

the NIH Record

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

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FILE COPY

NATIONAL INSTITUTES OF HEALTH

Noted Soviet Scientist, Dr. A. E. Braunstein, Lectures Here Friday

The noted Russian biochemist, Dr. A. E. Braunstein, Head of the Institute of Molecular Biology of the Soviet Academy of Sciences, will visit NIH next Friday, Sept. 19, to give a lecture on "Studies on the substrate specificities and catalytic properties of some pyridoxal phosphate dependent enzymes of cysteine metabolism."

The lecture will be given at 2 p.m. in Wilson Hall, Bldg. 1. NIH scientific staff is invited to attend.

Reception Planned

Prior to the lecture, Dr. Braunstein will be honored at a reception and buffet luncheon in the FIC International Visitors Center in Building 16A.

Heading the guest list at the luncheon are Dr. Robert Q. Marston, NIH Director, Dr. Robert W. Berliner, NIH Deputy Director for Science, and Dr. Milo D. Leavitt, Jr., FIC Director.

Dr. Philip Handler, President of

(See LECTURE, Page 8)

Dr. Mider Named NLM Acting Deputy Director

Dr. G. Burroughs Mider has been named Acting Deputy Director of the National Library of Medicine.

Dr. Mider, who had been Special Assistant to the Director for Medical Program Development and Evaluation since May 1968, replaces Scott Adams. Mr. Adams has been detailed to the National Academy of Sciences (see NIH Record, Sept. 3, 1969).



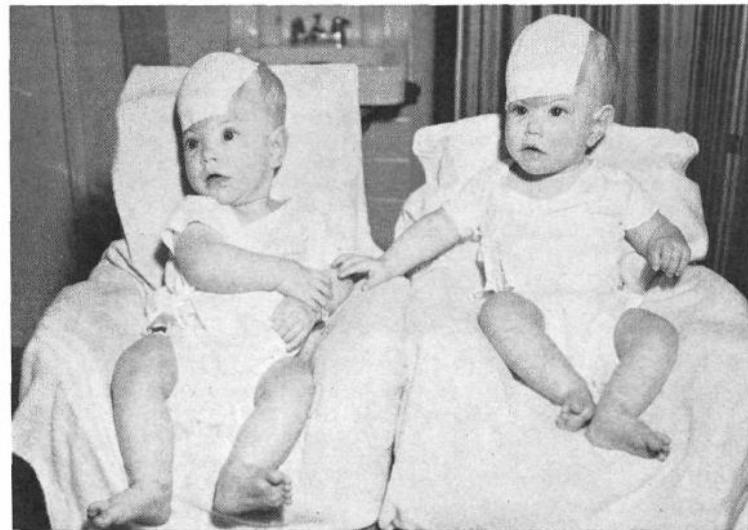
Dr. Mider

When making the announcement of Dr. Mider's appointment, Dr. Martin M. Cummings, NLM Director, said that Dr. Peter Olch, deputy chief of the History of Medicine Division, NLM, will assume additional duties as special assistant to Dr. Mider.

Dr. Mider is well known at NIH. Prior to his assignment at NLM, he had been NIH Director of Laboratories and Clinics from 1960 to

(See DR. MIDER, Page 6)

Bunton Twins Again Celebrate Birthday Here, First Came in '56, Aged 3 Mos.



The appealing Bunton Twins, Teresa and Virginia, at the tender age of 8 months—4 months after they were separated.

By Bari Attis

Two young ladies who have made medical history celebrated another birthday at NIH this year. Virginia and Teresa Bunton, who were 13 years old on Aug. 9, first came to NIH at the age of 3 months—joined together at the head.

The surgery which separated the twins and their subsequent healthy growth and development stands as a medical first. Virginia and Teresa are the only head-joined Siamese twins in the United States, and possibly the world, to survive surgery and re-

cover completely.

Head-joined twins occur once in every two to four million births, it is estimated.

Since they first came to the NIH Clinical Center in October 1956, Virginia and Teresa have returned almost every year for follow-up examinations and study. They have spent many birthdays here, the last one 4 years ago when President Lyndon Johnson visited them.

The twins are almost young ladies now. They are in the seventh grade and study with a teacher who comes to their farm in Tennessee.

Although they are identical twins, they are not alike in everything. Their mother describes Teresa as being a bit of a tomboy, while Virginia is a "lady." In keeping with this image, Teresa has a dog named Lassie, and Virginia's pet is Rusty, a cat.

The twins, who were joined right forehead to right forehead, must wear bonnets or hairpieces to protect the surgical skull defect, but

(Continued on Page 7)

NIGMS Pools Resources With NBS to Improve Labs' Diagnostic Tests

The National Institute of General Medical Sciences and National Bureau of Standards have pooled resources in a project to improve the reliability of diagnostic tests conducted in some 14,000 independent and hospital laboratories.

Under a 5-year NIGMS-support agreement, NBS scientists are developing standard reference materials (SRMs) for use in clinical laboratory analyses. These include organic as well as inorganic materials.

NBS will determine and specify the purity (99 percent or greater) of chemical reference agents and reagents, their homogeneity, stability of shelf-life, and other factors crucial to accuracy in laboratory measurement.

