Dr. William A. Lybrand Heads BHME Division, Manpower Intelligence

Dr. William A. Lybrand has been named Director of the new Division of Manpower Intelligence in the Bureau of Health Manpower Education.

As Director of DMI—established under the recent Manpower Bureau reorganization—Dr. Lybrand is responsible for analyzing and reporting data on national health manpower supply and demand. The Division will also provide guidance on such information and data systems to other Bureau components and direct a National Clearinghouse for information on various aspects of health manpower.

Dr. Lybrand comes to the Division from The American University where since 1966 he has served both as Director of the Development Education and Training Research Institute, and as professor of Behavioral and Social Sciences, School of Government and Public Administration.

He received his B.A. degree from Muhlenberg College, and his M.Sc. and Ph.D. degrees from the University of Maryland. Following his graduation there Dr. Lybrand was appointed assistant professor. In 1958, he joined Psychological Services, Inc. in Wash. D.C. (See DR. LYBRAND, Page 1)

Wash. Chemical Society Gives Hillebrand Award To Drs. Sober, Peterson

The Hillebrand Award for 1970 will be presented jointly to two NIH employees—Drs. Herbert A. Sober and Elbert A. Peterson of the Chemical Society of Washington on March 11.

Drs. Sober is chief of the Laboratory of Nutrition and Endocrinology in the National Institute of Arthritis and Metabolic Diseases. Dr. Peterson is head of the Protein Chemistry Section in the Laboratory of Biochemistry, National Cancer Institute.

According to the Chemical & Engineering News (Feb. 15, 1971), the two prize winners will be cited for their discovery and development of modified cellulose ion exchangers.

These are used to separate, purify, and identify proteins, nucleic acids, and other materials of importance in the life sciences.

Dedication Ceremony in North Carolina Opens 4 New Environmental Buildings

A cluster of four new buildings was dedicated yesterday (March 1) at the National Institute of Environmental Health Sciences Center, Research Triangle Park, N.C.

The dedication marked an important step toward completion of Phase II, a major Institute expansion program.

North Carolina Governor Robert W. Scott was among the dignitaries expected to take part. NIEHS Director Dr. Paul Kotin headed the Institute officials at the ceremony. Scientists and others will move into the new facilities in the next few weeks. Total net additional space is about 30,000 square feet.

Lab Space Doubled

Laboratory space accounts for 17,000 feet of this, almost doubling NIEHS's previous laboratory facilities. New animal facilities total almost 13,000 square feet, more than quadrupling previous animal space.

Dr. Hans Falk, NIEHS Associate Director for Laboratory Research, said "for the first time we will be able to undertake long-range, low-level exposures of animals that are protected against accidental exposure to pathogens from human or other sources."

Dr. Falk explained that all humans who enter the new animal building will shower and don sterile garments. They will enter 22 animal rooms from a "clean" corridor and when they leave the building they must exit through other corridors.

To reenter the clean area, they must go through the shower and sterile clothing procedure again. A positive pressure air system will create invisible barriers to pathogens and other particulates when doors are opened.

Controls Possible

In the animal holding rooms, temperatures, humidity, and lighting are controlled. For example, a precise combination of these three factors that encourage opussums to breed can be obtained.

These marsupials have been found by NIEHS scientists to be


On Feb. 18 President Nixon outlined his comprehensive health policy for the 1970's in a special health message to Congress.

Of special interest to NIH were recommendations to expand research in cancer and sickle cell anemia and in increase Federal support to schools and institutions that train health manpower.

The President recommended a "balanced" approach to biomedical research support with "strong efforts in a variety of fields."

Two critical areas," he said, "deserve special attention. The first is cancer; the second, sickle cell anemia.

To direct and oversee the proposed expansion in cancer research, the President called for establishment of a new management group within the organizational framework of NIH.

"Because this project will require the coordination of scientists in many fields, drawing on many professions."

(See NEW GROUP, Page 7)

Dr. O'Donnell Appointed DRR Assistant Director

Dr. James F. O'Donnell has been named assistant director of the Division of Research Resources.

In his new post, Dr. O'Donnell will take part in the day-to-day administration of the Division's programs, and represent the Division on several scientific management and program committees.

He will also work with DRR branch chiefs to evaluate program progress and will be responsible for developing new ideas and approaches to the Division's extramural research resource and institutional support programs.

Dr. O'Donnell came to NIH in 1968 as a Grante Associate and joined the National Institute of Child Health and Human Development in February 1969.

