

5-1970

News and Notes 1970, vol. 1, no. 9

The Rockefeller University

Follow this and additional works at: http://digitalcommons.rockefeller.edu/news_and_notes_1970

Recommended Citation

The Rockefeller University, "News and Notes 1970, vol. 1, no. 9" (1970). *News and Notes 1970*. Book 6.
http://digitalcommons.rockefeller.edu/news_and_notes_1970/6

This Book is brought to you for free and open access by the The Rockefeller University News and Notes at Digital Commons @ RU. It has been accepted for inclusion in News and Notes 1970 by an authorized administrator of Digital Commons @ RU. For more information, please contact mcsweej@mail.rockefeller.edu.

The Voice from the "Goldfish Bowl"

If you dial the University operator for help and a man answers, don't hang up. That's the voice of Harold Millard, who is following in a long tradition of male switchboard operators at the University. When he first came to work in 1938, men manned many switchboards in the city. Today the few remaining men on the job are in small hotels or working as relief operators in hospitals. Mr. Millard started as a night orderly in the Hospital. He remembers that when he was asked to try out as an operator, he was "scared to death. I had never seen a switchboard." Within a year, he became a full-time operator. Except for more

than four years of military service, he has been a familiar figure ever since in what he calls his "goldfish bowl" in the reception area of the Hospital.

Up to 1958, the University operator had to help place local calls, "ring" all calls from extension to extension, and handle all toll calls. He worked at a two-position manual board. Even though the University community was much smaller, the operator was kept busy plugging in and out. Then the old board was replaced by an interior dialing system, which was in turn replaced by the present Centrex system. Today direct dialing has greatly reduced the number of calls requiring a personal exchange between operator and caller. But Mr. Millard's friendly voice still soothes persons frustrated by the vagaries of modern technology. He believes the system "won't ever be completely automatic. Anything can go wrong and it takes a human being to straighten things out."

A good memory and long familiarity with the University make it possible for Mr. Millard to handle most calls without looking up an extension number. When the rapid pace of change and growth taxes his memory, he enlists the aid of Mrs. Betsy D. Gibson, Founder's Hall Receptionist, who maintains a card file on all personnel.

One resource he has developed over



HAROLD MILLARD

the years is his own loose-leaf directory of numbers most frequently called around the country. This list is constantly being revised.

When Mr. Millard, who works the day shift, is not at the board, the service is in the capable hands of five part-time operators, some of whom double as receptionists. On the dayside, the relief operators are Mrs. Catherine Cummings, Miss Agnes Hyland, and Willie Brown, Jr. Night calls are handled by James Wilson and Johnie Chapman.

Mr. Millard is a bachelor who likes to cook—almost anything. He has yet to become bored with his work, and his humorous view of life extends even to the Long Island Rail Road, on which he commutes every day from Merrick.

Facing the Problem

President Seitz views "the matter of coping with the degradation of our environment less as a contrite response to occupational sin than as one of facing a long-standing practical problem about which we are now becoming far more acutely aware than we were in earlier days."

In an address recently in Philadelphia at a meeting of the American Academy of Political Science, he explored the problem of achieving a balance between technological progress and control of its undesirable side effects. Dr. Seitz warned that, "although the scientific and engineering community must become deeply involved professionally in the process of preserving our environment, it obviously will be almost entirely powerless if it attempts to act alone. It will need to work with and be supported by many other groups in the complex process of enlisting the efforts of society as a whole in launching the type of determined crusade that is necessary to attain effective goals."

These goals, Dr. Seitz concluded, "will clearly require both large-scale economic sacrifices and the voluntary restriction of a substantial degree of personal freedom, particularly the freedom, which many of us feel to be a God-given privilege, if not an absolute right, of abusing our surroundings."

Explain Start of Protein Formation

Three Rockefeller University scientists describe in the May 2 issue of *Nature* research results explaining a mechanism in mammals that initiates the formation of protein. The authors are Professor Vincent G. Allfrey, Dr. Choong-Chin Liew, a guest investigator, and Mrs. Gail W. Haslett, a graduate fellow.

