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The Rockefeller University

THE ROCKEFELLER UNIVERSITY
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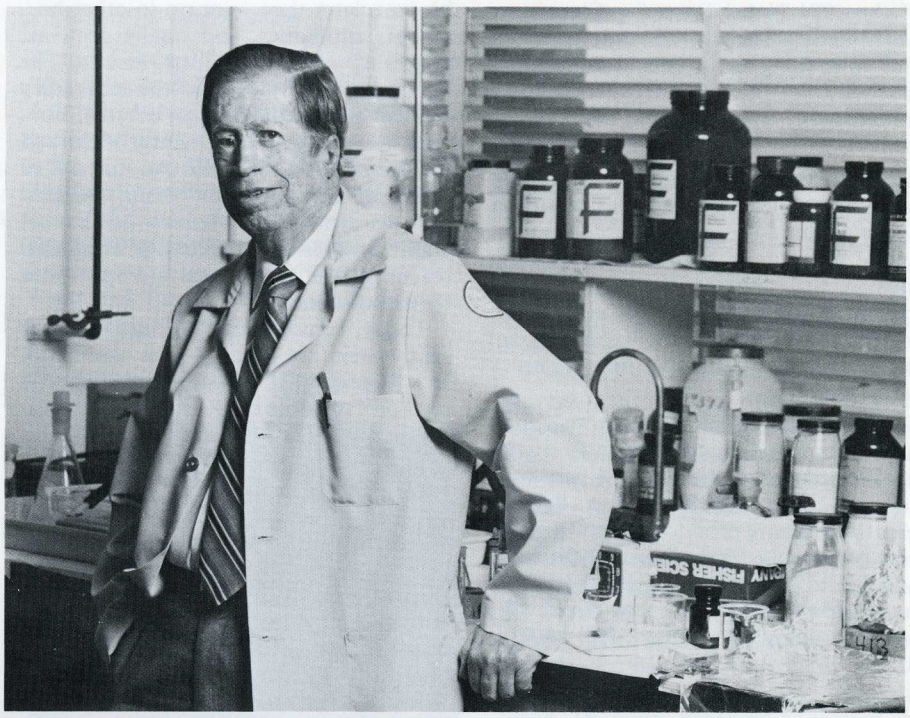
Merrifield Wins Nobel

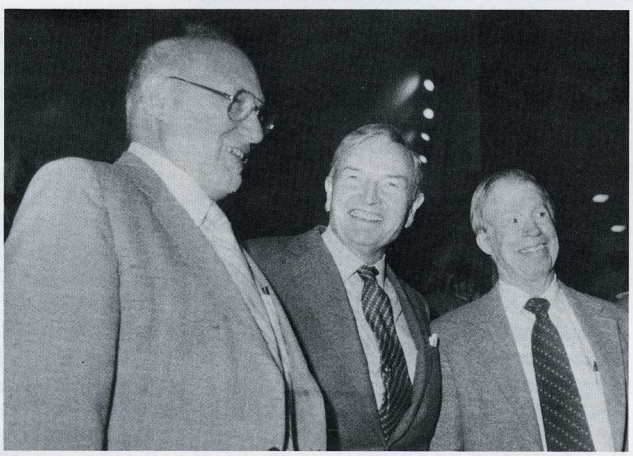


On October 17, the Royal Swedish Academy of Sciences awarded the Nobel Prize in Chemistry to Professor Bruce Merrifield of The Rockefeller University "for his development of methodology for chemical synthesis on a solid matrix."

The citation refers to a system which, in the words of the Academy's announcement, "has brought about a revolution in peptide and protein chemistry."

Dr. Merrifield is the 19th Nobel recipient to be associated with Rockefeller and the only American to win a prize this year. An explanation of the work that led to the award appears in this issue on page 2.

On the morning of the announcement, at a news conference in Caspary Auditorium packed with reporters, photographers, television crews, and University well-wishers, Dr. Merrifield confessed that he couldn't remember the exact moment when the idea for his innovative technique, called solid-phase peptide synthesis, came to him.



Chemical Synthesis on a Solid Matrix: A Nobel Achievement

Proteins, large molecules made up of long chains of smaller molecules called amino acids, are the basic components of living organisms. They are the major structural molecules. Enzymes, the chemicals that catalyze biological reactions, are proteins. Many hormones, which regulate body activities, are proteins or peptides, which are shorter chains of amino acids. As Rockefeller Biochemist Bruce Merrifield, winner of the 1984 Nobel Prize for Chemistry, has stated: "The key to understanding and controlling the events that occur in the body lies in first understanding the composition, structure, and function of proteins."

