

the



Record

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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NATIONAL INSTITUTES OF HEALTH

Dr. S. Blumenthal Heads NHLI Division of Heart And Vascular Diseases

Dr. Sidney Blumenthal has been named director of the National Heart and Lung Institute's Division of Heart and Vascular Diseases—the position held by Dr. Robert I. Levy before his appointment as NHLI Director.

In making this appointment, Dr. Levy said that "... Dr. Blumenthal is uniquely qualified for the position He is well known to many as a pediatric cardiologist and an outstanding leader in this field, but he has never limited his vision nor his concern to a single area of medicine.

"Furthermore, he has an exceptional 'track record' in selecting associates and recognizing latent talent among young investigators"

Dr. Blumenthal will plan and

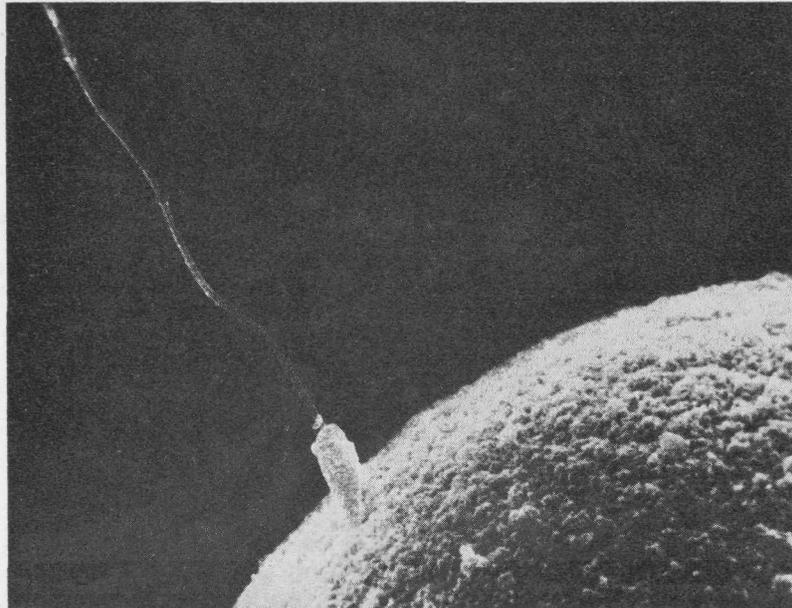


Dr. Levy termed Dr. Blumenthal an outstanding leader in the field of pediatric cardiology. He also said "it would be difficult to find someone who could bring a better breadth of vision to the Division and to the Institute."

direct the Institute's research grant, contract, and training programs in heart and vascular diseases. These areas encompass basic research, targeted research, clinical trials and demonstrations, national cardiovascular centers, technological development, and the application of research findings.

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HEW's New Bicentennial Exhibit Center, BI-CENT-EX, Will Open on January 19



The BI-CENT-EX exhibit developed by NICHD's Center for Population Research has a series of lighted panels activated by the viewer. It includes this scanning electron micrograph showing the dynamic process of sperm-egg interaction in the sea urchin.—Electron micrograph by Drs. D. W. Fawcett and E. Anderson, Harvard Medical School.

HEW's Bicentennial Exhibit Center will be open to the public, starting Jan. 19, Monday through Friday, from 9 a.m. to 5:30 p.m.

Called BI-CENT-EX, the center is composed of 26 exhibit areas located on the first floor of HEW's South Portal Bldg., 200 Independence Avenue, S.W.

Fed'l Agencies Sponsor Conference on Energy-Related Health Research

Last week, several Federal agencies sponsored a meeting on energy-related research for scientists working on health problems connected with such technologies.

The meeting was held on Jan. 7-9 in Pinehurst, N.C. The agencies were the National Institute of Environmental Health Sciences, the National Institute for Occupational Safety and Health, the Environmental Protection Agency, and the Energy Research and Development Administration. Dr. David Rall, NIEHS Director, opened the meeting.

Biomedical researchers and energy technology developers met in informal groups to discuss subjects that included hazards associated with energy-related occupational and community health prob-

lems, and the implications of these hazards.

On the last day of the meeting, leaders of each discussion group presented summaries of their findings. An open discussion followed the presentations.

(See BI-CENT-EX, Page 5)

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Dr. David B. Scott Appointed Director Of Dental Institute

Dr. David B. Scott has been named Director of the National Institute of Dental Research.

Dr. Scott was dean of the School of Dentistry, Case Western Reserve University.

"Dr. Scott . . . brings to this post an outstanding background in dental research, education, and administration," said Dr. Donald S. Fredrickson, NIH Director.

Academic Career Noted

The new NIDR Director joined the faculty of Western Reserve University in 1965 as the Thomas J. Hill Distinguished Professor of Physical Biology in the School of Dentistry and was jointly appointed as professor of anatomy in the School of Medicine.

Following the federation of the University with the Case Institute of Technology to form Case Western Reserve University, Dr. Scott became dean of the School of Dentistry in 1969.

Dr. Scott, whose appointment was effective Jan. 1, is returning to NIH where he served from 1944 to 1965.

He was with the Dental Section, Division of Physiology, Experimental Biology and Medicine from 1944 until 1948, when the NIDR



Dr. Scott was one of the original 13-member staff of NIDR when it was established by Congress in 1948.

(See DR. SCOTT, Page 6)

the  **Record**

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Speakers at Program Honoring Martin Luther King Include Fannie L. Hamer, Drs. Cooper and Fredrickson

Fannie Lou Hamer, well known civil rights leader, will be the principal speaker at the annual Martin Luther King, Jr., birthday commemoration. The day-long program will be held on Thursday, Jan. 15, in the Parklawn Bldg., Conference Rooms D, E, and F.

Mrs. Hamer will speak at 1:30 p.m.; she will be introduced by Dr. Donald S. Fredrickson, NIH Director.

Dr. Theodore Cooper, Assistant Secretary for Health, HEW, will address the audience at 10 a.m.—the opening of the program. His talk will be followed by a panel discussion whose participants include Dr. Abel Ossorio, PHS deputy regional administrator.

Clifford Allen, deputy associate

administrator, Health Resources Administration, will serve as coordinator for the discussion.

In a letter to PHS agency heads and staff, Dr. Cooper asked for their participation in the ceremonies and activities that "will honor Dr. King for his many contributions to the betterment of our society."

He also asked supervisors to "encourage all employees to attend the planned activities to the extent possible in keeping with the accomplishment of this program mission and its goals."

For further information about the program, contact Norman R. Seay, Parklawn Bldg., Room 10-22, telephone: 443-1960.