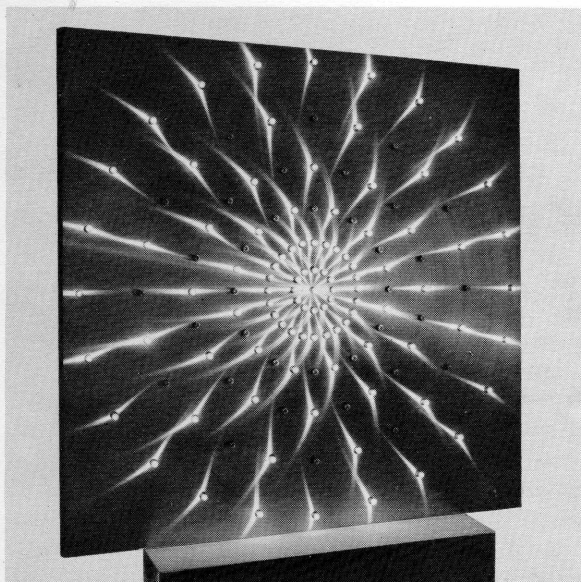
Because protein synthesis is the direct expression of genetic information, the problem of how the formation of protein chains is initiated is one of the most intriguing and important in modern biology. The chemical construction of all living matter depends on the

various protein "building blocks" produced by the cell. Most of the knowledge on protein chain initiation has come from studies of microorganisms that represent a different evolutionary stage than man in the organization of hereditary materials. Dr. Allfrey and his associates, for the first time, have established evidence that the system for starting protein synthesis in higher organisms, such as man, differs from the basic initiation mechanism for protein formation in bacteria. By making tracer studies of "tagged" radioactive chemical groups, they found that the

starting signal for protein formation in mammalian tissue involved an acetyl serine group introduced by a transfer RNA (ribonucleic acid) of low molecular weight. The corresponding transfer RNA for the initiation of protein synthesis in bacterial cells carries formyl methionine.

The sites of protein synthesis in the cell are the ribosomes, particles that contain RNA and proteins. A unique type of RNA known as messenger RNA brings to the ribosomes genetic information directing the synthesis of protein. Another type called transfer RNA assists in the translation of the information by attracting specific amino acids that serve as protein building blocks. The tRNA brings the amino acids up to the ribosomal template where they are linked up to form proteins. Since the information coded within the ribosomal templates applies to many proteins, the Rockefeller scientists had to determine how the information designating the start of a particular protein is deciphered onto the template.

Several steps were involved including the chemical release of an incomplete protein chain from a ribosome in order to identify a particular amino acid group that repeatedly indicated the start of a protein. Once this "signal" group was identified as acetylserine, a tRNA coding for the group had to be identified. Since serine is an amino acid and may also appear at any point in a protein chain, it was necessary to distinguish a particular type of acetyl-seryl tRNA that specifically signaled protein initiation. Such a tRNA was found to be present in mammalian tissue.



Skylight Nine by Howard Jones is one of 13 pieces of kinetic art now on exhibit in Caspary Gallery. Electric lights positioned in a brushed aluminum square are programmed to form hundreds of changing patterns.

EXTRACURRICULAR

Douglas Townsend, Graphic Services, is director of a team of 20 citizens-band radio operators affiliated with the King's County Radio Watch. This is an organization of volunteers who monitor, at home, radio frequencies assigned them by the Federal Communications Commission. By joining forces with other teams, they are prepared to function as an emergency communications network in the event of major fires, explosions, plane crashes, floods, and other situations where official channels are disrupted or overtaxed. Mr. Townsend and the other members of his team also have communications equipment in their cars. They have on several occasions summoned aid to the scene of a fire or automobile accident by relaying information to a team member at home, who in turn phoned the firemen or police. Mr. Townsend holds a license as an amateur radio operator. He has participated in civil defense activities and served as a volunteer driver for the Red Cross blood bank program. Right now the team members, most of whom live relatively close to the Brooklyn-Queens Expressway, are trying to set up an evening patrol that would assist in summoning help for stranded motorists. Mr. Townsend feels that the team could provide much-needed communications along the five-mile stretch of parkway where emergency telephones are widely spaced and frequently not in working order.