One of the ways scientists have sought to study peptides and proteins, many of which are hard to isolate or occur in minuscule amounts in nature, is by making them in the laboratory. Dr. Merrifield was awarded the Nobel Prize for conceiving, in 1959, and then developing, a fast, accurate way to synthesize these complex compounds.

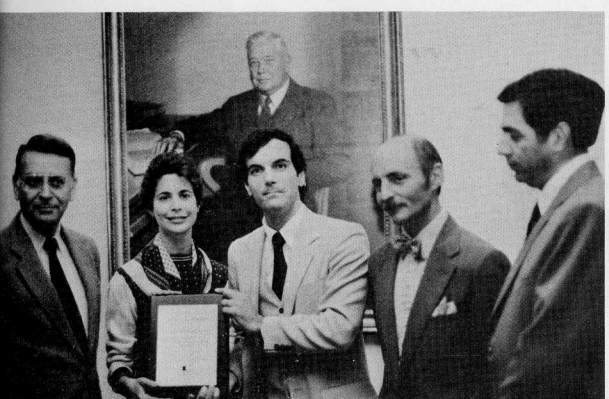
To make a peptide chain from amino acids, undesired combinations of the many chemical groups must be prevented from forming, or the by-products later removed, if a pure product of known structure is to result. Methods used before Dr. Merrifield's necessitated synthetic and purification procedures that could take weeks to complete, if they could be done at all.

With solid-phase synthesis, the technique Dr. Merrifield developed and later automated, peptide chains are put together by anchoring the appropriate amino acids, step by step, to a solid support, which is made of a bead of polystyrene. Because the support is insoluble, the intermediate peptide products are also held in an insoluble state and can be purified simply by dissolving unwanted by-products and washing them away. Once the required series of amino acids has been assembled, the chain can be separated from the support.

Dr. Merrifield first synthesized bradykinin, a hormone that lowers blood pressure and contracts smooth muscle. He and his associates then went on to other hormones, antibiotics, and finally proteins, beginning with the smallest, insulin. The landmark achievement of the laboratory was the first synthesis of an enzyme, ribonuclease, reported by Dr. Merrifield and Dr. Bernd Gutte in 1969. An automated machine, built in the laboratory, was used for this synthesis. Assembly of the 124 amino acid residues required 369 chemical reactions and 11,931 separate operations by the machine.

Today, commercially produced peptide synthesizers are used all over the world. Dr. Merrifield's "simple and ingenious method" to quote the Royal Swedish Academy of Sciences, "has created completely new possibilities in the field of peptide and protein chemistry...as well as in the field of nucleic acid chemistry where other researchers have applied Merrifield's ideas." It has "greatly stimulated progress in biochemistry, molecular biology, pharmacology and medicine. It is also of practical importance, both for the development of new drugs and for gene technology." One such practical area is antibody research. A number of laboratories are currently exploring the possibilities of making synthetic vaccines against viral diseases such as influenza, rabies, and hepatitis, applying the methods pioneered at Rockefeller by Bruce Merrifield. □

On October 1, the University received a Chubb Safety Award from Chubb & Son Inc., its insurance carrier, "in recognition of outstanding achievement in loss control," the second time in 100 years the award has been made by the company's downtown office. The plaque, held here by Hospital Administrator Kathy Kleinbard and Michael L. Marinaro, Loss Control Unit Supervisor for Chubb, hangs in the laboratory safety office. From left, Vice President and General Counsel William Griesar, Laboratory Safety Director Edward Gershey, and Thomas Mineo, supervisor of custodial services.



Photographs, page 1, bottom, clockwise: Professor Merrifield at the press conference. (From left), President Lederberg, David Rockefeller, and Professor Merrifield. Professor Merrifield in the laboratory with the automated peptide synthesizer. Well-wishers from around the world sent congratulatory messages. Bruce and Elizabeth Merrifield. Elizabeth Merrifield at the reception celebrating Professor Merrifield's Nobel Prize.

APPOINTMENTS

Harvey J. Babich, Laboratory Animal Research Center, as senior research associate, effective October 1.

Paul A. Recsei, Biochemistry, as assistant professor, effective December 1.

Robert K. Plunkett, Experimental High-Energy Physics, as senior research associate, effective January 1.

PROMOTIONS

Belur N. Manjula, Bacteriology and Immunology, to associate professor, effective November 1.

Elaine I. Tuomanen, Microbiology, to assistant professor, effective November 1.

And 18 Before

Bruce Merrifield brings to 19 the number of Nobel Prize winners who have been associated with the University. Two of them, Gerald Edelman and David Baltimore, earned their Ph.D. degrees here. The complete list is:

ALEXIS CARREL (deceased), 1912, for his work in suturing blood vessels, in blood transfusion, and in the transplantation of organs.

KARL LANDSTEINER (deceased), 1930, for classification of blood groups.

