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The Rockefeller University

news & notes

January 21, 1994 Volume 4, Number 15 — *The Rockefeller University*

RU offers four summer fellowships for minority college students

The Rockefeller University and the United Negro College Fund (UNCF) are jointly offering four new fellowships for students in UNCF colleges to participate in Rockefeller's Summer Undergraduate Research Fellowship (SURF) Program this summer. The fellowships are funded by a grant from the Philip D. Reed Foundation.

"We hope our collaboration with the United Negro College Fund will be very fruitful and introduce the challenges of laboratory research to students who may not have had these opportunities in the past," said President Torsten Wiesel. "I would like to thank the Philip D. Reed Foundation for supporting these four fellowships."

Associate Professor Marjorie Russel, co-chair of the steering committee for the SURF/UNCF initiative with Alan Kirschner, vice president for programs and public policy at UNCF, said: "I am delighted with this addition to our SURF Program. The collaboration between Rockefeller and the UNCF will help some minority students learn more about science and about Rockefeller. I hope that some students participating in this program will later apply to our graduate program."

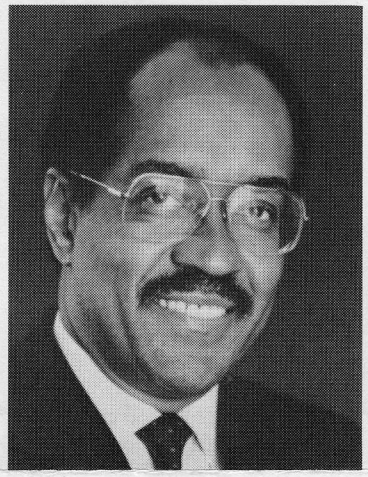
The SURF/UNCF initiative grew out of a conversation in the fall of 1992 between Wiesel and Hon. William Gray, president and chief executive officer of UNCF. The grant of $15,000 from the Philip D. Reed Foundation was approved in October 1993. The grant will fund four fellows, who will each receive a summer stipend of $2,100, and travel support and local housing if necessary.

The steering committee for the SURF/UNCF initiative has begun contacting UNCF colleges to publicize the program, encouraging professors to nominate outstanding college juniors who would find the summer experience exciting and rewarding. A selection committee of Rockefeller faculty will then chose among the candidates, who will be notified of the committee's decision by April 15.

The selected students will join 12 to 15 other undergraduates in the SURF Program. SURF students work in Rockefeller University laboratories with graduate fellows and postdoctoral fellows in the wide range of research areas represented on campus. Each student has a faculty advisor who guides the design and execution of the student's research project. SURF students

See ***Reed Foundation****, page 2*

Courtesy of the United Negro College Fund



William Gray *(above)* of the United Negro College Fund and Rockefeller University President Torsten Wiesel initiated a collaboration between the two organizations.

Newly formed group leads RU Council

An executive committee of The Rockefeller University Council was recently established to provide leadership for the Council's expanded activities and outreach efforts.

"I look forward to working closely with the individuals who have agreed to serve on the new executive committee," said President Torsten Wiesel. "I am impressed with their ideas and their energy, and their guidance will be most useful to the Council and to the university administration."

The Executive Committee was formed to further the Council's role in increasing the base of private support for the university, strengthening outside interest in important areas of research, and creating programs to reach new friends of the university.

The first meeting of the Executive Committee, held last month in Cohn Library, included discussion of issues such as the size and composition of the Council,

See ***New Committee****, page 2*

The new Executive Committee of The Rockefeller University Council held its first meeting last month. Some of its members are *(left to right)*: Russell Pennoyer, Carl Hess, Hubert Huckel, David Rockefeller, Richard Perkin, Alan Batkin and Herbert Singer. President Torsten Wiesel *(right)* also attended.

Inflammatory-disease expert to lecture

Rockefeller Uni versity alumnus Jeffrey Ravetch, head of the Laboratory of Biochemical Genetics at the Sloan-Kettering Institute, will speak on "Fc Receptors: Pleiotrophic Mediators of Adaptive and Innate Immunity" at the Friday lecture today (Jan. 21).

Using techniques of both cellular and molecular biology, the Ravetch laboratory is studying how immune system cells—specifically, macrophages, neutrophils and natural killer cells—are triggered to initiate the inflammatory cascade that leads to diseases such as lupus and rheumatoid arthritis. Ravetch and his colleagues have defined a large family of cell surface receptors, the Fc receptors, which bind immune complexes and trigger the acute immune responses. More recently, the laboratory created a genetically altered line of mice deficient in Fc receptors. The resulting mice were severely immunodeficient, which demonstrated an early and critical role of Fc receptors in initiating inflammatory responses. Ravetch will discuss his results at the lecture.

