Dr. Moskowitz is to Direct NHLBI's Office of Program Planning and Evaluation

Dr. Jay Moskowitz has been appointed to the position of director, Office of Program Planning and Evaluation, of the National Heart, Lung, and Blood Institute. Dr. Moskowitz will be responsible for the formulation, interpretation, and coordination of policies and plans regarding the Institute’s programs of support and investigations relating to the causes, prevention, diagnosis, and treatment of cardiovascular, respiratory, and blood diseases, and blood resources. He will oversee the Director on the establishment of future Institute goals and assist in development of programs to meet these goals. He will also oversee the preparation of such program documents as annual reports, program progress reports, and justification statements.

Dr. Moskowitz began his career at NIH in 1965 when he entered as a 2-year Research Associate in the Laboratory of Chemical Pharmacology, NHLBI. In 1971-72 he was a Grants Associate with the Division of Research Grants. He rejoined the Institute in 1972 as program coordinator for the Division of Lung Diseases; in 1974 he became associate director for Program Planning and Evaluation for that Division.

Patients, Researchers in Guam Survive Assault of Typhoon, Begin Recovery Work

Scenes of devastation such as this were common in the wake of the typhoon. Almost half the island’s homes sustained damage, but only one life was lost.—Photo by D. Robbins.

The National Institute of Neurological and Communicative Disorders and Stroke research team on Guam and their 119 patients emerged unscathed from Typhoon Pamela’s May 21 brutal 24-hour assault on the island. In fact, despite a staggering estimated $500 million in property damages throughout the island, only a few injuries and one death have been attributed to the storm.

Havoc Described

According to Dr. Paul Hoffman, officer in charge of the NINCDS Research Center at Guam Memorial Hospital, this remarkable record results from the extraordinary precautions taken by the Guamanian government and the islanders.

"As early as 48 hours before the storm, many Guamanians were being bused to schools serving as shelters, while others took refuge in typhoon-proof houses of relatives and friends," Dr. Hoffman said in a report to NINCDS officials. The report was co-authored by Jose Torres, a Research Center health technician.

Among those seeking safer ground were many of the patients participating in the NINCDS research study of two fatal nervous system diseases — amyotrophic lateral sclerosis (ALS, or Lou Gehrig’s disease) and Parkinsonism-Dementia (PD)—which occur there at astonishingly high rates.

Patients with ALS suffer from progressive muscular weakness and wasting. Although the disease occurs worldwide, it is the cause of death in one of every 10 Guamanian adults.

The Center’s staff, currently under the direction of Dr. Thomas N. Chase, director of NINCDS’ Intramural Research Program, has recently been pursuing new leads concerning possible immune system factors which may be involved in ALS.

Parkinsonism-Dementia also strikes one in 10 Guamanian adults. But unlike ALS, it is unique to Guam, and patients experience progressive muscular weakness and rigidity, tremors, and loss of voluntary movement.

(See TYPHOON, Page 4)

PhS Corps Meets Aug. 3 For Orientation Program

You and the Commissioned Corps, an orientation program for Commissioned Officers of the Public Health Service—especially those recently called to duty—will be presented in Masur Auditorium on Tuesday, Aug. 3, at 2 p.m.

The program will include information on pay, allowances, benefits, privileges, and other areas of interest.

(See DR. FOUTS, Page 2)
Wind and Rain Wreak Local Havoc July 15

On Friday morning, July 16, NIH'ers in the Westwood Building were operating—after a fashion—with partial electric power following Thursday's thunderstorms.

Some typists were without electricity for their typewriters, while others tried typing in the dark.

Hazards Cited

Employees on the top floors en
vised those on lower floors, for
there was no elevator service. And
walking up was a slippery business—water had cascaded down nine flights of stairs in the annex while the storm was at its height.

Some offices experienced minor flooding from water leaks in ceil
ings.

Brown baggers fared better than the elite when long lines formed in the cafeteria, which opened late with a limited menu after a coffee-less morning.

