Dr. Bernard B. Brodie, NHL, Among Winners of Nat'l Medal of Science

Antitumor Action of Chemical on Mice Suggests Possible New Cancer Weapon

A recently developed chemical has been used to control transplanted solid tumors in mice and rats, according to NIH scientists. The chemical is considered of interest for further investigation as a possible new weapon against cancer.

The drug is polyinosinic-polycytidylic acid (poly I:C), an artificial ribonucleic acid (RNA) which has been used experimentally to stimulate production of interferon, the body's natural virus-fighting system. However, the NIH scientists are not certain whether the antitumor action of poly I:C is directly related to interferon stimulation.

Dr. Hilton Levy, National Institute of Allergy and Infectious Diseases, and Drs. Lloyd Law and Alan Rabson, National Cancer Institute, reported their experiments with poly I:C to the Third International Congress on Interferon in Lyon, France, on Jan. 8.

Dr. Levy said that mice were inoculated with a variety of malignant tissues: leukemias, reticulum cell sarcomas, lymphatic lymphomas, fibrosarcomas, plasma cell tumors, human adenovirus 12-induced tumors, and Bittner mammary tumors.

A sarcoma was also implanted in rats. The tumors were all of animal origin and were transplanted into animals of appropriate strains.

In each experiment, Dr. Levy and his associates observed 8 to 10 grams of poly I:C, 3 times a week. Twenty-four to 48 hours after tumor transplantation, the animals were injected with 100-150 micrograms of poly I:C, 3 times a week. In each experiment, Dr. Levy and his associates observed 8 to 10 treated, and an equal number of untreated tumor-bearing animals.

With all the tumors studied, poly I:C treatment decreased the rate of tumor growth, increased survival time of animals, or caused a regression of established tumors.

However, the effect of poly I:C on survival was most marked in experiments using a strain of black mice known as C57. These animals were inoculated with reticulum cell sarcoma tissue, a slow-developing tumor.

In one such study, all animals treated with poly I:C soon after implantation of the tumors were alive 41 days later; all untreated animals were dead. Thirty percent of the treated animals were alive with no signs of tumor 2 months after treatment.

NIH FY '70 Budget Request, $1.5 Billion, Exceeds Previous Year by $90 Million

The Fiscal Year 1970 Federal Budget submitted by the President to the Congress last Wednesday (Jan. 15) included an appropriation request of $1,484.1 million for the National Institutes of Health.

This represents an increase of $90.2 million over current year (FY 1969) appropriations.

Of the $1,484.1 million requested for NIH, $1,099.8 million is in operating appropriations for research Institutes and Divisions, $337.7 million for the Bureau of Health Professions Education and Manpower Training, $22.2 million for the National Library of Medicine, and $4.4 million for buildings and facilities.

Operating appropriations for NIH research Institutes and Divisions provide $824.2 million for research, fellowships and training grants (an increase of $9.6 million), and $275.6 million for direct operations (an increase of $11.6 million).

Funds requested for FY 1970 will enable NIH to support more than 10,500 research project grants. Of these, approximately 2,600 will be new awards or renewals of grants whose prior period of support has expired.

New investigations include studies ranging from prevention of tumor transplantation, the animals were injected with 100-150 micrograms of poly I:C, 3 times a week.
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'Operation Clean-Up' Starts in February: 'Walk-Thrus' of NIH Buildings Scheduled

The third annual "Operation Cleanup" will soon be conducted at NIH. The objective of "Operation Cleanup" is to effect government economies and utilize idle equipment from both offices and laboratories. Last year such equipment, valued at $206,000, was transferred to Supply Management Branch's Property Utilization Warehouse and reassigned to other NIH components or government agencies.

Richard L. Seggel, Associate Director for Administration, has stated that in order to fulfill the objectives of "Operation Cleanup," each NIH component should initiate a "house-cleaning." Organized "walk-thru" teams will visit all NIH buildings, both on and off the reservation, to over- see "Operation Cleanup." The teams will be composed of representatives from each Institute and Division, and SMB.

Off-the-reservation buildings will be visited the week of Feb. 17. Representatives will go to buildings on the reservation during the week of Feb. 24.

Don Watson, SMB chief, has asked for the cooperation of all NIH personnel.