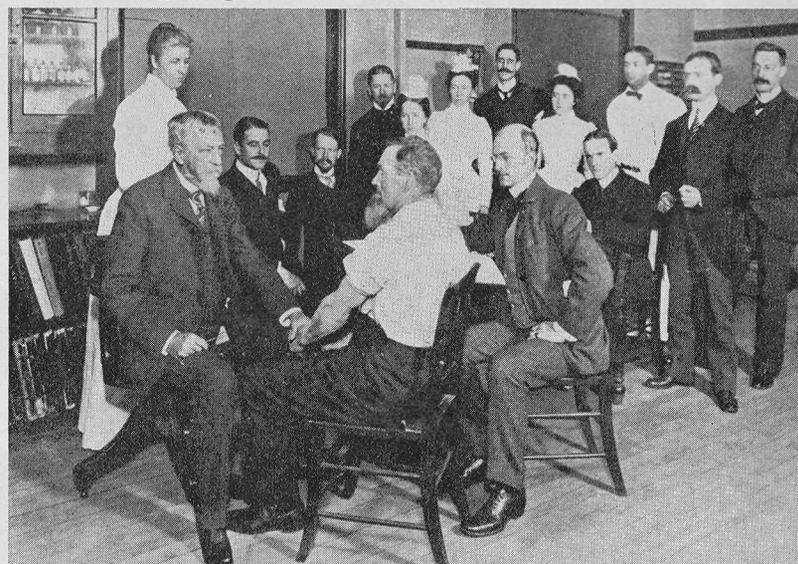
History of Med. Society Meets Jan. 22; Munch, Jaffe Talk

Two topics—drug addiction *fin de siecle* to 1930; the development of local anesthesia—will be discussed at the meeting of the Washington Society for the History of Medicine on Thursday, Jan. 22, at 8 p.m. in the Billings Auditorium, National Library of Medicine.

Arnold Jaffe, University of Kentucky, will talk on Medical Science and the Problem of Drug Addiction, 1890-1930, and Dr. Roland Münch, of the Washington Hospital Center, will speak on Carl Ludwig Schleich and the Development of Local Anesthesia in Surgery.

Visitors are welcome. The next meeting of the society will be held on March 18.

NLM Highlights 200 Years of Am. Medicine



Dr. Silas Weir Mitchell (1829-1914), shown in his clinic at the Infirmary for Nervous Disease in Philadelphia, was a noted poet, novelist, and a superb clinician. During the Civil War, with George R. Morehouse and William W. Keen, he made studies of gunshot and other injuries of peripheral nerves, which he expanded and published in 1872 as "Injuries of Nerves and Their Consequences." His original and important research in neurophysiology included studies on the coordinating function of the cerebellum.

The National Library of Medicine is observing the Nation's bicentennial by presenting an exhibit which highlights selected American achievements in medical science and practice and outlines the development of medical education, medical literature, and public health in the U.S.

Installed in the lobby of the Library, the exhibit—titled 200 Years of American Medicine—will be open to the public through 1976.

Material Described

Books, manuscripts, and pictures from the NLM collections are featured, including John Jones' *Plain, Concise, Practical Remarks on the Treatment of Wounds and Fractures* (1775) and other works by physician-patriots.

One case displays a letter from George Washington about the medical department of the Army. Another section gives a capsule history of NLM.

An illuminated panel presents portraits of 29 American men and women who have made notable contributions to medicine through the years. A group of prints illustrates changing views of the American physicians through the eyes of artists.

On-Loan Models Shown

Also included are a patent model of William T. G. Morton's ether inhaler on loan from the Smithsonian Institution and a microscope used by Joseph J. Woodward in his early photomicrography studies, on loan from the Armed Forces Medical Museum.

'Operation Clean-up' To Begin Next Week; Economy Is Object

The 10th annual "Operation Clean-up" will be conducted here this month to effect economies by identifying idle equipment and supplies which can be used elsewhere.

Last year's campaign resulted in the identification of 451 items of equipment, valued at \$137,805, which were transferred to the Property Utilization Warehouse for reissue.

Cleve Frye, assistant director for Materiel Management, DAS, suggests that each NIH unit should initiate a "house cleaning."

Walk-thru Teams Coming

Again this year, NIH components are being asked to organize walk-thru teams to survey each program area in order to identify equipment which can be made available for redistribution on a cost-free basis to other areas.

For safety, fire prevention, and better appearance, special attention should be given to cluttered hallways and/or storage areas.

Off-the-reservation buildings will be visited during the week beginning Jan. 19; on-campus buildings, during the week beginning Jan. 26.

Property representatives will notify areas of specific dates.

The Scientific Equipment Rental Program has numerous unfilled requests for equipment. It is suggested that seldom-used expensive research equipment be transferred to the loan pool for redistribution.

For further information, call Herbert Horrell, Ext. 64131.



Dr. Robert A. Whitney, Jr., chief of the Veterinary Resources Branch, Division of Research Services, is president-elect of the American Association for Laboratory Animal Science for 1976.

R. G. Crystal, J. M. Pike Head Posts at NHLI



Dr. Crystal **Mr. Pike**

Two new branch chiefs have been named to head posts at the National Heart and Lung Institute. They are Dr. Ronald G. Crystal, who has been appointed chief of the Pulmonary Branch, Division of Intramural Research, and James M. Pike, who will head the Grants Operation Branch, Division of Extramural Affairs.

Dr. Crystal will direct research on lung structure and function and on the prevention, diagnosis, and treatment of various lung disorders. Current basic studies center on the production and metabolism of collagen and other components of lung connective tissue and on the mechanisms controlling these processes.

The clinical studies of the Branch include interstitial lung disease, hereditary forms of emphysema, and genetic connective tissue disorders.

Awards Cited

Dr. Crystal received his B.A. from Tufts University in 1962, and both his M.A. in physics and his M.D. from the University of Pennsylvania.

During his senior year in medical school, he received the George W. Householder III Memorial Prize for Cardiovascular Research, the Dr. I. S. Radwin Surgery Prize from his university, and the Undergraduate Research Prize of the Pennsylvania Heart Association.

Dr. Crystal joined the NHLI staff in 1970 as a research associate in its Molecular Hematology Branch. Subsequently, he spent a year as a clinical fellow in chest medicine at the Cardiovascular Research Institute of the University of California, San Francisco.

He returned to NHLI in 1974 to head the Section on Pulmonary Biochemistry.

Teaches at G.W.U.

Dr. Crystal, an adjunct professor in the department of genetics at George Washington University, is the editor of a book, the *Biochemical Basis of Pulmonary Function*, soon to be published by Marcel Dekker, New York.

His professional affiliations include the American Medical Association, the American Federation for Clinical Research, and the American Thoracic Society.

Mr. Pike is chief of the Grants Operation Branch, Division of Extramural Affairs.

