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THE ROCKEFELLER UNIVERSITY

news and notes

DECEMBER 1976 VOLUME 8 NUMBER 3

Dr. de Duve Leads Tour of Cell at Christmas Lectures

Christian de Duve, Andrew W. Mellon Professor and head of the laboratory of biochemical cytology, will lead several hundred high school students on A Guided Tour of the Living Cell at the 1976 Alfred E. Mirsky Christmas Lectures, to be held December 27 and 28 in Caspary Auditorium.

Dr. de Duve is a well-qualified tour leader. In 1974, he shared the Nobel Prize in Physiology or Medicine with Albert Claude and George E. Palade for pioneering work in cell biology. A member of the University's faculty since 1962, he is best known for his discovery of lysosomes, tiny cell organelles like little stomachs, which contain powerful digestive enzymes. In recent years at Rockefeller and at the University of Louvain Medical School in Belgium, where he also heads a large biochemistry laboratory, Dr. de Duve has turned his attention to research aimed at the application of new knowledge in cell biology to the problems of medicine, particularly in such areas as hereditary diseases, aging, arteriosclerosis, immunology, and cancer.

The cell, basic unit of life, was first named—or misnamed—300 years ago by its discoverer, Robert Hooke. But the living cell is not the empty cavity it was once thought to be. Advances in scientific knowledge and technology have revealed, rather, a complex landscape teeming with activity. Most of these advances are very recent. As Dr. de Duve stated in his Nobel Lecture: "Thirty years ago, much of the living cell still remained virtually unexplored. Invasion of this territory started almost



simultaneously on its two frontiers, after electron microscopy became available to morphology and centrifugal fractionation to biochemistry."

To prepare his audience for their visit to the cell, Dr. de Duve will begin with a brief history of cell research, much of which has been centered at the University, and he will explain some of the tools scientists use to pursue this research. The tour itself will begin at the outer wall—the cell membrane—which serves the cell as a busy center of two-way transportation and communication. The students' next stop will be inside the wall, in the cytoplasm, where different organelles perform the essential functions of metabolism. From there they will penetrate the "holy of holies," as Dr. de Duve calls it, the nucleus, code center of life, citadel of the genes.

The Alfred E. Mirsky Christmas Lectures, now in their 17th year, are named in honor of the series' founder, who died in 1974.

Scientists Advise on Recombinant Research

Testifying at public hearings held on October 21 by New York State Attorney General Louis J. Lefkowitz, Vincent Astor Professor James E. Darnell, Jr. and Rockefeller alumnus David Baltimore, American Cancer Society Professor of Microbiology at the Massachusetts Institute of Technology, urged adoption by the state of safety guidelines established by the National Institutes of Health for the regulation of recombinant DNA research. Earlier, Dr. Baltimore and Professor Norton D. Zinder also testified to the same effect before Congressional committee hearings in Washington, D.C.

As described in the February 1976 issue of *news and notes*, a technique using recently discovered enzymes has made it possible to join DNA molecules from different organisms in combinations (called recombinants) not found

DOUBLE DRUBBING

On November 17, the Rockefeller University Chess Club chalked up its second victory this year over the Yale Club. Score 6-0.

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in nature. Although this work offers the possibility of great benefit to basic research, medicine, and technology, some scientists have feared that the new test-tube-created organisms could escape from the laboratory and contaminate the general environment with unpredictable results. Earlier this year, after intensive investigation and discussion, a committee of the National Institutes of Health, on which Dr. Darnell served, drew up a set of safety guidelines to regulate recombinant research sponsored by NIH funds.

On November 3, at a meeting of the New York Academy of Sciences' Section on Science and Public Policy, Dr. Darnell discussed the NIH guidelines and the policy problems arising from current public and governmental concern over the potential danger of this research, which has figured prominently in the news in recent months.

According to Dr. Darnell, there is general agreement among scientists in the field that the NIH guidelines offer adequate protection. At the New York State hearings, he voiced his conviction that time will prove the "nonhazardousness" of this research.

Sidelight on History

The University's annual Christmas lectures for high school students, which began in 1959, have covered a wide spectrum of subjects and in one case, at least, have had unexpected results.

Some years ago, Professor Peter R. Marler gave the lectures on the Social Behavior of Monkeys and Apes. To announce the series, Reynard Biemiller of The Rockefeller University Press designed a handsome poster that featured a picture of a chimpanzee. Dr. Marler sent a copy of the poster to his colleague Thomas T. Struhsaker, who was then conducting primate studies in Cameroon, West Africa. Dr. Struhsaker liked the poster so well that one evening he took it with him to his favorite local pub. With great earnestness, he explained to his friends, the proprietors, that Professor Peter Marler, as they could see from the picture, was an exceptionally intelligent chimp and had delivered a remarkable series of lectures. The proprietors, not to be outdone, decided that such an accomplishment deserved to be commemorated, and they forthwith renamed their establishment in his honor. Since that day, a sign over their door has read "Professor Peter Marler's Off-License." (Off-license is a term for a place where liquor is sold.)

