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The Rockefeller University

THE ROCKEFELLER UNIVERSITY

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news and notes

New Moves Planned To Conserve Energy

The University's energy conservation committee reports that cooperative efforts by all members of the campus community have resulted in substantial reductions of energy usage, in some cases of as much as 25 percent. However, skyrocketing fuel prices, combined with normal and necessary University growth, resulted in an energy *cost* rise of approximately 70 percent during the first third of this fiscal year (July through October).

New automated monitoring equipment is being installed, which will help to cut down unnecessary energy use, especially during hours of lesser activity on campus. In addition, the committee circulated a questionnaire, in December, to all units in order to offer further energy-saving suggestions and, especially, to elicit further suggestions from all quarters of the campus. Buildings and Grounds is compiling the results of the responses to the questionnaires and, in conjunction with the department of engineering, is meeting this month with individual groups. The committee requests that those who have not completed their forms please do so, and return them, signed, as quickly as possible to Majid Azzu, assistant superintendent of Buildings and Grounds.

On behalf of the committee, Paul Penndorf, superintendent of Buildings and Grounds, offers his thanks "to all those who have actively participated in our conservation program. It is clear from the returns that there is a willingness to support all meaningful conservation measures throughout the University and specifically as they apply to individual areas."

University Advisory Group Visits Iran

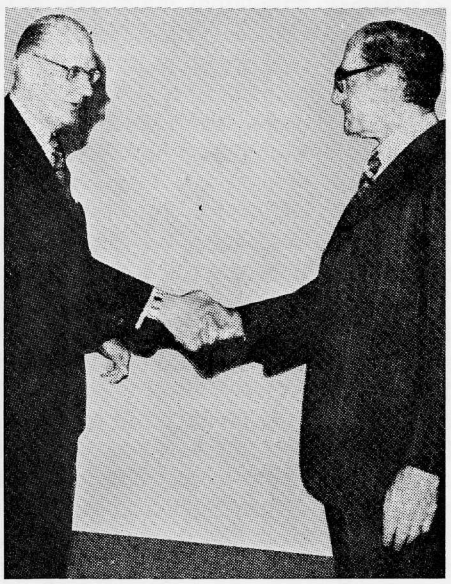

Photo from front page of Iranian newspaper shows the Shah (right) greeting President Seitz.

At the invitation of the Government of Iran, members of the University faculty and administration are exploring the feasibility of establishing a new and independent biomedical research center in that country modeled on the original Rockefeller Institute for Medical Research. As now visualized, the Iranian government would provide the funding for the center, which would be under the control of an independent board of trustees with an international membership.

A group from the University, headed by President Seitz, spent November 17–26 in Iran, where they met with government officials, chancellors, and faculty of major universities, and leaders in research, industry, and banking. President Seitz and the entire group also met with the Shah. Other members of the visiting team were Vice President Maclyn McCarty, Vice President Rodney W. Nichols, Physician-in-Chief Attallah Kappas, Professors Nicola N. Khuri, Richard M. Krause, and Norton D. Zinder. Professor James G. Hirsch is also a member of the ad hoc faculty group advising on the early stage of this study, but he was not able to go along on the trip. Channing H. Lushbough, executive secretary of the Citizen's Commission on Science, Law and the Food Supply, is assisting in the study and accompanied the group to Iran. The visitors spent most of their time—except for a brief "tourists' sidetrip" to the ruins of Persepolis, the ancient religious ceremonial capital of the Persian Empire—at medical schools, basic science departments of universities, and hospitals in Teheran and Shiraz, particularly with faculty members of those institutions having links to major universities in the United States.

The feasibility study resulted from conversations last spring among the Shah of Iran, David Rockefeller, chairman of the University's board of trustees, and James A. Linen, chairman of

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Announce Five Percent Wage Increase

The University last month announced a general wage increase of five percent for all employees on the biweekly payroll. The increase, retroactive to December 15, 1974, was reflected in paychecks received by employees on January 13.

About 900 individuals are affected by the increase, which was prompted by the concern of the board of trustees, administration, and laboratory service heads over the mounting pressure of inflation on the University and its employees. "I am keenly aware of the difficulties inflation is causing for you and your families," President Seitz noted in a memorandum to staff members announcing the wage increase.