He was chief of the Population and Reproduction Grants Branch prior to joining DRR.

Before coming to NIH, Dr. O'Donnell taught at the University of Cincinnati from 1957 to 1968, attaining the rank of associate professor of Experimental Medicine.

He holds a Ph.D. in biochemistry from the University of Chicago.

Dr. O'Donnell, whose main research interest is the biochemistry of liver disease, has published numerous articles in medical and chemical journals.
March 12

For Job Advancement

Clerk-Typist Training Program Offers Chance

Are you interested in a new job and a new career at NIH?

The Clerk-Typist Training Program is offering, for a second time, a chance for advancement to career and career-conditioned employees in dead end or limited skill jobs.

Typing or clerical experience is not required for those accepted for the full-time program. There will be 18 weeks of classroom instruction and 12 weeks of on-the-job training in NIH organizations.

Classroom training, conducted by teachers from the Montgomery County Adult Education Program, will be held from April 12 through June 27. The curriculum will include typing, English, mathematics, writing, filing, and general office procedures.

About 25 employees will be accepted for the program through the NIH Merit Promotion Plan; they will be given the title of clerk-typist trainee.

Program participants, including wage grade employees, will be paid GS salaries equal to their current salaries, plus a GS-4 step 10. An exception will be made for clerks who are GS-4's; they will continue to receive their regular salaries.

Trainees successfully completing the course will be assigned to clerk-typist positions at NIH. Those not meeting course requirements will return to their original assignments or to another job with comparable salaries.

Applicants should complete Form 171, available in the Personnel Offices. Forms may be sent to Mrs. Roberta Revuelta, Program Coordinator, Room 2B-03, NIH Record Office, Building 31.

nihrecord.org
Morton Lebow to Serve As Public Information Director for BHME

Morton A. Lebow has been appointed Director of Public Information for the Bureau of Health Manpower Education.

Mr. Lebow comes to the Bureau from his post as Director of Special Events for the recent White House Conference on Children. As information officer for BHME, he will be responsible for explaining the Bureau's programs. These programs are designed to increase the number of medical personnel serving the Nation and to help improve their training.

**Background Note**

Before serving with the White House Conference on Children, Mr. Lebow was district manager and information officer for the Social Security Administration, information officer with the Federal Water Pollution Control Administration, the Office of Equal Health Opportunity, and the Surgeon General's office of the Public Health Service.

While serving with the Information Office for HSW, he developed a project with author Budd Schulberg's Watts Writers Workshop in Los Angeles to recruit inner-city residents to write a series of government publications for distribution among the poor.

Mr. Lebow attended the College of the City of New York and received his M.A. from the University of California at Los Angeles.

**Davis Plan Contributions Reach New High in Ten-Year History**

NIH employees beat their own record in 1970. Contributions to the Davis Plan at Christmas time totaled $5,047.08, the highest in the Plan's 10-year history.

Only once before did contributions exceed the $5,000 mark.

**Proposes Revised Goals and Objectives**

Dr. A. Bruno, New Chairman of STEP, Proposes Revised Goals and Objectives

"If you can identify the right people—the problem solvers, impress them with the importance of what you wish to accomplish based on a critical view of realistic goals, you can move mountains."

With this outlook, Dr. Anthony Bruno assumed chairmanship of the Committee on Staff Training-Extramural Programs (STEP). The group serves as advisors to the NIH Associate Director for Extramural Research and Training, Dr. R.W. Lamont-Haverson.

Conception of the STEP Committee dates back to 1962 when Dr. Dwight C. Monnier, then assistant chief for Training Grants, Division of Research Grants, suggested appointment of such a group.

By June of the following year, a committee was established.

The mission of the committee—"to accelerate professional growth, increase competency and continue development of necessary skills in grants administration and management"—was set forth by Dr. Stuart M. Sessions, former NIH Deputy Director.

Dr. Bruno, senior project scientist, Medical Devices Applications Program, National Heart and Lung Institute, like all committee members, was appointed by Dr. Lamont-Haverson. He will serve a one-year term.

In addition to the 12 appointed members, representatives from the Associate Director's office, Grants Associate Program, and Office of Personnel Management serve as ex-officio members on the committee.

