; this, we can change, and it is changing.

And yet, I recently spent a fasci-

nating evening with a group of M.D.- Ph.D. students at the Johns Hopkins University. They were all in the process of marrying each other, and both women and men alike felt forced to choose between science and parenthood. They were not impressed with my protestations that the two are not mutually exclusive, arguing that science is much more competitive than it was 20 years ago when I received my Ph.D.

Since that dinner, some questions have been bothering me. Could the increased competition for research dollars and research positions that has plagued us all since the 1980s have created a professional environment that is more repugnant to women than men? At Princeton, the best students are going to medical school, not graduate school. How much of that choice is driven by medicine's traditional promise of financial and job security, how much by negative reaction to this environment? How would we feel about science if success required forgoing parenthood? Many young women feel they are at this pass. Are they right?

During my whole career, I have loved doing science. I have always said that I cannot imagine a better way to spend one's life, being paid to experiment and discover. Would I still feel this way if I'd just been turned down for the third time on my first grant application, despite a record of consistent productivity?

Practical changes can rectify disparity

Perhaps academic science is becoming increasingly unattractive to everyone but only women are voting with their feet. The Mills workshop suggested ways in which institutions could improve the workplace for women, and for men, for that matter.

Obviously, adequate child care should be provided. Business should be conducted within normal business hours—an apparently small point, but not to an assistant professor of engineering at Princeton whose weekly departmental seminars began at 5:35 P.M., half an hour before her day care center closed. Universities should adopt 'quality-over-quantity' standards for promotion, a policy that would also serve science as it might undo the paper glut caused by the least publishable unit phenomenon. Finally, the tenure clock should be more flexible, allowing time out for childbirth.

None of these suggestions is novel or revolutionary, but if the community embraced them, they might make a real difference.

Potpourri

William Mercer McLeod



Pianist Frederic Chiu performs works by Mendelssohn, Chopin, and Prokofiev at the Tri-Institutional Noon recital today (Apr. 12). The concert, to be held in Caspary Auditorium at noon, is free. All are welcome.

In memoriam

The university community mourns the passing of two members who died last Friday (Apr. 5): Bill Tsang, assistant supervisor in the Instrument Shop, and George Kuzmycz, who retired in 1982. Tsang, whose wife, Yuk (Katie), is a laboratory assistant in the Breslow lab, joined the university in 1979. Kuzmycz, who joined Rockefeller in 1960, was working part-time in the Greengard lab before his death.

Friday film

Pickpocket (France, 1959), directed by Robert Bresson, will be shown today (Apr. 12) at 8:00 P.M. in Caspary Auditorium. The film, in French with English subtitles, tells the story of an insignificant man who drifts into crime and finally finds grace in a prison cell. Admission is free.

Spraying

Weather permitting, the trees and shrubs on campus will be sprayed Sat., Apr. 13 from 6:00 A.M. to noon. The Grounds Department recommends that those on campus that day stay out of direct contact of the spray, close windows, turn off air conditioners, and keep pets inside. The rain date is Sun., Apr. 14. For more information, call James Sullivan, x8001.

Flexible spending

All 1995 Flexible Spending Account claims must be submitted to MassMutual by Mon., Apr. 15. Contact Kristin Gross, x8297, or Ginny Hansen, x8299, for more information.

Health lecture

Robin S. Goland, assistant professor of medicine and endocrinology, Columbia University College of Physicians and Surgeons, will speak on "Estrogen Therapy: Controversies in Women's Health" at the Sound Mind/Sound Body lecture Tues., Apr. 16 at noon in Nurses Residence 110B.

Clinical Research Seminar

Michel Chretien, director of the Molecular Neuro-Endocrinology Laboratory at the Clinical Research Institute in Montreal, discusses "Implications of Proprotein Convertases in Human Biology" at the Clinical Research Seminar Wed., Apr. 17 at noon in Nurses Residence 110B.

Primatology films

Films in the area of primatology will be shown Thursdays (Apr. 18 and 25 and May 2) from 11:00 A.M. to 3:00 P.M. in RRB 110. Entries in an international competition, the films will be judged for scientific and educational value, esthetics, and historical importance, and winners will be screened at the joint meeting of the American Society of Primatologists and the International Primatological Society in Madison, Wis. Sun., Aug. 11 to Fri., Aug. 16. For more information contact Charles Weisbard, e-mail weisbac.