NIH-Westwood Shuttle Adds 4 New Stops to Schedule

The Transportation Section recently announced that the transportation shuttle service between NIH and the Westwood Building has added four new stops to its regular run. As of last Dec. 30, Buildings 12A, 29A, 36 and 37 have been added to its regular schedule. Information on schedules may be obtained by calling Mrs. Erzen, Ext. 63426.

Latest Participants in NIH Visiting Scientists Program Listed Here

12/9—Dr. Kai-Li Hsia Ting, Taiwan, Section on Chemistry. Sponsor: Dr. Henry M. Fales, NIH, Bldg. 10, Rm. 6N306.
12/16—Dr. Geoffrey C. Tooth, England, Office of the Director. Sponsor: Dr. Stanley F. Yokles, NIMH, Barlow Bldg., Rm. 14W01B.
12/24—Dr. Hiroshi Ogata, Japan, National Center for Prevention and Control of Alcoholism. Sponsor: Dr. Jack H. Mendelson, NIMH, Barlow Bldg., Rm. 12A03B.
1/6—Dr. Raffale A. Massarelli, Italy, Laboratory of Preclinical Pharmacology. Sponsor: Dr. Erminio Costa, NIMH, St. Elizabeth Hospital, Washington, D.C.

NIH Television, Radio Program Schedule

NIH television on Channel 4, Sundays, 4:25 P.M.

Jan. 26
Dr. Robert J. Nelson, former chief, Materials Science and Special Studies, NIDR
Subject: Material in Human Prostheses
NOTE: NIH REPORTS has been switched from Saturdays to Sundays at 4:25 P.M.

February 2
Dr. Lester Goodman, chief, Biomedical Engineering and Instrumentation Branch, DRS
Subject: Material in Human Prostheses

DISCUSSION: NIH
WGMS, AM-570—FM Stereo 103.5—Friday Evenings—About 9:15 p.m.

Jan. 24
Dr. John C. Bailar III, head, Demography Section, NCI
Subject: 3rd National Cancer Survey

Jan. 31
Dr. Marilyn Hutchison, Division of Physician Manpower, BHPEMT
Subject: Physician Manpower Shortage
Both interviews take place during intermission, Library of Congress Chamber Music Series.

Tax Returns Now Filed

At IRS Service Centers

Federal income tax returns should no longer be filed with the Internal Revenue Service district office at Baltimore, Md., but with the IRS Service Center, 11601 Roosevelt Boulevard, Philadelphia, Pa., beginning Jan. 1, 1969. This applies both to tax returns with remittances and those with refunds due.

The IRS Mid-Atlantic Region, which includes Maryland and the District of Columbia, is the latest to require direct filing of all income tax returns with IRS regional service centers, under a law enacted Nov. 2, 1966.

Direct filing of returns will eliminate initial handling at the district office, where they are packaged and shipped to Philadelphia for processing.

Louise K. Baker Retires

From CC Nursing Dept.

Louise K. Baker, assistant to the chief, Clinical Center Nursing Department, has retired after more than 29 years of service to patients.

Mrs. Baker began her career as a private duty nurse and educator, after graduating from Henry W. Bishop III Memorial School of Nursing, Pittsfield, Mass. In 1941 Mrs. Baker entered the U.S. Navy Nurse Corps. She served at the Bethesda Naval Hospital and the U.S. Naval Hospital at Pearl Harbor. She was discharged in 1946 with the rank of Lieutenant Commander.

Mrs. Baker then entered Simmons College. There, she majored in science and received her B.S. degree in 1949. She did postgraduate work at Western Reserve University, majoring in nursing education. She was awarded her M.S. degree in 1952.

Later, Mrs. Baker taught at a V.A. Hospital, and then re-entered the U.S. Navy Nurse Corps as an instructor. After her discharge she taught medical nursing at Duke.

In 1954 she was commissioned in the PHS, and assigned to the CC. As a PHS Commissioned Officer she holds the rank of Nurse Director.

Donald Kennedy, Board Chrm., Joins DRFR's Advisory Council

Donald S. Kennedy, chairman of the Oklahoma Gas and Electric Company, was appointed to the National Advisory Research Resources Council, Division of Research Facilities and Resources. Dr. Robert Q. Marston, NIH Director, announced the appointment.