The University last July 1 gave an annual wage increase that averaged out to about five percent. However, the continued sharp rise in the cost of living since then has caused greater erosion than anticipated in personal incomes. In budget reviews over the past several months, a number of proposals have been considered for helping University employees cope with inflation.

President's Report Stresses Basic Mission

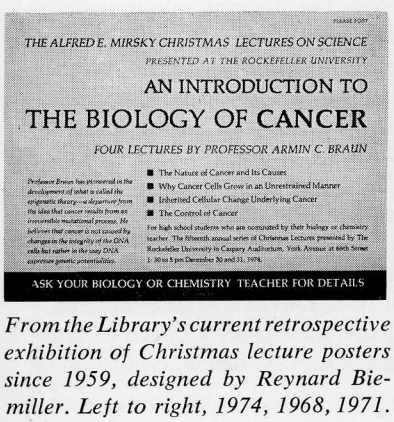
"Research programs and developments that illustrate the University's allegiance to its basic mission, and plans and actions to ensure that the University can continue to pursue that mission and maintain its high standards" are the major subjects under consideration in the *Report of the President, 1973–74*, published last month.

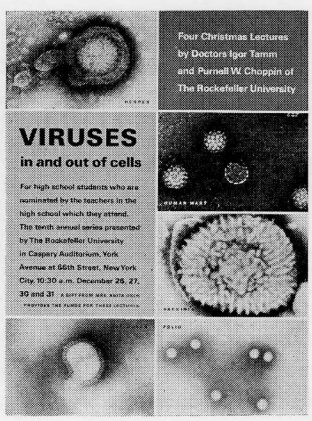
President Seitz begins his report by looking back to some reflections made by Dr. Herbert Gasser, director of The Rockefeller Institute from 1935 to 1953. "The target now," said Gasser in 1951, is "not just new knowledge, but the kind of new knowledge that has the power to illuminate sectors which are now dark." This, says Dr. Seitz, remains our essential mission.

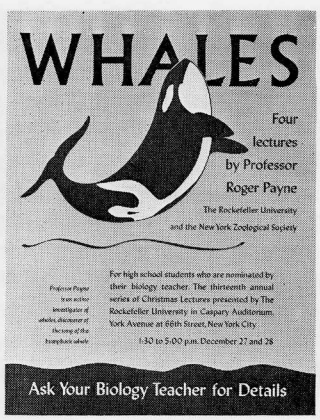
Two major areas that are still, in large measure, "dark" are cancer and reproductive biology. "Although our University does not envision itself as primarily a cancer center . . . the very nature of the problem made us one long before the federal government began to use such labels. The cancer problem is a problem of life itself." More than 15 University laboratories are concerned with fundamental questions directly related to discovering the causes of cancers. Similarly, the problems related to a greater understanding of reproductive biology—knowledge essential to any hope of meaningful population control—have "very deep roots in the fundamentals of biology, chemistry, and the behavorial and social sciences," and new University programs in this area, initiated only three years ago, are engaging an increasing number of participating laboratories supported by private and public sources.

"Any discussion of how basic research at our University is constantly reorienting itself to human needs must inevitably focus on our small but remarkably productive Hospital," Dr. Seitz continues. In addition to being, for its size, "the most successful in training those young medical scientists who have become the leaders in American academic medicine" over the past six decades, the Hospital's programs also represent "an extraordinary array of research efforts in the study of human diseases." The 30–40 diseases currently under investigation constitute "a major portion of the disabling and lethal afflictions to which mankind is presently subject" including genetic, immunological, and hereditary disorders, epidemic diseases such as gonorrhea and meningitis, and such widespread problems as obesity, arteriosclerosis, heart disease, and drug addiction. "In every case, the University's staff has made major contributions to medical understanding."

Rising costs in all areas of life, coupled with serious cutbacks in federal spending on basic science, are facts which lead Dr. Seitz to believe that "the country will witness a significant contraction in the number of people doing 'good' science. . . . In such circumstances, The Rockefeller University should stand out more than ever if we avoid unnecessary expansion. . . . Even if the economic picture were much more favorable, most of us would continue to favor a dynamic steady state with natural expansions and contractions of programs. . . . However, this is far from saying that there can be no growth in areas where the circumstances are ripe for new ventures into the unknown. There has been such growth recently, and there will be more such carefully guided growth in the future. None of us would jeopardize the continuity of the University's tradition of service to mankind."