R&W Elects Board Officers

The NIH Recreation and Welfare Association recently elected three officers to 2-year terms on its Board of Directors.

Charles C. Bowie, Jr., will serve as first vice president; Kenneth C. Styers as treasurer, and Colleen E. Keegin as secretary.

The FAES Autumn Schedule Is Available; Register Now

The schedule of courses is now available for the fall semester in the Graduate Program at NIH.

Beginning Sept. 20, evening classes sponsored by the Foundation for Advanced Education in the Sciences will be given on the campus in behavioral and social sciences, chemistry, biology and microbiology, genetics, immunology, physics, physiology, mathematics, statistics, languages, administration, and other topics.

Medical subspecialty review courses include endocrinology and metabolism, internal medicine, and pediatrics.

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 transfer assistance.

Registration is by mail now through Aug. 20, and in person from Sept. 9 through Sept. 15. Catalogs are available in the school office, Room B1-L-101, Bldg. 10, or by calling Ext. 65272.

To commemorate our Nation's 200th birthday, Mrs. Effie D. Eaton, grandmother of Joseph Naughton, chief, Computer Center Branch, Division of Computer Research and Technology, crocheted for him a 3x5 foot 1776 American flag. Mrs. Eaton, who is 87, spent 2 months making the flag. From 1949 until failing health curtailed her activities a year ago, she logged 20,000 hours of service—the second highest number on record in the U.S.—as an American Legion Volunteer at the V.A. Hospital in Pittsburgh. Her family has lived in Tarentum, a suburb of Pittsburgh, for six generations.

DR. FOUTS

(Continued from Page 1)

ology-Toxicology Center there. He was a major contributor to the understanding of enzyme induction as the response of an organism to foreign chemicals.

He had previously worked in the Laboratory of Chemical Pharmacology, National Heart and Lung Institute, and as a senior research biochemist with the Wellcome Research Laboratory.

Honors Received

Dr. Fouts has received numerous honors, including the Maple Schweitzer Award in Chemistry from Northwestern University, where he received his B.S. in chemistry in 1951 and his Ph.D. in biochemistry and pharmacology in 1954.

He has also received the DHEW Superior Service Award; the Abel Award in Pharmacology from the American Society for Pharmacology and Experimental Therapeutics; and the Claude Bernard Medal from the Institut de Medicine et du Chirurgie Experimental, University of Montreal.

Author or co-author of more than 145 publications, Dr. Fouts is currently adjunct professor of pharmacology at the University of North Carolina at Chapel Hill and of entomology and toxicology at North Carolina State University.

He is a member of the Basic Pharmacology Advisory Committee for the Pharmaceutical Manufacturers Association Foundation, Inc., and a special consultant to the Epidemiological Studies Program for the Environmental Protection Agency's Office of Pesticides, Technical Services Division.

He now serves on the editorial boards of Xenobiotics, Cancer Research, and Journal of Toxicology and Environmental Health, and since 1973 has been associate managing editor in the U.S. for Chemico-Biological Interactions.
Associates Begin Stint at Clinical Center; Hope to Emulate Noted Predecessors

More than 100 new Associates arrived at the Clinical Center this month to begin 2- or 3-year appointments. Since 1959 over 2,500 young physicians have begun their medical careers by taking advantage of the NIH Associate Training Program.

The three types of Associates have different roles:

Clinical Associates participate in clinical and laboratory research as well as in patient care, including rounds, conferences, and other functions of a primary physician.

Research Associates usually perform laboratory research in a biomedical science.

Staff Associates work in areas determined by a senior investigator, not specifically designated in research or clinical categories.

Dr. Griff T. Ross, acting CC director, said the program is constantly seeking means for improvement.

"The NIH program is important in that it is seeking means for improvement. Strengthening the research function of NIH is an important aspect, he said, because "good people come where there's good work being done."