A graduate of Yale University (B.S., 1973), The Rockefeller University (Ph.D., 1978) and Cornell University Medical College (M.D., 1979), Ravetch was a research associate at the National Institutes of Health from 1979 to 1982, when he joined the faculty of Cornell University Medical College and the Memorial Sloan-Kettering Cancer Center as assistant professor and assistant member, respectively. He was later named associate professor and associate member in 1986, then professor and member in 1990. From 1984 to 1987, he was also a guest investigator in the Cohn-Steinman lab at Rockefeller. A recipient of the Boyer Research Award of Memorial Sloan-Kettering Cancer Center, Ravetch is adjunct professor at Jefferson Medical College and Jefferson Cancer Institute in addition to his position at Sloan-Kettering.

The lecture, to be held at 3:45 P.M. in Caspary Auditorium, will be preceded by tea. All are welcome to attend.

Employees go back to school

By Jennifer Horne King

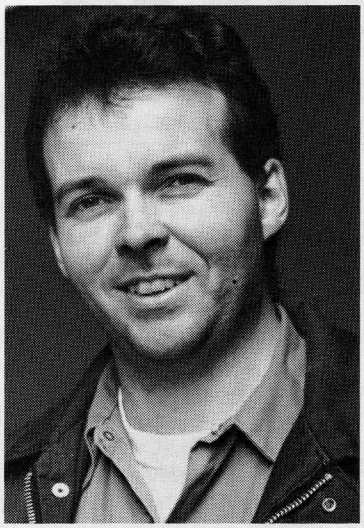
Since the tuition reimbursement program began at The Rockefeller University last fall, some employees have taken to the classroom, eager to expand their knowledge and enhance job performance.

"I don't think I could have completed my medical school prerequisites this year without the reimbursement," said Christopher Scott, an assistant for research in the Breslow lab who just finished a course in organic chemistry at Hunter College. "I simply could not have afforded it."

Scott's course, which met two nights a week, not only helped to make him eligible for medical school, but also complemented his work in the lab. "I needed a better foundation in chemistry to perform my histology work and, ultimately, to fully appreciate the mechanisms of atherosclerosis," he explained. "I didn't have to do much convincing to get the course approved for reimbursement. It just made sense all around."

Michael O'Shea, a Maintenance helper, completed two evening courses last semester in computer science and history at Queens College. "I am now exactly three credits away from a B.A. in government administration," he said proudly. "I have been trying to complete this degree on and off for about six years." While not directly related to his work in the Maintenance Department, the courses will contribute to improving O'Shea's qualifications without interfering with his work schedule. "I'm hoping that the B.A., together with my upcoming degree in mechanics, will open some doors for me," he said, "although at this point, I haven't quite decided which route to take."

Rockefeller reimburses eligible, full-time, non-faculty employees for 85 percent of tuition charges, fees and books for approved courses up to certain maximums based on length of service. In order to be approved, courses must enhance job performance (with the exception of undergraduate courses) without interfering with full-time work at the university. Prior to course enrollment, employees seeking tuition reimbursement must fill out an application (available at the Personnel Office, Founder's Hall 103) with their supervisor. Reimbursement will be made upon completion of the approved course, which must provide a grade; submission of a payment receipt (bursar's bill); and a "Pass" rating (for pass/fail courses) or grade of "C" or better. The deadline for submitting applications for this semester is Mon., Jan. 31. For more information, contact the Personnel Office, x8300.



Michael O'Shea, a helper in Maintenance, is one of the employees taking advantage of the university's new tuition reimbursement program.

