

# the NIH Record

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

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NATIONAL INSTITUTES OF HEALTH

## Colbert Appointed NIAID Associate Director for Collaborative Research

Dr. Dorland J. Davis, Director of the National Institute of Allergy and Infectious Diseases, has announced the appointment of Dr. James W. Colbert, Jr., as associate director for Collaborative Research.

In his new position, Dr. Colbert will be responsible for the Insti-



Dr. Colbert's duties will include administering collaborative international research and training programs.

tute's centrally-directed efforts aimed at specific medical problems, which are financed through contracts with medical research institutions, commercial laboratories and pharmaceutical companies. He succeeds Dr. John R. Overman, who died last November.

(See DR. COLBERT, Page 6)

## NIDR Study Finds Other Malformations Greater in Families With Oral Clefts

Research by the National Institute of Dental Research indicates that the incidence of serious malformations in other organs is greater in close relatives of people with oral clefts than in comparable families.

A group of 93 Caucasian families of children with oral clefts was compared with 82 similar families of children also seen at the Lancaster Cleft Palate Clinic for other dental and speech problems.

Family pedigrees and medical histories were recorded as completely as possible, including ascertainable facts about all pregnancies, especially the existence of any noticeable congenital abnormalities.

## Prolonged Oxygenation of Infants' Blood Seen Possible With New Artificial Lung

Long-term maintenance of blood-oxygen levels in newborn infants suffering from respiratory distress syndrome may soon become a practical clinical reality with a new artificial lung developed by scientists in the National Heart Institute.

The NHI scientists, and collaborating scientists in Boston, Chicago, and Baltimore, recently reported their use of the highly efficient and disposable membrane lung to safely maintain adequate blood-oxygen levels in newborn lambs during continuous use for periods of up to 4 days (96 hours).

### Findings Published

These findings were published recently by Dr. Theodor Kolobow and Dr. Warren M. Zapol of the NHI's Laboratory of Technical Development, Dr. Joseph E. Pierce, NHI Laboratory of Kidney and Electrolyte Metabolism, Dr. Ambrose F. Keeley, Boston City Hospital, Dr. Robert L. Replogle, University of Chicago Medical School, and Dr. J. Alex Haller, Johns Hopkins University School of Medicine.

Heretofore, prolonged blood-oxygenation with an artificial lung has been limited in duration to less than 12 hours in newborn laboratory animals, and has been accompanied by severe damage to lungs, blood cells and blood proteins, as well as the formation of dangerous blood clots and air bubbles in the blood.

The cylindrical, pint-sized lung, called the "spiral coil membrane

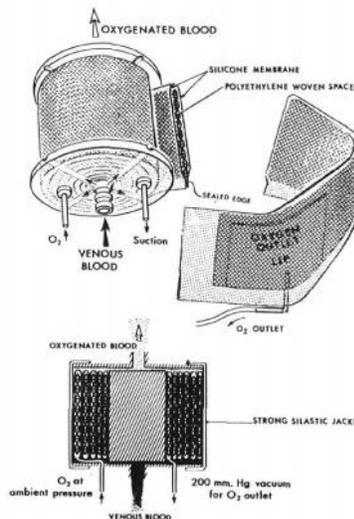
lung," contains a thin (5/1000 inch) silicone rubber membrane formed into a flat tube or envelope that is wound about a central spool.

The envelope is fitted with oxygen inlet and outlet ports. Blood enters one end of the lung's cylindrical housing, flows between layers of the spirally-wound silicone envelope and, still flowing parallel to the cylinder's axis, exits at the other end.

As in other membrane lungs, blood-oxygen and carbon dioxide exchange occurs by diffusion across a membrane. However, unlike most membrane lungs, the spiral coil lung is suction-actuated, i.e., oxygen is pulled through the lung by the intermittent application of a slight vacuum to the oxygen outlet port.

The new lung owes most of its safety advantages as well as its high oxygenating efficiency to this gentle, cyclic application of nega-

(See NEW LUNG, Page 7)



These illustrations show construction details of the spiral coil membrane lung, and the routes taken by blood and oxygen through the device.—Medical illustrations by Pat Kenny.

## Marston Appointed Director of NIH; Succeeds Shannon

President Lyndon B. Johnson on July 17 announced the appointment of Dr. Robert Q. Marston as Director of the National Institutes of Health.

Dr. Marston, now Administrator of the new Health Services and Mental Health Administration, will succeed Dr. James A. Shannon, who last week announced plans to retire as NIH Director on Sept. 1.



Dr. Marston

Previously Dr. Marston served as NIH Associate Director and Director of the Division of Regional Medical Programs, created to administer the 1965 Heart Disease, Cancer, and Stroke Amendments.

Dr. Marston received his M.D. from the Medical College of Virginia in 1947. He was selected as a Rhodes Scholar and spent 2 years as Oxford University in England.

In 1949 he interned at the Johns Hopkins Hospital, and the next year was a resident in medicine at Vanderbilt University Hospital.

### Does Research at NIH

As a member of the American Forces Special Weapons Project, Dr. Marston was stationed at NIH for 2 years (1951-53) doing research on the role of infection following whole body irradiation. On receiving his discharge he served another year of residency at the Medical College of Virginia.

Dr. Marston was selected as a Markle Fellow in 1954, serving at the Medical College of Virginia for 4 years, and the final year at the University of Minnesota.

He returned to the Medical College of Virginia in 1959 as associate professor of Medicine and assistant dean. In 1961, Dr. Marston was named director of the University of Mississippi Medical Center and dean of its School of Medicine. He was also appointed vice chancellor in 1965. In 1966 he was named DRMP Director.

# the NIH Record

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## NEWS from PERSONNEL

### CSC INSPECTION

The Civil Service Commission is inspecting NIH's personnel program and operations July 22 through August 23.

Such inspections are useful because they provide an objective appraisal of staff development and utilization.

Inspectors will be on hand to receive any information that employees think should be brought to their attention. The inspectors are not in a position to take action on individual grievances, but they will use the information in evaluating the personnel program, and making appropriate recommendations.

### Location Noted

During the evaluation period, the inspectors will be in Stone House, Room C. They are most likely to be there early in the day.

To contact inspectors, employees may call Ext. 62821, or arrange to speak directly to them by calling Joseph F. Smith, Employee Relations Section, NIH, Ext. 64759.

Inspectors may also be contacted at their Commission offices by writing to: U.S. Civil Service Commission, Bureau of Inspection, Room 5683, 1900 E Street, N.W., Washington, D.C. 20415, Attention: Mr. Eubanks Barnhill.