William T. Hertwig, Supervisor of the Laundry, serves as a volunteer ambulance driver on weekends. He holds down the Saturday midnight to 8 a.m. Sunday shift for the Flushing Volunteer Ambulance Corps in Queens. The organization is entirely supported by contributions. The members are all unpaid volunteers like Hertwig, who has been a driver and attendant for six years.

Rous Memorial

A memorial observance for Professor Emeritus Peyton Rous was held May 19 in Caspary Auditorium. Professor Rous died February 16th at the age of 90. (See February and March *news and notes*.) Among those offering reflections on the man and his work was Dr. Charles B. Huggins, director of the Ben May Laboratory for Cancer Research of the University of Chicago. In 1966, he and Dr. Rous received the Nobel Prize for medicine. Dr. Rous

Computer Changeover

Rockefeller University is getting a new computer system that will perform mathematical calculations approximately four times faster than the one now in use.

Control Data Corporation's 160-G computer system, leased by the University, will be removed from service September 30. During October, a Digital Equipment PDP-15/40 system will be installed in the same place on the first floor of Theobald Smith Hall. Dr. Robert L. Schoenfeld estimates that the new system may not be "fully available for general use until January 1."

The new system, which will be owned by the University, will have a core memory capacity of 24,000 numbers of 18 bits each. It will be equipped with two non-removable 260,000-word magnetic disk storage drives; three magnetic tape units, each capable of handling 150,000-word reels; and two industry compatible seven-track magnetic tape units, each capable of handling 2,400-foot magnetic tape reels at speeds of 45 inches per second and storage densities of 200, 556, or 800 bits per inch. The new system will also have an incremental plotter with the same characteristics as the present unit, a 1,000-line-per-minute printer, a 1,000-card-per-minute reader, and a high-speed paper tape reader and punch.

Dr. Schoenfeld urges users to consult with the computer staff before September regarding program and data conversion problems that may arise from the changeover.

was cited "for his discovery of tumor inducing viruses"; Dr. Huggins "for his discoveries concerning hormonal treatment of prostatic cancer." The other speakers were associates of Dr. Rous at various stages of his 60-year career at Rockefeller University. They are James S. Henderson, an assistant professor of pathology; Philip D. McMaster, professor emeritus of pathology and microbiology, and John G. Kidd, now a professor of pathology at the New York Hospital-Cornell Medical Center. Arrangements for the memorial were made by University Vice President Maclyn McCarty.

EDITOR'S NOTE

The name of Yvonne Holland, who is employed in the laboratory of Dr. Paul Weiss, was omitted from the story on the Employees' Representative Council in the April issue. Miss Holland is an alternate representative for technical employees.



Children Make Music at University

Shown warming up before the concert in Caspary Auditorium April 21 are members of the Children's Orchestra, directed by Dr. Hiao-Tsiun Ma. This was the orchestra's ninth annual concert and the fifth to be presented at the University. Dr. Ma founded the group in 1962 after years of research and experience had convinced him that the kind of music published and the teaching techniques for ensemble play-

ing did not meet the needs of very young children. Dr. Ma worked out a method by which children learn to read notes before they begin to play their instruments. In his group classes, the children enjoy participating in music programs that he orchestrates especially for them. Those who played in the concert range in age from 6 to 14 and attend many different schools in the metropolitan area.

Immunity to Parasitic Animals, a two-volume review published by Appleton-Century-Crofts, was organized and edited by three individuals who are or have been associated with the University. **George J. Jackson** is an assistant professor of parasitology. Robert Herman, a guest investigator from 1966 to 1968, is now a researcher at the National Institutes of Health. Ira Singer, a Rockefeller research associate from 1954 to 1959, is a director of medical research and education for the American Medical Association. Among the 40 contributors are **Philip A. D'Alesandro**, an associate professor of parasitology, and five others formerly at the University, R. B. McGhee, Edward G. Platzer, R. E. Ritts, D. T. Rowlands, and W. A. Siddiqui. The review follows by 40 years the first book on the topic of immunity and parasitism, William Hay Taliaferro's *The Immunology of Parasitic Infections*. In 1921, before joining the University of Chicago, Taliaferro worked on Chagas disease in the laboratory of Dr. Simon Flexner, director of The Rockefeller Institute for Medical Research.