New Position Explained

Dr. Ross said that a CC associate director for medical education—now being sought—will be a significant addition to the Program. The new position will entail working with Associates to define their training needs and to implement changes to achieve those goals.

The many important positions in academic medicine now held by former Associates attest to the significance of the Associate experience and the quality of the individuals selected.

Dr. Donald S. Fredrickson, NIH Director, more than half of the current Clinical Center department heads, and numerous professors of medicine and deans of medical schools are former Associates.

In the 1960's, with little recruitment effort NIH some years received more than 700 applications for the 100 to 200 Associate positions.

With the elimination of the draft and the exemption for Associates, applications have declined. According to Dr. Ross, this decrease has not adversely affected the Associate Program.

"The programs haven't changed just because the draft ended," he emphasized. "They still offer superb opportunity for training in medical science and clinical investigation."

Associates' Work Praised

He cited trends toward multi-institutional medical education and postdoctoral training, and the specialized nature of the research at NIH as other factors affecting the numbers of applicants.

In addition to gaining experience by assisting senior staff with patient care and research, Associates often conduct research of their own. This kind of work "makes a research enterprise grow," said Dr. Ross, adding that Associates are an invaluable part of NIH.

Associates may choose to be employed either through the Public Health Service Corps or through Civil Service appointments with comparable salaries, competitive with initial research positions at other major medical centers.

Credit for residency training may be given, depending on the Institute and program in which an Associate participates.

Associate appointments are made by each Institute, based on the candidate's academic achievement, research interest, ability, background, and clinical expertise in a specialty.

6 More Med Centers Join Nationwide Trial Of New Eye Operation

The National Eye Institute has awarded contracts which add six new medical centers to the Diabetic Retinopathy Vitrectomy Study.

These bring to 13 the total number of centers participating in the nationwide controlled clinical trial of vitrectomy—a major new eye operation for preventing and treating blindness due to diabetes.

Now in the final planning stages, the DRVS is expected to enroll its first patients within the next few weeks.

The new centers are the University of California at San Francisco; Cornell University Medical College, New York, and Good Samaritan Hospital and Medical Center, Portland, Oreg. Also, the University of Illinois, Chicago; Wayne State University, Detroit, and Wills Eye Hospital, Philadelphia.

Vitrectomy involves the surgical removal from the eye of blood-filled vitreous and scar tissue which has formed as the result of diabetes. The primary goal of the DRVS is to determine the optimal time after hemorrhage for performing vitrectomy.

Any individual with diabetic retinopathy who would like to be considered for admission to the Study should consult his or her ophthalmologist about possible referral to a participating clinical center. Each patient will be followed for 4 years.

An applicant's interests, matched with the Institute's needs, determine the program to which an Associate is assigned.

The application deadline for 1979 Associateships is Jan. 7, 1977. A few appointments will be made for 1978.

For further information, write to the Office of the Clinical Center Director, NIH, Bethesda, Md. 20014, or call (301) 496-4114.

Paul S. Hudson Named Info. Officer, DCRT

A native of Wisconsin, Mr. Hudson served in the U.S. Army from 1949 to 1969.

Paul S. Hudson has recently been appointed information officer of the Division of Computer Research and Technology.

A graduate of the University of Maryland, Mr. Hudson came from the Office of Professional and Consumer Programs, FDA.

Background Noted

Prior to service with FDA, he was the senior publications administrator for the AMECON Division, Litton Industries.

As DCRT's officer for public information and freedom of information activities, he will prepare and disseminate information concerning DCRT activities to the general public, medical scientists, NIH staff, and computing professionals.

In addition, Mr. Hudson will answer inquiries from the public and the media and prepare special reports on the Division's programs requested by the Office of the Director, NIH, other Government agencies, and the Congress.

In science, read by preference the newest works; in literature, the oldest—Edward Bulwer-Lytton.
TYPHOON

(Continued from Page 1)

hibit dementia and confusion in addition to the characteristic shaking of Parkinson's disease.