The present committee consists of Drs. Bruno; Mordecai H. Gordon, NCI; Barney C. Lepovetsky, NIDR; Samuel Schwartz, DBB; James O'Donnell, DRR; Laurence H. Miller, NIAMD; Ann Kaufman, NLM; Arthur Heming, NIGMS; and William Gay, NIAID; also, Richard Hopkins, NICHD, and Rob-

**Dr. Pastan to Head NCI Molecular Biology Lab**

Dr. Ira Pastan has been named chief of the newly established Laboratory of Molecular Biology in the National Cancer Institute General Laboratories and Clinics area.

He was formerly head of the Molecular Biology Section in the Endocrinology Branch.

Under Dr. Pastan's direction, the laboratory will investigate the mechanism by which the expression of genetic information is controlled in both animal and bacterial cells.

To facilitate this research, the Biochemical Genetics Section, headed by Dr. M.E. Gottesman, will function as a part of the laboratory.

A magna cum laude graduate of Tufts College and Tufts Medical School, Dr. Pastan joined NIH in 1959 as a clinical associate with NIAMD.

He served as a senior investigator in the Clinical Endocrinology Branch from 1962 to 1969, then transferred to NCI.

Dr. Pastan, whose primary research interests involve the role of cyclic adenosine monophosphate (AMP) in regulating gene activity, was presented the Tufts Medical School Roche Award in 1967 for academic excellence.

A member of several professional scientific societies, Dr. Pastan is a member of the editorial boards of the *Journal of Biological Chemistry* and *Endocrinology*.

**Kristin Moehler Exhibits Paintings**

For Two Weeks in Building 31

Kristin Moehler, young Washington artist, has her works on display in Bldg. 31, A Wing, for 2 weeks. She opened yesterday, sponsored by the NIH Art Club.

The artist is the daughter of Delphine Moehler, Clinical Center Pharmacy receptionist.

Miss Moehler is a 1970 graduate of the University of Syracuse. She took time off last summer to see Europe and learn more about her art major. Miss Moehler won "best of show" in the 1970 spring art exhibit at NIH.
Aerosol Spray Gases Can Be Dangerous, May Affect Heart, Cause Sudden Death

By Beri Attis

The gases used as propellants in aerosol sprays may affect the heart and, in certain circumstances, lead to sudden death. Researchers suggest that these findings may explain unexpected deaths among youths who turn on inhaling these gases deliberately and among asthma patients who use bronchial sprays excessively.

Toxin Ingestion Linked To Childhood Cirrhosis

An aerosol spray that has been shown to contain aflatoxin is being linked to childhood cirrhosis, indicating that aflatoxin is a hepatotoxin that can cause liver damage.

Follow-up Study Mode

In a follow-up study of one year's duration, the children developed hepatic lesions identical to Indian childhood cirrhosis, indicating that aflatoxin is, in all probability, involved in the etiology of this disease.

Indian Studies Reveal Toxin Ingestion Linked To Childhood Cirrhosis

A common mold found on peanuts and other food items grown in tropical countries may be linked to liver diseases in children. The mold—aspergillus flavus—produces a toxic factor, aflatoxin, known to be severely hepatotoxic in the young of many animal species.

In earlier studies, scientists at the Mysore Medical College and the Central Food Technological Research Institute in India linked aflatoxin with cirrhosis in children living in that country.

The investigators are doing research under the sponsorship of the National Institute of Allergy and Metabolic Diseases.

The toxin was identified in the urine of cirrhotic children, in the breast milk of their mothers, and in a dietary staple, crude peanut oil.

The accidental ingestion of aflatoxin-contaminated peanut protein flour by 29 Indian children has now permitted study of the toxic manifestations of this compound in humans.

Dr. John Munn Accepts WHO Scientific Post

Dr. John I. Munn, Division of Research Grants, has been chosen by the World Health Organization for a 2-year assignment in Geneva, Switzerland, as senior scientist in its Food Additive Unit, Division of Pharmacology and Toxicology.

At DRG, Dr. Munn is executive secretary of the Pharmacology A Section.

cirrhosis

Early hepatic lesions closely resembled histologically aflatoxin-induced hepatic lesions in young monkeys. Later lesions were indistinguishable from those of moderately advanced childhood cirrhosis.

The final picture of disorganized hepatic architecture with marked fibrosis, bile duct proliferation, and presence of chronic inflammatory cells was identical with the disorder.

It has been known that the toxic effects of aflatoxin are enhanced in rats by maintaining them on a low protein diet.

Thus, children suffering from protein malnutrition might develop hepatic lesions while ingesting only 200-400 micrograms of aflatoxin per month while partaking of mold-contaminated foods.