HERBERT S. GASSER (deceased), 1944, for his studies with Joseph Erlanger on the electrophysiology of nerves.

JOHN H. NORTHROP and WENDELL F. STANLEY (deceased), 1946, for their work, with James Summer, on the purification and crystallization of enzymes.

FRITZ LIPMANN, 1953, for his discovery of coenzyme A and his studies of intermediary metabolism, with Hans Krebs.

EDWARD L. TATUM (deceased), 1958, for his studies in biochemical genetics, with George Beadle and JOSHUA LEDERBERG.

PEYTON ROUS (deceased), 1966, for establishing a virus as the cause of chicken sarcoma, with Charles B. Huggins.

H. KEFFER HARTLINE (deceased), 1967, for work on the physiology and chemistry of vision, with Ragnar Granit and George Wald.

GERALD M. EDELMAN, 1972, for determining for the first time the complete chemical structure of immunoglobulins (antibodies), the key molecules of immunity, with Rodney R. Porter.

STANFORD MOORE (deceased), and WILLIAM H. STEIN (deceased), 1972, for their research on enzymes, body proteins central to life; particularly for working out for the first time the chemical structure of pancreatic ribonuclease, with Christian B. Anfinsen.

ALBERT CLAUDE (deceased), CHRISTIAN deDUVE, and GEORGE E. PALADE, 1974, for discoveries concerning the functional organization of the cell.

DAVID BALTIMORE, 1975, for discoveries concerning the interaction between tumor viruses and the genetic material of the cell, with Renato Dulbecco and Howard M. Temin.

TORSTEN S. WIESEL, 1981, for his studies of how visual information is transmitted through a complex network of nerve fibers from the retina to the brain, with David H. Hubel.

Still working on campus are Professors Lipmann, Edelman, deDuve, Wiesel, and President Lederberg.

The twentieth century frontier of polymers and proteins has been energized by Dr. Bruce Merrifield's elegant discoveries. His inspiration—modestly recorded in his notebook on May 26, 1959 as "a need for a rapid, quantitative, automatic method for the synthesis of long chain peptides"—opened an era of creating macro-molecules central to life and its enhancement by biomedicine. Particularly in an age of "molecular biology," Merrifield's molecules have a precision of composition and size unsurpassed in the annals of synthetic organic analogs to components of living matter.

Dr. William O. Baker
Chairman
Board of Trustees

Warmest congratulations, Bruce, from the Board of Trustees and from my family. You have pioneered quietly and brilliantly in all the ways in which we have hoped basic science would be pursued to serve mankind. We are proud of you. You bring great credit to the professorship bearing my father's name and to the community at the Institute and University in which you have been such a humane, generous, and profoundly important member.

David Rockefeller
Chairman, Executive Committee
Board of Trustees

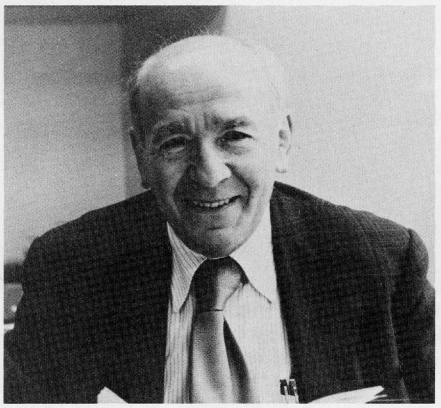
MERRIFIELD continued from page 1

"I do recall," he said, "that I first approached my boss, the late D. Wayne Wooley, with the general plan one day in 1959 while we were riding on the elevator in Flexner Hall. There was no comment, but the next morning Dr. Wooley said he liked the idea and suggested that I work on it for a while. Progress was slow and for three years there were no publications, but he stood behind me until a positive result was finally obtained. The possibility of such an arrangement was a unique feature of Rockefeller, and it made all the difference for me."

Stepping off the same Flexner Hall elevator 25 years later, Dr. Merrifield heard the news of his Nobel Prize from a joyous Josephine Lewis, a longtime laboratory helper. In short order, another proud member of the group had posted a handmade sign in the elevator depicting a smiling molecule next to the legend "solid-phase peptide synthesis born here."

Robert Bruce Merrifield has spent virtually his entire scientific career on this campus. Born in Texas in 1921 and educated at UCLA, he came to Rockefeller in 1949. He was appointed professor in 1966 and John D. Rockefeller Jr. Professor in 1983. The Nobel is the latest in a succession of honors and awards he has garnered over the years. At this writing, he and his wife, Elizabeth, herself a scientist and a member of his laboratory, and all of their six children plan to attend the Nobel award ceremonies in Stockholm on December 10. □

MARK KAC 1914 - 1984



Mark Kac

World-revered mathematician Mark Kac, a member of the Rockefeller faculty from 1961 to 1982 when he became emeritus, died of cancer, October 25, in Los Angeles. He was 70 years old. At the time of his death he was serving as interim chairman of the Department of Mathematics at the University of Southern California.