At the time of the storm, 14 patients were in Guam Memorial Hospital, 9 were off the island, while the remaining 92 sought refuge in typhoon-proof homes or shelters.

Because the patients are particularly vulnerable to respiratory infection, the NICDSD staff made prior emergency arrangements with Guam Memorial Hospital to admit any homeless patients who could not be properly cared for in makeshift conditions.

As Typhoon Pamela's 140 m.p.h. winds raged toward Guam, the Center's staff finished shoring their laboratory facilities at the Hospital and retreated to the safety of their homes.

According to Dr. Hoffman, gale winds swept the island as early as May 19 while the typhoon was still several hundred miles away. By noon of May 21, wind gusts ranging from 190 to 210 miles per hour produced a 2-hour calm as the storm's eye passed, and then resumed "in an assault which was even more fierce than the first," he reported.

Labs Inundated

The Center's laboratory facilities quickly became inundated as gale force winds hit in with air conditioners, drove in cascades of rain, and ripped off ceiling panels.

Patient records, however, were stored in fire and typhoon-proof cabinets and were not damaged.

In the storm's wake, about 3,000 or almost half of all island homes suffered, ranging from slight damage to complete destruction; power and telephone lines were blown down; several ships anchored in Apra Harbor were sunk; crop and livestock losses were almost complete, and water supply to civilian communities was cut off.

Make House Calls

Amid this chaos 2 days after the storm, when enough mud and debris had been cleared to make roads passable, the NICDSD research team "took to the field to visit every patient and determine those needing immediate attention for acute illnesses contracted during or as a result of the storm," Dr. Hoffman said.

Joining this massive effort was Dr. Kwang-Ming Chen, a neurology consultant who heads the Muscular Dystrophy Association's clinic at the NICDSD Center.

The team found that none of the 92 patients was acutely ill, but that homes of 17 patients had been completely destroyed, while those of 38 patients had sustained moderate to severe damage. How-

Dr. DeLuca Is Honored Visitor, Lecturer in Japan

During his 2-month visit, Dr. DeLuca (l) presented five lectures and exchanged information with his counterparts, including Professor N. Osaya (c) and Dr. Y. Muto—both of the department of nutrition in the University of Tokyo's School of Health Sciences—photographed during a spring festival outing.

Dr. DeLuca Is Honored Visitor, Lecturer in Japan

National Cancer Institute biochemist Dr. Luigi M. DeLuca was accorded a rare honor when the Japan Society for the Promotion of Science invited him to be one of 30 scientists from around the world to visit Japan and lecture on their various fields of expertise.

Methods Shared

Dr. DeLuca, head of the Differentiation Control Section in NCI's Experimental Pathology Branch, is engaged in isolating and studying the biological activity of phosphorylated derivatives of vitamin A.

He shared the methodology of the isolation procedures with Japanese scientists during lectures at the University of Tokyo, the University of Osaka, and at Tohoku University in Sendai.

Many Japanese scientists voiced their appreciation of his visit and are very eager to hear about recent scientific developments in the U.S., Dr. DeLuca said.

His host institution, the University of Tokyo, presented him with an inscribed plaque of the university seal, which now decorates his Bldg. 37 office.

Dr. R. A. Squire to Head Bioassay Branch in NCI

Dr. Robert A. Squire has been appointed acting chief of the Carcinogen Bioassay and Program Resources Branch, Division of Cancer Cause and Prevention, in the National Cancer Institute.

The Branch is responsible for the NCI program of testing individual chemicals for possible cancer-causing activity in long-term animal studies. Dr. Squire also serves as associate chief of the NCI Experimental Pathology Branch.

Taught at Johns Hopkins

Prior to coming to NCI in 1973, Dr. Squire taught pathology at the Johns Hopkins University and was director of comparative pathology at the Johns Hopkins Hospital. He received a B.A. in biology in 1956 and in veterinary pathology in 1964 from Cornell University.