Employees who wish to speak with inspectors during work hours should receive permission to be excused from work from their supervisors. Interviews must be scheduled so as not to interfere with work assignments. Time off for the interview will not be charged to leave of absence.

## NIH Colleagues, Friends To Honor Dr. Sessoms

A reception for Dr. Stuart M. Sessoms, Deputy Director of NIH, who is leaving to accept a post at Duke University, will be given on Monday, July 29, in the cafeteria of Building 31, from 3 to 5 p.m.

At the reception, NIH friends and associates of Dr. Sessoms will have the opportunity to wish him well before he leaves. He will assume his new duties at Duke University on Aug. 1.



Harriet Englander (center), Red Cross Hospital Volunteer at the Clinical Center, shows a painting from the "Pictures for Patients" collection to Frances Humphrey Howard (left), sister of Vice President Hubert Humphrey, and Mrs. Luther Terry, wife of the former PHS Surgeon General, during their recent visit here. The art program for CC patients, which Mrs. Terry initiated in 1964, is administered by Mrs. Englander. When a patient is admitted to the CC he may select a picture from the Art Cart to be hung in his room. The collection of original paintings and reproductions of the old masters, all donated by interested individuals at NIH and in the community, has grown from 150 to 750. —Photo by Ralph Fernandez.

## NIH Employees Alerted to Current Law Regulating Partisan Political Activities

In a major election year, it is important that Federal employees be aware of current regulations on partisan political activity.

This is one of a 2-part series, prepared by the Personnel Management Branch, to inform employees of permissible political activities and those prohibited by Federal Law (Sections 7323-7327 of Title 5, U.S.C., or the "Hatch Act" as it is commonly known).

In general, the law prohibits employees of executive Federal agencies and the D.C. government, as well as certain other employees, from taking an active part in partisan political campaigns or partisan political management.

### Prohibitions Listed

Except in certain exempted communities, an employee may not run as a candidate or actively work in a campaign if any of the candidates are nominees of a national or state political party such as the Republican or Democratic Party.

Also, the holding of an appointive position or an elective office in a state or national political party is prohibited.

More specifically, an employee may not:

- Engage in the solicitation or collection of political contributions, including the selling of tickets for such activities as political dinners;
- Distribute partisan campaign material such as political badges, buttons or stickers at any time, nor should he display such material on his person or vehicle while carrying out his duties as a government employee;

- Actively participate in the conduct of political rallies and activities, promote such activities, or engage in the management of a partisan political club;

- Work at the polls on behalf of a partisan political candidate or party as a checker, challenger or watcher;

- Work as a part-time volunteer for a partisan candidate, even though this activity does not involve contact with the public.

This includes such work as "stuffing envelopes" with political literature, performing clerical work at campaign headquarters, writing campaign speeches, or canvassing voters for the purpose of promoting support for a partisan candidate or party.

In addition, an employee may not use, lend, or rent his auto for the purpose of taking voters, other than family members, to the polls on election day.

### Car Pools Exempt

This prohibition, however, does not apply to members of a car pool stopping at the polling place to cast their votes on the way to or from work.

Ignorance of the political activity law does not excuse an employee from penalties for violation. Penalties range from suspension without pay for no less than 30 days to the most severe penalty of removal.

Further, the Federal criminal laws make the soliciting, giving or receiving of political contributions between Federal employees or officers subject to fine and imprisonment.

Questions on political activity should be addressed to the Employee Relations and Recognitions Section, PMB, Ext. 64973.

Permissible political activities including partial exemptions to the Hatch Act pertaining to certain designated communities, will be discussed in the August 6 issue of the *NIH Record*.

## Dr. McCallum and Mrs. Parkins Appointed to Dental Council

Dr. Charles A. McCallum and Phyllis Virginia Parkins were recently appointed to a 4-year term on the National Advisory Dental Research Council by Dr. James A. Shannon, NIH Director.

Dr. McCallum is dean of the School of Dentistry, University of Alabama, and Mrs. Parkins is the director of the Biosciences Information Service, Philadelphia, Pa.

**2 EHS Films on Drug LSD Rescheduled for Aug. 7, 8**

Because of the interest engendered by its two documentary films on LSD, the Employee Health Service is rescheduling them for viewing by NIH employees who were unable to see them at previous showings.

On August 7 in the Clinical Center auditorium, "LSD-25," will be shown at 1 and 2:05 p.m.; "Beyond LSD," at 1:35 and 2:40 p.m.

On August 8 in the Westwood Building, Conference Room A, "LSD-25" may be viewed at 12 noon and 1:15 p.m.; "Beyond LSD" at 12:40 and 1:55 p.m.

**Dr. William B. DeWitt Named Acting Director, DRS; Succeeds Hansen**

Dr. William B. DeWitt, associate director for Laboratory Resources, Division of Research Services, has been named DRS Acting Director by Dr. James A. Shannon, Director of NIH.

Dr. DeWitt succeeds Chris A. Hansen who resigned to accept appointment as Commissioner, Environmental Control Administra-



Dr. DeWitt



Mr. Hansen

tion, Consumer Protection and Environmental Health Service.

Before coming to NIH in 1949, Dr. DeWitt served for 2 years in the Southwest Pacific with a Tropical Disease Unit on Malaria, Filariasis, and Schistosomiasis.

He received his B.A. degree from Howard College, Birmingham, Ala., in 1948, and began his career here as a medical parasitologist in the Laboratory of Tropical Diseases.

As a PHS commissioned officer (1951), in the Laboratory of Parasitic Diseases, he acquired his M.A. degree at George Washington University in 1952, and received his

(See DR. DeWITT, Page 8)

**WOMEN AT NIH**

**Dr. Malvina Schweizer, Former Educator, Finds Science Administration Rewarding**

As a student, a professor, and a scientist administrator, Dr. Malvina Schweizer has pursued her lifelong interests in education, biological research, student counseling, and administration.

Presently with the Program Projects Branch, National Heart Institute, Dr. Schweizer came to NIH in 1960 following a New York University career as biology professor, guidance counselor, and coordinator of the Program of Coordinated Liberal Studies.

She also served as an endocrine physiologist investigating intra-ocular transplants of the pituitary gland.

**Works With Grantees**

This background led to her present position as scientist administrator.

In this post Dr. Schweizer administers applications for grant funds in cardiovascular research. She also interviews grantees and discusses with them the most effective measures for using these funds.

Dr. Schweizer plays a major role in ironing out the laborious details involved in turning a well considered plan into a reality.

People invariably ask Dr. Schweizer why a university professor would accept such a position.

"Nobody is born to this job; the people here are from very different backgrounds and bring with them very different skills. When I left NYU I was asked, 'Won't you miss teaching?'—I don't. The elements are different and challenging but utilize all of my past experience."