From the Library's current retrospective exhibition of Christmas lecture posters since 1959, designed by Reynard Biemiller. Left to right, 1974, 1968, 1971.

New Blood Fat Test Speeds Mass Screening

A fast, new test to detect abnormally high levels of fat in the blood, a major risk factor for the development of heart disease, has already been used to screen 166,684 volunteer blood donors from the New York area—at a cost in required chemicals of less than a penny per test. The procedure was put into operation in August 1973 by the University's Center for the Prevention of Premature Arteriosclerosis in collaboration with the Greater New York Blood Program. To date, 9,293 persons from among the apparently healthy donors have been pinpointed for suspected high-risk blood fat levels.

The first report of the new program was made in November at the 47th Annual Scientific Sessions of the American Heart Association by Professor William Insull, Jr., associate medical director and laboratory chief of CPPA, and associate professor of pathology at the Cornell University Medical College. Coauthors of the report were Doctors Howard A. Eder and Harold R. Scholnick of the Albert Einstein College of Medicine, Dr. Robert L. Hirsch of the Greater New York Blood Program, and Elaine Barzellato, assistant for research at CPPA.

Atherosclerosis is a form of arteriosclerosis that involves the narrowing and hardening of arteries through an accumulation of fats on the vessel walls, slowing down and ultimately shutting off the supply of blood and oxygen to the heart. It is the underlying cause of most heart attacks, which claimed 683,100 lives in this nation in 1972. The disease has no obvious symptoms, and the victim is unaware of his condition unless he or she is tested for it, or suffers a heart attack, 50 percent of which are fatal. The most promising treatment of this disease is control of various risk factors —such as high blood fats—in the healthy person before the disease has progressed to the stage of heart attacks. Mass screening for high blood fat has been hampered until now because the traditional test methods are complex, costly, and require overnight fasting. The new test can be administered quickly, at any time, with no previous preparation by fasting. Called the heparin turbidity test, it mixes the blood sample with heparin—a natural anticlotting agent—and calcium chloride to form a milky-looking suspension. The degree of milkiness, or turbidity, which can be measured with a commonly available laboratory instrument

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Gould and 6,000 Bees Confirm a Theory

When a foraging honey bee finds a rich food cache, she flies back to the hive and reports the news to her fellow bees by means of an elaborate "waggle" dance. What information is the forager conveying and how? These questions have interested behavorial scientists for over 50 years, among them most recently, James Gould, a graduate fellow in the animal behavior laboratory of Professor Donald R. Griffin. A series of intricate and varied experiments by Gould, culminated by work

James Gould at Millbrook

done last summer with 6,000 bees at the University's Center for Field Research in Millbrook (in the course of which, among other things, he taught some of them to "lie," dislocated their sun, and, inadvertently, melted their hive), has helped to clarify a long-standing controversy.

A graduate of the California Institute of Technology, Gould followed a progression in his studies which led from biochemistry to genetics to the effect of genetics on behavior, and finally to the enigmatic dance language of bees, first discovered by Karl von Frisch. A Nobel Prize-winner for his pioneering behavior work, von Frisch determined in 1920 that the bee dances communicate the *odor* of the food source. Later, he decided that the dance also conveys instructions concerning *distance* and *direction* to the food. Other researchers challenged this second claim, stating that their studies showed that the dance gives olfactory cues only. James Gould decided that a conclusive experiment might be one in which the information contained in the dance of the forager is altered in such a way that recruits, if they *were* receiving information about distance and direction, would proceed to a location where the forager had never been. The problem was to find a way to make the foragers unwittingly "lie."

Bees orient both their flight and dance directions in relation to the sun. They will also interpret a bright light placed in the hive as the sun, and orient to it. (Gould's first experimental "sun" melted the hive. While the bees made repairs, Gould fitted the 650-watt quartz lamp with a heat-absorbing filter.) In the absence of light, they orient themselves in relation to gravity. By painting over the ocelli (the three simple, light-sensitive "eyes" on top of their heads), Gould made returning foragers insensitive to the light in the hive. Their recruits, however, could see it. When the foragers communicated direction and distance messages, they oriented them to gravity. The recruits, however, interpreted them according to the position of the lamp, which was deliberately placed to contradict the information which the foragers were seeking to convey. In large numbers, the recruits traveled to sites that concurred with the angle of disparity between the lamp and gravity, rather than to the true food source, irrespective of possible odor cues. Eighteen experiments, over a period of several months, confirmed von Frisch's finding that the "waggle" does convey distance and direction information. (A preliminary report of James Gould's experiments was published in the November 22 issue of *Nature*.)