NIH Visiting Scientists Program Participants

12/3—Dr. Joseph D. Papamath-eakis, Greece, Viral Biology Branch. Sponsor: Dr. Michael A. Chirigos, NCI, Bg. 37, Rm. 1D19.

12/4—Dr. Kazunori Ohki, Japan, Chemistry Branch. Sponsor: Dr. Harry V. Gelboin, NCI, Bg. 37, Rm. 3E24.

12/12—Dr. Gunnar Rolla, Norway, Caries Prevention and Research Branch. Sponsor: Dr. William Bowen, NIDR, Westwood Bg., Rm. 532.

12/14—Dr. Isao Morishima, Japan, Laboratory of Chemical Physics. Sponsor: Dr. Edwin Becker, NIAMDD, Bg. 2, Rm. 120.

12/15—Dr. Elisabetta Agradi, Italy, Laboratory of Chemical Pharmacology. Sponsor: Dr. Gopal Krishna, NHLI, Bg. 10, Rm. 8N107.

12/15—Dr. Franz-Josef Ferdinand, Germany, Viral Biology Branch. Sponsor: Dr. Robert Manaker, NCI, Bg. 37, Rm. 1B16.

12/15—Dr. Masaki Yanagishita, Japan, Reproduction Research Branch. Sponsor: Dr. David Rodbard, NICHD, Bg. 10, Rm. 13N222.

12/31—Dr. Gerald M. Mugeru, Kenya, Laboratory of Toxicology. Sponsor: Dr. J. M. Ward, NCI, Bg. 37, Rm. 522.

1/1—Dr. Ernst Alfred Fischer, Switzerland, Laboratory of Chemical Biology. Sponsor: Dr. I. M. Chaiken, NIAMDD, Bg. 10, Rm. 9N313.

1/1—Dr. Urs Theodore Ruegg, Switzerland, Laboratory of Chemical Biology. Sponsor: Dr. Christian B. Anfinsen, NIAMDD, Bg. 10, Rm. 9N307.

1/1—Dr. Shu Shum, China, Section on Developmental Pharmacology. Sponsor: Dr. Daniel Neibert, NICHD, Bg. 10, Rm. 13N246.

He has been with NHLI since 1961, when he joined the staff as a scientific reference analyst in its Reports and Analysis Branch.

Mr. Pike will be responsible for procedures involving the applications and management of Institute grant awards for research and training activities on the heart, blood vessels, blood, and lungs, and the diseases that afflict them. Such grants totalled nearly \$203 million this fiscal year.

Mr. Pike received his B.S. from the University of Maryland in 1960. Afterwards, with NHLI, he continued training in work related to grants administration and management by attending seminars, workshops, and other programs administered by the Institute and other Federal agencies.

He is a member of the Society of Research Administrators, and he is also a member and co-founder of the Children's Special Education Center, in Rockville.

Charles C. Shinn Retires With Plans to Pursue Many Varied Interests

Charles C. Shinn, visual communications project officer at the Division of Research Services, has retired after 35 years of Federal service.

After working for several years as a reporter and staff correspondent with *The Washington Star*, Mr. Shinn began his Government career with the F.B.I. in 1940.

During World War II, he made documentary and training films at the U.S. Navy Photo Science Laboratory, and in 1946 came to NIH on detail from the PHS Commun-



Mr. Shinn has received numerous awards and citations, including three Blue Pencil Awards from the Federal Editors Association, the Award of Excellence of the Society of Federal Artists and Designers, and the Award of Merit of the Education Council of the Graphics Arts Industry.

icable Disease Center.

Later he transferred to the Division of Industrial Hygiene, Bureau of State Services. While there, he played an active role in

Holiday Contributions Aid Patient Emergency Fund; Donate All-Year-Round!

During the holidays, over \$7,000 was donated to the Clinical Center Patient Emergency Fund through contributions from NIH'ers, relatives of CC patients, visitors, and the Davis Plan.

This amount will cover nearly 2 months of emergency financial assistance for CC patients.

Through the Davis Plan, the Clinical Center Engineering Unit, OA, PEB, contributed one of the largest group donations—over \$380.

Barbara A. Murphy, chief of the CC Social Work Department and administrator of the fund, explained that in order to provide emergency assistance to CC patients continued support—throughout the year—is essential. NIH employees may send donations to the CC Social Work Department, Bldg. 10, Room 1N-254.

establishment of what later became the National Medical Audiovisual Center and served as art editor of *The Industrial Hygiene Newsletter*.

In 1951 he joined the Air Research and Development Command, U.S.A.F., to conduct audiovisual and behavioral studies in connection with space flight plans.

After directing his own advertising agency, he returned to Federal service in 1954 at the Department of Housing and Urban Development. For 13 years he headed its Division of Visual Arts.

Mr. Shinn came back to NIH in 1967 to head the Medical Arts and Photography Branch, DRS, and 3 years later moved to the position

(See MR. SHINN, Page 4)



Dr. Frank J. Rauscher, Jr. (seated c), National Cancer Institute Director, Calvin Baldwin (r), NCI executive officer, and Earle Browning, chief of the Institute's Financial Management Branch, present a group award for Special Achievement to FMB employees. The cash award was made for their handling of the additional demands on them as a result of the National Cancer Act. Standing first row from l to r are: Johnella Jenkins, Sandra Baker, Diane Shartsis, and Marguerite Dugan. Standing in last row are: Richard Carter, John Anderson, Thomas Jones, John Hartinger, and Frank Showers.

Dr. Stuart M. Sessoms Is Senior V.P. of N.C. Health Service Plan

Dr. Stuart M. Sessoms, who has been director of Duke Hospitals and professor of medicine and health administration at Duke University Medical Center, was named president of Blue Cross and Blue Shield of North Carolina. He assumed his new duties on Jan. 1.

Dr. Sessoms was NIH Deputy Director from 1962 to 1968, when he retired from Federal service.

At NIH, Dr. Sessoms' posts also included assistant director of the Clinical Center; associate director of the National Cancer Institute, and a year later, associate director for collaborative research in NCI's new Virology Research Resources Branch.

During his tenure here, Dr. Sessoms was the recipient of two PHS Meritorious Service Awards. He received his first award in 1964 for his accomplishments as chief of Cancer Chemotherapy National Service Center.

His second award, presented in 1966, was in recognition of his "outstanding ability and achievements in the development, operation and staffing" of regional medical programs.

Dr. Sessoms is a consultant to the National Library of Medicine and to the Veterans Administration Hospital in Durham.

MR. SHINN

(Continued from Page 3)

he held at retirement.

He was one of eight founders of the Society of Federal Artists and Designers and a charter member and first president of the Federal Design Council.

Mr. Shinn has a variety of interests. He is an inventor; he was issued three patents—one he assigned to the Government—in a single month.

He also was active as an artist between 1943 and 1953, and plans to return to painting as well as continue his writing and lecturing about visual communications.