Another objective will be establishment of nationally uniform procedures for calibrating analytical instruments and instrument systems—especially those which employ lightwave assay techniques.

(See DIAGNOSTIC, Page 6)

Dr. Albert Fuchs Given Samuel A. Talbot Award

At its recent meeting in Chicago, the Institute of Electrical and Electronics Engineers presented the \$500 Samuel A. Talbot Group Award to Dr. Albert A. Fuchs, staff member of the Regional Primate Research Center at the University of Washington. The Center is supported by the Division of Research Resources, Bureau of Health Professions Education and Manpower Training.

Honors Young Scientists

The Talbot Award honors individual contributions, made and reported by scientists before the age of thirty, which apply engineering principles and techniques to biological or medical problems.

Dr. Fuchs received the prize for his work in advancing the understanding of human and simian eye movements by showing that eye movements in the primate are similar to those in man.

Results of these studies could provide a better understanding of human eye movement disorders.

the NIH Record

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Work Begins on 818-Car Multilevel Garage Near Buildings 36 and 37

Contractors have begun clearing trees and excavating for the multi-level parking garage to be built at the southwest corner of the NIH reservation adjacent to Old Georgetown Road. The new facility is due to be completed in July 1970.

Has 4 Levels

The 364 by 184 foot reinforced concrete garage will have an 818-car capacity. It will be a 4-level, open-type structure with internal ramps providing access between levels.

A stairtower located on the north side of the building will enable pedestrians to enter the garage at the second level.

Entrance and exit for the garage will be at the roof level from Old Georgetown Road and at the lower level from the east end.

Motorists using the west entrance will park on the 3rd and 4th levels, while cars using the east entrance will use the first 2 levels.

Parking Stalls Larger

Since the garage will be self-parking, the architects have provided more generous dimensions than would be necessary if attendants were to park cars. Parking stalls are 9 by 20 feet, and traffic aisles are 22 feet wide. Ninety degree stalls will permit 2-way traffic.

The facility will serve employees in the recently completed laboratory buildings for the National Cancer Institute (Bldg. 37) and the Mental Health and Neurological Diseases and Stroke Institutes (Bldg. 36), and other adjacent buildings.

Annual NAGS Meeting To Be Held Sept. 27

The first annual meeting of the recently formed National Association of Government Secretaries (NAGS) will be held Saturday, Sept. 27, at 1 p.m. at the Marriott Twin Bridges Motel.

All secretaries GS-4 and above are invited.

At this meeting Art Lamb, Executive Director, will define the aims of the organization and answer any questions.

Membership fees are \$10 a year.

Interested employees who plan to attend are requested to call Rose Najarian, Ext. 61115 no later than Sept. 22.

Members may bring a guest.



"This group does its job as well or better than any other comparable group in the country. That is one of the reasons why the Clinical Center has taken its place among the outstanding hospitals in the country," said Dr. Robert M. Farrier, CC Acting Director (right). Twenty-one awards—13 for sustained superior performance and 8 for length of service—were presented to Department of Environmental Sanitation Control employees in two separate ceremonies so that night shift members (pictured) would be able to attend."

Margaret Freeman, an English Dietitian, Observes CC's Modern Nutrition Studies

Observing how things are done on the "other side" often is useful. This was true for Margaret Freeman, Chief Dietitian of the Royal Victoria Infirmary, Newcastle, England, when she visited the Clinical Center recently.

Miss Freeman spent 2 days here prior to the opening of the 5th International Congress of Dietetics in Washington, D. C., Sept. 8. Some 7,000 dietitians and nutritionists from around the world attended the 5-day meeting.

Chairs Committee

Edith Jones, chief, CC Nutrition Department, was chairman of the International Committee of Dietetic Associations of the Congress.

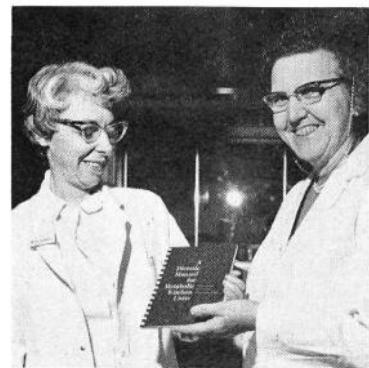
During her visit, Miss Freeman was the guest of the Nutrition Department. She saw modern techniques and procedures used in support of NIH research programs and patient care.

Also, she visited each of the three metabolic kitchens, the main kitchen, and the Life Island kitchen where sterile food technique is employed. Special dietary procedures were explained—for example, the close tolerance necessary in controlling food intake in patients participating in a variety of studies.

Receives Manual

Miss Freeman had the distinction of being the first visitor to receive a copy of the Nutrition Department's newest publication, *A Dietetic Manual for Metabolic Kitchen Units*. The unique 66-page manual, several years in preparation, was designed to serve as a guide for dietitians responsible for establishing a metabolic kitchen unit.

Dr. Frederic C. Bartter, chief of the Clinical Endocrinology Branch, National Heart Institute, extended the invitation to Miss Freeman to



Merme Bonnell (left), chief, Patient Dietetic Service, CC Nutrition Department, presents the first copy of the CC's new manual on metabolic kitchen units to Margaret Freeman, a dietitian from Newcastle, England.

visit the Clinical Center. He learned of her interest in NIH while serving recently as visiting professor at Cambridge University in England.