Dr. Kac was an authority in the field of probability theory and pioneered in its applications, especially to statistical physics.

"Mark Kac combined superb intelligence with human sparkle, humor, and warmth," said Professor Joel E. Cohen, Populations, whom Dr. Kac recruited to the Rockefeller faculty. "By his example and precept, Mark taught a love of excellence in every endeavor, and in science and mathematics, a reverence for what is beautiful and concrete. Once, I am told, after he lectured at Caltech, Richard Feynman—with whom Mark shares immortality for the Feynman-Kac formula—groused, 'If mathematics didn't exist, it would set physics back one week.' 'Precisely,' Mark replied without a pause, 'the week in which God created the world.' Science has lost a sage, and we here have lost a treasured friend."

Dr. Kac was born in Krzemieniec, Poland, in 1914. He received the Ph.D. degree in mathematics from John Casimir University in Lwow, Poland, in 1937. He came to The Johns Hopkins University the following year under a postdoctoral fellowship from The Parnas Foundation, a circumstance that saved his life. His family was killed during the German occupation of Poland.

He joined the faculty of Cornell University in 1939, rising to professor in 1947, and was appointed Andrew D. White Professor-at-Large in 1965, the year he was elected to the National Academy of Sciences. He was chairman of the Division of Mathematical Sciences of the National Research Council from 1966 to 1967. Other memberships included the Mathematical Association of America, which he recently served as president.

Dr. Kac's autobiography, completed just before his death, will be published in the spring as part of a Sloan Foundation series on lives in science and mathematics.

Dr. Kac is survived by his wife, Katherine, and their children, Deborah Altschuler of Santa Monica, and Michael, an associate professor of linguistics at the University of Minnesota. □

ALUMNI BRIEFS

Francis Barany (1981), assistant professor of microbiology, New York Hospital-Cornell Medical Center, has been selected as one of five Cornell Scholars in Biomedical Science, a new program designed to identify, recruit, and support young scientists who have shown exceptional talent in biomedical research.

Thierry R. E. Boon (1970), director of the Brussels Branch of Immunogenetics, Catholic University of Louvain, delivered Memorial Sloan-Kettering Cancer Center's Centennial Lecture in Immunobiology, October 24. His topic was Antigenic Tumor Cell Variants Obtained by Mutagenesis and Their Use in Obtaining an Immune Protection Against the Original Tumor.

Caleb E. Finch (1969), professor of biology and gerontology, University of Southern California, has received the 1984 Robert W. Kleemeier Award from the Gerontological Society of America for "his pioneering research and leadership in the neurobiology of aging."

Christmas Lectures

Professor Emil C. Gotschlich, head of the University's laboratory of bacteriology and immunology, will deliver the 25th annual Alfred E. Mirsky Christmas Lectures on Science for selected high school students in Caspary Auditorium on December 26 and 27.

His topic will be The Ecology and Molecular Biology of Bacterial Diseases, to be presented in four lectures, two on each afternoon: Bacterial Diseases—The Rules of the Game; Gonococcus—The Professional; Cholera Bacillus—A Man for All Seasons; and Vaccines—Of Mice and Men.

Dr. Gotschlich, a member of the Rockefeller faculty since 1960, collaborated in the development of meningitis vaccines that have been used successfully in major epidemic areas of the world. His contributions to meningitis research earned him an Albert Lasker Award in 1978. He also has contributed important studies on streptococci and is involved in work aimed at a better understanding of gonorrhea.

The Christmas lectures, begun in 1959, were named in honor of their founder, Rockefeller cell biologist Alfred E. Mirsky, after his death in 1974. □

Kenneth Schmitt Retires and Sends Thanks

Joining Kenneth Schmitt, third right, at the reception are, from left, Thomas McGinnity, director of plant operations, Vice President David Lyons, Erika Muellar, administrative secretary, plant operations, Assistant Foreman Eugene Roth, and Supervisor Robert Channell, of the cabinet shop.

Celebrating his 43 years of service to the University, Kenneth C. Schmitt was joined by his friends and colleagues at a reception on the 17th floor of the Tower on November 8 in honor of his retirement as associate superintendent of plant operations.

Mr. Schmitt, who has the distinction of having the longest employment record at Rockefeller at the present time, joined the University in 1941 as a temporary clerk. For many years, he was principal assistant to Barney Lupinek, superintendent of buildings and grounds, and played a key role in the major expansion and ongoing maintenance of the University's physical facilities. At the party, Vice President David J. Lyons read a letter from David Rockefeller, chairman of the executive committee of the board of trustees, conveying his thanks and congratulations.