Holiday Postscripts

The able pianist accompanying the carol singers at the all-University Christmas party, hosted by President and Mrs. Seitz, was graduate fellow **Abraham Zvi Snyder.**

The madrigal singers at the campus children's party were the members of a new University choral group now in the process of forming.

The Hospital's Christmas party was under the able guidance of the University's two new recreational therapists, **Donna E. Gothelf** and **Susan E. Egelko.**

The role of Fritz in the New York City Ballet's Christmas week production of the Nutcracker, at the New York State Theater, was danced on alternate nights by nine-year-old Adam Holland, son of **Yvonne Holland,** an assistant for research in the laboratory of Professor Peter Marler.

PERSONAL

Born, September 28, to **Majid Azzu,** assistant superintendent, Buildings and Grounds, and his wife, Aida, a daughter, Nada Nicole, their third child.

Born, November 29, to **Louise Ferraro,** bookkeeping clerk, Accounting Services, and her husband, Joseph, a daughter, Diana Yvonne, their fifth child.

Award for Rudzinska

Professor Maria A. Rudzinska, Cell Biology and Parasitology, has been selected to receive a 1974 Alfred Jurzykowski Foundation Award, to be presented on January 24 at the Polish Institute of Arts and Sciences in America. The Alfred Jurzykowski Awards are made each year to scholars and artists of Polish background for outstanding achievements in the arts and science. Dr. Rudzinska's contributions to science will be honored with a citation and a prize of $2,500.

Biomedical Seminars

The schedule of Biomedical Seminars, Topics in Immunology, for January through April is:

Immune Response Genes, Baruj Benacerraf, Harvard Medical School (January 21); *Antigenic Recognition and the Generation of Cytotoxic Effector Cells in the MLC*, Fritz Bach, University of Wisconsin (January 28); *Tumor Immunology*, John L. Fahey, University of California, Los Angeles (February 11); *Transplantation Biology*, Rupert E. Billingham, University of Texas Southwestern Medical School (February 25); *Delayed Hypersensitivity*, Barry R. Bloom, Albert Einstein College of Medicine (March 11); *Immunodeficiencies—Cellular and Humoral Aspects*, Henry Kunkel, Rockefeller University (March 25); *Immunoregulation-Suppression and Therapy*, Robert S. Schwartz, Tufts University School of Medicine (April 8); and *Clinical Problems in Transplantation—Bone Marrow*, Robert A. Good, The Sloan-Kettering Institute (April 22).

The Biomedical Seminars meet at 2 P.M. in Caspary Auditorium. They are a joint project of Rockefeller and the Cornell University Medical College.

DR. KOGBETLIANTZ DIES

Dr. Ervand Kogbetliantz, who served as an affiliate in mathematics from 1957 to 1967 and was revered by his Rockefeller students as an outstanding teacher, died in Paris on November 5 at the age of 86.

The Rockefeller University Council, and subsequent correspondence between President Seitz and Dr. Jamshid Amouzegar, Iranian minister of the interior. The University has received a grant adequate to cover all the faculty and staff work involved and all expenses of the study, which is to be completed by next summer. It will focus initially on four major concerns: the problem of recruiting an international scientific staff; the financial stability and independence of the new center; formation of an independent administrative structure and board of trustees; and details of site selection, logistic support, and adequate technical services.

President Seitz said that he and other members of the study group were impressed by evidence of Iran's "serious commitment" to improving education at all levels. "Although the Shah and his advisors are fully aware of the problem of staffing and organizing a new research center, they are enormously interested in enhancing the status and productivity of research in the biomedical sciences in their country, and they see the proposed institute as a symbol for talented Iranians that will encourage them to pursue scientific careers at home."

President Seitz added that what future, if any, there will be for Rockefeller University in this "exciting project" cannot be determined until the study is completed and specific recommendations are made to the Iranian government.