Mr. Kennedy received his Bachelor of Arts and Doctor of Law degrees from the University of Arizona. He also received a Doctor of Law degree from Butler University.

NIH Television, Radio Program Schedule

Televison

WRC, Channel 4
Sundays—4:25 P.M.

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Direct filing of returns will eliminate initial handling at the district office, where they are packaged and shipped to Philadelphia for processing.

Louise C. Anderson, chief, (0), CC Nursing Department, presents a letter of commendation to Louise K. Baker. Mrs. Baker recently retired after more than 29 years of service to patients.
More than 50 members of the Clinical Center Environmental Sanitation Control Department assembled at formal ceremonies in the CC auditorium recently to pay tribute to two coworkers. Lucille R. White and Marion E. Nottage, members of the CC Environmental Sanitation Control Department, smile happily at retirement ceremonies held in their honor recently.

Dr. Ronald W. Lamont-Havers, NIH Associate Director for Extramural Research and Training (ADERT), has announced a new organizational structure for his office. The reorganization establishes four major staff positions within ADERT (formerly the Office of the Associate Director for Extramural Programs).

Dr. Richard B. Stephenson, former associate director for Operations of the Division of Regional Medical Programs, ISMHA, has been named Training Officer.

In this position, Dr. Stephenson will assist and advise the Associate Director in the development and coordination of the extramural training and educational programs and provide guidance to the awarding units in solving problems relating to these programs.

From 1965 to late 1967, Dr. Stephenson had served as Research Grants Officer in ADERT. Prior to that, he was the first program director of the Gastroenterology Branch.

Program, Extramural Programs, NIAMD.

Dr. Stephenson received his B.S. degree from Tufts College in 1939 and his M.S. from the University of Maryland in 1940. He did further graduate work at the University of Illinois from 1940 to 1942, and in 1945 received his M.D. degree from the University of Illinois College of Medicine.

On completing a 4-year residency in surgery, Dr. Stephenson spent one year as a Surgical Fellow at the Memorial Hospital for Cancer and Allied Diseases and one year as a Pathology Fellow at the Memorial Hospital-Sloan Kettering Institute.

Following his clinical training, he served as chief surgeon at the PHS Hospital, McNeil Island, Washington, until he returned to his native Maine where he practiced surgery until joining the NIMHD Extramural staff in 1964.

Dr. Robert P. Akers, who has served on the ADERT staff for over 2 years as Extramural Operations and Procedures Officer, will take over as Policy and Procedures Officer.

Program, Extramural Programs, NIAMD.

Dr. Akers earned his B.S. from Fordham College in 1948. He received his M.S. and Ph.D. in Physical Organic Chemistry in 1949 and 1952, respectively, from Fordham University.

He joined NIH in January 1964 as a member of the Grants Associates Program which provides a one-year intensive training program for the administration of NIH extramural programs.

Before joining the Grants Associates Program, Dr. Akers was a research chemist with the U. S. Department of Agriculture from 1956 to 1964, serving as project director on basic research on muscle proteins.

In recognition of his contribution to the understanding of parasitology and tropical medicine, Dr. Weinstein received the Bailey K. Gibbs Award from the American Society of Tropical Medicine and Hygiene in 1957 and the Award of Honor from Brooklyn College in 1958.

Before coming to the NIH in 1949, he served as the Florida State Board of Health, Parasitology Division, and as a parasitologist with the Communicable Disease Center.

Dr. Weinstein received his A.B. degree from Brooklyn College and his Sc.D. degree in hygiene from Johns Hopkins University.

Dr. Gibbs also served as a research associate at the University of Virginia Medical School from June 1952 to 1954 and as a staff member at the Massachusetts Institute of Technology from 1954 to 1956.

George E. Jarboe, who has served on the ADERT staff for the past 5 years with responsibility in the training programs area, has been named to serve as the assistant to the Policy and Procedures Officer.

Mr. Jarboe will assist and advise Dr. Akers in the development of policy concerned with extramural research and training programs and will maintain liaison with the Division of Research Grants and the awarding units to assure consistent application of these policies and procedures.