Miss Freeman said she was impressed with the vast difference in the conduct of dietetics in a research hospital compared with a general infirmary. She felt her visit to the CC would prove most valuable because a medical research program is being initiated by the Royal Victoria Infirmary.

NIH Television, Radio Program Schedule

Television

NIH REPORTS

WRC, Channel 4
Sundays—4:55 p.m.

September 21

Preempted

September 28

Preempted

Radio

DISCUSSION: NIH

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

September 19

Dr. Herbert Swerdlow, chief, Dental Services Branch, NIDR Subject: Dental Services in NIDR Research

September 26

Dr. Harold Baer, chief, Section on Allergenic Products, DBS Subject: Studies on Poison Ivy Sensitization

Both interviews take place during intermission, recorded Music Room Series.

Flu Vaccine to Be Given Only to NIH Employees In Special Categories

In conformity with recommendations of the PHS Committee on Immunization Practices, the Employee Health Service will offer influenza vaccine this year only to employees who fall into specified categories.

There is no indication that personnel in so-called essential positions should receive the vaccine.

Anticipate Few "Flu" Cases

Only sporadic cases of influenza caused by A-2 strains are anticipated in the 1969-70 "flu" season, although Type B influenza may appear in areas where it did not occur last winter, according to Dr. John M. Lynch, chief of the Employee Health Service Branch.

The PHS Committee's current policy statement notes, "Until good protection is provided consistently by influenza vaccine, it is not recommended for healthy adults and children."

The Commission further advises, "Acknowledging its limited effectiveness, vaccine should be considered only for persons of any age with certain chronic debilitating conditions:

1) "Rheumatic heart disease, especially mitral stenosis; 2) such cardiovascular disorders as arteriosclerotic heart disease and hypertension, particularly with evidence of cardiac insufficiency;"

Other Categories Listed

Also, 3) "chronic bronchopulmonary diseases, such as asthma, chronic bronchitis, cystic fibrosis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema, and advanced pulmonary tuberculosis; or 4) diabetes mellitus or Addison's disease."

"... Older persons, who may have incipient or potential chronic disease, particularly cardiovascular and bronchopulmonary, should also be considered candidates for vaccination."

Blood Bank at CC Reports On Units Donated in August

The Clinical Center Blood Bank reports that 291 units of blood were received from NIH donors in August, and CC patients received 1,548 units of blood.

Five donors achieved a special status. Edmund E. Kaminski, OD, attained the 2-gallon mark. Joining the Gallon Donor Club were: Donald Eiler, NICHID; Gladys I. Heter, BEMT; Marilyn A. Lemanczyk, CC, and Arthur G. McKay, OD.

More blood is needed. Make an appointment with the Blood Bank, Ext. 64506.

Chimpanzee With Condition Resembling Human Mongolism Found for 1st Time



Further physical evidence of the similarity of Jama's condition to human mongolism is apparent in these photographs showing the typical posture assumed when she is held under the back compared with that found in a human infant with Down's Syndrome. The limp posture is a result of poor muscle tone, a characteristic of human mongolism in infants.



By Julian Morris

For the first time, an infant chimpanzee has been discovered with a condition closely resembling human Down's Syndrome, also known as mongolism. The finding has important implications for research on this form of mental retardation which affects one of every 700 babies born in this country.

Medical Library Services In Anchorage, Alaska Surveyed by Cummings

Dr. Martin M. Cummings, Director, National Library of Medicine, recently visited Anchorage, Alaska, in order to find out how NLM may assist physicians living in remote areas requiring improved medical library services.

Dr. Cummings met with community medical leaders, and Ursula P. Strash, librarian of the Alaska Health Sciences Library in the Alaska Native Medical Center.

This library, the only community medical library for the Anchorage area, also provides services to physicians, dentists, and other health personnel throughout Alaska.

It was established under a grant from the Washington/Alaska Regional Medical Library; the library also receives service from the Pacific Northwest Regional Medical Library at the University of Washington.

Has DRR Grant

Yerkes is one of seven regional primate research centers in the nation established and operated under special grants from the Division of Research Resources, Bureau of Health Professions Education and Manpower Training.

It was Jama's physical characteristics which first caught the attention of the staff at the Center.

Her overly flexible joints, prominent folds of skin under the eye near the bridge of the nose, short

(See CHIMPANZEE, Page 6)

Richard Bunch, BEMT Executive Officer, Dies; With PHS Since '46

Richard W. Bunch, Executive Officer of the Bureau of Health Professions and Manpower Training, died suddenly of a heart attack Sept. 7.

Mr. Bunch had served as Executive Officer for four different bureaus of the Public Health Service since 1946. Prior to entering the PHS, he served as Executive Assistant to the High Commissioner of the Philippines, Paul V. McNutt (1945-46).

Served With Navy

As Lieutenant, USNR, he served as Director of Personnel in the Office of the Inspector of Naval Materiel, Chicago, Ill., (1943-45). He was also Assistant to the Administrator, National Youth Administration (1941-43).

He would have completed 30 years Federal Government service on Nov. 8.