A beekeeper, Mr. Shinn will continue to maintain the hives from which he gets over 600 pounds of honey every year. His plans for an active retirement also include keeping his interest in sports car racing, sailing his sloop, and visiting relatives here and abroad.

M.C. Heart Ass'n Will Counsel Heart Attack Patients' Spouses

The Montgomery County Heart Association is offering a unique educational program, called "Heart-to-Heart," which counsels spouses of recent heart attack patients in the community.

Through group sessions those spouses can learn, free of charge,



Dr. Jane L. Showacre (left) and Nathaniel B. White (second from right) receive special achievement awards for their work with the Equal Employment Opportunity Committee of the National Institute of Child Health and Human Development from Dr. Gilbert L. Woodside, NICHD deputy director. Dr. Joseph M. Bobbitt was posthumously given the award for special achievement. Katherine Bobbitt accepted her husband's award. All three awardees were cited for their service to the Institute's EEO Committee and their dedication to the EEO program.

National High Blood Pressure Education Program Cites Numbers, Danger, Control

The National High Blood Pressure Education Program, established in 1972, has already progressed toward its goal of alerting the medical community and the public to the prevalence of high blood pressure in the U.S. population, the dangers of uncontrolled hypertension, and the health benefits of adequate blood pressure control.

Data released by the Program's Coordinating Committee indicate that in recent years there have been sharp increases in initial and total patient visits to physicians for hypertension and hypertensive heart disease, a substantial reduction in the number of people with unsuspected and undiagnosed hypertension, and a significant increase in the number of hypertensive patients whose blood pressure is under adequate medical control.

In a press briefing held Dec. 19 by the National Heart and Lung Institute, Dr. Robert I. Levy, NHLI Director, summarized data. Also present were representatives of the Am. College of Cardiology, A.M.A., Am. Hospital Assoc., Am. Osteopathic Assoc., Nat'l Conference for High Blood Pressure Control, Nat'l Kidney Foundation, Nat'l Med. Assoc., and Citizens for Treatment of High Blood Pressure.

The Program's wide variety of education, research, planning, and community service activities are coordinated by the NHLI and involve the participation of more

about the physical and emotional problems of heart disease.

For further information or questions, contact the Montgomery County Heart Association, 7847 Old Georgetown Road, Bethesda, Md. 20014, telephone 657-8878.

than 150 national organizations—Federal, private, and professional.

Except for arteriosclerosis, hypertension is the most common cardiovascular disease, affecting some 23 million American adults. Though potentially serious, it seldom produces symptoms discernible to the person who has it.

Easily diagnosed and, in most cases, readily controlled, it is often unsuspected or inadequately treated. Many who have the disease ignore it.

Initial Visits Increase

Data based on the National Disease and Therapeutic Index indicate that, since 1971, the number of initial patient visits to physicians for hypertension and hypertensive heart disease have increased 38 percent, and total patient visits for these conditions have increased over 40 percent.

Both are greater increases than initial and total physician visits for all causes, which rose about 17 percent.

Data were also summarized from three other surveys: the National Health Examination Survey of 1960-62, the National Health and Nutrition Survey of 1971, and the NHLI Hypertension Detection and Followup Study done in 1973-74.

The two earlier surveys indicate that nearly half of those with high blood pressure were unaware that they had it. In the 1973-74 community survey, this number was only 29 percent.

BLUMENTHAL

(Continued from Page 1)

Dr. Blumenthal comes to NHLI from the University of Miami School of Medicine, where he was professor of pediatric cardiology, 1970-75. For most of that period he also served as dean of continuing education.

Prior to this, Dr. Blumenthal was professor of clinical pediatrics, College of Physicians and Surgeons, Columbia University, and attending pediatrician at the Presbyterian Hospital. He was also a consultant pediatric cardiologist at the Long Island Jewish Hospital, and at the Vassar Brothers Hospital, in Poughkeepsie.

He is vice chairman of the American Heart Association's Ethics Committee, and has served on and chaired other AHA committees including the Committee on Arteriosclerosis and Hypertension in Childhood.

He is a member of the board of directors of the Heart Association of Greater Miami as well as chairman of the Florida Heart Association's Task Force on Rheumatic Fever and Rheumatic Heart Disease.

Dr. Blumenthal has also served on a number of NHLI committees, including the cardiovascular Training Grants Committee as chairman; Lipid Research Clinics; Lipid Metabolism Advisory Committee; Working Group on Training and Evaluation of Physicians in High Blood Pressure; and chairman, Task Force on Pediatric Hypertension.

Was Principal Researcher

From 1972-74, he was principal investigator of a Specialized Center of Research at Miami's medical school where he did research on atherosclerosis in childhood.

Dr. Blumenthal received his B.S. and M.D. from the University of Iowa and was in private practice in New York City from 1936 to 1955. During that time he was director of the division of pediatric cardiology at Mount Sinai Hospital.

From 1956 to 1970 he was at Columbia University's medical school. During his tenure there, he was principal investigator of an NHLI pediatric cardiology research training grant.

If the national situation is similar to that observed in the 14 communities participating in the HDFP study, some 4 million people have become aware since 1971 that they have high blood pressure—the first step to effective treatment.

Over the 14-year span covered by the surveys, the number of persons aware of their hypertension but not under treatment for it did not change appreciably.

Evaluation of Exposure To Kepone Will Continue Under NIEHS Contract

A 1-year research contract to continue a detailed clinical evaluation of workers exposed to the pesticide Kepone has been awarded by the National Institute of Environmental Health Sciences to the Medical College of Virginia.

The recent discovery of accidental chronic exposure of workers to Kepone in its concentrated form at the Life Science Products Company—the Nation's sole manufacturer of the pesticide—led to a Federal, state, and local investigation of individuals exposed to it.

These include factory workers, their relatives, and residents of Hopewell, Va., the plant site.

Former Workers Located

More than 110 people who worked at the plant during the 16 months it produced about 3,000 pounds per day of the white powdery pesticide have been located and tested. Over half of these people showed high levels of Kepone in their blood.

Doctors say the chemical can be absorbed through the skin, inhaled, or ingested. Of the known Kepone poisoning victims, over 20 have been hospitalized at one time or another as the result of ailments including apparent brain and liver damage, sterility, slurred speech, loss of memory, and twitches of the eyes.

To date there is no known treatment to alleviate the effects of Kepone, but some of the workers appeared to improve when they were removed from exposure to the poison.

Efforts to treat the poisoning victims have been hampered because Kepone is a relatively new compound, and there has been virtually no research into its effects on humans.

In addition, information about its effects on animals is meager. Only a few animal studies have been made of Kepone distribution and toxicity; and the metabolic fate in animals is unknown.

There is also a lack of information concerning methods of chemically analyzing Kepone.

