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The Rockefeller University

THE ROCKEFELLER UNIVERSITY

NOVEMBER 1977 VOLUME 9 NUMBER 2 news and notes

Meningitis Vaccine Trial Successful

On September 29, Adjunct Professor Richard M. Krause, director of the National Institute of Allergy and Infectious Diseases, announced that a vaccine to prevent bacterial meningitis caused by Group A meningococci had been proved effective in young children. The announcement was based upon the result of trials during a recent epidemic in Finland. Although adults and school-age children have been successfully vaccinated in the past, this is the first time a vaccine has protected children as young as three months, according to Dr. Krause.

The Group A vaccine is an outgrowth of the highly successful Group C vaccine, developed in the 1960s by Professor Emil C. Gotschlich, a member of the University's laboratory of bacteriology and immunology, working in collaboration with Doctors Malcolm Artenstein and Irving Goldschneider at the Walter Reed Army Institute of Research.

Bacterial meningitis is an inflammation of the three membranes covering the brain and spinal cord. Each year, the disease strikes 20,000 people, mostly children, and results in 2,000 to 3,000 deaths. There are three major groups of

continued on page 2

Kunkel Awarded Horwitz Prize

Professor Henry G. Kunkel is one of three pioneers of immunology who have been awarded the 1977 Louisa Gross Horwitz Prize, presented by Columbia University on October 5.

He shared the $25,000 award with Michael Heidelberger of New York University and Elvin A. Kabat of Columbia. (Dr. Heidelberger, whose research career began at Rockefeller 65 years ago, received an honorary doctor of science degree from the University last June.)

The research recognized by the prize has elucidated major aspects of the body's disease-combating system. Dr. Kunkel was honored for techniques that "laid the groundwork for the classification of immunoglobulins," for his contributions to the understanding of such autoimmune diseases as rheumatoid arthritis and lupus erythematosus, and for recent studies of how genes code instructions for the production of antibodies. Dr. Kunkel was the first to demonstrate that antisera could be made in the laboratory, allowing scientists to distinguish one antibody from another, a technique the prize committee cited as "one of the most powerful tools in modern cellular immunology and immunogenetics."

As part of the ceremonies, the three winners delivered lectures at Columbia. Dr. Kunkel spoke on Idiotype Antibodies and Their Application.

Columbia President William J. McGill and Dr. K

The Louisa Gross Horwitz Prize was established to honor scientific investigators whose contributions to knowledge in biology and biochemistry have been outstanding. Among the previous winners were Albert Claude, George E. Palade, and Keith Porter, who did major work in cell biology at The Rockefeller.

Left to right: Dr. Goudsmit, Dr. Casimir, Dr. Uhlenbeck.

Golden Jubilee for Uhlenbeck and Goudsmit

On July 7, 1927, George E. Uhlenbeck and Samuel A. Goudsmit were awarded their Ph.D. degrees in theoretical physics by the University of Leiden, The Netherlands. Exactly 50 years later to the day—on July 7, 1977—Professors Uhlenbeck and Goudsmit were made Commanders of the Order of Orange-Nassau, the highest nonmilitary honor bestowed on foreigners by the Dutch government.

The medals were hung around their necks by the Dutch Minister of Education in ceremonies capping a two-day "Symposium to Celebrate the Golden Doctoral Jubilee," held at the University of Leiden under the sponsorship of the Dutch Royal Academy. H. B. G. Casimir, former Rockefeller trustee, served as chairman.

Dr. Uhlenbeck, a member of the Rockefeller faculty since 1961, and Dr. Goudsmit, formerly a visiting professor and currently at the University of Nevada, were graduate students when they made their discovery of electron spin, cornerstone achievement of modern atomic theory.