Joining Mr. Schmitt at the reception were his wife, Ann, whom he met while she was working at the University's pharmacy, and Moira, one of their two daughters. In presenting his retirement gift, Mr. Lyons stated, "You have exemplified the best of our traditions at Rockefeller. Simply to have served this long would win recognition, but your service was extraordinary. You have won our affection and a place in our hearts from which there can be no retirement."

Mr. Schmitt has asked *news and notes* to convey his thanks to all his friends and associates at Rockefeller for making his retirement party such a happy and memorable occasion. □

Award Named for Kunkel

The Henry G. Kunkel Research Scholar Award has been established by the Terri Gotthelf Lupus Research Institute. It honors the late Rockefeller scientist who was Abby Rockefeller Mauzé Professor and head of the laboratory of immunology until his death in 1983, and was a major contributor to the understanding of systemic lupus erythematosus.

The award was dedicated at a dinner dance at the Pierre Hotel on October 18, which was attended by Professor Purnell W. Choppin, vice president for academic programs.

The Institute was founded by and named after 21-year-old Terri Goffhelf, who died of the disease three years ago. □

ANNIVERSARY AND RETIREMENT DINNER

On April 17 the University will hold its annual dinner for those who have 25 or more years of association and those who retire during the academic year with 10 or more years of service.

BRIEFS

Professor **D. Martin Carter**, Investigative Dermatology, visited Japan in July. He lectured at the annual meeting of the Japanese Society for Investigative Dermatology in Yokohama, and visited the departments of dermatology at Kitasato University, Kyushu University, and Nagoya City University. His lectures were entitled Induction and Repair of Chemical and Radiation Damage to DNA and the Biology of Wound Healing.

In May, 1985, the Society of Investigative Dermatology and the Japanese Society for Investigative Dermatology, of which Dr. Carter is President-elect, will hold a joint annual meeting in Washington, D.C.

Rockefeller University Council member **Stanley D. Frank**, formerly president of the CBS Educational and Professional Publications Division, has been elected executive vice president of Encyclopaedia Britannica and will become president of a division that will develop and market computer- and video-based learning programs for the home.

Adjunct **Bernice Grafstein**, professor of physiology, Cornell University Medical College, was named president-elect of the Society for Neuroscience, at the society's 14th annual meeting in October. She will assume her duties as president, the first woman to hold the post, in October 1985.

Professor **Mary Jeanne Kreek**, Biochemical Endocrinology, and Professor **Vincent P. Dole**, Biology of Addictive Diseases, presented the second and third talks, respectively, in a series of four lectures on Addictive Diseases: The State of the Art, at the New York Academy of Sciences. Dr. Kreek spoke on Opioids and Their Receptors: Basic and Clinical Studies Concerning Their Possible Relationship to Addiction, on November 19, and Dr. Dole spoke on Treatment of Narcotic Addiction: State of the Art, on December 4.

President Lederberg served as chairman of the first session of the Seventh Annual Bristol Meyers Symposium on Cancer Research, sponsored by Memorial Sloan-Kettering Cancer Center, held in Caspary Auditorium on October 18-19.

Other Rockefeller participants were: Professor **James E. Darnell, Jr.**, Molecular Cell Biology, who spoke on Gene Control in Differentiated Cells of the Mouse, Professor **Hidesaburo Hanafusa**, Viral Oncology, on Functional Differences Between Viral and Cellular Oncogenes, and Rockefeller alumnus **David Baltimore**, director of The Whitehead Institute, on Regulation of Immunoglobulin Gene Expression.

Professor **Alexander Mauro**, Biophysics, gave an invited plenary lecture, The Physical Basis of Osmosis, at the Third International Congress for Microcirculation, held at Oxford University, September 11.

Professor **Maclyn McCarty**, Bacteriology and Immunology, was Culpepper Foundation, Inc. Visiting Professor at Morehouse School of Medicine, September 26-28.

Professor **Robert Shapley**, Biophysics, was one of three organizers of a Workshop on The Systems Approach in Vision, held at the Royal Netherlands Academy of Arts and Sciences in Amsterdam, August 26-29. He also gave a lecture on The Importance of Contrast in Vision as Revealed by the Responses of Single Cells and by Visual Evoked Potentials.

Professor **Shigeru Sassa**, Metabolism-Pharmacology, delivered the Third Annual American Porphyria Foundation and Susan Young Lecture at the C. J. Watson Symposium on Advances in the Porphyrias and in Liver Diseases—Diagnostic and Therapeutic Aspects, held in Minneapolis, November 6. He spoke on Abnormalities of the Porphyrias.

President Emeritus **Frederick Seitz** has been named a member of the Media Resource Advisory Committee of the Scientists Institute for Public Information.