Mr. Jarboe received his B.A. degree from the University of Maryland in 1958 and subsequently was employed by the Department of Navy. He came to NIH in 1969 as a management intern and, on completion of a one-year training program, was employed by the Personnel Management Branch, OD, where he worked until he joined the staff of the Division of Research Grants in 1962.

Mr. Jarboe served as DRG administrative officer until January 1964 when he became a staff member of the NIH Career Development Review Branch, a position he held until joining the ADERT staff in September 1965.
This view of the drive leading to the headquarters of the NIEHS in the Research Triangle Park clearly shows the ideal setting in which it is located.

Pine boughs, a North Carolina trademark, enhance the beauty of the interior courts formed by several NIEHS buildings.

Shown here is some of the equipment for handling scientific information that will be used in the Quick Retrieval System (QRS) at the Institute. Manning the equipment are (from left) Richard K. West, technical information specialist; Ellen Carruth, secretary, and Ralph J. Hester, technical information specialist.

Research Triangle Park in North Carolina is the new home for the National Institute of Environmental Health Sciences (NIEHS), NIH's newest component.

Three universities, all about equidistant from the Institute, provide a fitting academic and scientific setting for the Institute's unique mission.

That mission is to identify and control harmful agents and factors to man's health, and to help in the eradication of such hazards.

These studies utilize disciplines ranging from clinical medicine, epidemiology, toxicology, and other scientific skills.

The National Environmental Health Sciences Institute's intramural research core includes studies in polymer dusts, alpha radiation, and other environmental contaminants—this is just a small sample of the work being done.

NIEHS cooperates and collaborates closely with the University of North Carolina at Chapel Hill.

The new Institute fosters such research efforts to the health, longevity, and productivity of people everywhere.
Environmental Health Sciences

North Carolina is headquarters for Environmental Health Sciences, located at Research Triangle Park, North Carolina. To the left are laboratory buildings, and in the background, the North Carolina Environmental Health Sciences Center, the Institute's headquarters. The Institute is a national center of excellence for research on the hazards of environmental factors that would determine the factors that would encompass biochemistry, physiology, pharmacology, veterinary medicine, and environmental sciences. The Institute's research component, conducts research on the adverse effects of radiation, and tobacco smoke and other environmental hazards as part of its probings.

The Institute cooperates with the medical centers in the region, such as the University of North Carolina and Duke University, and conducts research that will contribute to the health and activity of human beings.

Infant incubators generally used for premature human babies are required to provide proper controlled environment for newborn litters of research animals.

Vegetable material is produced in hydroponic solutions in controlled environmental chambers that are free of pesticide residues for comparison studies with field-grown crops.

Christina Coltrane, technician, adjusts controls for heat, humidity and light to environmental room in NIEHS animal building.

Housed in these mobile units at the Park are the information-storage-and-retrieval system, the library, and offices for research branch chiefs, administrative and support personnel.
Henry Juenemann Named
Asst. Director, DCRT

Appointment of Henry J. Juene­
mann as assistant director of the
Division of Computer Research and
Technology has been announced by
Dr. Howard W. Pratt, Director of
DCRT.

Mr. Juenemann came to NIH in
December 1961 as deputy chief of the
Computation and Data Processing
Branch of DRS. In April 1962 he
was made acting chief.

The Branch he headed was trans­
ferred in October 1965 from DRS to
form the nucleus of DCRT.

A 1949 graduate of Georgetown
University, Mr. Juenemann began his
career as a mathematician with the
Computation Laboratory of the
National Bureau of Standards,
where he participated in some of
the earliest efforts to use machines
for mathematical calculations.

He transferred in 1950 to Head­
quaters, USAP, where he was in

Mr. Juenemann headed the Compu­
tation and Data Processing Branch when
it was still part of DRS and continued
work to head it after it became the nucleus of
DCRT.

In 1955 Mr. Juenemann received the
Meritorious Civilian Service Award for work in the develop­
ment of computational methods for
predicting the economic impact of
possible nuclear conflict.

In his new position, he will repre­
sent NIH on the DH EW Career
Service Board for Automatic Data
Processing.

The proposed 1970 request of
$22.2 million for the National Li­
brary of Medicine represents an
increase of more than $4 million
for expanded Library operations.