Dr. Begab Elected President Of Internat'l Scientific Ass'n

Dr. Michael J. Begab has been elected president of the International Association for the Scientific Study of Mental Deficiency.

As president-elect, Dr. Begab will coordinate plans for the Association's Fourth International Congress to be held at American University, Aug. 22-27.

Dr. Begab, a social scientist with the National Institute of Child Health and Human Development's Center for Research for Mothers and Children, is head of

BI-CENT-EX

(Continued from Page 1)

functions touch upon the lives of all.

Individual NIH exhibits include those on the National Cancer Program and the National Library of Medicine. The National Hypertension Program and Sickle Cell Disease Program exhibits will be available later.

The main NIH exhibit is devoted to NIH Research: Diagnosis, Treatment, and Prevention with an overall theme, Better Health through Research, with slides and films about research and a juke box that plays 1-minute health messages.

In addition, NICHD is assisting the Department's Office of Population Affairs with an exhibit which depicts how research is helping to solve human population problems.

At the entrance to the Main Hall is the Public Health Service cube—a 3-foot block of plexiglass which, tilted up on one of its corners, revolves slowly in a simulated pool of blue. The walls of the pool detail highlights of PHS developments.

Four smaller lighted cubes within the larger one contain photos of PHS research and patient care.

The lobby information area will feature telephone "hotlines" connected directly to the Office of Consumer Affairs, and racks will be stocked with giveaway pamphlets on HEW programs and services.

The exposition Center is comprised of three sections—the Main Hall, the West Wing, and a 150-seat movie theater where HEW and related films will be shown several hours a day.

Dr. Chiazze Will Discuss Cancer Death Statistics At NCI Forum Jan. 28

Dr. Leonard Chiazze, Jr., of the National Cancer Institute's Biometry Branch, will discuss Recent Trends in Reported Cancer Mortality at the January Fourth Wednesday Forum. The meeting, open to all NIH staff, will be held Jan. 28 from noon to 1 p.m. in Wilson Hall, Bldg. 1.

Reports by the National Center for Health Statistics for the first 7 months of 1975 have shown a sharp statistical rise in the cancer death rate.

Dr. Chiazze will comment on these reports, describe the evidence needed to determine whether that statistical increase reflects an actual increase in cancer mortality, and answer questions from the audience.

the Institute's Mental Retardation Centers program which supports 12 centers throughout the country.

NMR Spectrometer at Stanford Permits Time, Space Study of Atoms in Molecules

The first of the world's most powerful Nuclear Magnetic Resonance spectrometers—to aid scientists in their study of biological molecules and their role in life processes—has been installed at the Stanford Magnetic Resonance Laboratory, located in the Chemistry Building at Stanford University's Medical Center.

Established by a joint grant from the Division of Research Resources and the National Science Foundation, the powerful new instrument allows scientists to "look" at individual atoms in complex structures, observe the magnetic properties of atoms in a molecule, and provide information which describes the individual atom's spatial relationships and movements.

For example, a scientist may label amino acids—the building blocks of proteins—with stable isotopes, and, from NMR spectra, chart changes in protein structure which result from interaction

Retardation Report Cites Early Identification Need

What Are We Waiting For, a new booklet published by the President's Committee on Mental Retardation, reports on a conference concerned with early intervention to help high-risk children—with Down's syndrome (Mongolism), language handicaps, mental retardation, and other difficulties—develop as normally as possible.

Topics discussed range from mother-child interactions to parental involvement in treatment programs.

The conference, sponsored in part by the National Institute of Child Health and Human Development, emphasized the need for early identification of high-risk children, prompt intervention, and the use of a multidisciplinary approach in helping these children.

The booklet may be obtained at 80 cents a copy from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

with drugs or other chemical agents. The studies are important in understanding disease—for example, abnormally shaped proteins associated with hereditary disease.

The investigator receives information on the molecules as they move through time. The NMR spectra can be blipped onto the screen every few seconds, and the memory of each spectrum is then stored in a computer.

Instrument Is Unique

Thus, a scientist can follow the changes of shapes and motions of molecules with the added dimension of time. No other instrument can do this.

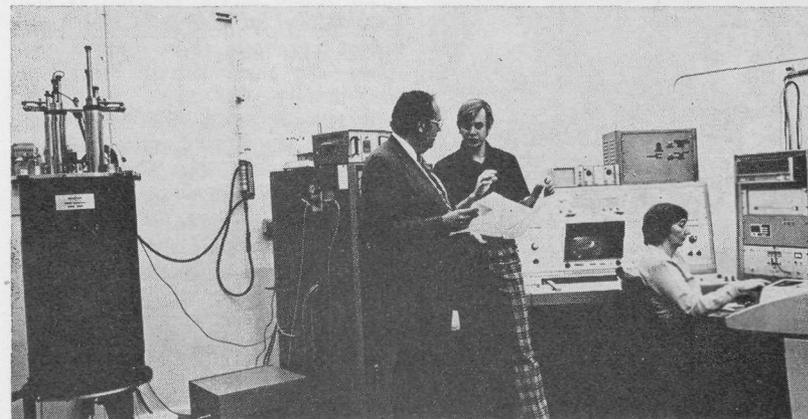
According to Dr. Oleg Jardetsky, director of the facility, a model of a live and working protein can now be developed. While other methods of studying proteins require that they be frozen or otherwise killed for measurement, the NMR method measures molecules in solution without damaging them.

Other Projects Planned

In addition to studying the geometry of protein molecules, other projects to be undertaken include the examination of mechanisms of genetic control, cell membranes, and drugs and their effect on enzymes.

Stanford's NMR was built to operate at the highest frequencies attainable with current technology. The instrument has a resolution of 360 MHz (Mega Herz) for hydrogen nuclei, and 90 MHz for carbon 13.

The laboratory operates under guidelines established by the Biotechnology Resources Program of DRR.



Dr. Jardetsky, director (l), consults with Woodrow Conover, operations manager, while research associate Norma Jardetsky operates the computer console. At the extreme left is the 85K Gauss magnet—the heart of the high-resolution nuclear magnetic resonance spectrometer.

Exhibit on Behavioral Audiometry Wins Prize; Explains Test of Infants' Hearing



This 12-month-old girl has just pushed a button on hearing an auditory stimulus and is enjoying visual reinforcement, an animated toy monkey.

A 6-month-old baby babbles and smiles, needs some support when sitting up, and has an attention span of a few minutes. Can the hearing of so young an infant be tested successfully?

Yes, as demonstrated in a prize-winning behavioral audiometry exhibit created by a scientist-administrator from the National Institute of Child Health and Human Development and by three scientists supported by NICHD.