**Lectures at NYU**

At NYU, Dr. Schweizer lectured before large groups of students, but had little personal contact with them. However, one student whom she does recall, is a former NHI surgeon, Dr. Nina Braunwald, whom she called "one of my most brilliant students."

Although emphasis was upon curriculum counseling, she also had to cope with the emotional problems of students. In order to understand these problems she enrolled in psychology and counseling courses at NYU and the New School for Social Research.

In 1957 she received a certificate from the William A. White Institute of Psychiatry.

Dr. Schweizer used her psychology background at NHI to deal



Dr. Schweizer attributes her understanding of certain aspects of cardiovascular diseases to psychology courses taken during her teaching career.—Photo by Ed Hubbard.

with the question of emotions and heart disease—an area of interest to the Heart Institute.

One of her first goals was to arrange for specialists with physiologic and psychologic training, to communicate and combine their talents in an effort to find an answer to this problem.

Because of her endeavors in this field, the Timberline Conference of Psychological Aspects of Cardiovascular Disease was held in 1962.

Dr. Schweizer particularly enjoys contacts with scientists in the field. "We don't accept grants cold; we always work with the scientist, discuss and review grants from a staff viewpoint. 'Is the scientist presenting it clearly, is he addressing it to his audience as cogently as possible?' This is all not so different from my university experience in working with students on graduate papers."

Dr. Schweizer's experience in working with faculty members has also prepared her for the admin-

(See DR. SCHWEIZER, Page 7)

**Med. Arts, Photography Br. Relocates to Improve And Centralize Services**

To centralize and improve services, the Medical Arts and Photography Branch, Division of Research Services, has moved to new quarters on the B2 level of the new Library wing of the Clinical Center.

For the first time, the design, art, and photographic services will be available in one location.

All requests to the Motion Picture, Medical Illustration, General Illustration, and Photography Sections for drafting, graphics, slides, photomacrography and photomicrography, can now be logged in at a central reception area, Room B2L-324, Bldg. 10.

**Open From 9 to 4:30**

Requests for service may be mailed or tubed (Tube Station AU-2) to this central area, open from 9 a.m. to 4:30 p.m.

The new plan for work reception and control, the result of a task force study, will provide many improvements. For example, it will now be possible to make a one-stop request for charts, graphs, and maps which are to be returned as tinted slides. Provisions have been made for checking, corrections, and approvals.

The new operation will also enable artists, photographers, and medical illustrators to work together more easily.

The cooperation of those requesting service from MAPB is needed while adjustments are being made for the streamlined service.

**New Numbers Listed**

The new centralized service telephone numbers are:

Gross specimen photography, photomacrography, photomicrography, medical illustration, medical models, and motion picture services, Ext. 62191;

Photography services (except those listed above), Ext. 65995;

Drafting, graphics, general illustration, including publications design, Ext. 63221;

Central offices, including the chief, MAPB, administrative officer, purchasing agent, and contract agent, Ext. 63467;

General information about services, Ext. 62191 or 63221.

Existing requisition forms will continue in use.

A Branch conference, presentation, and projection room will be available for consultation, planning, and development of designs. Motion pictures and exhibit models will be previewed here.

Original art work and publications designs will also be reviewed in this new room.

Use of the new motion picture sound studio will be delayed until necessary soundproofing is ready.

**Government Code of Ethics**

Any person in Government service should:

Never discriminate unfairly by the dispensing of special favors or privileges to anyone, whether for remuneration or not; and never accept, for himself or his family, favors or benefits under circumstances which might be construed by reasonable persons as influencing the performance of his governmental duties.

**Increasing Numbers Take Tests for Medical College**

A total number of individuals per year taking the Medical College Admission Test has shown a marked increase from 1962 to 1967. However, most characteristics of the examinees remain constant.

There has been no significant change in the ratio of nine male examinees for every one female.

The total number of MCAT examinees per year increased by 5,018 or 29 percent during this period.

## Robert Walkington Wins Career Education Award

Robert Walkington of the National Library of Medicine has received one of 15 DHEW Career Education Awards to develop outstanding potential for leadership in government.

Presented annually by the National Institute of Public Affairs under a Ford Foundation grant, the one-year scholarships are offered in national competition to career employees.

Mr. Walkington, acting chief of the Facilities and Resources Di-



Robert Walkington will concentrate on public policy courses during his school year at Princeton University.

vision, Extramural Programs, will attend the Woodrow Wilson School of Public and International Affairs at Princeton University during the 1968-69 academic year. He will take courses relating to public policy and the role of government in Federal-State relationships.

At 33, Mr. Walkington has been with the government for more than 10 years. He began his career as a management intern in the Bureau of State Services. From there he became a program representative in San Francisco for the Division of Water Supply and Pollution Control, Bureau of Environmental Health.

### Joins NLM in '66

He returned to the Bureau of State Services in 1963, where he was made a public health advisor for the Division of General Health Services. Later, he went to the Division of Hospital and Medical Facilities in the same capacity.

Mr. Walkington came to NLM's Extramural Programs in 1966 as construction program officer. He assumed his present position in February 1968.

Mr. Walkington, who was born in San Jose, Calif., received his B.A. degree in Political Science from San Jose State College.

He has also done graduate work in political science and public administration at Stanford and American Universities.

## Discovery Infected Monkeys Retransmit Human Malaria Simplifies Parasite Study

NIH scientists have found that a strain of human malaria which infects monkeys can be transmitted back to man by mosquito.

This finding simplifies the study of the malaria parasite, will make life more comfortable for the human volunteers participating in studies of the disease, and may have important implications for programs of malaria control.

This research finding was reported by Drs. Peter G. Contacos and William E. Collins of the National Institute of Allergy and Infectious Diseases.

### Volunteer Develops Malaria

The NIAID scientists infected a New World (owl or night) monkey with a chloroquine-resistant strain of the parasite, which causes virulent falciparum malaria in man, by injection of blood from an infected volunteer.

The monkey developed malaria and the parasite was then transmitted from the monkey's blood to a human volunteer by the bite of infected anopheles mosquitoes. The volunteer developed falciparum malaria 11 days later.

Prior to this transmission, whenever the research program on human malaria called for infected mosquitoes, it was necessary to subject volunteers to prolonged, though modified, clinical illness while the parasites developed in their bloodstreams to a stage where they were infective for mosquitoes.

Infection of the small, inexpensive monkeys with human malarial parasites will preclude the use of volunteers in this step of malaria research.

Efforts are now under way to complete the cycle, transmitting the parasite back to the monkey from man through bites of infected mosquitoes.