Mr. Bunch introduced many modern management techniques into the PHS including executive development programs, the program management officer concept, and employee relations programs.

He was well known for his personal involvement in the development of youth through sponsorship of programs in employee development including management intern programs.

Recipient of Awards

Mr. Bunch received several awards including the DHEW Superior Service Award in 1957 for promoting modern management in health programs nationwide, and the Merit Citation of the National Civil Service League in recognition of his outstanding career in the PHS. He also was the recipient of the Military Merit Medal, Commonwealth of the Philippines, for superior service.

He is survived by his wife, Eugenia Anderson.

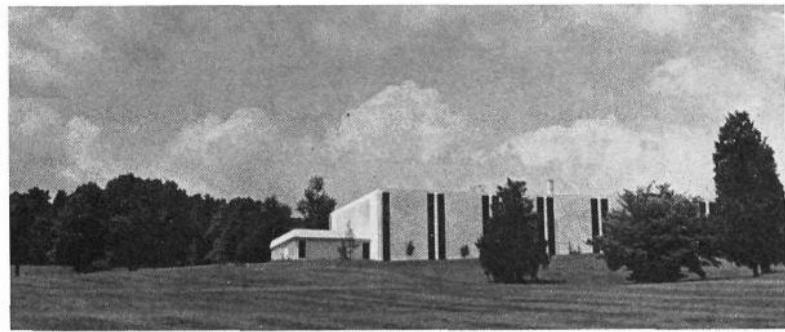
The family requests that in lieu of flowers, contributions be made to the American Heart Association.



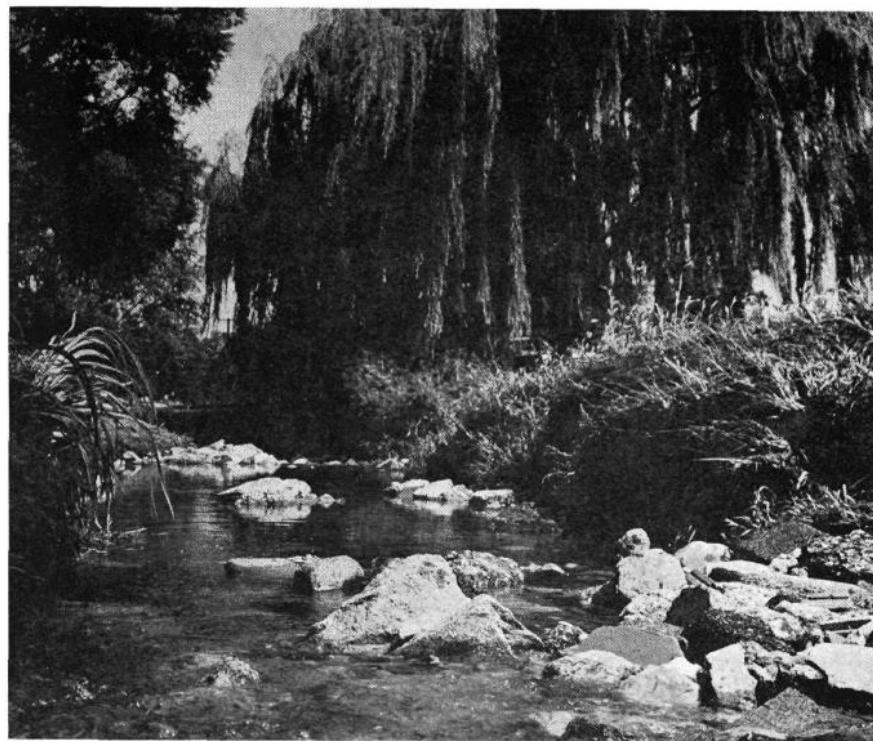
During his long Federal career, Mr. Bunch played a major role in developing and formulating PHS health legislation and programs.

Quiet Scenes Remembered as t

With the return of fall, vacations taper off, and employees return to NIH with fresh outlooks. Memories of places visited during the summer are revived by often-overlooked scenes around the reservation. But, we are quickly brought back to the present as work again gathers momentum and looking for a parking place at 8:25 becomes just a little more difficult.



The Pace of Work Quickens at NIH



Photos by Ralph Bredland

DIAGNOSTIC

(Continued from Page 1)

To achieve uniformity of instrument calibration, NBS scientists will relate light wavelengths, slit width variations, stray light and other instrument factors to light absorbance values established for various substances.

Venture Hailed

The Journal of Clinical Chemistry, published by the American Association of Clinical Chemistry recently hailed the NIGMS-NBS interagency venture as the laying of a new "cornerstone of reliability" for the Nation in clinical laboratory performance.

Recommendations for laboratory quality standards were made recently by the Health Insurance Benefits Advisory Council in its report on Medicare to DHEW Secretary Robert H. Finch.

Funding of the program by NIGMS will make it possible for NBS to expand and accelerate a small pilot project it commenced 2 years ago for the development of laboratory SRMs.

According to NBS officials, the pilot effort was begun by its Analytical Chemistry Division at the urging of the AACC and the College of American Pathologists.

