

the



Record

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

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NATIONAL INSTITUTES OF HEALTH

Foreign Company to Test Long-Term Contraceptive Mostly in United States

The Center for Population Research, National Institute of Child Health and Human Development, has awarded a \$1.2 million cost-sharing contract to Schering AG of Berlin/Bergkamen in the Federal Republic of Germany for the development of a long-acting injectable female contraceptive agent.

The contract calls for the testing of norethindrone enanthate—the parent compound of which is used in oral contraceptive agents—according to FDA guidelines. Schering AG holds the patent for the drug.

Norethindrone enanthate has demonstrated effectiveness in preventing pregnancy for up to 12 weeks following a single injection.

Side Effects Described

Side effects include breakthrough bleeding and spotting, with alteration of the menstrual cycle. These side effects appear to diminish with continued use of the contraceptive.

Although many animal and human investigations have already been conducted with norethindrone

(See ORAL DRUG, Page 8)



Dr. Teh-wei Hu, a Fogarty International Center visiting research professor, will discuss Health Care in the People's Republic of China: An Economist's First Hand Observations, on Wednesday, Aug. 27, at 10 a.m. in Bldg. 31, Conference Room 10. Professor Hu, department of economics, Pennsylvania State University, recently visited that country.

Computer System at CC Scheduled to Speed Up Medical Data Retrieval

A hospital-wide computerized medical information system, recently purchased for the Clinical Center, is scheduled for complete installation by mid-autumn of next year.

With the new system, laboratory tests, X-rays, drugs, and other hospital services, can be ordered rapidly, test results can be quickly reported to physicians, and information can be promptly included in patients' medical records—all via computer.

Advantages Cited

All of this information will be compiled in less time than is now possible, with less chance of human or mechanical error.

The computerized system will also make information more accessible for research and analysis. If an investigator wants to know the relationship between certain drugs and laboratory data on patients who have received those drugs, he will be able to direct a DCRT computer to search the new system's records for the necessary information.

At present, someone must be assigned to an extensive and time-consuming review of handwritten or typed medical records.

The system will be provided under contract by Technicon Medical Information Systems, Inc., at a total cost of up to \$8.8 million.

Open Meeting to Discuss Results of NTA Studies

The results of recent scientific studies on the general toxicity and carcinogenicity of nitrilotriacetic acid will be discussed on Wednesday, Aug. 13, at an open meeting on the NIH campus.

HEW Committee Is Sponsor

The meeting, sponsored by the HEW Committee to Coordinate Toxicology and Related Programs, will be held from 9:30 a.m. to 2:30 p.m. in Wilson Hall.

NTA is considered a substitute for phosphates used as building agents in detergents. Its use in the United States was discontinued 4 years ago.

The research results come from

Special Lab to Study Human and Animal Influenza Viruses Under NIAID Contract

A special influenza laboratory established by the National Institute of Allergy and Infectious Diseases in Memphis, Tenn., will serve as the focus for an international network of

investigators checking on influenza infections in animals and the relationship between animal and human influenza viruses, possibly explaining the mysterious periodic appearance of epidemic human influenza viruses.

The laboratory, supported for the first 2 years by an NIAID contract, will be under the direction of Dr. Robert G. Webster, a member of the laboratories of virology and immunology at St. Jude Children's Research Hospital.

Dr. Webster and his associates, through contacts in this country and around the world, will obtain influenza viruses found in domestic and wild animals.

By studying these viruses and corresponding blood samples from the same animals, the scientists hope to learn whether new pandemic viruses arise by the combination of human viruses with genetic traits from animal or bird strains or by mutation from existing human strains.

Earlier Studies Noted

Earlier studies have suggested that animals may be the source of new influenza viruses. Of special interest will be samples of animal and avian viruses from the Orient, where past experience has shown a particular likelihood for the emergence of new flu virus variants.

The Memphis laboratory, coordinated with the World Health Organization, will also serve as a central "antigen bank," retaining all identified samples in anticipation of the next pandemic.

Dr. Webster and his colleagues
(See VIRUS LAB, Page 7)

Dr. Joseph M. Bobbitt Dies; Leading Behavioral Scientist, Administrator



Dr. Joseph M. Bobbitt

Dr. Joseph M. Bobbitt, National Institute of Child Health and Human Development, died July 24 at the National Naval Medical Center after a stroke and heart attack.

Dr. Bobbitt was assistant director for behavioral sciences in NICHD's Office of Planning and Analysis. He served in various capacities as a staff advisor and as a consultant in the development of research and training programs in the behavioral sciences.

In 1966 Dr. Bobbitt retired as a scientist director in the U.S. Public Health Service Commissioned Corps, in which he had served 20 years. After his retirement he be-

(See DR. BOBBITT, Page 4)

one study conducted by the National Institute of Environmental Health Sciences, and two studies sponsored by the National Cancer Institute Bioassay Program.

Copies of the results can be obtained from Ms. Horne, NIEHS, Research Triangle Park, N.C. 27709. Telephone: (919) 549-8411, Ext. 3213; the NIH Press Office also has copies: (301) 496-2535.

Public attendance at the meeting will be limited to the space available. Those wishing to attend may notify Ms. Horne.

Summer Employees to Get Awards in August Ceremony

The sixth annual awards ceremony for summer employees will be held in the Masur Auditorium, on Friday, Aug. 22, at 10 a.m.

Summer employees, their supervisors, and all other NIH employees are invited.

the NIH Record

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Illustrated Talk on Rebirth of Donora, Town Covered By Fog In 1948, Given at Industrial Hygiene Meeting



DONORA THEN. The photo was taken soon after the smog of 1948.

Twenty-six years ago Donora, Pa., suffered a devastating smog which killed 20 people and left thousands sick.

Charles C. Shinn, visual communications project officer, Division of Research Services, and a member of the original Public Health Service team sent to investigate the October 1948 smog episode, recently revisited Donora.

The changes he saw and photographed were the subject of a visual presentation at the American Industrial Hygiene Conference in Minneapolis on June 4.

Mr. Shinn was art editor of the *PHS Industrial Hygiene Newsletter* at the time of the Donora episode. He designed the report, *Air Pollution in Donora, Pa.*, which was to become a landmark in its field.

Because the smog was too dense for aerial photographs, Mr. Shinn climbed the steep hills surrounding the town, walked through the steel, wire, and zinc mills, and sketched what he saw for a composite painting of the town.

The finished painting became the frontispiece for the *PHS* report.