### New Problems May Arise

This achievement would reveal additional problems of worldwide malaria control; eradication of the disease from both human and simian reservoirs would be difficult.

Drs. Contacos and Collins are members of the research staff of NIAID's Laboratory of Parasite Chemotherapy, Section on Primate Malaria, at Atlanta and Chamblee, Ga.

Human malaria studies are carried out through the volunteer program at the Atlanta Federal Penitentiary.

### Dr. Ramiro Casso Will Serve 4 Years on Advisory Council

Dr. Ramiro R. Casso, McAllen, Tex., has been appointed to the National Advisory Council on Health Research Facilities for a 4-year term beginning July 1, 1968. The appointment was announced by Dr. James A. Shannon, NIH Director.

## Dental Health Division's Film on Oral Cancer Detection Wins Award

"Early Detection of Oral Cancer," a movie produced this year for the Division of Dental Health, Bureau of Health Manpower, has been cited for a Golden Eagle Award by the Council on International Non-Theatrical Events (CINE), Washington, D.C.

The movie will be among the entries offered by United States in 60 international film festivals and exhibitions.

### Dentists' Role Explained

The 16-mm, 16-minute color, sound movie was produced to explain the role dentists can play in the detection of mouth cancer. It familiarizes the viewer with the cytological examination for detecting oral cancer. The dentist, because of his special training in detecting mouth diseases, has a prime responsibility for early diagnosis of oral cancer.

The Division of Dental Health has supported more than 20 projects to educate the dental profession in oral cytology.

The new film represents the first major effort to educate the public on the value of the cytological technique for early detection of oral cancer.

### 7 Agencies Compete

The film was one of 20 selected from seven Government agencies to win the coveted award. Government films were included in the competition for the first time last year.

For the past 11 years CINE has been coordinating the selection of entries from business and industry for international film events.

CINE received over 600 films in this year's competition. Regional screening committees selected films for the final judging, which took place in Washington before a committee of motion picture experts from business, industry, and education.

"Early Detection of Oral Cancer" was produced by Vital Research Films, Houston, Tex., and the Texas Institute for Rehabilitation and Research, Houston, under a contract from the Division of Dental Health.

The award will be presented Nov. 15 in CINE's annual awards and exhibition program.

Prints of the film are available for loan from the National Medical Audio-visual Center, Distribution, and the Division of Dental Health, Chamblee, Ga.

## Dr. Marchesi Appointed Chief, NIAMD's Section On Chemical Pathology

Dr. G. Donald Whedon, Director, National Institute of Arthritis and Metabolic Diseases, has announced the appointment of Dr. Vincent T. Marchesi as chief of the Section on Chemical Pathology, Laboratory of Experimental Pathology.

Dr. Marchesi will conduct investigations of cell structure and biochemical functions, and their alterations in disease.

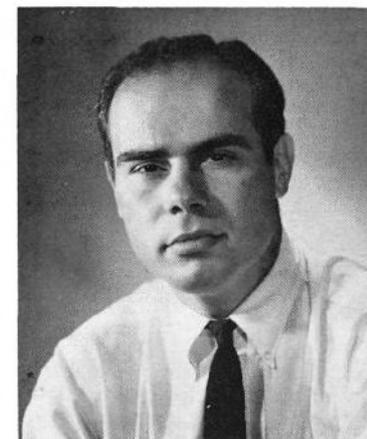
One research area will concern surface properties of blood cells in tissue culture obtained from man and experimental animals.

This study will attempt to determine the cell surface components involved in abnormal cellular interactions in inflammation, thrombosis and tumor cell growth.

Dr. Marchesi received his undergraduate degree from Yale, and his M.D. from Yale Medical College. He also studied and did research at Oxford University in England.

Much of his research training was in histochemistry and electron microscopy.

Dr. Marchesi also served as a research associate at Rockefeller University where he studied the



In his new post, Dr. Marchesi will do research on cell structure and biochemical functions.

structure and chemical properties of cell membranes and transport mechanisms.

In 1966 he was commissioned in the Commissioned Officer Corps, and was assigned to NCI, Laboratory of Viral Oncology.

## Dr. Ralph Wolfe Named To NIGMS Award Comm.

Dr. Ralph S. Wolfe, professor in the Department of Microbiology, University of Illinois, has been appointed to the Research Career Award Committee of the National Institute of General Medical Sciences.

## Heart Surgery Advances Described in Illustrated, 58-Page NHI Pamphlet

A new, illustrated publication entitled "Cardiovascular Surgery," which describes the most recent advances in the surgical treatment of congenital and acquired heart disease, has been issued by the National Heart Institute.

As a result of NHI research support, along with other Federal and voluntary research funds, spectacular strides have been made during recent years in the field of cardiovascular surgery.

### Major Strides Noted

Major advances include the following:

- Corrective or palliative operations have been devised for most of the common inborn heart defects and for many of the rarer forms as well.

- With the development of better artificial heart valves and improved methods of sustaining the patient during prolonged open-heart operations, surgeons can repair or replace as many as three heart valves damaged by rheumatic fever during a single operation with good prospects of success.

- High blood pressure caused by atherosclerosis or blood clots interfering with the kidney's blood supply can often be cured by surgery to restore normal renal bloodflow.

- A variety of ingenious, totally implantable artificial pacemakers have been developed to restore and maintain normal heartbeat in victims of heart block.

- Assisted-circulation techniques of "booster hearts" are being developed for maintaining normal blood pressure and adequate bloodflow to the body's organs and tissues while substantially reducing the workload of severely damaged or failing hearts. This temporary respite may enable damaged hearts to recover completely.

### Available Services Listed

- And much research is presently being directed at the development of a completely implantable artificial heart to replace hopelessly damaged or diseased hearts.

These and other facts, including facilities and services for the prospective surgical patient, also are presented in the publication.

Single copies of the 58-page publication (PHS Publication No. 1701) may be obtained, free of charge, from the Heart Information Center, Bethesda, Md. 20014.

Quantity copies may be purchased at 45 cents per copy or \$33.50 per 100, from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

## 1st NIAMD Workshop on Hemoproteins Includes Many Scientists From Overseas



Dr. Makio Murayama, NIAMD, whose research on sickle cell anemia contributed to the knowledge of the hemoglobin molecule, initiated the first hemoprotein conference at NIH.—Photo by Jerry Hecht.

A Workshop on Hemoproteins, sponsored by the National Institute of Arthritis and Metabolic Diseases, recently brought together more than 50 scientists from NIH, Germany, England, and Italy.

Participants discussed the state of research on hemoproteins (hemoglobin and cytochrome C). It was the first time that a conference on this subject was held at NIH.