Professor **Norton Zinder**, Genetics, served as chairman of the National Research Council committee on the disposal of chemical munitions and agents. The committee's report, which evaluated the Army's plans to dispose of the material, was summarized at a public briefing at the National Academy of Sciences, in Washington, D.C., November 21.

Samuel Silverstein, third right, a longtime member of the laboratory of cellular physiology and immunology, who has been appointed chairman of the Department of Physiology, Columbia University College of Physicians and Surgeons. Friends and colleagues joined in wishing him well at a reception on October 3 on the 17th floor of the Tower. Pictured with him, left to right, are Abraham Pais, Nicola Khuri, Mrs. Silverstein, Zanvil Cohn, and James G. Hirsch, a former member of the lab, now president of the Josiah Macy Jr. Foundation.

HONORS & AWARDS

Visiting Professor **Mitchell Fiegenbaum**, Theoretical Physics, and Adjunct Professor **Roger S. Payne**, Animal Behavior, have been named as recipients of MacArthur Prize Fellowships, announced in October.

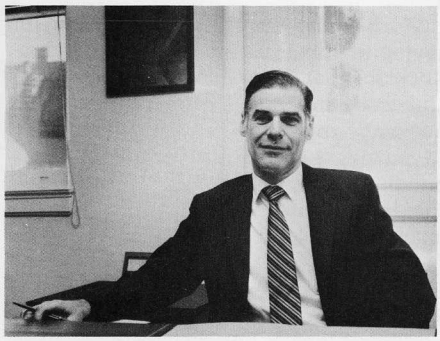
Professor **Neal E. Miller**, Physiological Psychology, was awarded The New York Academy of Sciences Award in the Behavioral Sciences for his "outstanding contributions in the field of psychology," at the Academy's annual meeting, December 12.

Professor Emeritus **Carl Pfaffmann**, Neurobiology and Behavior, was elected an honorary member of The European Chemoreception Research Organization (ECRO) in recognition of "his fundamental contributions to taste research and his continuous interest in ECRO activities."

Professor **Robert L. Schoenfeld**, Electronics and Laboratory Microprocessors, was one of 20 members of the Engineering in Medicine and Biology Society of the Institute of Electrical and Electronic Engineers to receive the IEEE Centennial Medal, presented at the Society's Sixth Annual Conference, in Los Angeles, September 16. The medal was awarded to "outstanding members of the Institute of Electrical and Electronic Engineers in all electrotechnical fields, in celebration of the 100th anniversary of the Institute."

At the sweatshirt sale, held October 16, for the benefit of the Children's School. Future sales will be February 14, April 3, and June 13; and a bake sale on February 5.

Landau Appointed



Daniel Landau

Daniel Landau, formerly associated with The Stamford Hospital in Connecticut, has joined the University as assistant director of plant operations. Mr. Landau, who will assist Director Thomas P. McGinnity in the general engineering responsibilities of the University's physical facilities, holds degrees in engineering and in business from the University of Vermont and the University of Bridgeport, respectively. □

Patricia Berlin Retires

Patricia Berlin, center, admires her farewell gift, held by Anna Elskus, secretary to President Emeritus Seitz.

Friends and colleagues of Patricia Berlin, assistant to the president for interior design, gathered at the Faculty and Students' Club on September 25, to wish her well on her retirement and to honor her 21-year association with the University.

Over the years, Mrs. Berlin has been responsible for maintaining and enhancing all areas of the University. She helped select furnishings for laboratories and offices and arranged art exhibitions. Stated Vice President David J. Lyons at the reception: "Certainly no scientific institution could ask for a better interior designer than Pat, who is able to find some of the beauty that she gives us in our very science."

An accomplished landscape and scientific artist, Mrs. Berlin's paintings have been shown at the Smithsonian Institution and the Albany Museum of Natural History. An exhibit of some of her work was on display at her retirement party.

Succeeding Mrs. Berlin, who will continue as a consultant, is Katharine Cameron, who has been assistant to Frederick G. Lehmann, formerly special assistant to the President.

Emil T. Kaiser, right, the University's first Patrick E. and Beatrice M. Haggerty Professor. (See story, news and notes, *October-November '84.) The post was established by the late board chairman and his widow, pictured here, center, next to her daughter, Mrs. Sheila Turner.*

RU-Suntory Lectures

In conjunction with The Suntory Institute for Biomedical Research, of Japan, the University inaugurated the Rockefeller University-Suntory Lectures '84, on October 29, in Tokyo, highlighting the new collaborative relationship between the two institutions.

President Lederberg gave the opening address of the meeting and later spoke on Future Trends in Scientific Research. He was followed by Keizo Saji, the president of Suntory Ltd., which established the Suntory Institute in 1979. Mr. Saji is also a recently appointed member of The Rockefeller University Council.