DONORA NOW. The same location—26 years later.

The original now hangs in Donora's municipal building.

In his talk at the meeting, Mr. Shinn compared photos from 1949 with shots he made this past May from the same locations. The before-and-after photographs illustrate the progress which has been made.

Even more impressive, said Mr. Shinn, is the air of optimism that now prevails. "You needn't be an expert to know that the green grass, trees, flowers, and a recreation park have given Donora a new look, new hope, and a positive outlook on the future."

Movie, 'The Fat Fighters,' To Be Shown Aug. 27, 28

The Employee Health Service is showing a 20-minute film, "The Fat Fighters," for those who may have a weight problem.

Viewings are: 11:45 a.m. and 12:30 p.m., Wednesday, Aug. 27, Wilson Hall, Bldg. 1, and Thursday, Aug. 28, Conference Room D, Westwood Bldg.

Harold A. Kahn Retires; NEI Branch Chief Plans To Join Johns Hopkins



At his retirement party, Mr. Kahn shows the plaque he received from his NEI co-workers. He was lauded for his dedicated leadership. Mrs. Kahn was among the many guests who attended the party.

Harold A. Kahn, chief of the National Eye Institute's Office of Biometry and Epidemiology, retired on July 31 after 35 years of Federal service.

NEI Director Dr. Carl Kupfer commended Mr. Kahn for his "establishment and development of a unique and outstanding program in the biometry and epidemiology of ocular disease which helped open the way to a new era in clinical vision research."

A specialist in chronic disease epidemiology, Mr. Kahn concentrated on identifying risk factors associated with chronic diseases.

Came Here in 1950

He began his civil service career in 1940 with the U.S. Census Bureau. In 1950 he came to NIH as the second statistician to be employed by what was then the National Heart Institute.

During his tenure there, he was responsible for the statistics on cardiovascular epidemiologic studies among 10,000 male civil servants in Israel and 11,000 male residents of two Yugoslavian towns, as well as population studies in Honolulu, San Juan, and Framingham, Mass.

Mr. Kahn came to the National Eye Institute shortly after it was established because he said it represented another health area where risk factors were largely unknown.

"I wanted to do more than count the number of persons registered as legally blind. I wanted to do something that would help keep at least one person from becoming blind."

In 1971, he organized the NEI Office of Biometry and Epidemiology. Another of Mr. Kahn's important projects was instituting the Framingham Eye Study.

FAES Will Start Fall Courses on Sept. 15

Evening classes will begin Sept. 15 in the graduate and undergraduate program sponsored by the Foundation for Advanced Education in the Sciences on the NIH campus.

Course offerings include: behavioral and social sciences, biological sciences, chemistry, physics, modern languages, administration, mathematics, medicine, physiology, statistics, and courses of general interest.

The medical subspecialty review courses and certain others were recently approved for credit in the AMA programs for continuing medical education.

Tuition is \$22 per semester hour. Courses may be taken for credit or audit.

Students whose expenses will be paid by the Government should apply at once to their administrative offices for training assistance.

Registration is by mail through Aug. 22 and in person from Sept. 4-10.

Call FAES, Bldg. 10, Room B1-L101, Ext. 65272, to request a catalog including the fall schedule and registration card.

Toastmasters Club Lists Newly Elected Officers

The NIH Toastmasters Club, sponsored by the R&W Association and open to all NIH employees, recently elected officers to terms through December.

The new officers are: Jasper Cummings, president; George Mook, administrative vice president; Reginald Russell, educational vice president; Rosemary Thorwarth, secretary; James Pomeroy, treasurer, and Anne O'Connor, sergeant at arms.

For further information about the club, which meets Thursdays at noon in Conference Room 2 of the Bldg. 10 cafeteria, call Mr. Cummings, Ext. 65635.

Mr. Kahn received his B.S. degree in 1939 from the College of the City of New York, and his M.A. in 1949 from American University.

Last year he received the NIH Superior Service Award, and in 1957 was given the Surgeon General's Award for Outstanding Performance.

He has published extensively in the field of chronic disease epidemiology. He is a fellow of the American Statistical Association and the American Heart Association, and a member of the Society for Epidemiologic Research and the International Society for Geographical Ophthalmology.

In October, Mr. Kahn will join the department of epidemiology, Johns Hopkins University.

Dr. Gordon Tomkins Dies, Former NIH'er Famed For Hormone Research



Dr. Gordon M. Tomkins

Dr. Gordon M. Tomkins, 49, a pioneer in the field of hormone research, died on July 23 after brain surgery in New York City. Dr. Tomkins was a former chief of the Laboratory of Molecular Biology, National Institute of Arthritis, Metabolism, and Digestive Diseases.

After 14 years with NIH, Dr. Tomkins left in 1969 to become professor of biochemistry and vice chairman of the department of biochemistry at the University of California at San Francisco.

He was known for his research on how specific hormones carry the messages that regulate the functions of cells and organs in microbes, animals, and humans. His investigations resulted in 150 published papers on the hormonal regulation of mammalian cells.

In his latest paper, he theorized that the hormones worked through a "metabolic code." Scientists have pointed out that this code may be as important to biology when it is deciphered as the genetic code is to heredity. Much of Dr. Tomkins' work was in the field of hormones related to heart disease and cancer.

Studies Explained

His important research findings included discovering how the liver makes cholesterol; describing the way enzymes transform male sex hormones into chemicals responsible for determining sexual differences, and developing an experimental model for studying the effects of hormones on drug-resistant leukemia cells.

Dr. Tomkins received his B.A. in 1945 from the University of California at Los Angeles, and his M.D. in 1949 from Harvard University Medical School. In 1953 he received his Ph.D. from the University of California at Berkeley.

Recently, he had served as a visiting professor at Cornell University Medical School.

In 1966 Dr. Tomkins won the Biological Sciences Award present-

Anyone for Sailing Wide Atlantic Alone? Heed Stanley Jablonski, He Crossed Twice

When Stanley Jablonski wants to get away from it all, he crosses the Atlantic in a sailboat. He is both captain and first mate—in fact he's the entire crew.

In his work-a-day life, Mr. Jablonski heads the Index Section, National Library of Medicine. That office analyzes medical literature and provides indexing for MEDLARS—NLM's computerized biomedical bibliographic system.

He has been with NLM for 26 years. When he first joined, it was named the Army Medical Library; then it was renamed the Armed Forces Medical Library. In 1962 the Library moved to the campus as the National Library of Medicine, and in 1969 it became an NIH component.