### Initiates Workshop

The initiator of the workshop, Dr. Makio Murayama, of NIAMD's Laboratory of Physical Biology, contacted scientists from here and other countries, and asked them to present their research papers on hemoproteins.

Dr. Murayama is noted for his research on sickle cell anemia. This research resulted in further knowledge of the hemoglobin molecule.

One conference highlight which may benefit evolutionary studies, was a paper on the similarity between the hemoglobin of the insect, *Chryanomomus tumi tumi* (blood worm), and that of the human.

### Other Papers Discussed

Other papers that were discussed included the following questions: Why do hemoglobin molecules "click" closed when four oxygen molecules bind onto it?

Can the evolutionary trees of insect to mammal be plotted by studying the amino acid sequence in the hemoglobin molecule?

How much time is necessary for the hemoglobin molecule to pick up oxygen as red blood cells flow through the lung capillaries?

Nobel Laureate Dr. Max F. Perutz, Laboratory of Molecular Biology, Cambridge, England, was one of the 11 speakers. He discussed recent findings on the three-

dimensional structure of hemoglobin.

Other participants who addressed the workshop were: Dr. E. Margoliash, Abbott Laboratories, Chicago, Ill., the "Evolutionary Variability of Cytochrome C"; Dr. Jeffries Wyman, Instituto Regina Elena, Rome, Italy, "Linked Functions of the Hemoglobin Molecules"; Dr. G. Braunitzer, Max Planck Institut fur Biochemie, Munich, Germany, "Hemoglobin of the Insect *Chryanomomus*." Dr. Braunitzer reviewed the structure of insect hemoglobin including a recent report on X-ray diffraction studies.

### Presiding Scientists Named

Scientists who presided at the workshop meetings were Drs. J. T. Edsall and Guido Guidotti, Harvard University; Dr. Q. H. Gibson, Cornell University; Dr. Ray D. Owen, California Institute of Technology; Dr. Murayama, and Drs. Harvey A. Itano and Christian B. Anfinsen, also of NIAMD.

## Book by DEHS Author Now in Five Languages

The fifth translation of *Climate and Economic Development in the Tropics*, by Dr. Douglas H. K. Lee was recently printed in Spanish. Dr. Lee is associate director for Scientific Information and Communication, Division of Environmental Health Sciences, Research Triangle Park, N.C., and serves as Adjunct Professor of Zoology at North Car-

## CLEFTS

(Continued from Page 1)

in other members of the family and appear to be hereditary is not large, but in isolated CP it is even smaller. Both types of clefts occurred in the same family only six times.

Isolated CP was as common in one sex as in the other, but 72 percent of the CL±CP cases were male.

Inheritance of all 10 of the isolated CP families in which some other member had a cleft, could be traced through only one side of the family, nine being on the maternal side. This is evidence for the presence of a dominant gene.

### Relatives Affected

Among the 27 CL±CP families with more than one member having a cleft, three had affected relatives on both sides of the family, which is consistent with the theory of recessive genes.

In both types of familial clefting, some individuals showed less severe abnormalities such as a forked uvula or a lip notch or pit, but it is not clear why the defect is less clearly expressed in these cases.

There were no statistical differences between the cleft and control groups in the number or timing of pregnancies, the age of parents, or birth rank.

However, there were nearly twice as many serious congenital malformations in all organ systems among relatives of both CL±CP and isolated CP as in the control families.



Dr. Harold R. Stanley (left), NIDR's clinical director, presents a cash award to Eileen Luchinskas, secretary in the Oral Medicine and Surgery Branch, for her suggestion of a simplified, uniform bookkeeping method. Kirk Weaver, administrative officer of NIDR Clinical Programs, looks on.—Photo by Tom Joy.

olina State University.

Dr. Lee's book has also been translated into Bengali, Japanese, Indonesian, and Portuguese. The Spanish edition was published in Mexico by the Union Tipografica Editorial Hispano Americana.

The book reports on research by the Council of Foreign Relations on the effects of tropical climates on men, materials, animals, and plants.

## Early Environment Can Influence Growth, No Detectable Effect on Overall Health

Recent studies by Rockefeller Institute scientists receiving NIH support have revealed that nutrition and microbial contamination during prenatal and newborn life can produce lifelong effects on body development. However, some of these early environmental influences have no detectable lasting effect on overall health.

The research effort—funded in part by the National Institute of Allergy and Infectious Diseases—was aimed at determining whether or not early environmental influences have lasting biological effect.

Recent epidemiological evidence has indicated that some of the most important medical problems in underdeveloped geographical areas stem from such influences.

Because the study of humans would involve so many factors which could not be experimentally controlled, mice were used.

### Conclusions Noted

After a series of experiments, the research team, headed by Dr. Rene Dubos, concluded that:

- Early nutrition plays a significant role in the total growth of mice, but the mother's diet—even when inadequate—is probably not responsible for the later overall health of the offspring.

- Inheritance appears less important than nutrition and other environmental factors in determining growth.

- And—at least in mice—there is a filterable agent, of intestinal origin, which depresses normal growth rate although changes usually associated with disease are not seen.

Using specific - pathogen - free (SPF) mice—animals bred and raised in a protected environment—the Rockefeller University investigators altered in various ways the diet of females during pregnancy and lactation.

They found that these alterations—for example, low levels of amino acids or of magnesium—permanently depressed the growth of the young throughout their life span.

### Health, Lifespan Unaffected

This effect continued despite institution of an adequate diet after weaning. However, the studies also showed that neither the general health nor the life span of the young animals were affected by this early deprivation.

Indeed, two experiments, comparing the young nursed by mothers on different diets, showed that the small (less abundantly nourished during lactation) animals had somewhat longer life expectancies.

The scientists also noted that individual mothers in a colony consistently produced litters which became adults of a uniform size. However, genetics did not seem to play the dominant role in determining ultimate growth.

## Huly E. Bray to Direct Public Information and Publications at NLM

Huly E. Bray, a public relations management counselor in military, industrial, and government programs, has been appointed chief of the Office of Public Information and Publications Management, National Library of Medicine.



Mr. Bray

Mr. Bray recently retired from the Air Force. In military public relations, he handled radio, motion picture and television production, community and press relations, and the publication of various periodicals.

Before his retirement, Mr. Bray was special assistant to the Air Force Deputy Chief of Staff for Research and Development.

He was responsible for public affairs activities concerning the public, industry, scientists, and educators.

He also served as coordinator for the Director of Information, Office of the Secretary of the Air Force.

Mr. Bray received a B.S. in Education from Ohio State University, and took graduate courses in public relations.