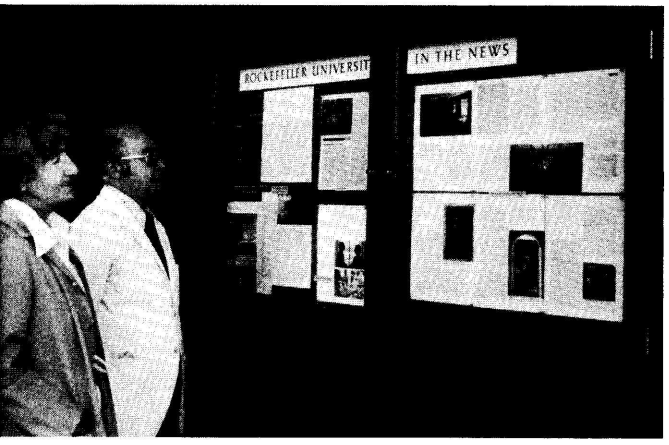
Add One Cup Sugar

Last summer, Postdoctoral Fellow William C. Hirst posted notices around the University asking for subjects for an experiment. The only requirement was some knowledge of cooking. Assistant for Research Beth Vermont was one of those who responded. She found herself in a small room with a stopwatch and a pile of recipes to memorize. A week later, she was tested to see if she could remember one purposely omitted step for making ratatouille, Jerusalem artichokes, and chestnut wonder.

Dr. Hirst is an experimental psychologist whose interest centers around the vastly complex and interacting phenomena of language, attention, and memory. His work explores such questions as: Is memory a faculty or a developed skill? How does pragmatic experience affect language comprehension? What are the limits of attention?

He began his memory experiments while a graduate student at Cornell University, using mathematical proofs as the material to be memorized and reconstructed. Recipes are an intermediate step—less structured than math but more structured than most prose. He came to Rockefeller last year to work with Professor George A. Miller, one of the world's leading authorities in the study of psycholinguistics. In addition to his memory research, he has begun a project on pronouns—small words that cause many people large confusion. They are considered by linguistic experts to be extremely significant indicators of language competence. He is designing experiments which will explore both the developmental aspects—how children learn to use these words—and adult usage.

Next month, Dr. Hirst will take time out from the lab to participate in a meeting sponsored by the American Philosophical Association and the Association for Symbolic Logic that will look at the question of whether or not human thought can be simulated by computers. He will also be doing some nonexperimental memorizing of his own, preparing to perform with the St. Cecilia Choir in a Christmas concert at Carnegie Hall.



Something new in the Tower from the Public Information Office. Matthilda Van Zadel and Ramon Silvestri catch up with Rockefeller University in the news.

MENINGITIS VACCINE

continued from page 1

meningococcal bacteria—A, B, and C. Group C has been the most troublesome in this part of the world, particularly at military posts. The purified polysaccharide antigen vaccine developed by Dr. Gotschlich and his colleagues is now routinely administered to military recruits and has proved to be more than 90 percent effective.

Group A meningococci are responsible for the periodic widespread epidemics in Africa, a recent outbreak in Brazil, and the epidemic in Finland. Although it has not been a major problem in the United States since the 1940s, it could reappear. Group B, however, like Group C, is a serious problem here, but to date no effective vaccine has been developed. Dr. Gotschlich is concentrating his current efforts to achieve a successful Group B vaccine while continuing to work on details of the chemistry of Groups A and C.

University Hosts Science Writers

During the week of November 13, the University will play host to the 15th Annual New Horizons of Science Briefing of the Council for the Advancement of Science Writing. During the meetings, scientists from many institutions will be telling science writers from all over the country what is new and important in their respective fields.

Among those participating from Rockefeller will be Professors Anthony Cerami, Medical Biochemistry, Attallah Kappas and Mahin D. Maines, Metabolism-Pharmacology, and Neal E. Miller, Physiological Psychology. The writers will also visit the virology laboratory of Professor Purnell W. Choppin, the biochemistry laboratory of Professor Bruce Merrifield, and the animal behavior laboratory of Professors Donald R. Griffin, Peter R. Marler, and Fernando Nottebohm.

BRIEFS

Vice President **Carl Pfaffmann** delivered a plenary lecture on Sensory, Central, and Behavioral Mechanisms of the Sense of Taste at the 27th International Congress of Physiological Sciences, held in Paris, July 18–23. He also served as chairman of the Commission on Olfaction and Taste of the Sixth International Symposium on Olfaction and Taste, a satellite meeting of the physiological congress, held at Gif-sur-Yvette, France, July 15–17. Other members of Dr. Pfaffmann's physiological psychology laboratory who gave papers or chaired sessions at the symposium were **Robert J. Conteras, Marion E. Frank, Michael Meredith, Ralph E. Norgren,** and **Geoffrey H. Nowlis.**

From August 23 through September 24, Professor **Kenneth M. Case,** Theoretical Physics, gave a series of invited talks, mainly on the subjects of inverse scattering problems and linear transport theory, at the Laboratory of Nuclear Engineering of the University of Bologna, Italy, the Universities of Sarajevo, Belgrade, and Ljubljana in Yugoslavia, and the Institute for Nuclear Research in Warsaw, Poland.