Develops Standards

The Bureau subsequently developed certified standard reference materials for five widely used bioassay materials—cholesterol, creatinine, urea, uric acid, and calcium carbonate. These are now being used as quality control benchmarks by various manufacturers of laboratory supplies and instruments, and by individual laboratories to check the accuracy of analytical procedures and to verify questionable test results.

However, because NBS does not have a mandate in the field of measurement for clinical chemistry, it was unable by itself to expand the pilot project sufficiently to meet in a reasonable period of time the requirements for standardized materials deemed urgently necessary.

Responsibilities Noted

NIGMS, on the other hand, has a prime responsibility for the advancement of patient care through support of research in clinical chemistry, biomedical engineering, and other disciplines pertinent to the improvement of diagnostic instrumentation and, in particular, to the automation of clinical laboratory operations.

The unique capabilities of the NBS and its long experience in the development of measurement standards in general is unequalled anywhere in the world, according to Dr. Robert Melville, administrator of NIGMS's automated clinical laboratories program.

Linda Barbine, Winner of Trip to Italy, Has a Long List of Folks to Look Up

For Linda Barbine, a tightly-budgeted excursion to Ocean City was to be her only vacation for 1969—this week, however, she's planning a 15-day tour of Italy.

Mrs. Barbine, a secretary in the National Institute of Allergy and Infectious Diseases, won the trip in a contest held for charter members of the National Association of Government Secretaries. On Sept. 25 she will fly, via Alitalia Airlines, with \$100 spending money from NAGS.

Unlike most European vacationers, Mrs. Barbine won't have to face the rigors of pre-flight inoculations. She's had more than enough already, a required precaution for her post in the Laboratory of Microbiology.

And she has a long, long list of folks to look up while she's there. The list was made by her father, Louis S. Cittadino, the thirteenth child of Italian immigrant parents.

A native Washingtonian, Linda was graduated from Montgomery College as a medical secretary. She now works for Dr. Joseph Tully, head of the Mycoplasma Section, Laboratory of Microbiology.

"I miss the contact I used to

have with patients," she says, but she has offset that by becoming involved in the laboratory's work.

"Dr. Tully has published more than 30 articles, and I've been taking them home and reading every one."

Her duties on the job, as she describes them, include "everything from assisting with manuscripts and tables, to ordering chemicals and equipment for the laboratory."

Mrs. Barbine was one of six girls to graduate from her class which started with 30 members.

"Most of the girls drop out because of the science," she explains, noting that her class has been called back at times to encourage present students.

She finds her work at NIH stimulating and challenging, and appreciates the variety of her responsibilities.

CHIMPANZEE

(Continued from Page 3)

neck with excess skin folds, and webbing between some of her toes contrasts with the features of other chimps in the colony.

Jama weighed less than normal at birth and continues to grow at an abnormally slow rate. Neurological abnormalities have appeared and at 40 weeks, Jama was still unable to sit up or move about in her cage.

Has Extra Chromosome

In the performance of 34 tasks which test postural maturation in chimpanzees, Jama is slower than two other chimps that were tested. And significantly, Jama's blood cells have been found to contain 49 chromosomes in contrast to the normal 48 in chimpanzees. The extra chromosome has also been found in her bone marrow and skin cells.

The Yerkes team believes that the extra chromosome, added to anatomic, neurologic, and behavioral evidence, justifies classifying Jama's condition as "Down's-like." They note that a comparable syndrome has not previously been reported in non-human primates.

The researchers hope that Jama may provide an experimental model for studying human mongolism. It may be possible to breed her to produce a strain of mongoloid-like chimps which would be available for further scientific study.

The discovery of the chimpanzee with Down's Syndrome was reported in the Sept. 5, 1969, issue of *Science* by Harold McClure, Kathy



Jama, a young female chimpanzee, is the first non-human primate known with a condition similar to human mongolism. Note the fold of skin extending upward from either side of the root of Jama's nose, nearly overlapping the inner corner of each eye. This fold, or epicanthus, is characteristic in human mongolism. The protruding tongue is also typical of mongolism; however, Jama does not always exhibit this characteristic.

H. Belden, and W. A. Pieper, Departments of Veterinary Pathology and Psychobiology, Yerkes Regional Primate Research Center, and Cecil B. Jacobson, Reproductive Genetics Unit, George Washington University School of Medicine.

These studies were also supported in part by NIMH.

U.S.-Russian Scientists Meet in Moscow on Hemorrhagic Fever

Several American scientists are meeting with Russian experts on hemorrhagic fever this week in Moscow.

The scientific exchange and tour is the second visit to hemorrhagic fever laboratories and USSR endemic areas made by American investigators involved in this field of research. A similar trip was made in 1965, and a follow-up tour was recommended at that time.

Both American and Russian scientists recently determined that there is a close serologic relationship between the virus of Crimean hemorrhagic fever and Congo virus, and the significant role of Ixodid ticks in the virus cycle.

As a result of these discoveries the group expects to discuss questions on pathogenic potential and world distribution of the virus.

Scientists Listed

Scientists on the tour are Drs. Jordi Casals, the Yale Arbovirus Research Unit; Brian D. Henderson, National Communicable Disease Center; Harry Hoogstraal, Naval Medical Research Unit No. 3; Karl M. Johnson, MARU/NIAID; and Alexis Shelokov, University of Texas (formerly with DBS and NIAID).