He replaces Gerald N. Kurtz, who transferred to the National Institute of Mental Health as head of the Office of Communications.

It was found that the growth rate and adult size of mice taken at birth from their natural mothers and reallocated to foster mothers were profoundly affected by some unidentified influence of the foster mother—perhaps the quantity or quality of milk, transmission of a microbial agent, or more probably, some aspect of the foster mother's behavior toward the young.

### SPF Mice Grow Larger

In comparing ordinary and specific-pathogen-free mice, it was noted that the latter were regularly much heavier at weaning time and grew to larger adult size regardless of their post-weaning diet.

The NIAID-supported scientists found that a bacteria-free filtrate of the intestinal contents of ordinary mice when fed to SPF newborns, produced early and lasting depression of weight.

Furthermore, the contaminating

## DR. COLBERT

(Continued from Page 1)

A former associate director for Extramural Research, NIAID (1964-1967), Dr. Colbert returns to the Institute from the Public Health Service where he was director of the Advanced Planning Staff for the Surgeon General.

In addition to the three existing branches in the Collaborative Research Program, Dr. Colbert also will have under his jurisdiction a newly-formed Geographic Medicine Branch.

### Administers U.S.-Japan Program

This branch will administer the U.S.-Japan Cooperative Medical Science Program, a mutual effort to encourage research on parasitic diseases, cholera, virus diseases, leprosy, tuberculosis, and malnutrition.

It will also: 1) Coordinate the International Centers for Medical Research and Training Program, a cooperative effort by five U.S. and five foreign university medical research centers to improve knowledge of specific disease problems; and

2) Manage the International Career Development Program, which provides an opportunity for U.S. medical scientists to gain firsthand experience with disease prevalent in other parts of the world.

Other branches in the Collaborative Research Program are the Research Reference Reagents Branch, the Transplantation Immunology Branch, and the Vaccine Development Branch.

### Taught at Yale

Dr. Colbert received his M.D. degree from Columbia University College of Physicians and Surgeons. He was on the faculty at Yale University School of Medicine, and was dean of the St. Louis University School of Medicine from 1953 until 1962, when he joined the PHS.

As associate director for NIAID's Extramural Research, Dr. Colbert was responsible for planning and direction of research grant, training grant, and fellowship programs of the Institute.

agent could be transferred from parent to offspring over many generations by inbreeding contaminated mice.

This agent, which exerts its effect only when introduced within the first 3 days of life, apparently produces no obvious effect on the mice other than weight depression.

The scientists are currently investigating the metabolic disturbances, produced by the contamination, which result in weight depression, in a search for possible clues to other effects on the body not yet revealed.

## Dr. Grainger Appointed Assoc. Director, NIDR Extramural Programs

Dr. Robert M. Grainger has been appointed associate director for Extramural Programs at the National Institute of Dental Research.

Dr. Grainger will administer the Institute's broad-based grant support of research and graduate research training in more than 100 universities and other institutions.

Before coming to NIDR, Dr. Grainger was at the University of British Columbia in Vancouver, Canada, where he headed the Dental Clinic, taught and conducted research in epidemiology and computer applications.

From 1958 until 1967 he was professor of Epidemiology and chairman of the Research Division, University of Toronto, Ontario.

Dr. Grainger has been active in dental affairs internationally. In Canada he served his Government and dental organizations; there he chaired a Government subcommittee responsible for gathering dental health statistics and maintaining a national dental health index.

His international work includes



Dr. Grainger is known internationally in the field of dentistry as an educator, researcher, and administrator.

serving as chairman of a committee on design and analysis of clinical trials and heading a World Health Organization panel that is developing a system of dental epidemiology.

In this country, he has served on two NIH advisory groups, the Dental Program Project Committee and the Dental Study Section, and he has been consultant to the Food and Drug Administration and the National Center for Health Statistics.

Author of more than 55 papers, monographs and manuals, Dr. Grainger received his D.D.S. from the University of Toronto in 1943. In addition, he holds a graduate degree in dental public health and an M.Sc.D. in epidemiology from the same university.

## Dr. A. Morrow, NHI, Elected President of Cardiovascular Group

Dr. Andrew G. Morrow, National Heart Institute, was recently elected president of the North American Chapter of the International Cardiovascular Society.



Dr. Morrow

Founded in 1950, the society is concerned with stimulating research and exchanging ideas on the art, science and therapy of cardiovascular disease.

To be eligible for active membership, surgeons and interns must have achieved distinction in the cardiovascular field by meritorious contribution to the knowledge of cardiovascular disease and treatment.

Dr. Morrow, chief of the NHI Clinic of Surgery since 1953, is a graduate of the Johns Hopkins University School of Medicine where he also did his internship and residency training.

### Teaches at Johns Hopkins

In addition to his duties at the Heart Institute, Dr. Morrow has been an associate professor of Surgery at Johns Hopkins since 1960.

Recipient of many distinguished service citations and honors, Dr. Morrow was selected as one of the ten outstanding young men in the Federal Government and presented with the Arthur S. Flemming Award in 1962.

Dr. Morrow has authored or co-authored over 275 articles. At the society's San Francisco meeting last month, he presented a paper "Instantaneous blood flow through ball valves prostheses in the tricuspid position: effects of heart rate and atrial contraction."

## Latest Participants in NIH Visiting Scientists Program Listed Here

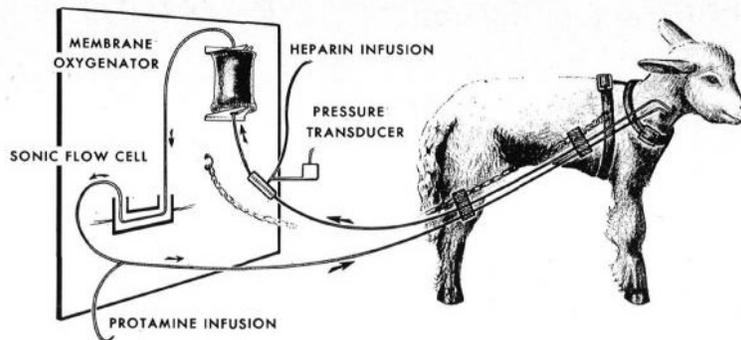
6/25—Dr. Sieglinde B. Hennig, Federal Republic of Germany, Laboratory of Biochemistry. Sponsor: Dr. R. Ann Ginsburg, NHI, Bldg. 3, Rm. 214.

6/28—Dr. Takahiro Hirano, Japan, Laboratory of Pathology. Sponsor: Dr. Harold L. Stewart, NCI, Bldg. 10, Rm. 2A33.