Professors **M. A. B. Bég** and **Heinz R. Pagels,** Theoretical Physics, were discussion leaders in workshops on current problems in elementary particle physics held at the Aspen Center for Physics, Aspen, Colorado, during July and August. Dr. Bég's workshop dealt with unified gauge theories of weak and electromagnetic interactions, a discipline now known as quantum flavordynamics. Dr. Pagel's workshop was concerned with quantum chromodynamics, the currently popular gauge theory of strong interactions.

Professor **Abraham Pais,** Theoretical Physics, spoke on Gauge Theories and the New Particles at the 1977 meeting of the German Physical Society, held September 20–23 in Karlsruhe.

Adjunct Professor **Brian F. Hoffman,** Cardiac Physiology, who is David Hosack Professor and chairman of the Pharmacology Department of the College of Physicians and Surgeons of Columbia University, has been elected president of the New York Heart Association.

PERSONALS

Kathleen Walla, a secretary in the Journals Office, was married on September 17 to David Hoey, an airline employee.

Journal of Cell Biology Honors Porter

Volume 75 of *The Journal of Cell Biology*, published by The Rockefeller University Press, is dedicated to Keith R. Porter on the occasion of his 65th birthday.

The opening article of the October issue, "Keith Roberts Porter and the Development of Contemporary Cell Biology," was written by his friend and former Rockefeller colleague, George E. Palade. In it, with humor and affection, Dr. Palade cites the many contributions made by Porter to cell biology in its renaissance and its subsequent development.

Dr. Porter came to The Rockefeller in 1939 and remained until 1961. Among the results of his early collaboration with Albert Claude was the discovery of the endoplasmic reticulum. Dr. Palade joined the group in 1946. With the introduction of electron microscopy into biological research, the Rockefeller team made fundamental discoveries in cell studies. An important advance was the development by Porter, working with Joseph Blum of the Instrument Shop, of the Porter-Blum microtome, an instrument that made possible great refinements in the preparation of specimens for study under the electron microscope.

Two other major contributions cited by Dr. Palade were Dr. Porter's role in the founding of *The Journal of Cell Biology* (originally called *The Journal of Biophysical and Biochemical Cytology*), first published in 1955; and of The American Society for Cell Biology in 1960. The article also contains a complete bibliography of Dr. Porter's scientific writings.

HOLIDAY BALL

The Rockefeller University Holiday Ball will be held on Friday, December 16, from 8:30 P.M. to 1 A.M. on the 17th floor of the Tower. Music will be by Lester Lanin and dress is optional. Tickets at $5 per person may be purchased in advance in Purchasing, the Pharmacy, or at the Founder's Hall reception desk. They will be $6 at the door.

Volunteers are needed to help with preparations. Please call Charles Laughery extension 1263.

HONORS AND AWARDS

President Seitz was awarded the degree of *laurea* honoris causa by the University of Pavia on September 29 in ceremonies held in Como, Italy, in conjunction with the commemoration of the 150th anniversary of the death of Alessandro Volta. The commemoration also included the annual National Conference of the Italian Physical Society, at which Dr. Seitz delivered an invited lecture, A Physicist's View of Living Systems, on September 30.

Robert J. Winchester, associate professor in the immunology laboratory of Professor Henry G. Kunkel and chief resident physician and assistant program director of the Hospital, has received a Research Career Development Award from the Institute of Allergy and Infectious Diseases of the National Institutes of Health. The award is for a period of five years. Dr. Winchester's research centers on genetic aspects of cell surface antigen systems in relation to disease.