The visit has been planned by the National Institute of Allergy and Infectious Diseases and sponsored under the Exchange Agreement with the Soviet Union.

En route to Moscow the group members participated in the International Symposium on Arboviruses Transmitted by Ticks at Smolnice, Czechoslovakia. The group arrived in Moscow last Sunday (Sept. 14) and will return Oct. 1.

DR. MIDER

(Continued from Page 1)

1968.

Dr. Mider first came to NIH as a research fellow at the National Cancer Institute in 1939. In 1941, he became an instructor in Pathology and an assistant professor of Pathology at Cornell Medical College, 1941-44. Concurrently he was an assistant pathologist, New York Hospital.

Then followed assignments as associate professor of Pathology, University of Virginia School of Medicine, 1944-45; research associate in Surgery and professor of Cancer Research, University of Rochester School of Medicine and Dentistry, 1945-52, before returning to NIH where he became Associate Director in Charge of Research at NCI, 1952-60.

Much of Dr. Mider's professional career has been spent in teaching and in science administration work.

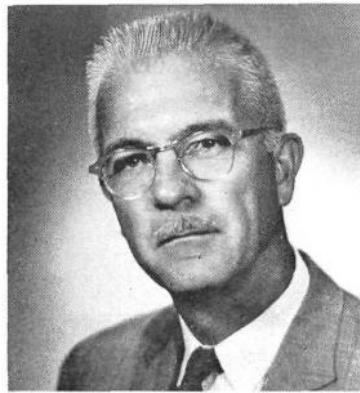
Several Tributes Planned To Honor Dr. Williams Upon His Retirement

Dr. George Z. Williams, chief of the Clinical Center Pathology Department, and one of the country's outstanding leaders in the field of clinical pathology, will retire Sept. 30.

A distinguished scholar and internationally known researcher, Dr. Williams has made major contributions to the advancement of clinical pathology.

Notable among these has been his work at NIH where he organized and directed the development of the CC Clinical Pathology Department to its present position as one of the finest in the world.

Several tributes are being planned to honor him on his retirement. A party will be given for him on Sept. 18 in Chicago during the meetings of the College of American Pathologists and the American Society of Clinical Pathologists.



Dr. Williams, a leader in the field of clinical pathology, came to the Clinical Center in 1953 as the first chief of Clinical Pathology.

Guests will include Dr. Williams' friends in these associations and former Clinical Associates and Residents who trained under him at the Clinical Center.

On Sept. 24, a reception is planned at the Officers Club, National Naval Medical Center, which professional colleagues and NIH associates will attend.

An "Open House" also will be held Sept. 25 in the Clinical Center. Friends and staff members at NIH have been invited to attend.

Dr. Williams received his M.D. degree from the University of Colorado, where he also served a residency in pathology and completed postgraduate training in tumor pathology, physiology, chemistry, and pathology of silicosis. He later became an instructor in pathology in the School of Medicine there.

In 1936, he joined the Medical College of Virginia as an assistant professor of Pathology. He was Director of the Department of Clinical Pathology and Hospital Laboratories before entering active

BUNTON TWINS CELEBRATE BIRTHDAY AT NIH

(Continued from Page 1)

they are able to lead essentially normal lives. Further bone and skin grafting surgery is planned when they are older.

The surgery to separate the twins was performed by Dr. Maitland Baldwin, clinical director and chief of the Surgical Neurology Branch, National Institute of Neurological Diseases and Stroke.

Both he and Dr. Anatole Dekaban, head of the Institute's Section on Child Neurology, have followed Virginia and Teresa's progress for the past 13 years.

Two procedures were required to separate the girls. At the first operation, lasting less than 2 hours, Dr. Baldwin performed the separation of half the shared bone area and studied the brain interconnections.

To save the infants from any undue stress before surgery, he had taken only X-rays and an electroencephalogram (EEG) rather than more sophisticated tests to show the positions of blood vessels. For this reason also, Dr. Baldwin limited the first operation to the length of time he thought the girls could comfortably tolerate.

At the second procedure, which again lasted less than 2 hours, Dr. Baldwin completely separated the shared bone and followed the lines of a dividing fissure to separate the two brains.

Although the surgery was complex, only one major blood vessel and some branches of the common anterior cerebral circulation had been shared.

In addition to the usual difficulties of brain surgery, the twin's case posed a number of other problems. A special table was designed which could be divided when the twins were separated so that separate surgical teams for each child could complete the operation.

military duty.

During World War II, Dr. Williams served in the U.S. Navy and held a variety of executive positions. Among them, Acting Fleet Medical Officer for the Seventh Fleet. He retired from the Naval Reserve in 1967 with the rank of Captain.

On being selected in 1953 as the first chief of Clinical Pathology for the Clinical Center, Dr. Williams organized the Clinical Pathology Department, achieving superior standards of test performance.

More than a decade ago, Dr. Williams led his department in a program of research and development for accelerated automation of instruments, together with use of data handling equipment.

Upon retirement, Dr. Williams will become Director of the Research Institute of Laboratory Medicine, Institute of Medical Sciences, San Francisco.