During World War II, Mr. Jablonski was in the U.S. Merchant Marine.

"The ships were somewhat larger than what I sail now. We were part of the Atlantic convoy delivering materiel to our Western allies. I have been around boats nearly all my life. I have sailed since I was



He made the dock. The photo was taken on May 21, the day before Mr. Jablonski sailed from Annapolis. He spent the day readying his boat for the long haul.

annually by the Washington Academy of Sciences. He was recognized for his discovery of a mechanism whereby hormones directly affect the physical structure of enzymes.

In 1968 Dr. Tomkins delivered the 40th NIH Lecture on the topic, Control of Gene Activity in Higher Organisms.

Dr. Tomkins was also a classical and jazz musician and while in college had played the saxophone with bands led by Stan Kenton and Charlie Barnet.

He is survived by his wife, Millicent; two daughters, Leslie and Tanya, and his mother, Jean Tomkins of Los Angeles.

A Gordon M. Tomkins lecture-ship has been established at the university's medical school. Contributions may be sent to the Regents of the University of California, Department of Biochemistry and Biophysics, Room 964-S, UCSF, San Francisco, Calif. 94143.



Now he is about to leave Little Creek, Va. Soon he will run up the sails, set his course, and put out to sea.

a child."

He first sailed across the Atlantic by himself in 1963. He bought the boat in Poland and he sailed it back to the U.S. It was a wooden boat with sails and auxiliary motor, and he christened it *Amethyst*.

He used the motor to get in and out of harbor and to charge batteries for electricity for radios and lights. The sailing distance to the U.S. was over 7,000 miles. From Poland he sailed about 1,200 miles before reaching Plymouth, England, for the final outfitting of supplies.

"You have to do everything you want to do; I had to have water, kerosene for lamps, fresh eggs, vegetables, bread, it's the last chance."

The first stop from Plymouth was the Canary Islands — from there—Norfolk, Va.

"I was out on the ocean by myself for 45 days."

"What happened?" he was asked. "Nothing, just sailing, the usual thing. Nothing that you wouldn't expect. You stay busy. There's a great deal of doing during sailing; housekeeping, washing, cooking, cleaning, the usual thing you would do in an apartment; it clutters up.

THIS Was Different

This last voyage was different. Much happened.

He started from Annapolis this past May 22 in a Carter 33 racing-cruising sailboat named *Storm Petrel*. It lived up to its name.

Mr. Jablonski had planned to sail the great circle navigation route—following the Gulf Stream to south of Newfoundland. From there to the northern part of Scotland and around Scotland to Copenhagen, the final stop. But the best laid plans—

"That type of boat is capable of crossing the Atlantic in about 3 weeks under normal conditions

when you have predominantly westerly winds.

"This year the weather pattern was different. I spent one week in almost total calms near the U.S. coast. I sailed from calms to gales south of Newfoundland, and I lost the self-steering apparatus. I sat by the tiller and sailed the boat for Plymouth instead. You almost have to learn the lost art of steering with the sails the way the old sailors used to do."

Sleep was sporadic. Mostly, he just "flopped down on a wet bunk wearing foul weather clothing and a safety harness to be ready for any emergency." In sailors' parlance, a dry bunk is one properly made up with sheets and blankets. On this voyage a well-made bunk was not for him.

Calms! Storms! Squalls!

"I hit a curious combination of calms, storms, and very strong squalls. It took 46 days, which is more than twice the intended time. The average daily run of a new boat is 180-190 miles a day. There were only 3 days that I reached 160 miles, and out of 46 days I had 28 days in which there were at least 2 hours of calm.

"My annual leave was exhausted and after I reached Plymouth I had to return home—by plane, of course.

Was he discouraged? Would he cross the Atlantic by himself again? The answer to the first question was "No," to the second, "Yes."

"I'm a spontaneous type of sailor. If the conditions are right, if I have the time and the boat I can afford, then I will sail again.

Solved Own Problems

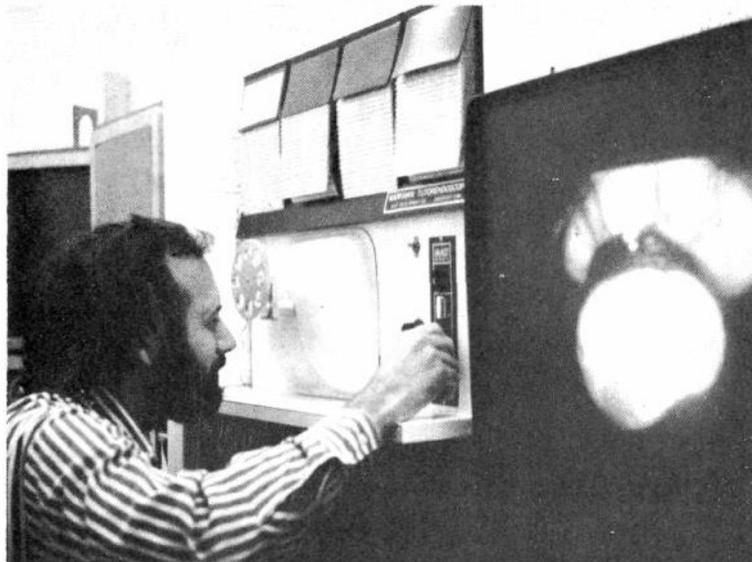
"I go because I like sailing, I like to do things on my own without advisory committees, without procedural manuals, and without written reports. I had problems, but I took care of them all by myself."

On this last venture, Mr. Jablonski had no time for reading, but on a lone voyage when it's smooth sailing, the usually erudite Mr. Jablonski leaves the deep tomes for home and office and turns to hammock literature—mostly mysteries.

"I don't read heavy literature at sea. Anything that is serious enough, that you might wish to discuss with somebody else—well, it's a good idea to stay away from that sort of reading."



NLM Displays Tutorendoscope; AV Aid Teaches Proctoscopy, Lesion Diagnosis



The Tutorendoscope permits simultaneous viewing of slides through a simulated proctosigmoidoscope and on an 18-inch square screen. Numbers on the slides, showing normal and pathologic conditions, correspond with index cards giving full clinical details, which may be detached from the unit for testing.

The Markman Tutorendoscope, recently placed on display in the National Library of Medicine reading room, enables a student to peer through a simulated proctosigmoidoscope equipped with a projector that allows viewing of 160 slides of colon and rectal lesions.