For special importance has been
the establishment of the Lister
Hill National Center for Biomed­
ical Communications. The Center
will use the latest electronic equip­
ment and communications technol­
y for more rapid transmission of
information to improve health edu­
cation, medical research and the
delivery of health services.

Blood Bank at CC Reports
123 Units Donated in Dec.

The Central Clinical Blood
Bank reports that 123 units of
donor blood were received from NIH
donors in December, and CC
collected 1,796 units of blood.

Three donors joined the Gal­
lon Donor Club: David B. Coff­
man, DRS; Dr. Thomas F.
Dutcher, CC, and Chaplain
Donor Club: David B. Coff­
man, DRS; Dr. Thomas F.
Dutcher, CC, and Chaplain

Dr. Donnelly, New Chief,
Dental Caries Program

The appointment of Dr. Charles J.
Donnelly as chief, Dental Caries
and Hard Tissues Program in the
Extramural Programs of the Na­
tional Institute of Dental Research,
has been announced by the Insti­
tute Director, Dr. Seymour J.
Keshover.

Dr. Donnelly succeeds Dr. Robert
C. Likins, who retired from PHS
to direct the Walter G. Zoller
Clinic at the University of Chi­
cago.

Dr. Donnelly comes to the NIDR
from the Division of Dental Health,
Bureau of Health Education and
Manpower Training, where he had been chief of the
Research Grants Program since
1966.

Dr. Donnelly earned his A.B.,
D.D.S., and M.P.H. degrees at the
University of Michigan.

1970 NIH Budget Summary

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The overall NIH budget also pro­
vides added impetus to health profes­
sions and related manpower training programs. In FY 1970, a
total of $96.4 million is proposed for a broadened program of as­
istance to medical, dental and re­
lated professional schools, an in­
crease of $30.4 million (46 per­
cent) over the previous year.

Student Aid Expanded

Student assistance will also be
expanded under the health profes­
sions and nursing scholarship pro­
grams, with more than 31,100 stu­
dents expected to be aided—about
7,500 more than in 1969.

Loans under the nursing student
loan program will be awarded to
an estimated 29,000 nursing stu­
dents in FY 1970, more than 2,000
above current levels.

In FY 1970, funds for construc­
tion of teaching, health research,
and medical library facilities will be
limited to facilities which will lead
to an increase in the supply of
medical and dental manpower.

When combined with funds car­
ried over from prior years, the
proposed $30.4 million increase in budget­
ary authority of $43.1 million will
provide $141 million to build new
facilities for training physicians,
dentists, and related professional
persons, or to replace existing
facilities.

The proposed 1970 request of
$22.2 million for the National Li­
brary of Medicine represents an
increase of more than $4 million

for expanded Library operations.

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NIH as head of the Heart Insti­
tute and grantee of NIGMS, and
also grantee of NIGMS, and
Neyman, University of California
Eckert, Remmington Rand Univac
THE NIH RECORD

CANCER

(Continued from Page 1)

after injections of poly I:C were stopped.

In another study, delayed treatment of established tumors caused a virtual disappearance of this growth in 10 days. Presently, Dr. Levy and his colleagues only speculate on the mechanism through which poly I:C causes tumor regression. They do not believe that the effect is attributable solely, if at all, to the antiviral action of the interferon induced, particularly since only two of the tumors tested are of viral origin.

Dr. Levy said, "We decided to test the effect of poly I:C on tumors after noting its apparent ability in interferon experiments to enable a cell to distinguish between viral RNA and normal RNA. We theorized that the drug might also be useful in controlling tumor growth by making the host cell reject tumor cell RNA. Yet, although we have observed an effect on protein and RNA synthesis in treated cells, we do not understand the implications of this."

"Further elucidation of these effects and other aspects of poly I:C's action will be needed. However, for the moment, the exciting thing is that it does show definite activity against a variety of tumors, particularly slow-developing ones."

Infectious, tumor-inducing virus has not been found in any of the tumors used, although adenovirus of specific T antigen is present in the adenovirus-induced tumor. However, since T antigens of transformed cells are not affected by interferon and even the adenovirus itself is relatively resistant to interferon action, not much antiviral action would be expected in this system.