Dr. Squire replaces Dr. Norbert P. Page, who resigned recently to accept the position of chief, Priorities and Research Analysis Branch, National Institute for Occupational Safety and Health.

In his new position, Dr. Page will coordinate research priorities concerning substances or occupations that pose health hazards and recommend development of criteria or standards documents on specific substances.

Dr. Page, who received his doctorate in veterinary medicine from Ohio State University in 1956, had been with NCI since 1971. From 1967 to 1970 he was a scientific administrator in mammalian biophysics at the Atomic Energy Commission. He directed the Large Animal Radiobiology Program of the Naval Radiological Defense Laboratory from 1963 to 1967.

ENERGY TIPS

- Regular tuneups can save as much as 10 percent on gasoline costs.
- Keep the air filter clean to avoid wasting gasoline.
- Check tire pressure regularly. Underinflated tires increase gas consumption.
- Steel-belted radial tires give better mileage and last longer.
- Remove unnecessary weight from the car. The lighter the car, the less gas it uses.
- The weight of an auto airconditioner adds to your fuel costs year round. A car airconditioner reduces fuel economy an average of 10 percent, up to 20 percent in stop-and-go traffic.

Elect Officers

Reginald Russell, of the Printing and Reproduction Branch, DAS, has been elected president of the NIH Toastmasters Club, of which he has been a member for the past 3 years.

Other officers for the next 6-month term are James Pomeroy, educational vice president; Dr. Padman Sarma, administrative vice president; Anne O'Conner, treasurer; Dr. Charles R. Warner, secretary; and Hazel Braxton, sergeant at arms.

The club meets every Thursday at noon in the reserved dining room at the Bldg. 10 cafeteria.

Center Hit Before

This is the second typhoon the Research Center has weathered in the 20 years since NICDSD scientists first began scrutinizing genetic and environmental factors on Guam which might be involved in ALS and Parkinsonism-Dementia.

In the aftermath of "the worst storm to hit Guam since 1962," as Dr. Hoffman put it, the Center's staff is now going about the business of repair, rebuilding, and recovery.

Dr. Almy, on Council, Honored

Dr. Thomas P. Almy, professor and chairman of the department of medicine at Dartmouth Medical School, was recently awarded the Friedenwald Medal by the American Gastroenterological Association.

Advises NIAMDD

A member of the National Arthritis, Metabolism, and Digestive Diseases Advisory Council, Dr. Almy was cited for his outstanding contributions and service to the AGA and the profession.
METRO's Coming!

What's happening behind the green fence that's been up for a year on South Drive and Rockville Pike?

Metro construction by the J. F. Shea Co., supervised by Bechtel Associates, is proceeding—on schedule—and Shaft #4 excavation is essentially complete.

According to Bechtel representative John Fisher, concrete pouring operations in the shaft will begin soon. In about 3 weeks, conventional tunneling will begin moving south from Pooks Hill Road.

Beginning in December, a giant mining machine nicknamed "the mole" will be used for tunneling, also starting from Pooks Hill Road and moving south.

January 1979 is the planned completion date for construction of this segment of the Metro.

On-site pictures (counterclockwise from top r): The view from South Drive as the crane lowers a worker in the "man cage." Semi-moist "Shotcrete" is kept flowing by hammering on the revolving drum. Shaft-side warnings spell safety. Drillings dot the shaft rim of sprayed concrete test panels. A supervisor checks on the six to eight workers 128 feet below. Inside the shaft, it's wet, dusty, and noisy as a Shotcrete wall is sprayed on the tunnel surface—hard hats, masks, ear plugs, and boots are necessities! (Bottom) A graceful old pine is fenced for preservation. Muck settles in tanks before water is pumped into storm sewers. A former dump truck is outfitted for conventional drilling and blasting. Looking toward the shaft and South Drive. The crane operators display the spirit of '76. (Center) Hard hats, lunch boxes, and huge machines symbolize "Men at Work," and construction in progress.
Alabama Scientists Develop Oral Vaccine Effective Against Tooth Decay in Rats

Investigators supported by the National Institute of Dental Research at the University of Alabama have shown that by drinking a liquid vaccine rats can develop considerable protection against tooth decay. Drs. Jerry R. McGhee and Jiri Mestecky of Alabama's Institute of Dental Research and associates in the microbiology department on the Birmingham campus reported these animal studies at the recent annual meeting of the International Association for Dental Research in Miami, Fla.