The Tutorendoscope permits medical students and physicians to see and study—in the absence of patients—the appearance of both normal and pathologic conditions of the anus, rectum, and colon, all within the rigid tubular environment of a sigmoidoscope.

It permits economical, concentrated learning in minimal time, under conditions closely simulating clinical practice.

Each slide is numbered to correspond with an index card giving information on age, sex, symptoms, and depth of penetration at the time the lesion was photographed.

The endoscopic unit, with its tubular projector, can be synchronized with a projection theatre unit to provide 18- by 18-inch views of the slide for more detailed visibility or for multiple viewing.

The advantages of using the Tutorendoscope include its availability at any time without interfering with schedules of patients, physician-instructors, or students, and elimination of embarrassment and discomfort to patients.

Variety of Lesions Shown

It also offers a wide variety of lesions for study, compared to the few seen clinically in a short training period, and practice in exercising depth perception.

The endoscopic viewer, which can be adapted to other types of endoscopy, such as bronchoscopy, is equipped with a dioptrimeter which provides individual visual correction to the 25- to 35-mm distance neces-

sary for sigmoidoscopy.

The self-contained teaching tool, which can also be used for classroom teaching, was developed by Dr. H. David Markman of the department of surgery, Albert Einstein College of Medicine.

Dr. Markman has also developed a procto-trainer with a maneuverable flexible colon that can simulate the variety of anatomical positions found in clinical practice.

Additional Aid Developed

It can be used to train students to perform passage of the proctosigmoidoscope and the fiberoptic colonoscope without harm or discomfort to the patient.

Development of the Tutorendoscope was supported by the National Cancer Institute, the American Association for Cancer Education, and the New York City Division of the American Cancer Society.

Cancer of the colon and rectum is the most frequently occurring internal cancer that is common to both sexes. More than 79,000 Americans developed colon and rectum cancer in 1973; approximately 47,000 died of their disease.

Almost three out of four of these patients might have been saved by early diagnosis, including a proctosigmoidoscopic examination, and by prompt treatment.

Although medical educators have been aware of the necessity for teaching proctoscopy, the difficulties of instructing each student on an individual basis include problems of time, effort, scheduling, patient

DR. BOBBITT

(Continued from Page 1)

came executive director of the Joint Commission on Mental Health of Children, a specially-created Government commission.

The following year, he received the Harold M. Hildreth Memorial Award in Public Service from the American Psychological Association.

Previous Posts Held

From 1964 to 1966 he served as acting associate director for planning and assistant director for manpower development in NICHHD. Previously, from 1946 to 1964, he held several posts in the National Institute of Mental Health, including those as chief of the Professional Services Branch and as associate director for program development.

During World War II Dr. Bobbitt was a psychologist in the U.S. Coast Guard Academy, and from 1937 to 1942 was assistant professor of psychology at Michigan State College.

Dr. Bobbitt received B.A. and M.A. degrees from the University of Southern California and was awarded his doctorate in psychology from Northwestern University in 1937.

He is survived by his wife, Katherine Long, of the home, 9411 Corsica Drive, Bethesda, Md.; and his son, Bruce, a graduate student in psychology at Cornell University.

Memorials Planned

A private burial ceremony was held at Gettysburg National Cemetery.

Memorial contributions may be made to the Joseph M. Bobbitt Graduate Fellowship Fund, Department of Human Development and Family Studies, MVR Hall, Cornell University, Ithaca, N.Y. 14853.

A memorial service will be held in the fall.

Federal After-Hours Program Holds Registration Aug. 26-27

The Federal After-Hours Education Program will hold registration for the fall semester in Conference Rooms A, B, and D—just off the lobby—in the Department of Commerce Bldg., 14th Street and Constitution Avenue, N.W., from 10 a.m. to 2:30 p.m. on Tuesday, Aug. 26, and Wednesday, Aug. 27.

Fall classes will begin Sept. 11 and continue through Dec. 15.

For further information, contact Robert W. Stewart, Jr., College of General Studies, George Washington University at 676-7018.

participation, and availability of a variety of lesions.

Most doctors do not examine the lower bowel until the patient has symptoms of bleeding or change in bowel habits.

Safety Tips for NIH



CHEMICAL WASTE DISPOSAL

In recent months some NIH employees have been unnecessarily exposed to contact and inhalation of chemicals which were discarded in improper waste receptacles.

Laboratory personnel are reminded to dispose of unwanted chemicals and their containers in a receptacle set aside and designated for chemicals only.

Do not mix chemical waste and paper or other rubbish.

Solvents should be disposed of in solvent safety cans which are available from the NIH Fire Department.

Fire Dept. Will Pick Up

Call the NIH Fire Department, Ext. 62372, to arrange for pick-up of chemical wastes.

By following these simple procedures, laboratory personnel can assure the safe disposal of chemicals and prevent needless injuries to themselves and others.

Sailing Club Plans Picnic In Annapolis on Aug. 17

The annual NIH Sailing Club picnic will be held at Truxton Park, Spa Creek, Annapolis, on Sunday, Aug. 17, from noon to dusk.

Boats will be available for free sailing. Bring food and sports equipment for volleyball, softball, badminton, chess, checkers, or cards. Drinks and chips will be provided.

For reservations send \$1.50 for each adult and 50 cents per child to Larry Bisnett, Westwood Bldg., Rm. 1A16, by Aug. 14.

For further information and directions, call Mr. Bisnett, Ext. 67-864, or 762-3685 evenings.

Admission may also be purchased at the park. Interested non-members are welcome. Aug. 24 will be the rain date.

Dr. Konrad Chang Hsu Gives Aug. 20 Talk; Visited China in May

Dr. Konrad Chang Hsu, Columbia University professor emeritus of microbiology, will give a slide-illustrated talk, *A Visit to China in May 1975*, in Wilson Hall, Bldg. 1, on Wednesday, Aug. 20, at noon. NIH employees are invited to attend.

Dr. Hsu is one of the few American basic scientists who have toured the Peoples' Republic of China since 1972.

Research Supported by NCI

Dr. John T. Kalberer, Jr., special assistant to the director of NCI's Division of Cancer Research Resources and Centers, will introduce Dr. Hsu.

Most of Dr. Hsu's research in diseases resulting from immune reactions has been supported by grants from the U.S. Public Health



This past spring, Dr. Hsu visited well-known hospitals and research institutes in Peking, Nanking, Shanghai, Soochow, and Canton.

Service, including the National Cancer Institute.