A birthday party for the 7-year-old girls was a highlight of their visit to NIH in 1963; Teresa on the left, and Virginia, right, prepare to blow out the candles.

The anesthesia, too, presented difficulties. While the girls were joined, anesthesia was administered through a specially designed Y tube which would fit into the mouths of both girls. Again two anesthesia teams were standing by to minister to each child individually after they were separated.

Because the girls were so young and small, traditional skin grafting procedures to cover the head were not used. Working with the tissue bank at the National Naval Medical Center, Dr. Baldwin used frozen dried adult dura to cover the brain tissue and calf embryo skin as a superficial covering.

Holds Up Well

This may have been the first time such a covering was used on a human wound. It has held up well over the years, providing a firm covering for the underlying brain tissue.

Several days after surgery, Virginia developed meningitis which fortunately responded to drug treatment.

After this episode, both girls continued to recover well from the surgery. They remained at NIH until they were 14 months old.

Virginia and Teresa return to the Clinical Center almost every year for follow-up studies which include electroencephalograms, brain scanning, pneumography, and X-rays, as well as behavior and intelligence tests and the standard clinical biochemical tests. The girls have passed them all.

One current research study for which the twins are unique subjects involves comparing their brain hemispheres as if they shared one brain.

This study is based on the fact that the girls are identical twins who developed from the same cell and who also shared some brain tissue at birth.

History of Medicine Soc. Meets at NLM Sept. 18

The Washington Society for the History of Medicine will hold its next meeting on Thursday, Sept. 18, at 8 p.m. in the Billings Auditorium of the National Library of Medicine.

Dr. James H. Cassidy, NLM History of Medicine Division, will discuss "An American Health Officer and European Science: Charles Wardell Stiles (1867-1941)."

Dr. Peter D. Olch, in the same Division of NLM, will speak on "William S. Halsted and Private Practice: A Reexamination."

Visitors are welcome.

The researchers hope eventually to learn from tests of this type more about the relationship and differences between the brain hemispheres.

This study employs sophisticated recording equipment to compare the power levels of the girls' brain hemispheres during a simultaneous EEG.

During the testing, the girls complete both verbal and non-verbal tests and a computer compares each side of each girl's brain to its opposite hemisphere and its twin hemisphere in the other girl.

The new study is in the early stages and findings are incomplete. As they begin either task, the power level oscillates.

Then as expected, since the girls are right-handed, the power levels

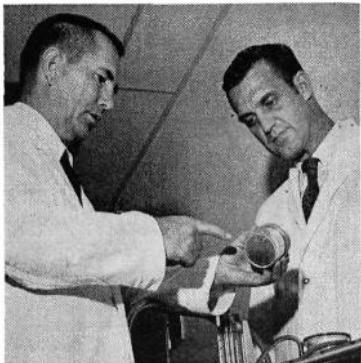


And now the twins are 13 years old. During this present visit, Virginia (l) works on a shag rug, Teresa is making a wallet, and Dr. Maitland Baldwin admires their handicraft.

in the left hemisphere are increased when they begin verbal tasks and in the right hemisphere the power levels increase on non-verbal tasks.

For Virginia and Teresa Bunton, a visit to NIH is an annual adventure, a chance to see old friends, and a somewhat long trip away from home.

For NIH and the medical world, these two young ladies represent an historical triumph and a continuing contribution to neurological research.



Corwin D. Strong, chief, Development and Training Section, CC Department of Environmental Sanitation Control (I), explains an NIH-modified air sampler to H. Harold Lehman, first PHS commissioned officer to participate in the Hospital Residency Program in Environmental Health at Tulane University's School of Public Health and Tropical Medicine. He recently completed a week's orientation at NIH.

Donations of Employees Reimburse Summer Aids Robbed of Payday Funds

In less than 2 days, NIH employees generously donated a total of \$1,022.81—\$158.29 above their goal—to compensate Summer Aids who were robbed on payday, Aug. 19.

The robbery took place when two youths—one armed with a gun, the other with a knife—boarded the Aids' homeward bound bus at 14th Street and Colorado Avenue in Northwest Washington.

The collection was handled through the NIH Recreation and Welfare Association, which was able to give the funds to the Aids on Friday (Aug. 29) before they returned to school.

Emergency Loans Made

The R&W was unable to replace the stolen money from its funds but emergency loans were made available on a liberal basis.

However, Mary Lord, Summer Youth Program Coordinator, informed R&W that many of the young employees were reluctant to accept loans they might not be able to repay.

The balance of the money not disbursed is being invested in the Credit Union, to be used when needed for the Summer Aid Program.

Benjamin Fulton, R&W President, thanked all who had given to the fund for their generosity.

He said that "employees at NIH felt that this was one way they could express their support for the Summer Aid Program."

A number of employees who had not been contacted directly, phoned or visited the R&W office to offer their assistance.

Ed Rich, DRS, Develops Cheap Portable Intensive Care Unit for Treating Burns

By Sari Staver

NIH Information Intern

Using a filter employed in space research for measuring atmospheric contamination, an experimental device with potential for treating burns and other sensitive skin conditions has been developed by Edward Rich, Jr., Division of Research Services.

Called *Burn-Aid* by Mr. Rich, the device is designed as an inexpensive portable intensive care unit for use in the hospital and at home.