THEODORE SHEDLOVSKY

1898-1976

Professor Emeritus Theodore Shedlovsky, a leader in applying techniques of physical chemistry to the study of life processes, died on November 5 at The New York Hospital after a long illness. He was 78 years old.

Next year would have marked the 50th anniversary of Dr. Shedlovsky's arrival on this campus. In addition to his important scientific accomplishments, he was responsible for the founding of the Rockefeller University Concerts in 1958, and in 1965 he started and for many years directed the University's Children's School.

In 1975, in recognition of his many contributions to science and to the life of this institution, the University conferred an honorary doctor of science degree on Dr. Shedlovsky. The feelings of the University community were expressed on that occasion by Professor Vincent P. Dole who, in presenting Dr. Shedlovsky for his degree, described him as "a special person who makes the world around him richer."

Dr. Shedlovsky's experiments on conductivity, electrophoresis, and the thermodynamic activity of ions in solution have been cited as classics of pure technique, and he was one of a small band of pioneers at the University who applied the techniques of physical chemistry to the exploration of the physical forces involved in the chemical activities of living tissues. His research included studies on solutions of electrolytes, on the soluble antigens of vaccinia virus, on some anterior pituitary hormones, on sera and plasmas compared in health and disease, and on possible mechanisms underlying electrical phenomena in living cells. He also brought to his research the skill of a craftsman. Among the scientific instruments now on display in Caspary Gallery are the conductivity cells designed by Dr. Shedlovsky for extremely precise determination of electrical conductance in solutions and his precision quartz pycnometer, for determining specific gravity of a solution.

He was born in St. Petersburg (now Leningrad), Russia, on October 29, 1898. He came to the United States in 1908. He received an S.B. degree in 1918 and a Ph.D. degree in physical chemis-



try in 1925 from the Massachusetts Institute of Technology, where he was an assistant in physical chemistry from 1918 to 1921. He joined The Rockefeller Institute for Medical Research in 1927 as an assistant, became an associate in 1929, an associate member in 1944, and a member and professor in 1956. He became emeritus in 1969.

Dr. Shedlovsky was a member of the National Academy of Sciences and a fellow and vice president (1942-1960) of the New York Academy of Sciences. He was also a member of the American Chemical Society and the American Association for the Advancement of Science.

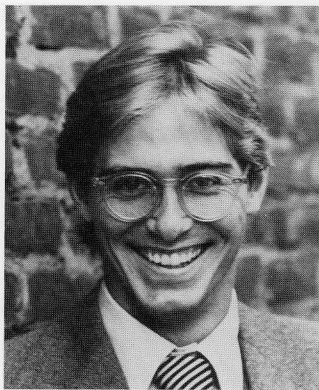
Dr. Shedlovsky is survived by his wife, the former Beatrice Paul; three children, Richard of Yonkers, New York, Julian of Boulder, Colorado, and Alexandra Shedlovsky Dove of Madison, Wisconsin; and a brother, Dr. Leo Shedlovsky, also a physical chemist, now retired.

Holiday Treat

As a special treat for its readers, *news and notes* presents below a recipe for a succulent duck liver paté to grace the tables of University revellers in this joyous holiday season. It was provided by Sam Perkins, production trainee on *The Journal of Cell Biology*, former sous-chef of Cape Cod's famed La Méditerranée restaurant, who is also a cookbook reviewer for the Book-of-the-Month Club, and the subject of a recent "Meet the Chef" feature in *Seventeen* magazine.

Until the summer of 1972, Mr. Perkins was just another Harvard English major looking for a vacation job. He remembers standing in the college employment agency and suddenly turning to a friend and saying, "I want to cook." He insists the idea was completely unpremeditated and out of character, since he had never cooked before. Nonetheless, he admits that back home in Rutherford, New Jersey, his mother is a superb cook and his father and sisters bake the family's bread and pastries. (His younger brother, a premed student at Williams, is now moonlighting as an assistant chef.)

The ad in the Harvard *Crimson* said "no experience, will train." So Perkins went to La Méditerranée and found out that "will train" meant 15 backbreak-



SAM PERKINS

ing hours a day at minimum wages. He loved it. Three summers later he was assistant chef there and, when the head chef decamped, he pretty much took over.

After graduation, he had to decide between full-time cooking and his original goal of a career in publishing. He chose the latter, but after 5 and on weekends he chops onions.