NEW BLOOD FAT TEST

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called a spectrophotometer, is proportional to the level of fats in the serum sample. The test identifies the existence of elevated blood fat levels, but it does not distinguish which of the different kinds of blood fats is the offender. When a subject has been identified by the heparin turbidity test, traditional testing methods must then be applied to confirm the abnormality and to determine whether it is caused by excess cholesterol or triglycerides. This specific information is needed for treatment, which can involve diet or drugs or both. Donors to the Greater New York Blood Program who are identified with suspected high fats are referred to their physicians, or to CPPA for further evaluation and possible participation in the center's experimental therapy programs.

The basic method for the heparin turbidity test was developed several years ago at the Albert Einstein College of Medicine by Dr. Meyer Burstein, and Doctors Eder and Scholnick. Dr. Insull simplified and automated the technique for use in large-scale screening. According to Dr. Insull, the CPPA trials represent "the largest population group ever screened for blood fat in one laboratory in a comparable period of time. The program has immediate value for the blood donor who receives, without charge, important information on his risk of coronary heart disease, which he or she would not normally get." Although the CPPA testing is considered as a developmental trial, the broad, practical applications are apparent, according to Dr. Insull. "A screening program based on the new method would enable a local health agency to provide an important community health service, at minimal cost. Using automated equipment and inexpensive chemicals, one technician can analyze 600 to 1200 specimens a day."

ACADEMY HONORS BRONK

President Emeritus Detlev W. Bronk was given the Lehman Award for Distinguished Contributions to Science by the New York Academy of Sciences at their annual dinner, held on December 4. Dr. Bronk addressed the assemblage on the subject of the Social Values of State Academies of Science. At the meeting Professor Philip Siekevitz, Cell Biology, was announced as president elect of the academy for 1976, and Professors Neal E. Miller, Physiological Psychology, and Heinz R. Pagels, Theoretical Physics, were elected fellows.

NEW ASSIGNMENTS

Tonya Siddiqi has been promoted to the position of administrative assistant to the President, effective December 16, 1974. Mrs. Siddiqi will be responsible for providing centralized staff assistance to the faculty on grant applications and other matters, including duties formerly handled by Phyllis Viets relating to faculty appointments, faculty records, and immigration actions. Mrs. Viets left the University on December 13, 1974, in order to travel overseas with her husband. Constance B. Schnurr has taken over Mrs. Siddiqi's post as principal secretary in the office of President Seitz and is working with Ariane Matschullat who recently joined the office.

BRIEFS

President Seitz delivered a talk on Research and Development—Our National Policy, at a Government Accounting Office lecture series held in Washington, D.C., on November 4. He also served as cochairman of a symposium on the subject, Should There Be Limits to the Growth of Science and Technology?, held as part of the 150th anniversary celebration of the Franklin Institute in Philadelphia in October, and delivered a summation talk on the symposium at the awards dinner. Also participating in the program were Professor **Mark Kac,** Mathematics, and Visiting Professor **Gerald Feinberg,** Theoretical Physics.

Professor **Philip Siekevitz,** Cell Biology, served as chairman for a session of a symposium on Molecular Aspects of Membrane Phenomena, at the Battelle Seattle Research Center, November 4–6.

Professor **James M. Manning,** Biochemistry, spoke on the Chemical Basis for the Treatment of Sickle Cell Anemia with Sodium Cyanate, at the meeting of the Cincinnati section of the American Chemical Society, held at Miami University, Oxford, Ohio, on November 13.

Trustee **Marian S. Heiskell** was one of two recipients of the 1974 Mrs. Lyndon B. Johnson Award presented by Keep America Beautiful, Inc., on December 5. Mrs. Heiskell is cochairman of The Council on the Environment of New York City.

Dr. **Samuel A. Goudsmit,** for many years a visiting professor in theoretical physics at Rockefeller, was awarded the Karl Taylor Compton Medal for Distinguished Statesmanship in Science by the American Institute of Physics at the annual meeting of the Corporate Associates of the AIP, held November 14 at the National Academy of Sciences in Washington, D.C. The award comprises a gold medal and a $1,000 honorarium.

Margaret E. Broadbent, manager of the Rockefeller University Press Journals Office, is chairman elect of the Council of Biology Editors for 1976. She will serve as program chairman for 1975.

President Emeritus **Detlev W. Bronk** received the Rensselaer Polytechnic Institute Distinguished Service Award, presented at the institute's 150th anniversary convocation in October.

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