The antitumor action might be related to a general enhancement of the body's immunological response; or the drug may act directly on the tumor. In support of the latter hypothesis, there is the preliminary evidence mentioned by Dr. Levy that treatment of mouse cells with poly I:C does modify RNA and protein synthesis.

A third possibility is that poly I:C produces changes in the blood supply to the tumor, leading to tissue death.

Examination of these possibilities is now in progress. Meanwhile, preliminary plans are under way to develop a dosage schedule for trials of poly I:C in treating human cancer.

Seeks Non-Toxic Human Dosage

Although the animal tests have been encouraging, these successes are no guarantee that the drug will be useful in treating human tumors. A major problem to be solved is determining whether a dose large enough to be effective in humans will be non-toxic as well.

Nevertheless, the National Cancer Institute is hopeful that a nontoxic human dosage can be formulated because of the drug's promise in treating slow-growing tumors. If the drug is determined to be safe for human use, it could possibly be used against such tumors as cancer of the lung and breast which have not responded well to other drugs.

The announcement of the antitumor effect of poly I:C comes less than 2 months after NIH told of the drug's use in curing an acute viral infection in rabbits—the first time a virus disease had been cured through stimulation of interferon. Poly I:C used as late as 3 days after inoculation of rabbit eyes with herpes simplex virus cured the resulting keratoconjunctivitis, an often fatal infection. These experiments were conducted at NIH by Dr. Samuel Barond, also of the NIAID (see NIH RECORD, Nov. 26, 1968).

Synthetic Acids Combined

Poly I:C is a synthetic double-stranded polynucleotide formed by mixing the two commercially available synthetic single-stranded materials—polyinosinic and polycytidylic acid. Dr. Maurice R. Hilleman and his associates at Merck Laboratories were the first to show that poly I:C had marked interferon-inducing ability. It is now widely synthesized and used experimentally in virus research.

(Note: To identify active antitumor drugs empirically, scientists use a "screen" of animal tumors that are useful in predicting the material's activity against human cancer. Of about 20 useful test systems, two animal tumors are most effective in predicting the clinical usefulness of drugs. These are L-1210, a leukemia in the mouse, and Walker 256 I.M., a carcinosarcoma injected intramuscularly in the rat.)

Medical History Society To Meet January 23

The Washington Society for the History of Medicine will meet on Thursday, Jan. 23, at 8:30 p.m. in the Billings Auditorium of the National Library of Medicine. The meeting is open to visitors.

Speakers and their topics are: Dr. Jane M. Oppenheimer, professor of biology, Bryn Mawr College, "Some International Aspects of Late 19th Century Experimental Embryology," and Dr. David L. Cowen, chairman, Department of History, Rutgers University, "Medical Science and Medical Practice in the 19th Century."

New EEO Program Symbol BeingPosted Throughout NIH

The design above, representing the NIH Equal Employment Opportunity Program, is beginning to appear on bulletin boards throughout the reservation and other NIH facilities.

Dr. Colvin Gibson, who directs the program, says the design symbolizes that everybody is entitled to be considered equally for selection, training, or promotion, regardless of race, color, creed, sex, or national origin.

An experimental animal tumor, originally induced by human adenovirus 12 and now known as MT1, grows readily when implanted in a BalbC mouse.

This BalbC mouse with a moderately large MT1 tumor was treated with poly I:C resulting in massive destruction and sloughing of tumor tissue.
Physicians Retraining Program Sponsors Project for Updating Medical Knowledge

In order to encourage the re-entry practice, the Division of Physician Fessions Education and Manpower project at the Pacific Medical Center in San Francisco.

The project offered a 6-to-12-month program under which physicians go through a "preceptorship-residency" type of retraining. This is designed to update knowledge of advances made since they became inactive.

Because of its success similar programs are being planned throughout the country.

In connection with this project the AMA's Department of Survey Research conducted a study to determine the reasons for the present inactivity of physicians under the age of 55 years.

Also surveyed were the number of inactive physicians who wish to return to practice via a retraining program.

About one-third (614) physicians of inactive physicians into medical Manpower, Bureau of Health Pro-Training, sponsored a retraining project that indicated an interest in taking part in retraining programs. Other physicians said they would like to participate in future programs when their present responsibilities have decreased.