PERKINS' PATÉ

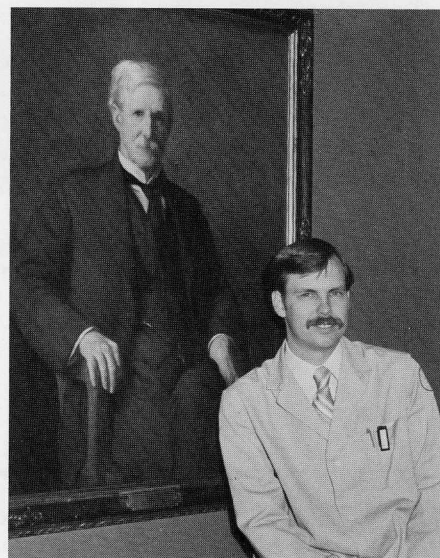
Preheat oven to 350°. Line 9-inch loaf pan with most of 1 lb. blanched sliced bacon, draping slices over the sides. (Leave ends to cover top later.) In large skillet, cook 1 lb. each ground

Welcoming Another Generation of Gates

Among the University's new postdoctoral fellows this year is Frederick T. Gates, III, great-grandson of Frederick Taylor Gates, the man who proposed the establishment of The Rockefeller Institute for Medical Research.

The first Frederick T. Gates was neither physician nor scientist, but as a young clergyman before the turn of the century, he had ministered to the sick and had observed and pondered the limitations of medical science. For many years he served as advisor to John D. Rockefeller. The idea for The Rockefeller Institute grew out of his conviction that "medicine could hardly hope to become a science" until "qualified men could give themselves to uninterrupted study and investigation. . . ." His dream became reality in 1901 and his own participation in the Institute's affairs, including service on the board of trustees, lasted until 1929. From 1913 until 1929, his eldest son, Frederick Lamont Gates, worked as a bacteriologist with Institute Director Simon Flexner and with virologist Peter K. Olitsky.

Twenty-seven-year-old Frederick T. Gates III came to Rockefeller spurred in part by family feeling but mostly be-



FREDERICK TAYLOR GATES III

cause his graduate advisors at the University of California at Berkeley suggested that it was a good place to pursue his research interests. He is currently working with Professor Thomas J. Kindt in the laboratory of immunology and immunochemistry on studies of the immunological system and the development of antibody diversity.

pork and veal until greyish. Remove from heat. Mash 1 clove garlic and finely chop 1 onion and cook in butter until onion wilts. Add to meat. Cut ½ lb. pork fat into ¼-inch dice, sauté until brown. Add to onions and meat. In large bowl combine ½ c. brandy (or Scotch), ½ Tb. ground pepper, 2 eggs, ½ c. Madeira (previously reduced to ¼ c.), ¼ tsp. ground allspice, ¼ c. shelled pistachios, ¾ lb. finely chopped duck or chicken livers. Add meat, stir well, add salt to taste. Mixture will be soupy. Pour into lined loaf pan. Cover top entirely with bacon ends. Seal tightly with foil. Place pan in baking dish half-filled with simmering water. Bake 30 min. Remove from oven. Drain off fat by untucking foil and pressing top of paté with a small board (or another loaf pan). Reseal foil. Return to oven for another 30 min. Remove from oven and cool briefly. Place board on top. Untuck edges of foil. Weight the board (or the covering pan) with something heavy like a can of soup. Refrigerate overnight. Slice in pan, remove gently, and serve.



And while we're on the subject, don't forget the *Children's School International Cookbook*, with recipes culled from 10 years of international dinners given at the University's Children's School. On sale at the school for three dollars.

Denmark Honors Stengaard-Pedersen

On October 28, Postdoctoral Fellow Kristian Stengaard-Pedersen was awarded the Tordenskiold Prize, the highest honor that can be bestowed upon a member of the Royal Danish Navy, for "courage, resourcefulness, and excellence."

While serving as a surgeon with the helicopter rescue service in the North Atlantic, Dr. Stengaard-Pedersen saved the life of a severely injured seaman on a French trawler. He performed multiple operations on the injured man, on board the trawler, in the midst of a violent storm. The award was also presented for another contribution made during his tour of duty. On his own initiative, he undertook a survey and analysis of the procedures and equipment used by the service and prepared a report with recommendations, which is now used as a manual by the Danish navy.

Dr. Stengaard-Pedersen, who recently completed his residency in internal medicine, is a member of the biology of addictive diseases laboratory of Professor Vincent P. Dole, working on quantitative histochemical analyses of drug binding.



In Elizabeth Hixson's class at the Children's School, C group studies yeast spores they grew themselves. At left, Bruce Knight, Jr. and Nina Shapley. On the right,

Postdoctoral Fellow Hugh Akers demonstrates some fine points for Joanna Salit, Gwyn Akers, Fernande Scheid, and Lynne Hurwitz.