Professor Shigeru Sassa, of the University's laboratory of metabolism-pharmacology, spoke on The Rockefeller University—Historical Perspective on Its Research: Pursuit of Excellence. While in Japan, Dr. Sassa delivered an invited lecture, Recent Progress and Future Horizons in Heme Biology, at the 26th Congress of the Japanese Association of Clinical Hematology, in Nagoya, on October 26. He was also an invited speaker at a meeting of the Tokyo Medical Association, in Tokyo, on October 30, where he spoke on Recent Progress in Porphyria Research. □

Citibank Offers Mortgage Program

The University is participating in Citibank's new MortgagePower Program, designed to help employees receive better terms when buying or selling a home or when using the equity in an existing one.

Among the program's features, according to Zachary Contes, director of housing and realty services, are lower origination fees, lower down payments and more dollars financed, no lending limits on adjustable rate mortgages, second home and investor financing, equity source accounts for existing homeowners, and priority processing. Citibank also will hold seminars on campus during early 1985, details of which will be sent from the Housing Office.

Those interested in the program may drop by the Housing Office, Room 318, Abby Aldrich Rockefeller Hall. □

RU Council Meets; 54 New Members Join

A joint meeting of The Rockefeller University Council and the Board of Trustees was held at Caspary Auditorium on October 16.

President Lederberg spoke on The State of The Rockefeller University. Trustees J. Richardson Dilworth and Thomas G. Cousins of the Ad Hoc Committee on the Scholars' Residence informed the group of the progress of plans for the residence. All city permits have been obtained and construction is scheduled to begin in a few months, with occupancy set for sometime in 1987. Executive Vice President Rodney W. Nichols reviewed the University's past and present plans.

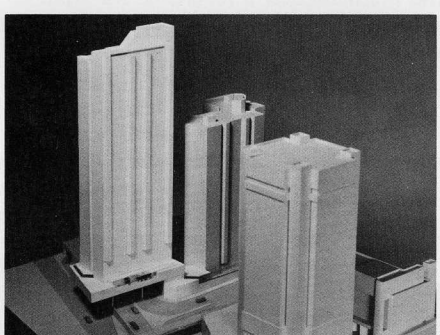
As is the Council's usual procedure, the group was addressed by a scientist about an aspect of the University's research. Professor Jan L. Breslow, head of the University's new laboratory of biochemical genetics and metabolism, addressing the subject Heart Disease: Determining the Genetic Risk, described the research of his laboratory into the structure, function, and alterations in the genes that govern atherosclerosis.

Fifty-four members have been appointed to the Council since its last meeting on May 25. They are: Stanley Abrams, president, Intrepid Sea-Air-Space Museum; Rand V. Araskog, president, International Telegraph & Telephone; Marvin Asnes, president, Becton, Dickinson & Co.; Chrisine Beshar, partner, Cravath, Swaine & Moore; Robert P. Beshar, Esq., New York City; Catherine McCormick Blair, Washington, D.C.; Frank Borman, chairman of the board, Eastern Air Lines, Inc.; Theodore Burtis, chairman, Sun Company, Inc.; Frank Considine, president, National Can Corporation; Nicholas Deak, Scarsdale, New York; Augustin Edwards, Empresa El Mercurio S.A., Santiago, Chile; Marie N. Eising, Mamaroneck, New York; John Evans, chief executive officer, Allelix, Inc.

Also: Louis Fernandez, chairman of the board, Monsanto Company, Inc.; Edward S. Finkelstein, chairman, R. H. Macy & Co. Inc.; Myra Finkelstein, New York City; Leon Finley, Finley, Kumble, Wagner, Heine, Underberg, Manley & Casey; Alice Fordyce, executive vice president, Albert and Mary Lasker Foundation; Leonard Franklin, Franklin, Weinrib, Rudell & Vasallo, P.C.; Robert Frederick, president, RCA Corporation; Arlyn Gardner, Larchmont, New York; Edward L. Gardner, Industrial Solvents Corporation; John C. Haley, deputy chairman, Kissinger Associates, Inc.; Jane Hanson, National Broadcasting Co.; Lita A. Hazen, New York City; Michael Jaharis, Jr., president and chief executive officer, Key Pharmaceuticals, Inc.; Helene L. Kaplan, Webster & Sheffield; Howard Kaskel, president, Carol Management; Susan Kaskel, New York City; Helen Kimmelman, New York City; John Klingenstein, president, The Esther A. & Joseph Klingenstein Fund; David Koch, executive vice president, Koch Industries; Pedro-Pablo Kuczynski, president, First Boston International Limited; Theresa Lang, New York City; Richard Lenon, chairman, International Minerals & Chemical Corp.