PROMOTIONS

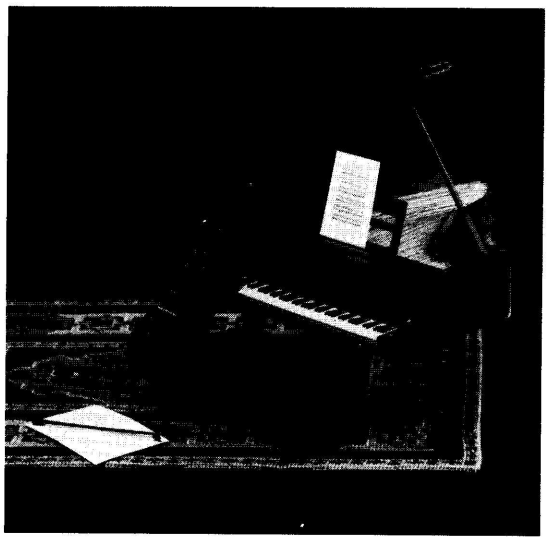
Joseph Y. Tai, Bacteriology and Immunology, to assistant professor, effective September 1.

Wolf-Dieter Schleuning, Chemical Biology, to assistant professor, effective October 16.

Sigma Xi Lecture

Albert Einstein: Creator and Rebel will be the subject of the fall 1977 Sigma Xi Lecture, to be presented by Banesh Hoffmann, professor of mathematics at Queens College, CUNY, on Monday, November 14, at 8 P.M. in Caspary Auditorium. Dr. Hoffmann takes his title from the book he wrote about Einstein, with whom he collaborated. The lecture is open to all.

The Small World of Erminio Gubert



The University's recent arts and crafts exhibition is a once-every-few-years event which each time seems to reaffirm that those who pursue truth through science can also do remarkably well in the pursuit of beauty. An outstanding example is Erminio Gubert, an assistant for research in the parasitology laboratory of Professor William Trager, photographed above with the miniatures he exhibited.

Craftsmanship is part of Mr. Gubert's north Italian heritage. His interest in miniatures was fostered by his wife, Betty, a longtime enthusiast. By day his world is the minute territory revealed by the electron microscope—what he calls "the flatlands." Miniature-making gives him the chance to work in three dimensions and to indulge his considerable artistic talent and love of fine woods.

The sideboard, carved in mahogany and rosewood with oval inlays of American walnut, is an exact scale model of an 18th-century Hepplewhite original in the Baltimore Museum of Art. The Guarnerius cello is also made from original plans scaled down by Mr. Gubert. The Oriental carpet is based upon a piece he saw exhibited at the Metropolitan Museum of Art, which he adapted and worked in petit point. The rosewood piano, with its exquisitely turned legs and individual keys, is his own design. The bench has two lids, one in wood and one upholstered in leather "for concert appearances."

The only other time Mr. Gubert participated in an exhibition, which was given by the National Association of Miniature Enthusiasts, the piano won first prize and his group of pieces was rated best in show.

New Playground Planned For Children's School

Some time around Christmas, the Rockefeller University Children's School will have a very special present—a completely redesigned playground. The 29′ × 90′ facility, adjacent to the school on the north side, needed a face-lift badly. The new playground will be far better equipped, more physically challenging, and prettier to look at than the existing one.

The renovation is being planned and executed by members of the Urban Landscape Architecture Program of City University, under the direction of M. Paul Friedberg.

The cost of the project is estimated at around $10,000 to $15,000, which will be covered mainly by the Stanley Sajdera Fund, with some help from the University. Dr. Sajdera, a Rockefeller graduate and a member of the biochemistry faculty from 1969 to 1972, was active in the school, where his two children were enrolled. After his untimely death in 1975, his friends and colleagues established the fund as a memorial to him.

APPOINTMENTS

Professor **Roman Jackiw,** Department of Theoretical Physics, Massachusetts Institute of Technology, as a visiting professor in the theoretical physics laboratory of Professor Nicola Khuri, effective September 15.

A. V. HILL DIES

Professor A. V. Hill of the University of London, Nobel laureate physiologist and a pioneer in biophysical research, died on June 3. Dr. Hill was the author of *The Ethical Dilemma of Science*, published in 1960 by the Rockefeller University Press, and was a recipient of an honorary doctor of science degree from The Rockefeller in 1962.

HOLIDAY PARTY

All members of the campus community are cordially invited to the annual holiday party given by President and Mrs. Seitz, which will be held this year on Friday, December 9, from 3 to 5 P.M. on the 17th floor of the Tower.