Reed Foundation funds four minority fellows

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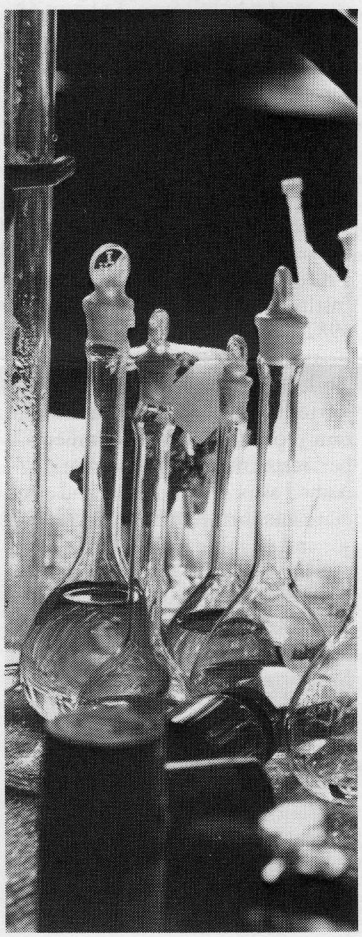
also participate in a weekly journa club, which teaches them how to present material from their own research and critically review the work of others.

At the conclusion of the summer, the UNCF students will submit brief papers describing their work in the laboratory and commenting on how they have been influenced by the experience. The will also meet with the program's faculty coordinators to discuss thei summer activities and post-college plans.

UNCF is a consortium of 41 pri vate, historically black colleges an universities. Founded in 1944, UNCF has raised more than $700 million for black higher education As the largest black fund-raising organization in the country, UNC has been ranked among the nation's leading charities by *Mone Forbes* and *The Non Profit Times*. Since the organization's founding, approximately 250,000 men and women have graduated from UNCF colleges.

The Philip D. Reed Foundation founded in 1955 by funds donated by the late Philip D. Reed, gives grants for higher education, international studies and public policy organizations. Philip D. Reed, Jr., is chair and president of the foundation.

Still life with glassware



New committee leads RU Council

(continued from page 1)

the recruitment and introduction of potential members, and initiatives that might be taken to expand the Council's outreach, particularly to a younger generation of members.

The members of the Executive Committee, who were appointed by the Board of Trustees, are: Alan Batkin, vice chairman of Kissinger Associates, Inc.; Peter Bentley, president of The Carl J. Herzog Foundation, Inc.; Lydia Forbes, Forbes Foundation; Lynn Glenn, G-K Associates Limited Partnership; Carl Hess, chairman of the executive committee of AEA Investors, Inc.; Hubert Huckel, M.D.; John Klingenstein, president of The Esther A. & Joseph Klingenstein Fund; Bernard Palitz, chairman of the Financial Federal Corporation; Russell Pennoyer, Benedetto, Gartland & Greene, Inc.; Richard Perkin, president of VZV Research Foundation, Inc.; and Herbert Singer, Esq., Singer Netter & Dowd.

During its first year, the Executive Committee will be chaired by David Rockefeller, chairman of The Rockefeller University Council and chairman of the Executive Committee of the Board of Trustees.

Founded in 1973, the Council is today comprised of 135 individuals who contribute their time, counsel and financial resources to the university. In recent years, the Council has emerged as a volunteer group second only to the Board of Trustees in its knowledge of and commitment to the university. More than any other group of advocates, Council members have introduced new friends who have, in turn, themselves become donors and volunteers on the university's behalf.

In 1983, The Rockefeller University Council began a formal annual giving program that now generates approximately $500,000 each year. In addition, many Council members make special major gifts in support of projects of particular interest to them. In response to Trustee Gustavo Cisneros's challenge grant, Council members contributed $10 million in both annual and major gifts over the last two years—representing a doubling of giving from the previous two-year period.

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Historian of science looks back on 50 years of DNA research

Robert Olby, a historian of science educated at Imperial College of Science and Oxford University, is currently visiting professor at The Rockefeller University. Author of The Path to the Double Helix, *Olby is a leading expert on the birth of modern genetics and molecular biology. He will moderate a historical discussion at Rockefeller on Feb. 3, at 4:00 P.M., about the 1944 discovery by Oswald Avery, Colin MacLeod and Maclyn McCarty that genes are made of DNA. Doron Weber of* News&Notes *spoke recently with Olby.*

News&Notes (N&N): Why is the Avery, MacLeod and McCarty discovery important?

Olby: For scientists it is important because, before this discovery, much of the biochemical understanding of life was based on proteins as the "master molecules." Proteins were believed to be the source of all forms of biological specificity. They were presumed to give all living things their distinctive identifying characteristics. So, the undermining of this fundamental dogma was a very important turning point.

N&N: Can you describe the context of the 1944 discovery?

