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NEWS AND NOTES 1991, MARCH 8

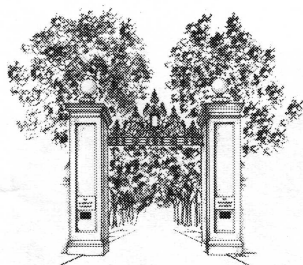
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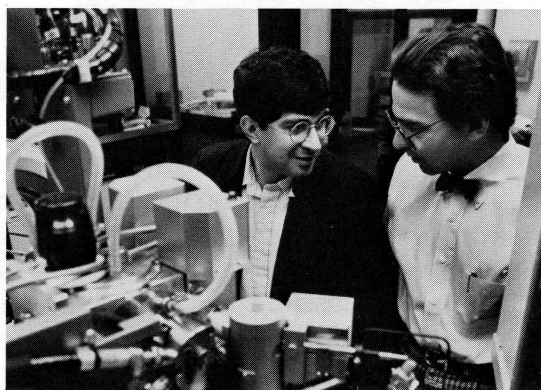
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News & Notes

Crystallography gives RU new 'vision'

The Laboratory of Molecular Biophysics is up and running on the C level of Smith Hall. Consisting of two research groups headed separately by University Fellows Stephen Burley and John Kuriyan, the lab is a state-of-the-art X-ray crystallography facility. Its establishment was made possible by support from the university, the National Institutes of Health, the National Science Foundation, the Howard Hughes Medical Institute, and



John Kuriyan (left) and Stephen Burley discuss installation of area detector.

the Pew Memorial Trust.

"X-ray crystallography allows us to overcome the limi-

tations of the human eye, by revealing the three-dimensional position of every atom in biological macromolecules such as proteins," Burley said. This structural information is essential for a complete understanding of proteins, the "working molecules" of the cell that perform an extraordinarily diverse range of tasks in living organisms.

Proteins are comprised of amino acids strung together one after another, somewhat like beads on a string. Interactions among the amino acids cause the macromolecule to fold into a specific, three-dimensional structure, and it is this 3-D structure that determines the protein's function. Because X-ray crystallography reveals the 3-D structure, Burley said, "it helps us understand how the protein functions as part of the cellular machinery."

The molecular "machines" Burley and Kuriyan are studying include enzymes (which catalyze biochemical reactions) and transcription factors (which bind to genes and regulate their activity). Kuriyan and Burley are al-

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Raffle offers escape to the mountains

Nature lovers will want to enter the drawings to be held later this month for reservations at the university's MacInnes and Hostage cottages, located in Fort Montgomery, NY, near Bear Mountain State Park. Demand for the cottages is high: About 300 people from the RU community apply for reservations each spring. The raffle selects 100 of these to reserve time to visit the cabins with their guests.

This year, the cottages will be open from April 20 through mid-November. The 100 slots of time to be raffled off include reservations for either two nights (Friday-Sunday) or five nights (Sunday-Friday). The rate for the cottages is \$25 per night.

The two rustic cabins are located in heavily wooded areas 50 miles north of the city. One, MacInnes, offers a view of the Hudson River. Jo Ann Greene of the Housing Office notes that there are hiking trails and quaint river towns nearby.

Reservation request forms can be obtained from the Housing Office through March 15; the deadline for returning the form is March 18, and those chosen will be notified after April 1. ➞

Crystallography (continued from page 1)

ready collaborating with a number of molecular biologists at the Rockefeller and look forward to further collaborations in the future.

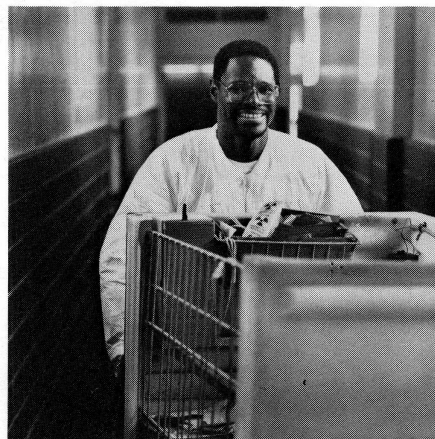
In the lab, the scientists will be able to purify a protein, crystallize it, and then produce a highly magnified image of the protein using X-ray diffraction equipment. Simply put, when these devices shoot an X-ray beam through a protein crystal, the beam is diffracted in all directions. The diffracted rays are intercepted by a detector, and variations in the positions and intensities of the spots in the diffraction pattern are interpreted by a computer to provide an image of all the atoms in the protein. A new machine in the lab, called an X-ray area detector, is ten times faster than previous available X-ray diffraction equipment.

After the atomic positions have been obtained, they are fed into the lab's mini-super-computer system. These supercomputers generate a preliminary model of the protein, which Kuriyan describes as a "complex geometrical jigsaw puzzle." The scientists then hone and refine this model by drawing on concepts from theoretical physics, chemistry and quantum mechanics.