He is currently engaged in collaborative studies with Drs. Robert J. Huebner and Berge Hampar of the NCI Viral Carcinogenesis Branch.

A graduate of St. John's University in Shanghai, Dr. Hsu received his Ph.D. in chemistry from Columbia University in 1924.

He returned to Shanghai as professor of chemistry and dean of the College of Science at Great China University from 1924 to 1926 and served in various Chinese Government posts until 1937.

From 1938 to 1954 Dr. Hsu engaged in the import-export business. He joined the department of microbiology of the College of Physicians and Surgeons, Columbia University, in 1954 and has published over 100 biomedical articles. He became an American citizen in 1962.

The common sense is that which judges the things given to it by the other senses.—Leonardo da Vinci.

SV-40 Study Provides First Evidence Viral Gene Region 'A' May Cause Cancer

Molecular study of virus-caused cancer of experimental animals has shown, for the first time, that a virus gene is needed not only to initiate the cancerous process in previously normal cells, but must be continually present for the cancer cells to continue growing.

Research at the National Institute of Arthritis, Metabolism, and Digestive Diseases provides concrete evidence that virus genes become incorporated into a normal cell's gene profile and then direct abnormal reproduction of the gene material called DNA.

The study pinpoints at a molecular level the region of a virus which actually initiates and maintains a cancerous change.

Drs. Robert G. Martin, Janice Y. Chou, Jesus Avila, and Rein Saral investigated the cancer-causing potential of simian virus 40 (SV-40), first isolated from monkeys and known to cause cancer when inoculated into newborn hamsters.

The NIAMDD scientists focused attention on a number of SV-40 viruses that are heat sensitive. All were SV-40 mutant viruses able to grow in laboratory-cultured monkey cells at 33°C (81.4°F), but unable to grow and make new virus particles in monkey cells at warmer temperatures, starting at 40°C (104°F).

Circular Structure Studied

These mutant viruses, like other SV-40's, usually exist as a circle of double-stranded genetic material, or DNA. The first observation of this circular structure was reported by Drs. R. Weil and J. Vinograd at the California Institute of Technology in 1963.

SV-40's circular DNA is now known to consist of five gene regions, termed A, B, C, BC, and D, according to the sequence in which they were identified.

To determine the role of these various gene regions, Dr. Martin and colleagues studied events occurring when SV-40 viruses defective at different gene regions were exposed to high temperatures.

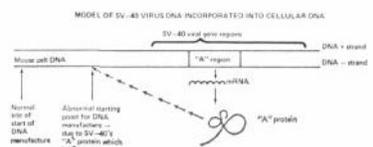
Faulty 'A' Proteins Are Key

They found that only the "A" mutants did not cause a cancerous change when inoculated into hamster cells at 40°C. Inability of faulty "A" protein to start DNA replication was first demonstrated in 1972 at Case Western Reserve University by Dr. Peter Tegtmeier, who also postulated that the "A" region was necessary to start cancerous changes.

The finding was also consistent with a "Replicon" concept of European scientists F. Jacob, S. Brenner, and F. Cuzin, who proposed in 1963 that DNA reproduction always starts at the same point on a DNA molecule, whenever a specific protein, the "initiator protein," travels to that site.

At 40°C the "A" mutants made a defective SV-40 initiator protein and so were unable to start viral DNA manufacture at the normal initiation site.

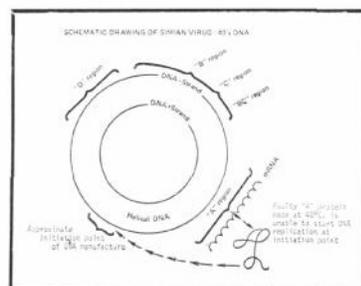
In additional experiments, Dr. Martin and associates discovered that after SV-40's DNA was incorporated into the DNA of hamster cells, the "A" region was the only area of viral DNA whose functioning was essential to perpetuate the cancerous change.



The "A" region is thus marked as the key site of SV-40's ability to initiate viral DNA synthesis and to maintain malignant transformation of the next generation of cells.

The NIH scientists propose that the expression of normal "A" gene function is not fully autonomous, however, but is determined by the place where it is incorporated into the cell's DNA.

For example, if SV-40 is integrated into cellular DNA active only in the period immediately prior to the production of new cells, there would be insufficient time for the cancerous change to



occur before cell division.

By contrast, if the virus is integrated into cellular DNA that is active following cell division, it would be continually stimulated by the "A" gene it harbors to manufacture abnormal DNA, maintaining the cancerous state.

Although there is no evidence that the ubiquitous SV-40 is a factor in causing human cancer, the scientists describe their findings as potentially valuable through arousing interest in identifying "initiator proteins" in human cancer and in conditions that are conducive to various virus diseases among humans.

The NIH findings appeared in the March issue of the *Journal of Virology*, and in the proceedings of a Cold Spring Harbor Symposium.

Other Research Results Similar

Dr. Martin notes that other laboratories have demonstrated similar results—notably at Baylor University by Drs. Janet Butel and Joan Brugge; at Case Western Reserve University by Dr. Peter Tegtmeier; at Cold Spring Harbor Laboratory by Drs. Mary Osborn and Klaus Weber; and at Tottori University School of Medicine, Japan, by G. Kimura.



THE INVADERS recently received trophies as the NIH R&W basketball champions of the 1974-75 regular season and playoffs. Standing (l to r) are: Robert Bager, NIAMDD; Clyde Colmes, Jr., DCRT; Sandy Freeman, DR5; Leonard Williams, OD, and player-coach Edward Radden, DR5. Jerry Winston, DRG, and Ray Danner, DCRT, kneel. Roy Stewart, NIMH, was not present. During the last 4 years, the Invaders have been season champions over 7 other teams and have also won the playoffs for 3 of the 4 years. They compiled a record of 68 wins and 4 losses.



AN OCCASION FOR SMILES—Dr. Donald S. Fredrickson, NIH Director, receives his Recreation and Welfare Association membership card from R&W officers (l to r): general manager James B. Davis, president Edward S. Condon, and second vice president Ignacio A. Smith, Jr.

Agreement at Leningrad: US-USSR to Exchange Data on Breast Cancer

The U.S. and U.S.S.R. agreed recently to launch joint studies on early detection of breast cancer, treatment efficacy, and rehabilitation.

The collaborative studies were among agreements reached at the Second U.S.-U.S.S.R. Working Meeting on Problem Area No. 6—Cancer Control and Cancer Centers, held in Leningrad.