By concentrating a constant stream of ultrafiltered air directly over a burn, the device would allow the patient to move about without risking infection. It will soon be tested on laboratory animals at NIH.

"The Burn-Aid idea first occurred to me when I used the polyurethane filter at NASA," explained Mr. Rich.

"The filter was used effectively in balloon systems sent 100,000 feet above the earth to test for microbiological contamination. This project supported NASA's program to land an unmanned space vehicle on Mars."

Last year there were approximately 300,000 serious burn victims in this country. When open skin areas cannot be bandaged, such patients now must usually be confined in elaborate and costly oxygen tent and laminar airflow units to prevent infection.

May Reduce Isolation

According to Mr. Rich, "The new Burn-Aid could eliminate the time and expense of several weeks isolation in the hospital."

Burn-Aid is a sandwich-like device with a layer of polyurethane filter packed between and sealed to two sheets of vinyl plastic. The plastic sheets are sealed together at the edges; the bottom sheet is coated with an adhesive and covered with paper. An air tube is attached to the top of the unit.

To use the Burn-Aid the physician cuts a hole in its center sufficient to clear the sensitive area. The paper backing is stripped off and the device applied like an ad-

hesive bandage. The burned skin is thus left uncovered.

The tube can conduct air, oxygen, or carbon dioxide to the filter from a portable pump or gas tank. A gentle blanket of filtered air then rises from the wound site, preventing germs from settling on the burned skin.

Before joining NIH last November, Mr. Rich spent 9 years at NASA. He was the manager of its sterilization research unit at Goddard Space Center from 1964 to 1968.

Concern Changes

"When I started work at NIH last November, I was suddenly concerned with protecting people, not hardware, from contamination," Mr. Rich observes.

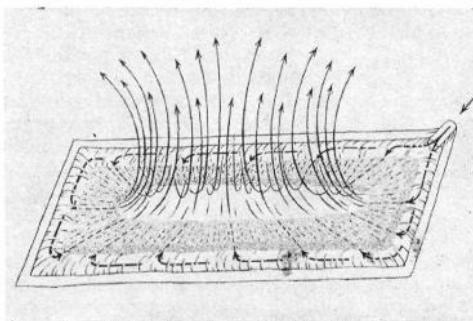
Preliminary tests indicate that Burn-Aid does work in principle, its filter effectively keeping surfaces free of contamination.

Trials of its ability to promote healing of surgical wounds in animals are planned by Dr. Maitland Baldwin, chief of the Surgical Neurology Branch, National Institute of Neurological Diseases and Stroke. If the device lives up to expectations, clinical trials with human patients will be planned.

2 Grants Awarded for Training Students in Genetic Aspects

The National Institute of General Medical Sciences has awarded grants to two universities to train people for academic careers in genetics.

According to Dr. Frederick L. Stone, NIGMS Director, trainees completing the course which leads to a Ph.D. degree, will become scientist-teachers in medical



Arrows in this diagram indicate the flow of air from an outside supply around the outer edges of the Burn-Aid. The air is filtered as it passes through the polyurethane foam (shaded area) and, as it rises, organisms are prevented from entering the wound area.



Mr. Rich applies his Burn-Aid to the back of a mannequin in his laboratory. A small pump (lower right corner) will supply air to the wound.

Latest Participants in NIH Visiting Scientists Program Listed Here

8/21—Dr. Genjiro Kusano, Japan, Laboratory of Chemistry. Sponsor: Dr. Yoshio Sato, NIAMD, Bldg. 4, Rm. 134.

8/22—Dr. Ju-Yuan Lin, Taiwan, Laboratory of Molecular Biology. Sponsor: Dr. Ernst Freese, Bldg. 36, Rm. 3D02.

8/25—Dr. G. Thyagarajan, India, Section of Medicinal Chemistry. Sponsor: Dr. Everette L. May, NIAMD, Bldg. 4, Rm. 135.

9/2—Dr. Adhid Al-Arif, Iraq, Chemistry Branch. Sponsor: Dr. Michael B. Sporn, NCI, Auburn Bldg., Rm. 20.

9/2—Dr. Yoshiyuki Kitano, Japan, Cell Growth Regulation Section. Sponsor: Dr. John P. Barker, NCI, Auburn Bldg., Rm. 107.

9/2—Dr. David Davis, U. S. A., National Center for Prevention and Control of Alcoholism. Sponsor: Dr. Jack Mendelson, NIMH, Barlow Bldg., Rm. 12A03B.

LECTURE

(Continued from Page 1)

the National Academy of Sciences, and Dr. William D. McElroy, President of the National Science Foundation, have also been invited to the luncheon.

Dr. Braunstein is considered one of the pioneers in enzymology, and is the discoverer of transamination reactions.

A graduate of the Kharkov Medical Institute, he has published about 100 papers on enzymology and metabolism of nitrous substances, amino acids and proteins.

He received the Stalin Prize in 1941. Dr. Braunstein's visit to NIH is being cosponsored by FIC and NIAMD.

schools where they will instruct students in genetic aspects of health and disease.

Grants were given to the Duke University School of Medicine and to the University of Virginia at Charlottesville.