Reason Awake: Science for Man is the title of a new book by Professor **René J. Dubos** that explores the penetration of science into all aspects of human life and presents a forceful plea for the subordination of technology to human values. Dr. Dubos states that "modern societies are deteriorating because they are inept in applying their scientific and technological prowess to the concerns of human life." He views "the present form of scientific civilization"

in the mood of "a despairing optimist." Dr. Dubos despairs because he sees experimental science, "one of the sanest and most powerful instruments ever devised," used for "purposes which are the epitome of human folly." But he is an optimist because the word catastrophe has not always implied utter failure. There is still time, he affirms, to change course "by refocusing scientific technology on goals that are socially desirable and compatible with human biology."

The author points to the evolution of The Rockefeller Institute for Medical Research into The Rockefeller University as an example of historic shifts in scientific emphasis. "The change in emphasis from microbiologic to chemical, physiologic, genetic, and then to behavioral sciences has a logic which is not inherent in science itself, but is derived from social concerns."

The book, published by the Columbia University Press, not only examines the origins of man's environmental problems, but also explores the responsibilities of scientist and layman in working out solutions. Dr. Dubos concludes that "the time has come when we must produce, alongside specialists, another class of scholars and citizens who have broad familiarity with the facts, methods, and objectives of science and thus are capable of making judgments about scientific policies."

"On the Origin of the Cancer Cell" is the title of an article by Professor **Armin C. Braun**, Plant Biology, in the May-June issue of *American Scientist*. On the basis of results described in the article, Dr. Braun postulates that the tumorous state is a potentially reversible process. The diversity of tumors found in a wide spectrum of organisms (plants, frogs, newts, mice, hamsters, and humans) that have now been shown to be reversible represents, in Dr. Braun's opinion, a very real breakthrough toward an understanding of the basic cellular mechanisms that un-

derlie the cancer problem. He presents evidence to show that the establishment and maintenance of the tumorous state result from changes in the expression rather than, as is so commonly believed, from changes in the integrity of the genetic determinants that are present in a cell. Dr. Braun thus believes that the tumor problem is in essence a problem of anomalous differentiation in that the basic cellular mechanism underlying tumorigenesis is similar in principle to that involved in the normal processes of cell division and cell differentiation.

He suggests that "if we are really to come to grips with the tumor problem we shall have to learn...how to switch the pattern of synthesis in a cell from one that makes it grow as a malignant cell to one that restores its normal or...at least nonmalignant state. This, in turn, will require an ability to manipulate nuclear gene function at will." Dr. Braun notes that the possibilities offered by such an approach are most strikingly illustrated by the neuroblastomas of man in which highly malignant cells "matured and differentiated spontaneously into ganglion cells that had lost their malignant properties." Patients in which such regressions occurred lived for more than 20 years without recurrence of the malignant tumor.

Professor Emeritus **Paul A. Weiss** is the author of an article in the March-April issue of *American Scientist* entitled "Whither Life Science?" Dr. Weiss writes that progress in biology "could be faster, steadier, and on a broader front if the research forces could distribute themselves more evenly and widely over the vast field remaining to be explored." He sees a "need to rekindle target- or goal-consciousness and to make deliberate choice of goals with a deep sense of relevance, as counterpoise to the down-drift of mass movement along lines of least effort that leaves piles of trivial and redundant data in its wake."

Voluntary Groups Work on Key Issues

In the wake of the all-day meeting May 11, voluntary committees have sprung up on campus to work for continued action by faculty, students, and employees, as individuals, on a variety of issues arising out of American involvement in Indochina and events on the nation's campuses.