Dr. Wesley R. Wilson and John M. Moore of the University of Washington Child Development and Mental Retardation Center, Dr. T. Newell Decker of the University of North Dakota, and Dr. Lyle L. Lloyd of NICHD won the second award for excellence of presentation.

Their scientific exhibit, Behavioral Assessment of Hearing Sensitivity in Infants, was presented at the American Speech and Hearing Association's annual meeting held recently in Washington, D.C.

The exhibit, which included a video-taped segment, depicted various aspects of their research into the application of operant conditioning principles to measure thresholds in infants as young as 5 months.

Affects Speech

One reason for determining hearing sensitivity in a baby under a year is that any hearing impairment has considerable impact on the child's future language development. Even very young babies are able to discriminate between sounds, and that ability provides the foundation for later speech and language behavior.

The research focused primarily on two types of responses—head-turning and button-pushing—and two types of reinforcers or rewards, visual and tangible. When a baby hears a sound, a tone, or a spoken word, he will usually turn his head toward the source.

In operant conditioning that

response is rewarded with a reinforcement which the baby likes—a toy, a bit of food, or something visually pleasing. The reinforcement strengthens the response, and the baby will continue to respond long enough to determine his hearing threshold. A test session last approximately 10 minutes.

Different Ages Tested

The first experiment presented in the exhibit explored various types of visual reinforcers in groups of 12- to 18-month old infants to see what "turns a baby on." The scientists found that complex visual reinforcement—an animated toy—was quite effective with these infants.

When they tested the animated visual reinforcer with babies as young as 5 months, they found it just as effective.

Threshold levels—defined as the lowest level of sound to which an infant responds three out of six times—for these infants were approximately the same as those reported for adults and were considerably lower and more reliable than thresholds determined by observation techniques not using reinforcement.

Another part of the display showed the use of this approach in testing the hearing of young Down's syndrome subjects.

The exhibit showed that infants can also be taught to press a button, and this response can be used in obtaining auditory thresholds. The button is 4 by 6 inches in size, large enough to accommodate a baby's imprecise physical movements.

DR. SCOTT

(Continued from Page 1)

was established, and he served as chief of the Institute's Laboratory of Histology and Pathology from 1956 to 1965.

Dr. Scott received the B.A. degree in physical biology from Brown University in 1939 and his D.D.S. from the Baltimore College of Dental Surgery, University of Maryland, in 1943. The next year he was awarded the M.S. degree from the University of Rochester where he was a Carnegie Fellow.

In 1956, he received one of the awards given the 10 most outstanding young men in Government service by the Arthur S. Flemming Awards Commission.

Research Cited

Dr. Scott was cited for his development of new methods for applying the electron microscope to the study of enamel and dentin, and the development of new techniques for studying the structure of teeth.

Other awards accorded Dr. Scott include: honorary membership, Finnish Dental Association; honorary lecturer, Tokyo Dental College, and the International Association for Dental Research Award for Research in Mineralization, 1968.

Affiliations Listed

Dr. Scott is a Fellow, American Association for the Advancement of Science, and a Fellow, the American College of Dentists and the International College of Dentists.

He has served in scientific posts with the Federation Dentaire Internationale.

He is a member of the Electron Microscope Society of America, the American Dental Association, and is president of the International Association for Dental Research.

Two approaches were used to adjust to infant preferences or satiation during testing. In addition to the animated toy reinforcement, the researchers tried using tangible reinforcement—a bit of cereal or piece of cookie.

In a group of infants between 7 and 20 months of age, they obtained thresholds in more than 60 percent of babies under 12 months of age and 80 percent of older youngsters.

While the display was primarily designed to acquaint clinicians with the operant conditioning approach to testing auditory thresholds in infants, results of one study of infants 6 to 8 months of age—in collaboration with Dr. Rebecca E. Eilers—indicate that the method can be applied to speech discrimination studies.

Infants tested on as many as 10 speech contrasts in as few as

DRG Publishes Part II, PHS Grants and Awards

The recently-published Part II of the five-part series, *Public Health Service Grants and Awards, Fiscal Year 1974 Funds and Fiscal Year 1973 Released Funds*, presents a summary of PHS training, construction, and medical library grants awarded from those funds.

Included in the summary are 5,336 grants supported by NIH listed by recipient area, program director, and the organization having professional responsibility for the work.

Parts I, III, and IV of the series, released earlier, contain an accounting of support of research grants, contracts, health planning, and health services grants.

Single copies of the Part II volume, DHEW Publication No. (NIH) 75-495, are available free of charge from the Division of Research Grants. Multiple copies may be purchased at \$2.50 each from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

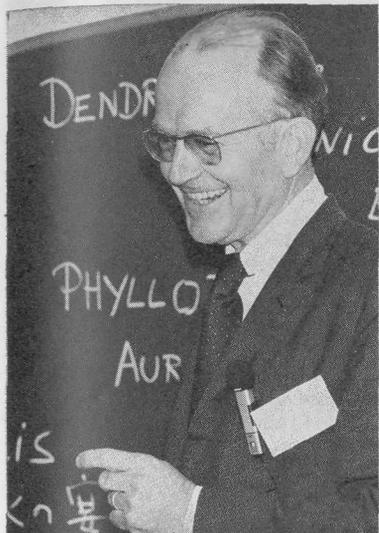


Gayle Galloway, a senior at D.C.'s Theodore Roosevelt H.S., and a clerk-typist working under the Stay-In-School Program in NHLI's Atherogenesis Branch, recently received the Outstanding American High School Student's Award. Winners of the award are considered for an academic scholarship of up to \$5,000 sponsored by the National Scholarship Service. Gayle plans to enter Montgomery College, where she will major in computer technology.

three 20-minute sessions showed results that suggested developmental changes in speech discrimination.

NICHD is supporting further studies on suprathreshold auditory abilities of infants, as well as studies to test the hearing sensitivity of babies younger than 6 months of age at the University of Washington Child Development and Mental Retardation Center.

Japanese Medal Is Given To Dr. Bernhard Witkop



Dr. Witkop has sponsored more than 60 associates and fellows from Japan in NIAMDD's Laboratory of Chemistry through the Visiting Scientists Program of the USPHS.

By decree of the Emperor of Japan, Dr. Bernhard Witkop, chief of NIAMDD's Laboratory of Chemistry, has received Japan's Order of the Sacred Treasure, Second Class.

The medal was awarded to Dr. Witkop on Nov. 7 in Tokyo by the Japanese Minister of Education.

Believed to be the first given to a U.S. Government scientist, the medal—usually awarded to outstanding Japanese scientists, writers, and artists when they reach the age of 70—is rarely given to foreigners.

In accepting the award, Dr. Witkop spoke in formal Japanese.

Helped Begin Program

Twenty years ago, Dr. Witkop helped create a program at NIH to accept Visiting Scientists from abroad.