IN PRINT

A new book by Adjunct Professor **June Goodfield,** *Playing God: Genetic Engineering and the Manipulation of Life*, has been published by Random House. Although the major focus of the book is a survey of the current debate over recombinant DNA, its broader implications have to do with the entire question of the relationship—the social contract—between science and society. The provocative title derives from a remark made by a middle European microbiologist at the 1975 Asilomar Conference: "Nature does not need to be legislated. But playing God does."

Among the various metabolic disorders under study at the Rockefeller Hospital, toxicities from metals and other environmental chemicals are particularly significant in our highly industrialized society. An unusual example is reported in the August issue of *The American Journal of Medicine* in a paper titled "Plumbism from Airborne Lead in a Firing Range." The authors are Professors **Karl E. Anderson, Shigeru Sassa, Alvito P. Alvares,** and **Attallah Kappas** of the laboratory of metabolism-pharmacology, Dr. Alf Fischbein of the Mount Sinai School of Medicine, and Dr. David Kestenbaum of the Beth Israel Medical Center. The authors point out that because lead is more widely used in manufacturing and industry than any other nonferrous metal, it is not surprising that exposure to toxic amounts of it occurs in widely differing occupations. The case history under discussion—that of a young man exposed to high levels of lead as the result of his job as an instructor at an indoor firing range with poor ventilation—gives a detailed overview of many of the perplexing clinical and epidemiologic features of this widespread and persistent problem. In this case, what was first presumed to be due to the genetic disease porphyria proved, through some interesting detective work by the Rockefeller group, to be environmentally caused.

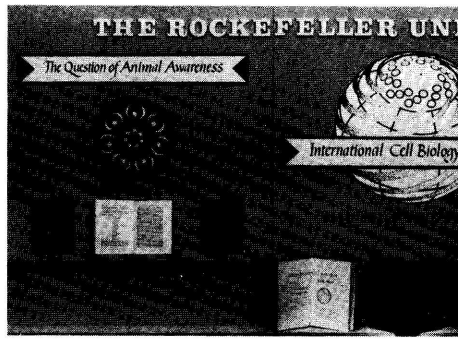
A paper on "Social Organization, Communication and Graded Signals: the Chimpanzee and the Gorilla," by Professor **Peter Marler,** Animal Behavior, is included in the volume, *Growing Points in Ethology*, edited by P. P. G. Bateson and R. A. Hinde and published by Cambridge University Press. In it, Dr. Marler relates the use of vocalizations in wild chimpanzees and gorillas, which he has studied on frequent field trips to Africa, to differences in how their societies are organized.

Another volume, *Recognition of Complex Acoustic Signals*, containing reports of papers and discussions held at the Dahlem Workshop in Berlin, Germany, on Recognition of Complex Acoustic Signals includes contributions by Dr. Marler and by Professors **Steven M. Green, Donald R. Griffin,** and **Fernando Nottebohm.**

Histocompatibility antigens are proteins on cell surfaces that cause the rejection of tissue grafted from one person to another. However, as Professor **Bruce A. Cunningham** explains in an article in the October issue of *Scientific American*, "this cannot be their normal biological function because in nature tissues are not usually transplanted between individuals." In the article, "The Structure and Function of Histocompatibility Antigens," Dr. Cunningham reviews this area of research and explains why immunologists think that a promising explanation of the role of these molecules is that they act as the body's defense against abnormalities among its own cells, including the deleterious events that lead to cancer.

HOLIDAY SHOPPING TIP

The Third Annual Rockefeller University Children's School Book Fair will be held in the Tower Lobby on November 29 and 30 and December 1 from 8:30 A.M. to 5:30 P.M. The books for all age groups and other gift items are all tax-exempt and many are at discount prices. Proceeds go to benefit the Children's School.



A section of the current window display in Barnes & Noble bookstore, 424 E. 70th St., that features a number of publications of The Rockefeller University Press.

news and notes is published from October through July. This is Volume 9, Number 2. Suggestions for articles are welcome and may be sent to *news and notes*, Box 194, phone extensions 1420 and 1051. Photographs: page 1, top right, Columbia University, bottom left, University of Leiden; page 2, George Rodriguez; pages 3, 4, Henrik Boudakian. Printed in the United States of America.