7/1—Dr. Norio Aimi, Japan, Section on Steroids. Sponsor: Dr. Yoshio Sato, NIAMD, Bldg. 4, Rm. 134.

7/1—Dr. David J. Boullin, England, Laboratory of Preclinical Pharmacology. Sponsor: Dr. Erminio Costa, NIMH, St. Elizabeths Hospital.

7/1—Dr. Dorothea I. Connell, England, Carcinogenesis. Sponsor: Dr. Hans L. Falk, NCI, Wisconsin Bldg., Rm. 5C09A.



In this diagram a lamb is connected to spiral coil membrane lung via tubes inserted into neck artery and vein. Tethered lamb can walk about within confines of cage. Blood circuit includes provisions for measuring pressure and flow, and for adding an anticoagulant drug, heparin, to blood entering oxygenator. Normal blood coagulability is subsequently restored by adding protamine to blood returning to the lamb.

## NEW LUNG

(Continued from Page 1)

tive pressure.

This prevents oxygen bubbles from entering the blood (gas emboli) should pin hole leaks occur in the membrane, and the pulsatile motion it imparts to the membrane greatly increases blood oxygenation by eliminating the "stagnant" boundary layer of oxygen-saturated blood immediately adjacent to the membrane.

### Eliminates Need for Pump

Thus, more blood is brought into contact with the membrane where oxygenation occurs. Finally, the low perfusion pressure and pulsatile motion, along with normal arterial blood pressure, act to propel blood through the lung and eliminate the need for a separate blood pump with its attendant damage to fragile blood components.

Performance of the spiral coil lung was studied during prolonged use in eight newborn lambs (from 1 to 8 days old), each connected to an externally located spiral coil lung by means of plastic tubing inserted into an artery and a vein in the neck.

### Tests Determine Efficiency

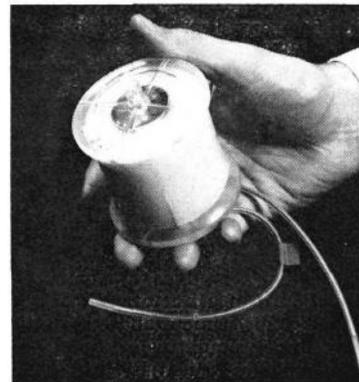
Lambs were chosen for these studies because they weight about the same as newborn infants. In these studies, oxygenating efficiency of the artificial lungs were determined daily during brief periods of oxygen lack when the lambs were subjected to an atmosphere containing only seven percent oxygen.

The NHI and collaborating scientists reported that the artificial lungs performed well during continuous operation in the animals for periods of from 21 to 96 hours, and that no consistently abnormal gross or microscopic changes occurred in the six survivors.

From this excellent performance of the spiral coil lung, and the

overall benign effects of its prolonged use in animals, the scientists feel that its use should be considered as a method of treating respiratory distress in the newborn infant or adult.

The spiral coil lung can oxygenate up to 450 cc of blood (nearly a pint) per minute, yet has a total priming volume of only 45 cc.



Shown here is the pint-sized disposable membrane artificial lung recently developed in NHI's Laboratory of Technical Development which has provided safe, effective oxygenation of blood during continuous use in lambs for periods up to 4 days.

## DR. SCHWEIZER

(Continued from Page 3)

istrative duties of her NHI post. "My administrative background gave me a feel for this work."

She further explained that she is able to use her experience in research here. "If you have done research, even though you're dealing with totally different problems, you know enough to know if the design of an experiment is well presented.

"I feel more challenged by variety. One of the most challenging things in life is to put a firmly established career behind you and begin a new career; it revitalizes you, you learn from everyone."

## Dr. Van Scott Retires, Joins Temple University And Philadelphia Hosp.

Dr. Eugene Van Scott has retired as scientific director for General Laboratories and Clinics of the National Cancer Institute to join the staff of Temple University as professor of Dermatology and associate director of the Skin and Cancer Hospital of Philadelphia.



Dr. Van Scott

At Temple University, he will be active in integrated clinical and laboratory programs in the study of cutaneous disease and injury, and related epithelial cancers.

Dr. Van Scott was born in Macedonia, N.Y. He received B.S. and M.D. degrees from the University of Chicago.

After internship at Millard Fillmore Hospital in Buffalo, and a residency in dermatology at the University of Chicago, he served as associate in Dermatology at the University of Pennsylvania Hospital. From there he came to NCI.

He was named head of the Dermatology Service in 1957, and chief of the Dermatology Branch when it was created in 1961.

### Research Aids Understanding

He also served as director of Intramural Research, and in 1966 was named scientific director of General Laboratories and Clinics.

Dr. Van Scott's research on the biology of normal and abnormal skin has led to a better understanding of basic growth problems.

He has shown the importance of the stroma in cell differentiation, and demonstrated that hair can be used to measure the effects of radiation, drugs, and physiologic disturbances on normal growth.

Results of his research have been useful in clinical studies of such diseases of mycosis fungoides, psoriasis, and skin cancer.

For example, he has shown that psoriasis appears to be related to a failure of keratinization due to rapid epidermal proliferation, and that cancer drugs, which retard cell growth, permit the epidermal cells to produce keratin, at least temporarily.

Dr. Schweizer is married to Erno Balogh, a noted concert pianist and composer, who studied under the late Bela Bartok in Hungary.

A tireless worker, Dr. Schweizer appears undaunted by the long hours, paper work, and great amount of traveling her job requires.

"I believe that a job is what it is plus what you bring to it," she commented. "A job is not a little something with a fence around it."

## 'Toxicity Bibliography' Includes Current Data On Drugs, Chemicals

The National Library of Medicine's new quarterly publication, the *Toxicity Bibliography*, is of special interest to health professionals working in toxicology and related disciplines.

Drawing upon current references in NLM's computer-based MEDLARS (Medical Literature Analysis and Retrieval System), the bibliography provides quick access to the world's relevant and significant journal literature in the field of toxicology.

### Adverse Effects Reported

Coverage includes the adverse and toxic effects of drugs and chemicals reported in approximately 2,300 biomedical journals.

Each quarterly issue contains references selected from the monthly issues of *Index Medicus* for the corresponding 3-month period.

The bibliography, which began with Volume I, Number 1 (January-March 1968), is divided into two major sections.

Section I, Drugs and Chemicals, contains references to articles indexed under subject headings for a chemical, drug, or similar substance for which the subheadings "adverse effects," "poisoning," or "toxicity" have also been applied.