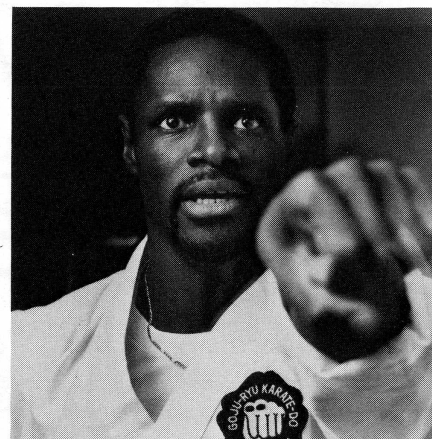
This combination of experimental and theoretical approaches—unusual in protein crystallography—will help the scientists reach their goal of "understanding, at the level of atomic detail, how biological processes actually work in the cell," said Burley.

—by Susan Blum

The two faces of Isaiah



Bob Reichert



Bob Reichert

The Isaiah Curry on the left, pushing a cart full of wastes collected from university labs, may be one of the most familiar faces on campus. The jabbing Isaiah Curry on the right, however, is known primarily to his Wednesday evening karate students. Curry, a lab attendant, has been at Rockefeller for 17 years; he began studying karate in the Workout Room 15 years ago with José Santos, who used to work in the Mail Room. Curry, who became a black belt in 1988, credits karate with giving him a sense of discipline, good health and an opportunity to help people. Anyone interested in learning karate with Curry can contact him at x8324. ➡➡

Premiere issue of **SEARCH** published

The premiere issue of the university's new magazine, *Search*, is in the mail. The colorful quarterly publication contains articles on scientific developments at Rockefeller and elsewhere, and is distributed free to members and friends of the Rockefeller community, to government officials and to heads of scientific departments at other institutions.

Suggestions or change of address information should be sent to the editor, Enid Goldberg, at Box 68. ➡➡

ROCKEFOLLIES '91 tickets on sale

Tickets for this year's ROCKEFOLLIES, which will be held in Caspary Auditorium on Tuesday, March 19, at 7:30, are now on sale. They are available from the Faculty and Students' Club, Nina Casciano (Purchasing), Marie Grossi (Smith Hall Annex, Room A2) and Albert Sargenti (Media Resources). Tickets can also be ordered from Grossi, Box 64, by inter-office mail. Members of the committee will sell tickets in Tower Lobby between 11:30 and 2:00, Wednesday-Friday, Monday and Tuesday (March 13-15, 18-19). ➡➡

Scientists sought for movie

George Miller, who directed *The Witches of Eastwick*, is looking for three "real people" from the academic or medical worlds to perform in his upcoming feature film, *Lorenzo's Oil*.

The film tells the true story of a child named Lorenzo, who develops leukodystrophy (ALD) and his family's battle to cure the disease. Some revenues from this film will go to support this research.

Miller, a physician, is looking outside the traditional pool of actors for persons "with an intellectual weight and credibility, the ability to disseminate complicated ideas with clarity and simplicity."

Those chosen will be paid expenses and salary for one to three days on location in Pittsburgh. Contact John Lyons or Christine Sheaks, 391-1112. ➡➡

Campus literary publication begins

Graduate Fellow Mark Pettet plans to produce an alternative publication entitled *The Rockefeller Rag*. *The Rag*, according to Pettit, will publish poetry, essays, short fiction and non-scientific articles.

Pettet also seeks people interested in editing, transcription, photocopying and other tasks. He can be contacted at 535-8549 or Box 121. The target date for release of the first issue is the end of March. ➡➡

Rockefeller University United Way campaign starts March 18

The 1991 United Way Campaign kicks off March 18 and will run through March 29. In preparation, a planning meeting of representatives from labs and services will be held in the Nurses' Residence Conference Room at 2:00 on Thursday, March 14. The meeting will feature representatives of the United Way of New York City, speaking on who and what the organization supports. Those interested in attending should contact Ray Aldrete, chairman of this year's campaign, at x8990.

Perhaps the meeting's most knowledgeable speaker about the United Way will be Ed Glynn,

who spent over 20 years living in a cardboard box at the corner of East 45th Street and Lexington Avenue. Glynn, now an Ambassador Speaker for the United Way, is one of the organization's success stories. A problem with alcohol caused him to lose his job and family, and he was in and out of various agencies supported by the United Way for two decades. Three years ago, he obtained a job. Today, Glynn supports himself and has been reunited with his three daughters after a 20-year absence. He will tell the story of how others have touched his life through the United Way at the Thursday meeting. ➡➡



Hey Buddy, can you spare some time?

The Rockefeller University Hospital and New York Hospital need people to participate in volunteer programs.