Harvey Society lecture

Stuart Lee Schreiber, professor in the chemistry department at Harvard University and investigator in the Howard Hughes Medical Institute, will give a talk entitled "Chemical Approach to Under-

Bonhoeffer

(continued from page 1)

tum. Bonhoeffer and his co-workers identified two molecules: repulsive axon guidance signal (RAGS), which has been cloned, and repulsive guidance molecule (RGM). Both molecules have a graded distribution in the tectum and a capacity to guide retinal axons. Work is now under way to characterize RAGS, its receptors, and related molecules, and to purify and clone RGM.

"Over the past decade Friedrich has changed the direction of research on the mechanisms of formation of retinotectal maps not once, but twice," said Professor Mary Beth Hatten, who introduces Bonhoeffer today. "In the first instance, he examined the hypothesis that gradients of a few molecules, not a complex system of adhesion 'locks and keys,' could establish a map. This work has recently led to the discovery of an eph ligand system. More recently, he has carried out a very broad screen of retinotectal development in the zebra fish, with the aim of providing a genetic approach to map formation. It is very exciting indeed to have Dr. Bonhoeffer here

for a Friday lecture."

Bonhoeffer received his doctoral degree in nuclear physics from the University of Göttingen in 1958. He spent a postdoctoral year with H.K. Schachmann at the Virus Laboratory at the University of California, Berkeley studying the organization of nucleic acids within nuclear proteins and viruses. In 1960 he joined the Max Planck Institute for Virus Research in Tübingen, studying bacterial genetics and DNA replication first as a postdoc, then as an assistant professor. During his early years at Tübingen, he showed that there are at most two sites of DNA synthesis in bacterial chromosomes and that DNA replicates by DNA polymerase III, rather than polymerase I, which was previously thought. He became director of the institute in 1971, which is now called the Max Planck Institute for Developmental Biology.

The lecture will take place at 3:45 P.M. in Caspary Auditorium and preceded by tea at 3:15 P.M. in Abby Aldrich Rockefeller Lounge. All are welcome.

standing and Controlling Signal Transduction" Thurs., Apr. 18 at 8:00 P.M. in Caspary Auditorium.

Cardiovascular colloquium

Bristol-Myers Squibb Company sponsors a cardiovascular colloquium Tues., May 21 from 8:30 A.M. to 4:30 P.M. in Caspary Auditorium. The speakers will be: Pierre Corvol, Chaire de Médecine Expérimentale, Collège de France; Loren J. Field, professor of physiology and biophysics, Indiana University School of Medicine; Tadashi Inagami, director of the Specialized Center of Research in Hypertension and Stanford Moore Professor of Biochemistry, Vanderbilt University School of Medicine; Mark Keating, professor of medicine and human genetics, Howard Hughes Medical Institute, University of Utah; John H. Laragh, director of the Cardiovascular Center, New York Hospital-Cornell University Medical Center; and Judith L. Swain, Herbert C. Rorer Professor of Medical Sciences, University of Pennsylvania Medical Center.

Admission is free, but seating is limited. To register, contact Elizabeth Gualfetti, 609-252-6562, or e-mail Gualfetti_Elizabeth_M.PRILVMS3@msmail.bms.com

by Mon., Apr. 22.

EAPC workshop

The Employee Assistance Program Consortium offers a workshop on "Managing Stress/Optimal Performance in the 90s" Thurs., Apr. 25 at noon. The workshop, to be held in Room 107 at Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, is free, but space is limited. Call 746-5890 to register.

History play

The Abigail Adams Smith Museum, 417 East 61st Street, presents "Fare for All at the Mount Vernon Hotel," an interactive historical play. The play, performed by DramaMUSE Associates, takes place in the period 1826 to 1833. The play will be held at 2:00 P.M. Sun., Apr. 28, and Sun., May 19. Admission is \$3 per person and includes a tour of the museum.

Searle scholar

The Chicago Community Trust has named Assistant Professor Peter Mombaerts one of the 15 Searle Scholars for 1996. He studies how the nose senses thousands of different odor molecules and how the brain processes these sensations.