More than half of the inactive physicians (55.5%) stopped their practices for "pregnancy or family reasons." Another 28 percent left for other than health reasons; many of this group were foreign graduates who had difficulty obtaining a license.

In the opinion of AMA research assistants, the 614 inactive physicians interested in re-entering medical practice would be equivalent to the number of men and women graduating from 12 U. S. medical schools, thus alleviating the shortage of physicians.

Dr. Kotin (left) greets Mrs. Wilbur J. Cohen before formal ceremony at the National Library of Medicine. With them are (from left): Dr. Martin M. Cummings, NLM Director; Dr. Marston, and Sec. Cohen.

INSTITUTE
(Continued from Page 1)

stitute is the only major NIH component located away from Bethesda.

In making the announcement, Secretary Cohen said, "Fundamental knowledge developed at NIEHS will provide a scientific base upon which measures can be developed to help control or prevent environmental health problems. This is a major priority for HEW."

"I expect that close liaison between the new Institute and Federal environmental control agencies—many of which are in HEW—will contribute significantly to meeting the Nation's needs and priorities in environmental health."

The Secretary said that only by determining the hazards to man's health within his total environment can "environmental crises of the future" be forestalled.

Established as an NIH division in November 1966, the environmental health facility is directed by Dr. Paul Kotin. Congress has appropriated $17.8 million for NIEHS for the current fiscal year.

Research Aims Identified

At the Institute's North Carolina research center, scientists are working to identify harmful environmental agents, to determine the mechanisms by which these agents affect an individual's health, and to develop data on the effects of long-term, low-level exposures.

NIEHS is also the hub for nationwide Federal support of basic research and research training in the environmental health sciences.

Paul Kelly Joins NLM Pub. Information Office

Paul Kelly has been appointed deputy chief of the Office of Public Information & Publications Management, National Library of Medicine.

He was previously with the Military Traffic Management and Terminal Service, Bailey's Crossroads, Va., where he served as deputy chief of the Information Office.

Mr. Kelly, a former Boston Post reporter, served as Information Officer for the U.S. Army Combat Developments Command at Ft. Belvoir prior to his retirement from the Army in 1968 as a Colonel.

Heads 'Stars and Stripes'

During his military career he was also Officer in Charge of Pacific STARS and STRIPES in Tokyo.

As a free lance writer, Mr. Kelly has had numerous articles published.

A native of Boston, Mass., he attended Holy Cross College and received a B.S. degree from the University of Maryland. He is also a graduate of the Army Command and General Staff College, Ft. Leavenworth, Kan.

Computerized Analysis for NCI Research Programs Now Being Used—First at NIH

A new type of computerized analysis, the only analysis of its kind at NIH, is used by the National Cancer Institute for its research programs.

The computerized analysis relates each research project to NCI's entire support program for cancer research.

The breakdown is based on 2,138 abstracts describing individual grants, contracts, transfers of funds and intramural programs.

These abstracts are grouped together into 227 research categories, 28 sub-areas, and 4 major areas of cancer research to form a "Multi-Level Analysis of Projects Supported by NCI in Fiscal Year 1968."

Final camera-ready copy of the 252 pages of abstracts with page numbers, table headings, underlined titles, and subtitles was computer-organized in 4.8 minutes.

It was printed from magnetic tape in 20 minutes of off-line printing on a high-speed, computer-driven printer in the Division of Computer Research and Technology.

Summary boxes showing the number of grants, contracts, and intramural projects and funding for each of the 227 research categories were also calculated and printed automatically by the computer.

The analysis was prepared by Dr. John H. Schneider, scientific director of the Office of the Associate Director for Program, for use by NCI program directors, and other staff members.

NIH employees outdid themselves last Christmas donating almost $5,000 to the NIH Patient Welfare Fund via the "Davis Plan." Here, Dr. Robert Q. Marston, NIH Director (right), and Dr. Jack Masur, Clinical Center Director (standing) review the record of exceptional generosity posted in 1968. Noting the sharp rise clearly indicated on the chart held by James B. Davis, Director of the Office of Administrative Services and initiator of the plan, Louise C. Anderson, chief of the CC Nursing Department, expresses appreciation of patients who will benefit from the fund throughout the year. Under the Davis Plan, NIH employees donate to the fund money normally spent in exchanging Christmas cards with other employees.