Human, Animal Data Compared

The present data indicate strongly that the counterpart of aflatoxin liver injury in young animals is infantile cirrhosis in young humans.

Dr. Indira Amla and associates reported their findings early in January at the annual conference of the Society of Pathologists of Great Britain and Ireland.

Methodology Described

In studies with laboratory animals, the researchers first exposed groups of mice to the propellant gases used in aerosol sprays. Then they then asphyxiated these animals by markedly reducing available oxygen for less than a minute, they found that the mice's sinus rate—the heart's own pacemaker—slowed and that the mice quickly developed atrioventricular block.

Either or both of these reactions slowed or stopped the heartbeat.

By contrast, in groups of control mice who were not exposed to the sprays but were asphyxiated in the same way for 4 minutes, their heartbeats increased in response to the lack of oxygen.

Tests Repeated

The heart changes in the group of mice tested with the aerosol propellants were rapid, long-lasting, and eventually lethal. When the researchers repeated these tests on rats and dogs, they noted similar results.

Pressurized spray dispensers release fluorokylene gases, many of which are called Freons, as propellants. Because of the deadly slowing of the heartbeat they produced, the researchers suggest that these gases can no longer be described as "inert."

Additionally, the chemical structure of these gases resembles halothane, a gas which has a well-known cardiovascular effect.

Precise Mechanism Unexplained

Although they do not know the precise mechanism of these gases in humans, Mr. Taylor and Dr. Harris believe the cardiac effects of aerosol gases combined with lack of oxygen may play a role in two sudden death syndromes.

In the first syndrome, a number of deaths have occurred among youths "turning on" by directly breathing the gas from an aerosol can or the vapors from airplane glue. The situation combines the cardiovascular effects of the propellant gases with the lack of oxygen in the plastic bag used to cover the face.

The second syndrome occurs in patients with asthma who die unexpectedly and show evidence that they have used bronchial sprays excessively immediately before death.

The researchers postulate that the gases may gravitate down the air passage and become trapped in the tiny air sacs in the patients' lungs, thereby increasing the blood levels of the propellant gases.

The increased blood levels of the gases and the asphyxia produced by a severe asthmatic attack may increase the effect of the gases on the heart and cause death.

Investigators Cautious

The investigators caution that their findings in animals cannot be applied directly to humans without further study.

They emphasize that the slowed heartbeat which was the most apparent effect of the Freons in laboratory animals may well be overshadowed in humans by other cardiac effects, such as fast or irregular contractions of the heart's main pumping chambers (ventricles), or may combine with other cardiac effects to cause death.

Because both turned on youths and asthma patients who die suddenly usually do not get to hospitals in time for an electrocardiogram, the exact heart changes in these patients is not known.

Millions of people use aerosol dispensers for cosmetic, household, and numerous other purposes.

Sensitivity Varies

The researchers suggest that people may vary in sensitivity to the harmful effects of the gases.

This research was reported in the Journal of the American Medical Association, Oct. 5, 1970.

Similar findings on the cardiac effects of glue-sniffing in mice were reported by Mr. Taylor and Dr. Harris in Science, Nov. 20, 1970.

The NIH Record

By Margaret E. McCall

The aerosol spray used in household cleaning preparations can be dangerous, according to a study reported by a researcher at the National Institutes of Health.

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Follow-up Study Mode

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The 20 children, ages one-and-one-half years to 5 years, all suffered from protein malnutrition prior to their accidental exposure to aflatoxin.

They had consumed one to two ounces of the contaminated material daily for 5-30 days.

Characteristically, the soft hepatomegaly typical of protein malnutrition gradually progressed to the firm hepatomegaly with early biliary cirrhosis typically of Indian childhood cirrhosis.

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A favorite view for visitors on a tour of the National Library of Medicine is the public Catalog Room looking down from the heights of the mezzanine. The abstract ceramic mural was done by Franz Wildenhain. Scientists, scholars and students find that the fluorescent mercury vapor lighting simulates daylight and is most effective when looking up source material. Interest is always present from model of the room as roped-off in the center of the room. Public tours of NLM are conducted at 3 p.m., Monday through Friday.

Prolonged Corticosteroid Use to Treat Contact Lens Irritation May Harm Eyes

Dr. Levy Named Chief Of Newly Established Lipid Metabolism Branch

Appointments of Dr. Robert I. Levy as chief of the Lipid Metabolism Branch, newly established within the National Heart and Lung Institute Collaborative Studies Program, was recently announced.