Also: Arthur Levitt, New York City; Ira H. Lustgarten, Esq., Wilkie Farr & Gallagher; Donald Marron, chairman of the board, Paine Webber, Inc.; James M. Marx, Esq., New York City; Helen Winter Marx, Irvington House Institute for Medical Research; Donal C. O'Brien, Jr., New York City; Alexander Papamarkou, president, Papamarkou, Petra & Co., Inc.; Jonathan Piel, president and editor, *Scientific American*; Richard Ravitch, New York City; Keizo Saji, president, Suntory Ltd., Tokyo, Japan; Benno Schmidt, J. H. Whitney & Co.; Davidson Sommers, counsel, Webster & Sheffield.

Also: Mrs. William H. Stein, New York City; Sidney J. Weinberg Jr., partner, Goldman, Sachs & Co.; James R. Withrow, Jr., Esq., Donovan, Leisure, Newton & Irvine; James D. Wolfensohn, president, James D. Wolfensohn Incorporated; Sydney A. Woodd-Cahusac, former treasurer of the University, Greenwich, Connecticut; Charles E. Woodruff, retired vice chairman, Manufacturers Hanover Trust Company; Admiral Elmo R. Zumwalt, Jr., president, Admiral Zumwalt & Associates, Inc. □



Model of the Scholars' Residence, left, which is to be built next to Faculty House.

Anne Hamill Dies

Anne Hamill, an assistant for research in the cellular physiology and immunology laboratory of Professor Zanvil Cohn, died September 8, after a long illness. She was 42 years old.

Ms. Hamill came to the University in 1967, working for the late Edward Tatum until his death in 1975, when she joined Dr. Cohn's research group.

"Her competence and breadth of experience are reflected in the large number of publications she co-authored. She will be remembered by all of her co-workers both as a caring friend and a dedicated colleague," stated Professor Nicholas Pawlowski, with whom Ms. Hamill worked closely. □

PERSONALS

Born August 7 to **Angie Dohnert**, secretary, Purchase and Supply, and her husband, Herman, a son, Brian Anthony, their second child.

Valienthia Smiley, secretary, Graphic Services, was married on September 29 to Robert Miller, a member of the maintenance office of the Van Doren Nursing Home in Queens.

Born July 16 to **Barbara Taylor**, draftsperson, Plant Operations, and her husband, Timothy, a daughter, Aileen Marie, their second child.

IN PRINT

The October 22 issue of *Chemical & Engineering News* contained an article on the pheromone research of Professors **William C. Agosta** and **Alan G. Singer**, Organic Chemistry and Physical Biochemistry. Animals use pheromones, molecules small enough to be airborne and detected by smell, to communicate with members of their own species. Drs. Agosta and Singer have discovered evidence of a mammalian pheromone that is composed of protein and is not airborne.

An American Saga: The Story of Helen Thomas and Simon Flexner, a biography of the first director of The Rockefeller Institute for Medical Research and his wife, written by their son, Pulitzer Prize-winning author James Thomas Flexner, has been published by Little, Brown.

Public Health Risks of the Dioxins, the proceedings of a symposium held by the University's Life Sciences and Public Policy Program in October 1983, has been published by William Kaufmann, Inc. of Los Altos, California. The volume, edited by Program Director **William W. Lowrance**, includes the papers presented and an interpretive summary of the symposium.

Professor Emeritus **Carl Pfaffmann** has contributed a chapter, Taste Electrophysiology, Sensory Coding and Behavior, an historical account of his research studies, in *Foundations of Sensory Science*, published this year by Springer-Verlag.

Additions to Scientific Instrument Exhibit

Valuable additions have been made to the exhibition of historic scientific instruments in Caspary Gallery, thanks to the efforts of Professor Merrill W. Chase, who served as scientific consultant for the original installation in 1976.

One, the Claude-Blum ultramicrotome no. 2, was developed at Rockefeller in the 1940s by J. Blum, then head of the University's machine shop, and Albert Claude. It was an important first step in the cell biology research that led to a Nobel Prize in 1974 for Dr. Claude, George Palade, and Christian deDuve. This instrument, along with the Porter-Blum microtome, later developed by Blum and Keith R. Porter, was discovered this summer in a storage box in the Instrument Shop.

Also newly on display are three early micromanipulators that belonged to the collection of Elaine G. Diacumakos, a pioneer in cell microsurgery and head of the laboratory of cytobiology from 1976 until her death this past June. They were presented to the University by her husband, James Chimonides. □

news and notes is published five times a year from October through July. This is Volume 16, Number 2. Suggestions for articles are welcome and may be sent to *news and notes*, Box 194, phone extensions 8968 or 8970. Photographs, page 1, top and bottom row left and right, page 2, and page 5, left top and