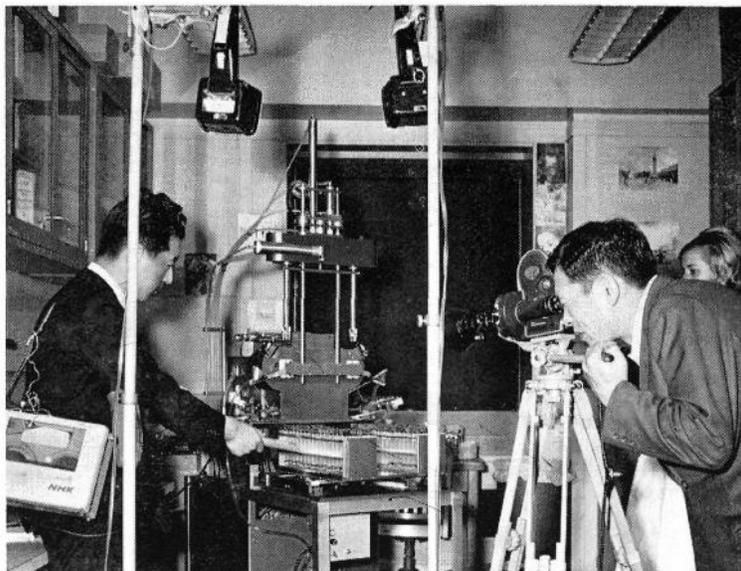
Section II, Adverse Reactions to Drugs and Chemicals, with 18 subsections, contains references appearing under headings which, together with the subheading "chemically induced," denote signs, symptoms, disease states, or congenital abnormalities caused by a drug or chemical.

The *Toxicity Bibliography* is a publication of NLM's Toxicology Information Program, which was established in 1967.

It is sold by the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at an annual subscription rate of \$9 (\$11.25 foreign), or \$2.25 per individual issue.



Perfection is a much sought attribute but, alas, we live in an imperfect world, as evidenced by this sign in the parking area in front of Building 31.—Photo by Bob Pumphrey.



A camera crew from the Japanese Broadcasting Company, Tokyo, recently spent a day shooting medical research activities at NIH for a television documentary. Takashi Kakuma (left) and Masaji Yuasa are preparing to film a prototype media exchanger developed by the Division of Research Services for the Clinical Center.—Photo by Tom Joy.

## DR. DeWITT

(Continued from Page 3)

Ph.D. in Parasitology there in 1956. He has served with DRS since August 1965.

From 1959 to 1965, Dr. DeWitt was editor of the *Tropical Medicine and Hygiene News*, a publication of the American Society of Tropical Medicine. He was secretary of the Helminthological Society of Washington from 1965 to 1966, at which time he was elected vice president of the society.

He has served as a member of the Board of Directors, NIH Federal Credit Union and is on the Executive Committee of the NIAID Assembly of Scientists.

### Numerous Articles Published

Dr. DeWitt has published numerous articles in the field of tropical medicine, one of which, Contributions of the U. S. Public Health Service in Tropical Medicine, was recently presented as part of a Symposium on American Contributions in the History of Tropical Medicine and published in the *Bulletin of the New York Academy of Medicine*.

Mr. Hansen became the first chief of DRS in April 1956, a title changed to Director in 1966. Prior to joining NIH he was assistant chief (Operations) of the Communicable Disease Center, Atlanta, Ga., a position he had held since late 1952.

During this time he also served as chief of the Facilities Planning Office, which was charged with the development of six new CDC buildings.

Mr. Hansen joined the PHS Reserve Corps in 1942 and was assigned to the Headquarters of Malaria Control in War Areas, At-

lanta. He remained with this group (which became the CDC in 1946) until he joined NIH.

He graduated from North Dakota State College in 1937 with a B.S. in civil engineering and earned his M.S. in sanitary engineering at the University of North Carolina in 1942.

Mr. Hansen was appointed to the PHS Regular Corps in June 1946. He is a member of several honorary and professional societies and is a diplomate in the American Academy of Sanitary Engineering.

In 1964 Mr. Hansen received the PHS Meritorious Service Medal for "his unique achievements in the development of technical supporting services to the research programs of the NIH."

A farewell cocktail and buffet party was held in honor of Mr. Hansen July 19 at the Linden Hill Inn by his many friends and colleagues at NIH.

## CC Reports June Donations, Urges More Blood Donors

The Clinical Center Blood Bank reports that, in June, 207 units of blood were received from NIH donors. CC patients received 2,785 units of blood.

During that period, five donors achieved a special status. John B. Debnam, OD, reached the 2-gallon mark.

The others, Herbert C. Christoferson, NIDR; Jay Lee Jackson, NCI; Willard R. Piggett, NIAID, and Dr. Deward E. Waggoner, NCI, joined the gallon donor club.

Anyone wishing to donate blood may do so by calling Ext. 64506.

## Indian Medical Center In Phoenix Will House NIAMD Research Unit

A groundbreaking ceremony was held recently for the Phoenix Indian Medical Center in Phoenix, Ariz.

The Center will also house a research unit staffed initially by clinical investigators and scientists of the National Institute of Arthritis and Metabolic Diseases.

The Division of Indian Health's 200-bed Center will be a referral facility providing diagnostic services and specialized treatment for 10 peripheral hospitals and seven health centers in Arizona and Nevada, and other clinics in nearby states which serve Indian tribes.

Research patients may be drawn from Indian and Eskimo populations in any of the 50 states.

A 25-bed research area, designed by NIAMD Director Dr. G. Donald Whedon and including examination and treatment rooms, a metabolic kitchen, and collateral laboratory and service units, will occupy the fifth floor.

### Other Research Included

NIAMD research projects will include studies on diabetes, gall-bladder disease, and arthritis.

The finding in 1965 of a high prevalence of diabetes among the Pima Indians of Arizona was one of the factors indicating the need for a research center in Phoenix.

Other NIH components will join NIAMD in conducting clinical research programs.

Invited by the Inter-Tribal Council of Arizona to represent NIAMD and NIH at the groundbreaking ceremony was W. G. Baylis, executive officer of the Institute.

The \$5.9 million medical, surgical and research Center is scheduled for completion in early 1970.

## Dr. Hoye, NCI, to Study At Karolinska Institutet

Dr. Robert C. Hoye of the Surgery Branch, National Cancer Institute, will leave his post for one year of study at the Karolinska Institutet in Stockholm, Sweden, beginning Aug. 12.

Dr. Hoye will be engaged in studies dealing with the circulatory, metabolic, and immunological functions and significance of the lymphatic system in man.

Methods of studying the lymphatic system via thoracic duct drainage have been available for only a few years and investigations at Karolinska appear to be in the forefront of this field of study.

A native of Detroit, Dr. Hoye received his B.S. degree from the University of Detroit (1952) and the M.D. degree from St. Louis University in 1956.