Dr. Levy has been with the Institute since 1963.

He has served since 1966 as head of the Molecular Diseases Branch's Section on Lipoproteins and since 1969 as chief of its Clinical Service.

Duties Defined

He will continue to hold down both positions in addition to his new post.

Dr. Levy will be responsible for the planning, development, and administration of a contract-supported research program directed toward the prevention of premature atherosclerosis through the identification and treatment of individuals rendered highly susceptible to the disease by blood-lipid abnormalities.

Elevated blood levels of cholesterol and other fatty substances, collectively called lipids, are, with few exceptions, strongly associated with increased risk of atherosclerosis and such consequences of the disease as acute heart attacks.

During recent years, research in the Molecular Diseases Branch and elsewhere has established that elevated blood lipids may be indicative of one of five different disorders—designated hyperlipoproteinemias Types I through V. Each type differs from the others in clinical manifestations, risk for the patient, and responsiveness to therapy.

Research Results Listed

This research has also resulted in 1) effective means for differentiating among these lipid-transport disorders by lipoprotein analysis or other, simpler techniques and 2) development of therapeutic diets, supplemented as necessary with specific lipid lowering agents, that can completely correct or substantially improve the lipid-transport abnormality in nearly all instances.

The research program to be supported by the Lipid Metabolism Branch will be an extension of the clinical research program conducted over the past 6 years in more than 2500 patients by scientists and clinicians of the Molecular Diseases Branch.

The major thrust of the new program will be the establishment and support of a network of Lipid Research Clinics at medical centers and other research institutions to carry out targeted research designed to improve the detection and clinical management of hyperlipoproteinemias in the U.S. population.

In addition, the Lipid Research Laboratories will seek to improve the detection, diagnosis, and clinical management of hyperlipoproteinemias by providing assistance and guidance to practicing physicians.

These laboratories also plan to facilitate the collection and dissemination of new information on these disorders through central pooling of data and use of common protocols, and seek improvements in diagnostic and therapeutic procedures.

Dr. Levy will continue to serve as head of the Molecular Disease Branch's Section on Lipoproteins and chief of its Clinical Service as well as chief of the Lipid Metabolism Branch.

Joint Meeting for PHS Professional Personnel To Be Held April 4-7

The Commissioned Officers Association and the Clinical Society of the U.S. Public Health Service will hold their sixth annual Joint Meeting on April 4-7.

Convening at the Flagship Hotel in Galveston, Tex., the meeting will offer a program of both scientific and social value to health professionals of all disciplines.

Three general sessions and a variety of specialty sessions have been scheduled. The first general session, "Population and Family Planning," will be moderated by Dr. Jesse L. Steinfield, PHS Surgeon General.

"Community Health Preventive Medicine" will include sessions on national and local health issues.

All PHS professional personnel are eligible to attend.

Pre-registration forms and additional information can be obtained from the COA office, 1750 Pennsylvania Ave., N.W., Suite 313, Washington, D.C. 20006, or telephone 296-8680.
Ohio University Includes Computer Med. Program In Traditional Schedule

The Pilot Medical School, an experimental computer teaching program at Ohio State University College of Medicine, has been so successful that it will be incorporated into the University's regular instruction program.

At present, the program operates under a 3-year grant from the Division of Physician and Health Professions Education.

Because both faculty and students find the program satisfactory, and "the students feel they're getting a top-notch education," Ohio State will use a part of its own funds to support the program, even before the NIH grant is terminated.

Planning for the computer teaching program started in July 1968 (see NIH Record, July 22, 1969). The first class started last July with 32 freshmen students.

Twice this number is anticipated in the second class scheduled to begin this coming July.

Six basic science disciplines which formerly made up the first 2 years of traditional medical school are incorporated into a self-instructional program.

This method of learning allows students to proceed at their own pace and get rapid tutorial feedback.

Advantages Cited

Now that the program has been in operation for several months, faculty members have completed a preliminary evaluation of the program and have determined that the advantages outweigh its disadvantages.

For example, there is more student-faculty contact, teaching is highly personalized, and the course instruction is more integrated.

For a number of years the progress of the 32 students in the pilot program will be closely followed, and their achievements will be compared with other groups of medical students.

Dr. Manning and project directors of the Pilot Medical School discuss the progress of the self-instructional computerized program which will become part of the mid-western university's regular medical school program.