The U.S. co-chairman of the meeting was Dr. Diane J. Fink, director of NCI's Division of Cancer Control and Rehabilitation.

Dr. N. N. Napalkov, director of the N. N. Petrov Research Institute, Leningrad, served as the Soviet Union co-chairman.

Protocols were established to develop collaborative studies to determine the most effective means of early detection of breast cancer, including a combination of clinical examination, X-ray mammography, and thermography to examine women of age 35 and older.

To study the rehabilitation of patients with breast cancer, the project will include physical restoration and psychologic support during the patient's stay and after discharge.

These studies will serve as prototypes for future collaboration on other high-frequency cancers such as lung and colon-rectum.

Group Reviews Problems

The Working Group also reviewed problems related to the evaluation of treatment results. The countries' coding of information on breast cancer was found to be compatible.

Prior to the main study, both countries will exchange rules and procedures for abstracting and coding data.

In phase I, to begin in early 1976, each country will collect data, determine the feasibility of exchanging histologic material, cross-review the material, and exchange abstracts from a minimum of breast cancer cases to ensure that coding procedures are identical.

Phase II will be an exchange at 6-month intervals of tabulated treatment data. Phase III will be an information exchange on follow-up after a minimum of 5 years.

Other agreements emphasized the role of cancer centers in cancer control activities and on the organization of cancer research.

The third meeting on Cancer Control and Cancer Centers will be held in the United States in 1976.

firm before coming to NIH.

He is survived by his wife, Emilie, and four children, all of the home address; his parents, and a brother, all of Fairfax.

Jim Fuller, Financial Mgmt. Officer, NIAID, Retires From Gov't

Martin J. (Jim) Fuller, Jr., financial management officer for the National Institute of Allergy and Infectious Diseases, retired on the last day of July after 33 years of Federal service.

He joined the Institute in 1956 as a budget analyst and was appointed to his present position in 1968.

He has been responsible for the fiscal management of the Institute's research program, serving as technical expert on the financial aspects of program plans and policies.

As financial advisor, he supervised and directed the preparation of the Institute's budget and maintained the accounting systems which provided fiscal data for use in making management decisions.

Before coming to NIH, Mr. Fuller worked for the USPHS's Bureau of Medical Services from 1946 to 1955. In 1952 he was assigned to the Bureau's Division of Foreign Quarantine in Paris. He was posted there for 2 years.

Earlier in his career, Mr. Fuller



Mr. Fuller, who has been here since 1956, plans to go on a second trip to South Africa and a skiing trip to Quebec.

worked for the U.S. Post Office Department, and spent 3 years—1942 to 1945—in the military service in Puerto Rico with the U.S. Army Corps of Engineers.

During his career, Mr. Fuller also attended Strayer College of Accountancy and took courses in contracting and budgeting at NIH, the Civil Service Commission, and the Department of Agriculture Graduate School.

His retirement plans include a trip to South Africa—his second time there. He also plans to hunt and fish, and go skiing in Quebec with his wife Joan, an administrative assistant in NHL's Surgery Branch.

More than 80 of Mr. Fuller's friends and associates attended a buffet luncheon in his honor at the Lakewood Country Club on Tuesday, July 29, where he was presented with several retirement gifts.

NIH Visiting Scientists Program Participants

7/18—Dr. Anshumali Chaudhari, India, Pharmacology Branch. Sponsor: Dr. Thomas E. Eling, NIEHS, Research Triangle Park, N.C.

7/20—Dr. Ulf R. Rapp, Germany, Viral Leukemia and Lymphoma Branch. Sponsor: Dr. George J. Todaro, NCI, Bg. 37, Rm. 1B18.

7/20—Dr. Maharaj K. Sahib, India, Laboratory of Kidney and Electrolyte Metabolism. Sponsor: Dr. Joseph Handler, NHLI, Bg. 10, Rm. 6N311.

7/20—Dr. Tsuneyuki Yamazaki, Japan, Population Genetics and Epidemiology. Sponsor: Dr. Charles Langley, NIEHS, Research Triangle Park, N.C.

7/21—Dr. M. P. Jacob Anandaraj, India, Laboratory of Toxicology. Sponsor: Dr. David Cooney, NCI, Bg. 37, Rm. 5B22.

7/21—Dr. Nga Yen Nguyen, Vietnam, Reproduction Research Branch. Sponsor: Dr. D. Lynn Loriaux, NICHD, Bg. 10, Rm. 10B09.

7/22—Dr. Menashe Ben-David, Israel, Reproduction Research Branch. Sponsor: Dr. Andreas Chrambach, NICHD, Bg. 10, Rm. 12N210.

7/25—Dr. Marcin Draminski, Poland, Laboratory of Molecular Aging. Sponsor: Dr. Josef Pitha, NIA, Gerontology Research Center, Baltimore.

7/25—Dr. Katsuhiko Inoue, Japan, Laboratory of Experimental Pathology. Sponsor: Dr. Lois Tice, NIAMDD, Bg. 4, Rm. 434.

7/27—Dr. Enok A. Tjotta, Norway, Viral Leukemia and Lymphoma Branch. Sponsor: Dr. George J. Todaro, NCI, Bg. 37, Rm. 1B18.

8/1—Dr. Makoto Inaba, Japan, Drug Research and Development. Sponsor: Dr. Abraham Goldin, NCI, Bg. 37, Rm. 5E20.

Burnell A. Ferguson, Systems Analyst, Dies

Burnell A. (Bon) Ferguson, a systems analyst for the National Institute of Neurological and Communicative Disorders and Stroke since 1970, died July 28 at his Kensington home after a heart attack. He was 50 years old.

In 1972, after 2 years in the NINCDS Office of Biometry's Systems Design and Data Processing Section, Mr. Ferguson joined the Institute's new Section for Production of Data Analysis in the Perinatal Research Branch.

At the time of his death, he was involved in implementing that Branch's plan for analyzing and interpreting the massive bank of data gathered on 58,000 pregnancies and the offspring who were followed for an 8-year period.

Tasks like this were not new to him—he had been in the data processing field in the Washington area since 1946.

Born in Tracy, Minn., Mr. Ferguson spent his childhood here in Washington, and attended the George Washington and American Universities.

From 1942 to 1946 he served in the U.S. Army, operating a mobile machine records unit in France in 1944 and 1945. He was in the Army Reserve Corps from 1953 to 1961.