Young, germ-free rats were divided into two groups. Animals in the first group were given killed, decay-causing bacteria (Streptococcus mutans) in their drinking water. Later both groups were infected with the living organisms and fed a sugary diet.

3-Month Olds Tested

When all the animals were 3 months old, samples of saliva and blood were taken, and the teeth were examined for decay. The inoculated animals had less decay on all surfaces of their teeth and much higher levels of salivary antibodies against S. mutans than those not consuming the vaccine.

One type of antibody called secretory IgA, Dr. McGhee explains, found in saliva and other glandular secretions, differs from other immunoglobulins in that it does not kill bacteria but makes them clump together.

Recent dental research has shown that this reaction interferes with the attachment of many bacteria to various tissues in the mouth. Prevention of attachment may explain in part how secretory IgA antibody reduces tooth decay.

Unattached bacteria are easily washed away by saliva and unable to colonize teeth long enough to make the acid that dissolves enamel. Nevertheless, this protection is not complete because some bacteria are trapped in small pits and rough places.

The production of naturally occurring antibodies in saliva, Dr. McGhee says, is thought to be stimulated by immune reactions that take place when foreign substances contact mucosal surfaces, particularly those lining the gastrointestinal tract.

He believes that S. mutans living in the mouth (and probably other indigenous bacteria also) when swallowed can stimulate precursor lymphoid cells in that tract. These cells presumably travel via lymph ducts to local lymphoid tissue in various glands where they differentiate into the type of plasma cell which synthesizes the secretory IgA molecule.

Secretory IgA molecules are twice as large as those of serum IgA. Many immunologists have theorized that IgA, like other antibodies, was made originally in the blood.

They thought that in the process of glandular excretion, two small molecules became linked. They reasoned that to stimulate salivary glands to make a particular antibody it would be necessary to inject a vaccine into or near the gland.

Last year, however, other NIDR-supported scientists showed that in proportion to their output, the hundreds of small salivary glands secreted more salivary IgA than the six large glands.

Therefore, it would be hard to tell where a vaccine should be deposited to obtain the best effect. Now it appears that salivary IgA may be synthesized in salivary glands in the larger form and split by an unknown process as it progresses into the bloodstream.

Interest in the naturally occurring salivary IgA molecules led the Alabama group to investigate secretory IgA in the milk of healthy humans. They found that salivary antibody to the five varieties (serotypes) of S. mutans occurred naturally in colostrum.

Moreover the antibodies reached higher levels in the colostrum than in the saliva of these individuals, and much higher levels than in their sera.

This evidence that naturally occurring salivary antibody producing cells are probably not of salivary or blood origin but derive from the intestinal tract also increases the rationale for using an oral vaccine to attack the problem of oral infections.

In a few years children may swallow a vaccine to protect themselves against most tooth decay much as they now drink one for polio protection.

These findings were presented in two papers by Suzanne M. Michalek, Dr. Roland R. Arnold, Dr. Lorenzo Bozzo, Dr. Jiri Mestecky, Dr. Michael Cole, Rose Kulhavey, Shirley Prince, and Dr. Jerry R. McGhee, of the U. of Alabama, Birmingham, supported by NIDR.

Additional evidence in support of the theory that oral vaccines may be feasible against organisms that cause dental decay was also presented at the same meeting by Dr. Bo Krasse, of the University of Gotelborg, Sweden, and Dr. Harold V. Jordan, Forsyth Dental Center.

These investigators swabbed the mouths of young germ-free mice and rats and of young hamsters (not germ-free) with two strains of killed S. mutans every day for 2 weeks. Some animals received dead bacteria in drinking water and food for 2 weeks.