Rothen Reports

Professor Emeritus Alexandre Rothen, who is now living in his native Switzerland, lectured during the past year at the universities of Geneva, Bern, Lausanne, and Basel, and at the Nestlé laboratories in Vevey. In the near future, he will be working at the Swiss federal research institute for the dairy industry, teaching techniques in the use of the ellipsometer, an instrument which he developed for very fine measurement of the thickness of protein layers and which is now widely used in scientific and industrial laboratories.

DEATHS

Esther Judkins, who was associated with the Rockefeller Library for 40 years, died on October 30 in Barnesville, Ohio, at the age of 76. Miss Judkins joined the Library as an assistant librarian in 1925. In 1938, she was appointed librarian, a post in which she served until her retirement in 1965. She was one of the founders of the New York Regional Group of the Medical Library Association in 1951, and remained an active member until her retirement.

Taylor Watlington, 93, on October 21, night watchman at The Rockefeller Institute's Department of Animal and Plant Pathology in Princeton, New Jersey, from 1934 until his retirement in 1948.

APPOINTMENTS

Thomas Bever, professor of psychology, Columbia University, as visiting professor, effective September 1.

Lynn H. Caporale, Biochemistry, as research associate, effective October 1.

Kuldeep K. Bhargava, Medical Biochemistry, and **Mariette Robbi**, Biochemical Cytology, as research associates, effective December 1.

Robert McVie, Cholesterol Metabolism, as assistant professor, effective December 1.

BRIEFS

Professor **Shigeru Sassa**, Metabolism-Pharmacology, recently served on an *ad hoc* committee organized by the National Academy of Sciences to study the contamination problem caused by the escape of the toxic chemical dioxin from the Icmesa plant in Seveso, Italy. The committee submitted recommendations to Dr. Alan Poland of the University of Rochester School of Medicine and Dentistry, an expert in epidemiology whose services were requested by the Italian government to organize a program of surveillance and assistance. Dr. Poland was a member of the Rockefeller metabolism-pharmacology laboratory from 1969 to 1971.

Professor **Neal E. Miller** served as chairman of the Public Information Committee for the 6th annual meeting of the Society for Neuroscience, held November 7-11 in Toronto, Canada. Papers by 31 Rockefeller scientists were presented at the meeting.

Saimon Gordon, formerly an assistant professor in the laboratory of cellular physiology and immunology, is now a Reader in Experimental Pathology at the Sir William Dunn School of Pathology, Oxford, England. He retains a post as adjunct associate professor with the University.

PERSONALS

Biomedical Fellow **Alan D. Proia** was married on October 9 to Nancy Easter.

Linda Mann, a secretary in the immunology and immunochemistry laboratory, was married on October 23 to Jeffrey Adams, an associate product manager with General Foods Corporation.

Professor Emeritus **Walther F. Goebel** was married on November 12 to Alice Lawrence Behn, widow of Harry Behn, who was a writer for children and professor of English at the University of Arizona.

Jeremy Bernstein Is Visiting Professor

Visiting Professor Jeremy Bernstein is a scientist, a teacher of science, and a writer about science and scientists. This semester he is taking time off from his classroom at the Stevens Institute of Technology, where he is a professor of physics, to work at Rockefeller with Professor M. A. B. Bég on a problem in elementary particle physics. On November 8 he received the American Institute of Physics—United States Steel Foundation 1976 Science-Writing Award for a two-part profile of physicist I. I. Rabi, which appeared in *The New Yorker* in the issues of October 13 and 20, 1975.

This is Dr. Bernstein's second AIP award. The first, in 1970, was for "The Elusive Neutrino," a booklet for high school students published by the Atomic Energy Commission. He has also won the Bodowin Prize and the AAAS-Westinghouse Prize for Science Writing. He has been a staff writer for *The New Yorker* for 15 years and has written five books.

Dr. Bernstein writes when he is "tired of thinking about physics." He has been thinking about physics for more than 25 years: at Harvard, where he earned his degrees, at the Institute for Advanced Study in Princeton, at the Brookhaven National Laboratory, and at the Los Alamos Scientific Laboratory. He has been a visiting professor at Oxford University, at the European Center for Nuclear Research (CERN) in Geneva, Switzerland, and twice at Rockefeller. His first appointment at Rockefeller was for several months in 1971, also to work with Dr. Bég. Some of that time he spent talking with Professor Abraham Pais, who had been a colleague of Albert Einstein, as part of his research for a biography of Einstein, published in 1973.

In writing about science for laymen, Dr. Bernstein is interested in doing more than conveying information. He believes that science "gives us something to think about that is larger than our personal lives. When you succeed in communicating science to people, you find that you have given them a great deal of pleasure."

PROMOTION

Yu-Hwa Eugenia Wang, Virology, to research associate, effective November 6.