In 1946 Mr. Ferguson became a machine records field liaison officer with the supply division of the Veterans Administration, and 2 years later became project planner for IBM equipment in the office of the Assistant Chief of Staff for Logistics at the Pentagon.

From 1952 to 1955, he was machine records procedures examiner for the Army Chief Chemical Officer. He then was vice president for operations in a private consulting

Study to Analyze Data On Problems Resulting From the Use of IUDs

The National Institute of Child Health and Human Development has announced a contract with George Washington University for a study on the problems resulting from the use of intrauterine contraceptive devices.

The University's department of biostatistics will collect, validate, and analyze data from participating clinical facilities.

Although intrauterine devices of several designs are used as a birth control method by more than three million women in the U.S., the precise rates of major and minor complications are not well established.

Minor complications are device expulsion, discomfort, and bleeding. The more serious effects include pelvic inflammatory disease, hemorrhage, uterine perforation, ectopic pregnancy, and septic second-trimester abortion.

Dr. Heinz Berendes said that the results of the study are intended to assess the relative risks of severe complications that may be caused by each type of IUD used in the U.S. Dr. Berendes is chief, Contraceptive Evaluation Branch, Center for Population Research.

The clinical facilities will engage in case-controlled investigations of IUD-related side effects among women who are hospitalized because of complications.

Data will be examined from approximately 35,000 women, including one-third IUD users and two-thirds controls. This collaborative study is expected to run for a 30-month period; first results are expected in about 2 years.

VIRUS LAB

(Continued from Page 1)

will attempt to answer the following questions:

- Are there any previously undetected, but presently existing bird or mammal flu viruses?
 - How often are such new flu viruses introduced into animal groups?
 - Are these flu viruses transmitted between animal species under natural conditions?
 - How important are the wild versus domestic avian species as reservoirs of influenza viruses?
 - What effects do ecological events or climatic, environmental, or geographic conditions have on the epidemiology of flu infections among selected species?
 - What association is there between the next human pandemic strain of influenza virus and animal sources in the geographic area where the new strain first appears?
- Dr. Franklin J. Tyeryar of the Infectious Diseases Branch is the NIAID project officer for the contract, which is expected to take 5 years to complete.

7 Scientists Become Grants Associates; G. A. Panel Constantly Evaluates Program



Dr. Badman



Dr. Barbosa



Dr. Gross



Dr. Kimes



Dr. Orlans



Dr. Sandberg



Dr. Steinberg

Seven scientists have been selected for the Grants Associates Program instituted by NIH 13 years ago to train scientist-administrators.

This year's Grants Associates are: Drs. David G. Badman, Luis H. Barbosa, Michael A. Gross, Brian W. Kimes, F. Barbara Orlans, Howard E. Sandberg, and George M. Steinberg.

Dr. Badman was formerly professor of biology at Kalamazoo College. He received the Ph.D. degree in zoology from the University of Florida, Gainesville, in 1969.

Received Degree in Brazil

Dr. Barbosa, who has been with the Infectious Diseases Branch of the National Institute of Neurological and Communicative Disorders and Stroke, received the D.V.M. degree in 1958 from the National School of Veterinary Medicine, Rio de Janeiro, Brazil.

Dr. Gross, a research chemist from the Bureau of Biologics, Food and Drug Administration, received the Ph.D. degree in organic chemistry from Temple University.

Dr. Kimes, a research associate with the Salk Institute in San Diego, received the Ph.D. degree in biochemistry from the University of Washington, Seattle, in 1971.

Dr. Orlans was a staff scientist with the George Washington University Medical Center. She received the Ph.D. degree in physiology from London University in 1956.

Dr. Sandberg, assistant professor of biophysics and physics at Washington State University, received the Ph.D. degree in molecular biophysics from Yale University in 1966.

Dr. Steinberg was chairman of the Biochemistry Branch at Edgewood Arsenal. He received a Ph.D. degree in organic chemistry from Purdue University.

Since its inception, the Grants Associates Program has graduated 97 scientist-administrators, of whom 80 remain in Federal service, and 77 of these are in the Pub-

lic Health Service. At NIH, Grants Associates graduates hold positions within all Institutes—except the recent Institute on Aging—and in DRG and DRR.

While the program is an established part of NIH and is administered by the Division of Research Grants, it is constantly evaluated for effectiveness by the Grants Associates Board, a 17-member panel which directs, makes policy, and reviews the candidacy of eligible applicants for the program.

Responsibility for the G.A. Board has been assumed by Dr. Thomas Malone, NIH Associate Director for Extramural Research and Training, who was one of the first Grants Associates.

Board Functions Described

Board members, in addition to their executive and advisory functions, also serve as preceptors to Grants Associates; some members are former G.A.'s themselves.

The Board has representatives from most of the Institutes and Divisions of NIH as well as from ADAMHA and HRA.

Members, who are appointed by Dr. Malone, serve a 1- to 3-year term.

New members of the Board this year are: Dr. John Mathis, program manager, Division of Lung Diseases, NHLI; Dr. Carl Douglass, deputy director, DRG; Dr. Kenneth Hisoaka, deputy associate director for extramural programs, NIDR, and Dr. Wilford Nusser, chief, Scientific Programs Branch, NEI.

The new chairperson is Dr. William Bennett, chief, Institutional Resources Branch, Division of Med-

Baylor Team Will Study 4 Venereal Infections Under NIAID Grant

A group of scientists led by Dr. John M. Knox at the Baylor College of Medicine in Houston, Tex., will conduct research under a program-project grant awarded by the National Institute of Allergy and Infectious Diseases.

The first year of research—on gonorrhea, syphilis, group B streptococcal infections, and herpes simplex virus infections of the genital tract—is part of NIAID's special research grants program initiated in 1974 to facilitate multidisciplinary approaches to problems of sexually transmitted diseases.

Currently NIAID invests nearly \$3 million in VD research each year.

Dr. Knox, an authority on venereal disease, will coordinate studies in the departments of medicine, dermatology, microbiology, virology, and epidemiology at Baylor with the help of the Houston City Health Department. Research will include:

- Study of cellular immunity in rabbits infected with syphilis in order to gain better insight into the mechanisms by which the human body responds to syphilis infection.
- Exploration of the theory that gonorrhea may be spread through the male and female reproductive systems by sperm cells to which gonococci, the bacteria causing gonorrhea, are believed to attach by microscopic hair-like appendages on the surface of certain gonococci.
- Investigation of the relationship between the presence of one bacterium, group B streptococcus, in the vaginas of women and the occurrence of illness in newborns.
- Development of improved methods of prevention and treatment of herpes simplex virus type 2 genital infections, an increasingly frequent problem.