Results Compared

A week later, both treated and untreated animals were infected with the same strains of live bacteria applied various ways in the mouth or suspended in drinking water. Although the results were not as uniform in the hamsters as in the other germ-free rodents, fewer bacteria could usually be recovered from the immunized animals than from the controls.

However, it was harder to infect conventional animals than germ-free animals, and more difficult to study their antibodies because of cross reactions with other varieties of bacteria. No method of applying the vaccine in this study proved superior to any other. The relevance of these observations for humans requires further research.

Speakers, Panel Recap Nurses' Convention Highlights

Moderator Dr. Susan Gorminer (r), Nursing Research Branch chief, Division of Nursing, BHRA, listens to panelist Sigrid Cooper, professor and chairman, Department of nursing, University of Wisconsin-Extension, Madison, who received the 1976 ANA Honorary Recognition Award for her pioneering work in continuing education and outstanding contributions to nursing.

"Update and Upbeat," a program of highlights from the 1976 American Nurses Association Convention, was presented by the Clinical Center Nursing Department last month in the Masur Auditorium.

Keynote speaker was Jo Eleanor Elliott, a past ANA president and currently Director of Nursing Programs, Western Interstate Commission for Higher Education, University East Campus, Boulder, Colo.

NIH researchers requiring water of the highest purity for biomedical research can now obtain it from the apparatus illustrated above. The equipment developed by the Environmental Safety Branch, DRS, continuously produces and stores water of the highest purity possible, free from organic compounds, bacteria and their by-products, endotoxins and mycotoxins, and inorganic elements other than those leached from pyrex glass. Minimal operating and maintenance time are required. For further information, call Dr. Nabil A. Karamian, Ext. 63261.
Stanford Center Treats Premature Babies’ Respiratory Distress

Respiratory distress syndrome is the greatest danger faced by premature infants. Better known as hyaline membrane disease, RDS cripples the lungs of 20 percent of all “preemies.” In 1962 it killed President John F. Kennedy’s tiny baby. Now, doctors at Stanford’s Premature Infants Research Center, a clinical research center supported by the Division of Research Resources, save over 85 percent of these babies.

According to Dr. Philip Sunshine, program director of the Center, the immediate objective in treating RDS infants is to keep the airways open, and at the same time avoid the damaging effects of high concentration of oxygen on the lungs and eyes.

Certain forms of mechanical ventilation are used, such as intermittent-positive pressure ventilation, or continuous positive airway pressure early in the course of the illness—especially if it is anticipated that the child is going to become critically ill.

Despite their poor temperature control, the infants’ temperature is kept in a thermo-neutral zone—a zone where oxygen consumption is at its lowest point, Dr. Sunshine reports.

“The key to insuring whether or not these infants survive is the care of the child—especially if it is anticipated that the child is going to become critically ill.”

The clinical researchers at the Center are now concentrating on improved techniques to raise the percentage of survival of newborn infants weighing 1500 grams (3 1/3 lbs.) or under.

TREATMENT AID DEFINED

“Treatment aid,” says Dr. Sunshine, “is to support the infant until he produces a surface-active material to line the airways and keep the alveoli (tiny air sacs in the lungs) from collapsing. We treat the infant as one would treat a heart attack. We treat the complications of RDS brings and give the infant the time to heal himself.”

The Stanford Premature Infant Transportation Systems. The Stanford System transportation services now handles more than 200 infants from outlying community hospitals.
New Total Body X-ray Scanner at CC Gives Clearer, More Precise Body View

X-ray technician Carl Newman prepares a patient on the Clinical Center's new EMI total body scanner. The scanner's X-ray tube rotates 180 degrees around the patient at the opening in the scanner, taking 300,000 absorption coefficient readings of body tissues in 20 seconds.