"Volunteers are needed to help build patient morale," remarks Lanie Fleischer, Head of RU Hospital's Social Service Unit. Volunteers in the RU program assist in many ways, from playing pool with teenage patients to helping organize trips to local cultural events. Those with little time to spare can help: one hour is enough time to read a story to an eager 10-year-old patient.

Across the street, New York Hospital seeks volunteers willing to commit a minimum of four hours per week to visiting patients, working on nursing and respiratory units, and possibly assisting in the emergency room.

Anyone interested in the RU program should contact Lanie Fleischer or Eline Suzuki at x8415. To obtain an application for the volunteer program at New York Hospital, call 746-4396, or stop by the volunteer office.

—by Patricia Sadiq

Announcements

Thesis presentations next week

There will be three thesis presentations next week. All will be held at 3:45 in Caspary Auditorium, with a tea preceding each at 3:15.

On Monday, Graduate Fellow Hon So Ip will speak on "Approaches to Defining the Signals for the Transfer of Glycolipid Anchors to Proteins in *Trypanosome Brucei*."

Tuesday, Graduate Fellow John K. Delaney will present his thesis, entitled, "Evidence for Electron Tunneling in a Model of the Photosynthetic Reaction Center."

Wednesday's presentation will be by Graduate Fellow Arlene Hirano. The title is "ON- and OFF- Responses in Retinal Bipolar Cells: An *In Vitro* Study."

Get organized with RockMUG

The Rockefeller University Macintosh Users' Group (RockMUG) will hold this month's meeting Wednesday, March 13, 11:30-12:30 in Caspary 1B. The topic will be disk organization, including the use of file compression programs to save disk space.

As usual, there will be a general Macintosh question and answer session at the meeting. Bring your lunch—soft drinks will be provided. Also, those who come at 11:15 and bring a blank floppy disk can receive copies of file archiving and compression software.

New members are always welcome. To be put on the RockMUG mailing list, contact Rachael Kolb at x8933 or send e-mail to *rachael*.

School survey reminder

Children's School surveys must be returned to the school by March 15. Forms are available next to the drop-off boxes in Faculty House lobby, Tower lobby, the Children's School and the mailroom.

Film Series presents *The Draughtsman's Contract*

The university film series will present *The Draughtsman's Contract* at 7:30 Sunday evening, March 10, in Caspary Auditorium. Directed by Peter Greenaway (who did *The Cook, the Thief, his Wife and her Lover*), this psychological study involves a wealthy youngish matron who commissions a young artist to draw a series of studies of her manor. The artist requests, in addition to his fee, "her most intimate hospitality," and, as her husband is away, she happily agrees. Eventually it becomes known that her husband has been killed, and the artist is blackmailed by the matron's daughter, who has evidence implicating him in the murder. As a price for her silence, she requires his favors, and soon he is carrying on with both the wife and the daughter. All this, according to Graduate Fellow Mark Benedyk, who helps with the film series, "is presented in Greenaway's formal, highly staged style. A brilliant film."

Crafters invited to exhibit work

An exhibit of handicrafts created by members of the university community will be held in Founder's Hall lobby, May 1-10. Wood and metal works, pottery, jewelry, needlepoint, sewing, weaving and other crafts will be accepted for exhibition. (Because of space limitations, the show can accept only one entry per craft per exhibitor.) Entry blanks for the craft show will be distributed soon. Contact Kate Cameron, x7802, for information.

Puppetworks premieres Saturday

Life-size marionettes will star in "The Puppetworks," on Saturday, March 9, at 3:00 in Caspary Auditorium. The program, taken from *The Frog Prince*, *Peter and the Wolf* and *The Nutcracker*, is aimed at kids 3-12 years old. Tickets are \$4 in advance, \$5 at the door. Proceeds will benefit the Children's School. For reservations, call x8580 or 308-0361.

Quartet celebrates Women's Day

Today is International Women's Day, and the Tri-Institutional Noon Recital Series is marking the day with a free performance by the all-female Cavani String Quartet. The ensemble, which has won various awards including the 1989 Walter W. Naumburg Chamber Music Award, will perform works of Tchaikovsky and Dvorák at 12:00 at Sloan House, 1233 York Avenue.

Space Lecture focuses on comets

As part of the Space Science Lecture Series, George Lovi, Instructor at the Hayden Planetarium, will present a lecture entitled *Those Mysterious Comets* on Tuesday, March 12 at 2:00 in Tower 305. For information, or to attend a lunch with the speaker before the lecture, contact Erich Jarvis, x7733.



NewsNotes is published on Fridays throughout the academic year by the Public Affairs Office of Rockefeller University. Suggestions for articles are welcome and may be sent to Box 68, or call 570-8967. Articles may also be submitted via electronic mail to *newsnotes*. The deadline for each Friday's issue is the preceding Monday at 5:00 p.m. 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. Editor: Robert Brown. Designer: Patricia Sadiq.