The Baylor group will study certain proteins associated with herpes simplex viruses to learn whether these proteins could be used as a vaccine against later infection.

The study will also evaluate photodynamic treatment, one of the few therapies available for herpes infections.

Some scientists have suggested that photodynamic treatment of herpes simplex could itself lead to the formation of cancerous lesions. Therefore, the NIAID grant provides for a long-term followup of treated patients to rule out the risk of malignant change.

icine, BHRD, HRA, who succeeds Dr. Zora Griffio, OD.

Dr. Anthony Rene, program officer, Division of Blood Diseases and Resources, NHLI, and a recent Grants Associates graduate, is serving in the capacity of Grants Associates liaison.



WHAT'S GOING ON BEHIND THE FENCE? Metro construction workers recently boarded up the excavation site at the corner of South Drive and Rockville Pike, opposite the Navy Medical Center entrance. By 1980 when the

subway is scheduled to be running, bus stops will be a thing of the past for many NIH commuters. Inside the fence, workers are starting to sink the tunnel construction shaft which will later be enlarged to serve as a station.

Seminar Series Planned For Grants Associates And Other Scientists

A weekly Seminar Series conducted by the Grants Associates Program for staff members concerned with extramural activities is tentatively planned to start on Monday mornings early in October.

The Series is limited to 20 persons—approximately equal numbers of Grants Associates and other scientists—extramural, collaborative, and intramural.

Participants will discuss such topics as: the Federal Government—Executive Branch, HEW, NIH, other agencies, the legislative process, the budget; Policy and Ethical Considerations in Biomedical and Behavioral Research, and NIH Extramural and Collaborative Programs.

Also, the Development of Supervisory Knowledge and Skills; Program Planning and Evaluation, and Science in the Context of Public Policy.

Applicants should forward a Form 350, DHEW Training Nomination and Authorization, through their immediate supervisors to B/I/D Directors.

Nominations Limited

The Directors, who make the final nominations, should limit the number of nominees to no more than two or three for each B/I/D.

They should send these nominations—which must be received no later than close of business, Sept. 19—to the Grants Associates Office, Westwood Bldg., Room 2A-03.

Dr. Thomas E. Malone, NIH Associate Director for Extramural Research and Training, will make the selection from among the Directors' nominations.

A record of the number of training hours in the Seminar Series—a minimum of 120—will be placed in the personnel files of those accepted. A request to participate implies a commitment to regular attendance through the entire series.

Dr. Minna Appointed Acting Chief, NCI-VA Med. Oncology Branch

Dr. John D. Minna has been appointed acting chief of the NCI-VA Medical Oncology Branch.

He replaces Dr. Oleg Selawry, who recently accepted a position at the University of Miami School of Medicine.



Dr. Minna

The NCI-VA Medical Oncology Branch conducts clinical studies of new anticancer drugs and the effect of combination therapy on lung, prostate, and head and neck cancer. Other studies involve human tumor cell kinetics, biology, genetics and virology.

Dr. Minna joined NIH in 1969 as a research associate in the National Heart and Lung Institute's Laboratory of Biochemical Genetics. In 1973 he became head of the laboratory's Section on Somatic Cell Genetics.

He received a B.A. degree from Stanford University in 1963 and an M.D. degree from Stanford Medical School in 1967.

Dr. Minna was a PHS predoctoral trainee in the Stanford Medical School's department of genetics from 1963-67.

Dr. Minna is a clinical assistant professor of medicine at Georgetown University Hospital and adjunct professor of genetics at George Washington University.

Through the use of cell hybridization techniques, Dr. Minna has contributed to the understanding of the genetics of cancer. He has also studied disseminated intravascular coagulation.

Dr. Minna is the author of 36 scientific publications.

For further information, contact A. Robert Polcari, executive secretary of the Grants Associates Program, Ext. 67501.

ORAL DRUG

(Continued from Page 1)

enanthane, additional studies must be undertaken to satisfy FDA requirements to market the drug in this country.

Most contract funds will be expended in the U.S. on animal safety studies and clinical trials.

The clinical studies will involve relatively small groups of women in California and Arizona. Metabolic products of the drug will be identified and their biological activity determined.

Drug safety studies in rats, beagles, and monkeys will be carried out for extended periods.

Studies to determine the mechanisms by which the drug produces its prolonged contraceptive effect will also be undertaken.

NCI Interviews Planned By Polish Science Writer

Dr. Wiktor Osiatynski of *Kultura*—Poland's largest weekly magazine—recently visited the National Cancer Institute after com-



Dr. Osiatynski (r) and Wojciech J. Bogusz, scientific and technological attache at the Polish Embassy, visited NCI's Office of International Affairs and talked with Dr. Joseph F. Saunders (l).

pleting a State Department fellowship in science writing at Stanford University.

After covering the U.S. space

Fall Computer Courses Listed in New Booklet

A booklet, *Computer Training Courses and Seminars, Fall Term 1975*, has recently been issued and is available at the Division of Computer Research and Technology.

The courses will be of interest to scientists, clinicians, administrators, and secretarial personnel as well as to computer specialists.

A new seminar, *Application of Time Series Analysis to Clinical Data*, will emphasize the analysis of serial measurements obtained from individual patients or normal volunteers during research studies.

The use of DCRT's IBM 370 computers—including programming languages (FORTRAN, PL/1 and CPS)—will also be taught.

Other seminars will include lectures on the mathematics of diffusion, introduction to biophysical techniques, and pattern recognition.

The brochure may be obtained from the Computer Center, Ext. 65-431. The deadline for applications is Aug. 27 or until classes are filled.

Julia Neel, Keypunch Supervisor, Retires After 18 Years at NIH

Julia Neel, supervisor of the keypunch unit, is retiring after 18 years of service in the Division of Computer Research and Technology and its predecessor, the Computation and Data Processing Branch, Division of Research Services.

Previously a keypunch operator for the Government Employees Insurance Company, she started work at NIH in May 1957, and became a supervisor 7 years ago.

Mrs. Neel is contemplating a cross-country trailer journey with her husband, who is also retired.

launching on July 15 and visiting M.D. Anderson Hospital and Tumor Institute in Texas, Dr. Osiatynski will return to NCI to interview researchers before returning to Poland to write about American biomedical advances.