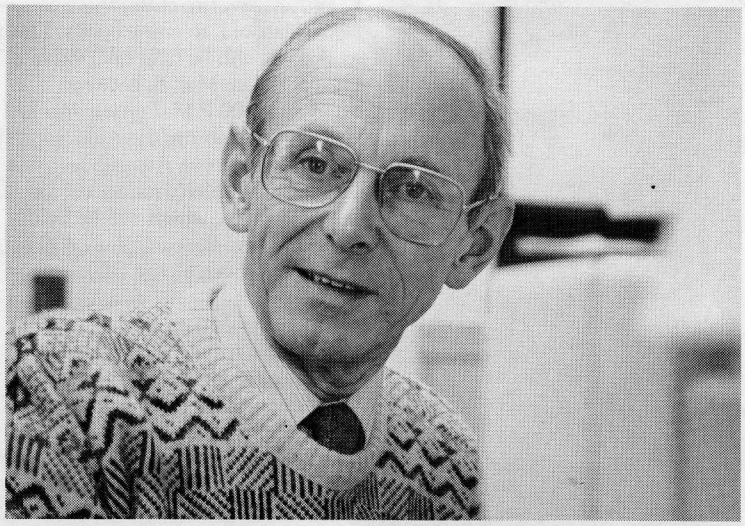
Olby: To geneticists, pneumococcology was a curious area from which to obtain knowledge about the chemistry of the gene. I think it happened this way because other lines of investigation were unsuccessful. Bacteriology wasn't an area with which ordinary biologists would come into contact. And the original work was published in a journal many biologists, including myself, had never read.

N&N: Did the fact that the discovery came from an unexpected source contribute to the difficulty with which it was received?

Olby: I'm sure that is the case. As you know, the genetics of bacteria was ill understood. Remember, we see this as a crucial experiment because we now know so much more than we did before. At the time, the lack of knowledge in the field helped scientists avoid deciding between alternative explanations. Specifically, little was known about how DNA could provide the diversity and specificity expected of genetic material.

N&N: You mean the Avery paper's conclusion was open-ended enough so that the finding could appear to be less dramatic than it was?

Olby: Indeed. Not only is the paper top-heavy in experimental details—mind you, that's one of its strengths, because that allowed it to be replicated—but it is also quite difficult going at first. In the final section, the paper presents all possible explanations for its data. The top choice was a mutagen. After all, there was only one characteristic transferred in normal transformation, so this could be the same mutation taking place each time, albeit to a different type. Yes, it was open-ended but Peyton Rous, the editor of the journal, played some part in that. He asked them to remove some speculative passages which might have made the case for the genetic role of DNA stronger.



Visiting Professor Robert Olby, a historian of science, spoke with *News&Notes* about the discovery at Rockefeller 50 years ago that genes are made of DNA.

N&N: So how crucial was this paper in your opinion?

Olby: Well, I see it as crucial not by itself, but in terms of the experiments that followed it and were inspired by it. In 1944 or 45, very few people were questioning the protein dogma about genetic material. By 1950 a lot of people were. It's significant that Francis Crick, who had been working on proteins, was inspired to take the study of DNA seriously in large part due to the Avery experiment.

N&N: As a historian of science, do you think we tend to overvalue the single crucial or decisive finding?

Olby: I think scientists would agree one experiment on its own is rarely enough to clinch an issue. The famous case of Einstein and the 1919 eclipse observations is often presented as being the experiment that validated the theory of general relativity, but the actual evidence produced was scant and uncrucial. That's just one example. It's generally agreed that experiments are only crucial when they've been dressed up after we've come to the conclusion that this is how they should be understood.

N&N: Unless, like the double helix, it's immediately clear and decisive?

Olby: The double helix made sense as a structure, yes, but if you talk to the biochemists they will admit that they accepted it as a structure before they accepted it as a vehicle for protein synthesis.

N&N: So even with a discovery such as the double helix, it is not instantly recognized as a "eureka" moment. Instead, there is a "wait and see" period?

Olby: It was not a "eureka" moment in the sense that Crick felt they had produced a rough structure based upon very, very scant evidence and they were even worried that the structure might not be right. So there was an element of uncertainty in both Watson and Crick's minds. Watson didn't want Crick to go on radio about it, for goodness sake! So what does that tell us? There are different levels of acceptance. Scientists can accept a chemical structure without accepting the functional claim for it. It's the same with the Avery experiment. Many scientists could accept that the substance going into the recipient cells was DNA, but they didn't always accept that it was genetic material.

N&N: Do you look at science as a series of chronological events one leading to another or are there other schools of thought that you bring to your approach?