As a member of the board on International Scientific Exchange of the National Academy of Sciences, he discussed with leaders of Japanese industry and government the need for reciprocal scientific exchange, so that NIH would receive more Visiting Scientists with all expenses paid by Japan.

In addition, he negotiated for voluntary private contributions to the Foundation for Advanced Education in the Sciences, Inc., to assist visiting scientists and their families in settling in the Bethesda area.

Dr. Witkop, who received his Ph.D. in 1940 from the University of Munich, came to NIH in 1950 after teaching chemistry for several years at Harvard University.

He is known principally for his work on oxidation mechanisms;

Nat'l Commission on Diabetes Suggests Plan to Combat Increasing Incidence

The National Commission on Diabetes recently reported that diabetes is now the Nation's third-ranking cause of death and recommended that funding for diabetes research be tripled to \$126 million by Fiscal Year 1979.

According to the report, between 1965 and 1973 the chance of developing diabetes increased in the U.S. by more than 50 percent. Last year more than 300,000 persons died from diabetes and its complications.

Five Percent Affected

The disease now affects an estimated 10 million Americans—5 percent of the population—half of whom are unaware that they have the disease. At the current rate of increase, the number of diabetics will double every 15 years.

Although the economic toll of diabetes—excluding its complications—is \$5.3 billion a year, in FY 1974 only \$43 million was allocated to diabetes research.

The cause of diabetes is unknown, nor is it known why the disease appears to be increasing in the U.S. Part of the increase may be the result of more detection, but specialists doubt that this is the entire story.

Problems Found

In addition to the need for increased funding, the 17-member Commission, chaired by Dr. Oscar B. Crofford of Vanderbilt University, reported:

- A serious shortage in both quality and quantity of trained personnel for diabetes research and treatment. This shortage was recognized by Congressional authorization of Research and Training Centers, which the Commission has incorporated into the Long-Range Plan to provide a demonstration of the entire effort against diabetes, including research, education, and model treatment programs.

- A need to translate the advances in research and treatment into local health care delivery. The plan recommends an extensive cooperative effort by Federal, state, private, and voluntary agencies to meet and improve the continuing health care needs of diabetics.

A National Diabetes Information and Education Clearinghouse will collect, evaluate, and disseminate information on prevention, diagnosis, and treatment of

selective non-enzymatic cleavage of peptides and proteins; novel natural products; toxins and venoms, and intermediary labile metabolites.

His other international awards and honors include the Paul Karrer gold medal from the University of Zurich.

diabetics.

- A major goal of the program is education of patients, professionals, and the public. Part of the education effort would be to dispel the misconception that insulin is a "cure" for diabetes. Although insulin helps to control the disease, complications such as blindness, kidney disease, and heart disease have continued to increase.

- The creation of a National Diabetes Advisory Board is proposed to coordinate related but widely dispersed programs and resources and to provide an annual report to the Congress and the Administration on the progress and results of this effort.

Statistics Given

Among the facts determined through this past year's studies and summarized by the Commission were the following:

- Women are 50 percent more likely than men to have diabetes.

- Nonwhites are 20 percent more likely than whites to have it.

- The disease is three times as common among the poor as among middle income and wealthy people.

- The chance of developing diabetes doubles with every 20 percent of an individual's excess weight and doubles with every decade of increasing age.

Complications May Result

- Diabetics are 25 times more prone to blindness than non-diabetics, 17 times more prone to kidney disease, over 5 times more prone to gangrene—often leading to amputation—and twice as prone to heart disease. These and other complications result in about 15 percent of all diabetics being bedridden for 1½ months per year.

- These problems are particularly acute for those suffering from juvenile onset diabetes; presently one half of all such patients die within 25 years of their diagnosis.

Incidence, Deaths Increase

- An American born today who lives an average life span of 70 years has a higher than one-in-five chance of developing diabetes.

- Last year 38,000 persons died directly from diabetes, making it the fifth leading cause of death by disease—ranking behind heart and circulatory conditions such as stroke, cancer, influenza and pneumonia, and diseases of early infancy. When complications are considered, diabetes emerges as the third leading cause of death and ranks above accidents, behind only heart disease and cancer.

Toxicology Quarterly To Make Jan. Debut

The first issue of a new quarterly publication, the *Toxicology Research Projects Directory*, will appear this month.

The 644-page *Directory* (Pub. No. NTISUB/B/021-76/001), which describes 2,500 ongoing projects, is available from the Toxicology Document and Data Depository, National Technical Information Service, Springfield, Va. 22161.

The information in the directory is drawn from the computerized files of the Smithsonian Science Information Exchange, which annually receives over 100,000 summaries of Federally supported research.

The publication is sponsored by the Toxicology Information Subcommittee of the DHEW Committee to Coordinate Toxicology and Related Programs. The Toxicology Information Program of the National Library of Medicine is responsible for the subcommittee and its projects.

Contents Described

The directory is organized in seven chapters: agricultural, industrial, and household substances; drugs, medical materials, food additives, and cosmetics; physical agents and gases; metals, minerals, and trace elements; biotoxins; multiple and unspecified agents; and environmental problems.

In addition, there are indexes for subject, investigator's name, supporting agency, organization, and grant number.

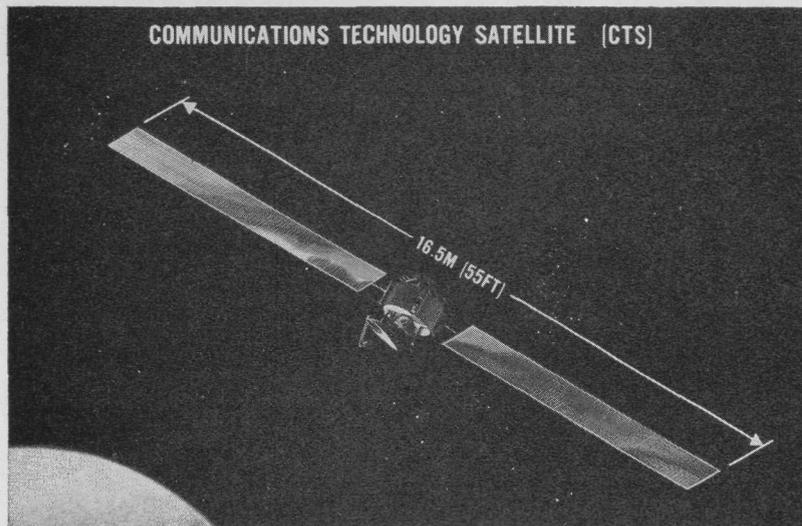
The first issue contains abstracts of research projects registered with SSIE between Jan. 1 and Aug. 15, 1975. The last quarterly issue for 1976 will contain a cumulative index for that year.

Although the directory is an experimental publication, it will be published on a continuing basis if scientists find it useful.