A meeting was held in Caspary Auditorium on May 14 at which those attending were urged to join or form committees oriented to specific tasks and issues. Several speakers stressed "personal involvement" as the keynote.

Among the activities arranged by such groups have been trips to Washington to visit congressional members and press for legislative action on Indochina, letter-writing campaigns, and the scheduling of speakers from Congress, labor unions, and other segments of society. A group has been organized to serve as an informal clearing house for information on the many activities in progress. Volunteers have also formed a political action committee to work toward a common goal of rapidly ending American involvement in Indochina.

PERSONAL MENTION

Miss **Christina Thomson Slats**, a technician with Dr. Richard Costello, was married April 11, to Paul Higgins in St. Thomas Episcopal Church. Mr. Higgins is an investment administrator.

Born, April 24, at New York Hospital, to **Michael W. Draper**, a graduate fellow, and his wife, Margie, a daughter, Stacey. She is their first child.

Mrs. **Mary Vostinar**, who for 12 years helped to handle reservations for the University's dining and residence halls, resigned April 30 to hunt for a larger apartment and prepare for the adoption of a child. She and her husband recently received the good news that their application had been approved. Now they must wait until a child is found for them. When the big day comes, the two of them will make an 800-mile trip—to Prince Edward Island, Canada—to pick up the baby from Catholic Welfare. Boy or girl? At press time, the expectant parents were still in suspense.

Miss **Margaret Ann Rivera**, a library assistant, was married May 2 to Dennis J. Sheehan.

Appetite Network

Dr. Sarah Fryer Leibowitz, a investigator in the laboratory of E. Miller, has reported finding a chemical system in the rat that controls appetite. For her studies, described at a meeting in April at the Eastern Psychological Association, Leibowitz injected four kinds of chemicals, in very small doses and into several areas of the rat's hypothalamus.

Dr. Leibowitz has found that opposing functions, hunger and satiety, are regulated respectively by hypothalamic alpha-adrenergic and beta-adrenergic systems. These two systems act in a fashion similar to peripheral adrenergic systems which regulate antagonistic functions such as contraction and relaxation of smooth muscle.

The hypothalamic alpha receptors, when activated by alpha stimulants, were found to elicit eating behavior, and the hypothalamic beta receptors, when activated by beta stimulants, were found to suppress eating behavior. If the alpha "hunger" receptors were blocked by alpha blocking drugs, appetite was reduced, and if the beta "satiety" receptors were blocked by beta blocking drugs, eating was increased.

Dr. Leibowitz has localized the alpha "hunger" system and the beta "satiety" system within specific areas of the hypothalamus. She finds that these two opposing systems act on the lateral hypothalamus which stimulates eating and the ventromedial hypothalamus which stimulates satiety.

Dr. Leibowitz showed that the well-known anorexic (appetite-suppressing) drug, amphetamine, acts by stimulating the beta "satiety" system, which then blocks activity in the hunger system.

Miss **Alice Fennessy** and **James Bruce Healy** were married May 9 at the Madison Avenue Presbyterian Church. A reception was held in Abby Aldrich Rockefeller Hall. Both are graduate fellows. Mr. Healy is spending a leave of absence this year at the Brookhaven National Laboratory.

news and notes is published monthly from September to June. Contributions are welcome and may be sent to *news and notes*, Box 194, The Rockefeller University, N.Y., N.Y. 10021 or phone ext. 1166 or ext. 1217.

PHOTOGRAPHS

Page 1, Henrik Boudakian; page 2, Lewis Koster; page 3, Burton Carnes.

Supervises Program

Dr. Malcolm L. Peterson, a University alumnus, is supervising the activities of a new prepaid group-practice program that some public health experts believe will set the pattern for America's medical care of the future.

The Columbia Medical Plan takes its name from the small town in Maryland where it was set up. It is sponsored by the Johns Hopkins University's School of Medicine, which provides the medical personnel and direction. Dr. Peterson is director of the Health Services Research and Development Center at Johns Hopkins.