Olby: You have described what we might call "signpost history" where you have a series of monuments and they are pointing in the direction of what we now know. I think we historians of science have become rather resistant to that approach, because it leads to a selective and somewhat prejudiced representation of events. Success stories are not the only stories we want to tell.

N&N: How do you think a deeper understanding of the past is going to help us practically in the future?

Olby: I am reluctant to make claims about the usefulness of this discipline in a practical sense. But I believe it may provide some map of the development of a field that will be useful to young people deciding which way they want to go. I am a strong believer that historical work can be used to teach concepts. Even if these concepts have turned out to be wrong, they help people to learn and to adapt a wary and critical stance toward accepted knowledge. The history of science is also a contribution to culture. We live in a scientific culture. If political history is something that needs to be supported, well then surely we need to support scientific history as well.

N&N: A recent *Time* magazine cover story on genetics dated the beginning of the modern genetics revolution to 1952. Do you think we will ever get this dated back to 1944? Or should we be satisfied with the place that it currently has?

Olby: I find this question difficult but I think we should be satisfied with the place that it currently has. What we can say is that at Rockefeller there were a series of people—Karl Lansteiner was one, Jacques Loeb and Oswald Avery were others—who were convinced that biological functions are dependent ultimately on chemistry. They believed that if we were going to understand the differences between types of pneumococcal bacteria, for instance, this understanding would be based upon chemistry. And I think that the chemical theory of biological specificity is a peculiarly Rockefeller concept and that it is of fundamental importance. You're not going to convince the general public that the genes started with Avery, but you can say that the notion of this chemical basis to biological specificity was something that Rockefeller really introduced. And Avery comes out of and decisively shapes this tradition which is so fundamental that today everyone accepts it.

Potpourri

Tri-Institutional Noon Recital

Soprano Kyoko Saito and pianist Dale Dietert will perform works by Franz Schubert, Richard Strauss, Ernest Chausson, Claude Debussy and Alfred Bachelet at the Tri-Institutional Noon Recital today (Jan. 21). A winner of the 1992 Young Concert Artists International Auditions and the Mortimer Levitt Career Development Award for Women Artists, Saito has performed in cities across Europe and Japan. An accompanist and vocal coach at Salzburg's Mozarteum Sommerakademie, Dietert has given concerts with the Texas Bach Soloists, the Allegro Choir Ensemble and Isis New Music Ensemble, among others. The concert, to be held in Caspary Auditorium at noon, is free and open to the public.

Sunday film

A Clockwork Orange (U.S.A., 1971), directed by Stanley Kubrick, will be shown in Caspary Auditorium at 7:30 P.M., Sun., Jan. 23. Winner of the New York Film Critics Award for Best Picture and Best Director, the film portrays a merciless vision of the future based on Anthony Burgess's chilling novel. Admission is free. All are welcome.

Food Service Committee meets

A luncheon meeting of the Food Service Advisory Committee will be held Thurs., Jan. 27 at 1:00 P.M. in the Tower cafeteria, South Dining Room. Members of the university community who would like to speak with the committee are invited to join the meeting at 1:45 P.M.

Computer workshops

There are still openings in the following computer workshops to be held during the next three weeks:

- Unix for Sequencers, Part I: Jan. 27;
- Unix for Sequencers, Part II: Feb. 3;
- Word for the Macintosh, Part III: Jan. 28;
- Excel for Mac or PC, Part I: Feb. 1;
- Excel for Mac or PC, Part II: Feb. 8;
- Intro to Windows: Feb. 7;
- Word for PC, Part III: Feb. 4;
- Sequencing, Part I: Feb. 10;
- Sequencing, Part II: Feb. 17;
- WordPerfect, Part III: Feb. 11.

All of the above classes will be held from 2:00 to 4:00 P.M. To register, call x7768 and leave a message stating your name, box number, extension, and lab or department. Your reservation will be confirmed. If the workshop you wish to take is filled, you will be placed on a waiting list. To cancel a reservation, call x7768 as soon as possible; your slot will be offered to someone else.

Hazeem Khan dies

Hazeem Khan, electrician in the Maintenance Shop, died of a heart attack on Sat., Jan. 15. He was 54 years old and had worked at the university since 1978.

Christian Steiner

Soprano Kyoko Saito will perform at the Tri-Institutional Noon Recital today (Jan. 21).