Dr. Karl Piez, president of the Foundation for Advanced Education in the Sciences, presents a check from FAES to Dr. Edith Miles for scholarships to the Preschool Developmental Center at NIH. Dr. Miles is chairperson of Parents of Preschoolers, Inc., the group which operates the Center.

U.S., Canada Launch Satellite to Improve Biomed. Communication to Remote Areas



CTS can broadcast to the entire western hemisphere. The satellite's two steerable antennas can be moved to locate anywhere in North America the "footprints"—each large enough to cover an area equal to the West Coast. Simultaneous two-way communications are possible with the Super High Frequency transponder.

Rapid, reliable communications are being brought to many areas of the world through continued development of communications satellites.

As the *NIH Record* went to press, the U.S. and Canada planned a Jan. 13 launching of a Communications Technology Satellite which will provide two-way television and voice communication to remote areas.

The National Library of Medicine's Lister Hill Center, the Veterans Administration, and the Association of Western Hospitals plan to test the ability of satellites equipped with the latest communications technology to help solve problems in the current health care delivery system.

Canada is developing the spacecraft. The NASA Lewis Research Center in Cleveland is managing the U.S. portion of the program, which will provide the high-power transmitting tube for the spacecraft, environmental testing, launch vehicle, and launch services.

The Communications Technology Satellite will be placed in a geosynchronous orbit, 22,300 miles above the equator, located off the west coast of South America (116° west longitude).

Satellite Is "Parked"

At this altitude, the spacecraft stays above the same spot on the earth. This stationary orbit is also used for navigation and some weather satellites.

Since the late 1960's, the National Aeronautics and Space Administration has been testing Applied Technology Satellites in limited experiments to test the equipment and the effects on delivery of social services.

The four U.S. telemedicine projects planned for CTS will be the most extensive use to date of biomedical satellite communications. The U.S. and Canada will share equally in satellite experiment time.

Some of the CTS experiments are extensions of those begun on the ATS-6, the last of the solely U.S. experimental satellites, which in May 1975 was moved from geosynchronous orbit over the western states to a location over Africa, where it will be used by the Indian government.

The V.A. plans to link 26-30 western hospitals by satellite. Previously, it had used an ATS to link 10 VA hospitals in the Appalachian region.

Projects Described

The Lister Hill Center is providing program coordination and technical support for five major projects sponsored by NIH and the Health Resources Administration: dissemination of the results of NIH-funded research; the Washington-Alaska-Montana-Idaho decentralized medical education program; continuing education programs for dentists and for dietitians, and training in predictive nursing for early child care.

The Association of Western Hospitals plans a physicians' continuing education program which it hopes will provide a model for doctors practicing in remote areas to keep up to date with advances in medicine.

With satellite communications, transmission costs are technically independent of distance, with greater reliability of interactive communications independent of terrain.

Satellite communications are able to carry multichannel signals over greater distance at less expense than conventional communications

STEP Committee Lists Module Topics for 1976

The Staff Training-Extramural Program Committee has several new topics among the eight modules offered in its Continuing Education Program for 1976.

These short courses—specifically designed to meet the needs of scientist-administrators and managers of activities related to grants and contracts—are intended primarily for extramural staff, but intramural personnel may also apply.

To encourage interchange of ideas with the faculty, each module is limited to a specific number of participants, usually 25. Last year 237 employees took part in the program.

Application deadlines are Feb. 9 for the first four modules and May 1 for the later modules.

The 1976 module topics will be:

- An Introduction to NIH Extramural Programs—Mar. 1-4.
- Committee Dynamics—Apr. 8-10.
- Interagency Interaction—Apr. 26-28.
- Contracts and Grants: Issues and Impacts—May 3-5.
- Public Policy and the Management of Scientific Research and Development—June 7-9.
- Interpersonal Skills and Women and Minority Issues—July 14-16.
- Program Planning, Evaluation, and Analysis—July 26-28.
- Social and Ethical Issues in Public Health Administration—Aug. 25-27.

Application forms, as well as a brochure detailing course content, may be obtained from personnel offices or from the Special Programs Office, Bldg. 1, Room 314, Ext. 65358.

systems. Television or voice signals are carried by telephone lines or microwave relay, with which the cost multiplies in relation to the distance travelled.

The CTS will be the most powerful communications satellite yet put into orbit. Its increased power in the 12-14 GHz or Ku-band range—a superhigh radio frequency previously used only for laboratory experiments—will allow less expensive earth stations to send and receive signals.

This frequency will enable NASA to test a compressed transmission method with more information in each signal, decreasing unit costs.

The transmitting power levels are 10 to 20 times higher than satellites now in use. Thus, smaller and less expensive ground receiving equipment can be used—a particular advantage for service to isolated areas where other forms

CFC Tops Quota 103%; NIH Exceeds Its Goal For 3rd Year in Row

With a fast finish after a slow start, NIH exceeded its quota in the Combined Federal Campaign for the 3rd year in a row.

Final figures show total contributions of \$204,326, or 103% of the original quota of \$199,400. The average gift was \$35.11 per person, with 60% or 5,819 out of 9,735 employees participating.

The drive, which began on Oct. 14, was extended until Dec. 18.

Goals Reached

Of the 18 NIH units contributing to the campaign, 12 either reached or topped their goals of 100%. The NIA finished at the top of the list with 176% of its quota and an average gift of \$40.40.

Runner-up was NIGMS at 163% and \$36.33 per person, followed by NIAMDD, with 146% and \$67.20 per person.

Others over the 100% quota level were: NLM, 145; DRG, 144; NEI, 134; NICHD, 124; NHLI, 119; FIC, 118; DCRT, 114; NIDR, 113, and NINCDS, 110.

The largest average gift per person was donated by NIAMDD which turned in \$67.20 per contributor. Best participation honors went to NIGMS, with 100% of its 127 employees giving.

Giving Is a Tradition

"NIH can be very proud of the participation and generosity of its employees, who made it possible for us to exceed our goal," said Dr. Carl Kupfer, NEI Director and campaign vice chairman. "We have proved once again that giving is an NIH tradition."

Dr. Kupfer said that much of the credit for this year's success belonged to the keypeople and coordinators "who worked the hardest. I am personally grateful for the extra effort they contributed."

Aside from NIH, the CFC drive in the Washington area exceeded its goal this year by \$100,000 over the original target quota of \$9.5 million.

of communication are not highly developed.

The satellite is planned to be partially operational by February and capable of full use by early April. The Lister Hill Center projects will begin in September 1976, with the full system working by January 1977. Six to ten ground stations and one mobile station are called for, each with both sending and receiving capability.

The VA plans to begin its hospital linking project by January 1977 with 26-30 receiver-only stations and a single mobile transmitter unit.