By Kurt Heine
CC Normal Volunteer

Following the success of the Clinical Center's EMI brain scanner, a $650,000 EMI total body scanner was installed at the CC in May. The device will be well worth its cost, according to Dr. John L. Doppman, chief of the CC Diagnostic Radiology Department. The body scanner uses a technique known as computerized axial tomography (CAT). Unlike a conventional X-ray that sends a broad beam of radiation over a large area, the CAT scanner's X-ray tube directs a thin, concentrated beam of radiation through a cross-section of the body to detectors.

Method Described

The tube rotates 180 degrees around the patient's body taking over 300,000 readings of X-ray absorption coefficient in a 20-second scan. A complete study of a patient usually includes 8 to 15 separate scans of 12 mm-thick slices of the body.

The absorption values are continuously fed into a computer which constructs an image from the readings that is viewed on a cathode ray tube. The image can then be recorded photographically with a Polaroid camera built into the viewer.

Variations in the absorption coefficients of tissue can easily be recognized using the CAT technique. For example, if a patient has a kidney tumor, the scanner can detect such a mass as different from the surrounding tissue.

Hold Breath for Clarity

Another advantage of the scanner is that since each scan takes only 20 seconds, most patients can hold their breath for this short time. The absence of movement gives a clearer, more precise image than possible before with a radiation dose comparable to that of conventional X-ray examinations.

Dr. Jean R. Herdt, deputy chief of the CC Diagnostic Radiology Department, says that the precision of the scanner enables it to be used to diagnose the extent of a disease more accurately than other means and that the machine will eventually be of more value.

Experience Needed

This is because the scans, showing tissue in a cross-sectional view, are new to radiologists. And, since there are no formal training programs in interpreting the scans, Dr. Herdt says, with more experience radiologists will be better able to understand what the new technique can show.

A complete series of scans can presently take up to 2½ hours. However, the computer is being adjusted to cut the processing time of each scan from the 5 minutes it now takes so the total study time will be shortened.

NIH Horn Club Presents Concert on Aug. 5 at CC

The NIH Chamber Music Association is presenting a concert by the NIH Horn Club on Thursday, Aug. 5, at 8 p.m. in the Masur Auditorium. The concert includes selections by Gabrieli, Wagner, Tchaikovsky, and Muller.

There is no charge for admission.

Dr. Robert Melville Wins Fisher Scientific Award for Clinical Chemistry

Dr. Robert S. Melville, chief, Automated Clinical Laboratory Section, Biomedical Engineering Program, National Institute of General Medical Sciences, will receive the American Association of Clinical Chemistry's 11th annual Fisher Scientific Award.

Honored in Houston

At a ceremony Aug. 4 in Houston, Tex., Dr. Melville will be presented with an honorarium of $1,000 and an inscribed plaque. The award is presented each year in recognition of outstanding service by a clinical chemist for the benefit of clinical chemistry as a profession.

A native of Worcester, Mass., Dr. Melville received his A.B. degree from Clark University, Worcester, and his Ph.D. in biochemistry from the University of Iowa.

Position Noted

Dr. Melville was clinical research chemist at the Massachusetts General Hospital for the Harvard University Laboratory of Research in Industrial Fatigue and held several clinical chemistry posts before joining the Veterans Administration central office staff as chief biochemist.

Since 1965, Dr. Melville has been an NICMS scientist administrator and also serves as executive secretary of the Institute's Medical Laboratory Sciences Review Committee.

In his present position, Dr. Melville has played a major role in the creation of a national program for the support of clinical laboratories research and training.

Dr. Melville, a founder and immediate past president of the National Registry in Clinical Chemistry, is credited with being an influence in the provision of credentials for clinical chemists at the baccalaureate level.

Received Roe Award

For the past 25 years, he has been an active member of the AACC, and in 1970-71 was its president. In 1972, the Capital Section of the AACC presented him with the Joseph H. Roe Award in the field of clinical chemistry.

It is the province of knowledge to speak and it is the privilege of wisdom to listen.—Oliver Wendell Holmes.