Theater for children

Tickets to see The Paper Bag Players, a theater group known for entertaining children and parents in original costumes made of paper and cartons, are now available at The Rockefeller University Children's School. This year's performance, an hour-long show focusing on nature, will be held at 2:00 P.M., Sat., Jan. 29, at Hunter College's Sylvia and Danny Kaye Playhouse. Tickets, $14 each, can be purchased by contacting The Children's School, x8580.

Reading with children

The Employee Assistance Program is sponsoring a free session of six workshops in which employees can help their favorite child, three to eight years old, to enjoy books. The workshops will be held on Tuesdays, from Feb. 1 to Mar. 8, between noon and 1:00 P.M. Participants are encouraged to bring their lunch. Call the Employee Assistance Program, 746-5890, to register for the workshops, which will be held at Rockefeller Research Lab, 430 East 67th Street, Room B20.

Tribute to Zanvil Cohn

A scientific tribute to the late Professor Zanvil Cohn appears in the January issue of *The Journal of Experimental Medicine*. This 30-page article, written by Professor Ralph Steinman and Research Associate Carol Moberg, covers Cohn's contributions as the founder of the modern era of the macrophage in cell biology and resistance to infectious disease. The tribute also includes a complete bibliography (370 items). Requests for reprints may be sent to Moberg, Box 280, x8777 or login *moberg*.

Paper towel dispensers

Laboratories on campus are invited to test a new paper towel dispenser that supplies high quality absorbent towels in a manner consistent with infection-control guidelines. If a lab likes the dispenser, Plant Operations will service it; if not, Plant Operations will remove it. Contact Bob Francis, x8001, for more information.

Water

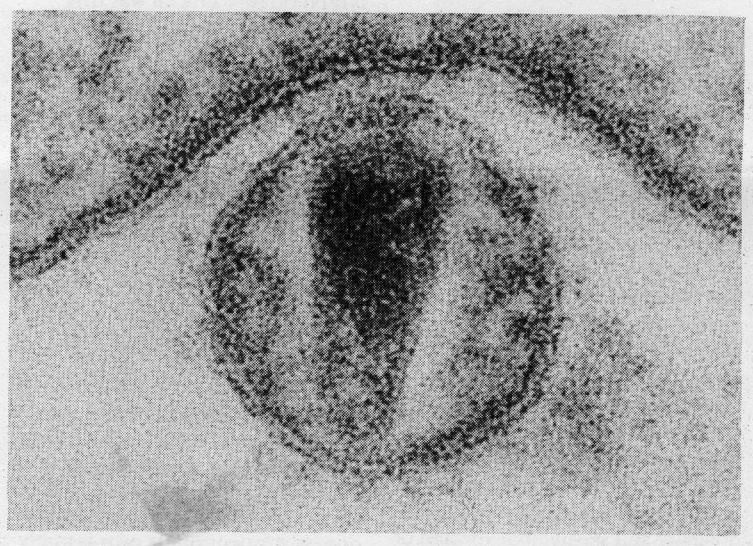
The university's potable water, supplied by the New York City Water Board, is introduced directly into laboratories without filtration. In applications where potable water is used for instrument cooling, it is usually filtered before it enters the instrument. One Rockefeller laboratory has recently experienced difficulties with instruments because impurities in the City water supply system clogged the water filters. Those with such instruments should check the filters and change them as necessary.

New PC anti-virus software

A new version of F-PROT, a free software package which protects against many new PC viruses is now available from Computing Services. F-PROT 2.1.0 can be copied from the directory Freebies/Viruspro on all PCs in Users Area/Classroom, Smith Hall A21. It can also be downloaded from the /mac+pc/pc software archives on rj, in the directory PublicFiles/VirusProtect. For further information, contact the consultant, x8940.

Discount airline tickets

A limited number of discount U.S. Air shuttle tickets are available for flights from LaGuardia Airport to either Boston or Washington, D.C., and are valid through Sept. 30, 1994. The cost of one round-trip ticket is $218 (the standard fare is $300). The tickets may be purchased either by personal check or charged to a laboratory/department account number at the Cashier's Office from 10:00 A.M. to 2:00 P.M. For more information, contact David Lyons, x8292.



Courtesy of Hans Gelderblom

This cover photo from the newly published issue of *Search* magazine shows a rare, close-up look at HIV, the virus that causes AIDS. The issue is currently being distributed to all members of The Rockefeller University community. Contact Director of Communications Doron Weber, x8968, with questions, comments about the issue, or suggestions about institutions or groups that might be interested in receiving the publication.