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25 Percent of Young Glaucomea Patients Have Unusual Type, Researchers Report

An NIH-supported study revealed that 25 percent of a group of young glaucoma patients had primary open-angle glaucoma—a type of glaucoma considered unusual in adolescents and young adults.

This research was conducted by Drs. Robert Goldwyn, Stephen R. Saltzman, and Bernard Becker at the Washington University School of Medicine in St. Louis, Mo.

It was supported in part by the National Eye Institute and National Institute of Neurological Diseases and Stroke.

Glaucomea in young people is usually due to a recognizable abnormality of the anterior chamber angle of the eye, or is related to other ocular disease.

Recently, however, several young patients with visual loss resulting from the primary open-angle type of glaucoma were referred to the Ophthalmology Department of the Washington University School of Medicine.

Results Prompt Review

Their glaucoma was indistinguishable from that seen frequently in older persons.

This prompted the researchers to review the records of glaucoma patients from one referral practice to determine the prevalence and characteristics of primary open-angle glaucoma in patients under 35.

In examining all glaucoma patients, aged 10 to 35, they found that one-fourth had primary open-angle glaucoma. Of this group, there were twice as many males as females with this type of glaucoma.

A majority of the young patients were also nearsighted (myopic). These findings contrast with those in older patients with open-angle glaucoma where the sex ratio is about equal and myopia does not predominate.

The investigators note that primary open-angle glaucoma in younger age groups may be due to

Dr. Bailey and Walker On NIAID's Adv. Council

Drs. Wilfred S. Bailey and Duard L. Walker have been appointed to 4-year terms on the National Advisory Allergy and Infectious Diseases Council.

Dr. Bailey is Vice President for Academic and Administrative Affairs for Auburn University, Ala.

He was on NIAID's Training Grant Committee from 1964 to 1969, and also served on the National Academy of Sciences committee studying veterinary medical education and research.

Dr. Walker is professor and chairman of the Department of Medical Microbiology at the University of Wisconsin School of Medicine.

In the past Dr. Walker's research interests in virology have included immunity to virus disease, latent infection, and persistent viral infection.

Whatever the basis of primary open-angle glaucoma in adolescents and young adults, it is obviously a disease entity that can cause marked visual disability before it is discovered.

They emphasize the need for tonometry for all patients old enough to cooperate and especially for those with a family history of glaucoma.

Their findings were reported in Archives of Ophthalmology.
Annual Artificial Kidney Contractors Conference Reviews Gains, Goals

On the fifth anniversary of the NIAMD’s Artificial Kidney-Chronic Uremia Program, Dr. Benjamin T. Burton, program chief, reviewed the gains made.

Dr. Burton discussed the history of today’s artificial kidneys and the goals the program will continue to work for at the recent annual Artificial Kidney Contractors’ Conference.

With nearly 55,000 Americans dying each year from irreversible kidney failure, the Institute initiated, in 1965, a contract program to develop safer, more effective, and cheaper artificial kidney machines.

The program seeks to rehabilitate dialysis patients and to develop other treatment in end-stage kidney disease.

It also maintains a national registry of patients who use artificial kidney machines.

This program, currently funding about 70 projects, each January brings together over 150 key contractor members, consultants to the Program, and Institute staff.

At the latest conference, significant research results were exchanged.

Progress and future plans were examined in three areas: hardware and instrumentation; membranes, blood cannulas and biologically compatible materials, and toxic factors in uremia (as well as clinical studies on uremia and dietary management of chronic end-stage renal disease).

Developments highlighted this year were a new generation of compact artificial kidneys—the so-called “hollow fiber dialyzers,” the size of a large flashlight—and a new, automatic home peritoneal dialysis system.

Study of Students May Decide Whether Emotional Stress Leads to Sore Mouths

People who are troubled by repeated sore mouths—such as fever blisters, canker sores, or trench mouth—may associate emotional stresses with the start of an attack. This relationship is a familiar one to doctors who treat any chronic illness, and it is always a puzzle to decide whether these stresses do actually precipitate attacks.

With the cooperation of some 200 graduate school students in research supported by the National Institute of Dental Research, a group of investigators from the University of Pennsylvania Center for Oral Health Research are collecting relevant health information to determine if psychological state is related to attacks of fever blisters and canker sores.

Students are ideal for such a study because many young men and women have trouble with such blisters and sores, and because, within a professional school community, afflicted students are members of a group uniformly exposed to many known stresses.

Study Infection Frequency

Initial results of these studies indicate that information obtained by a psychological questionnaire is related to the frequency with which students experience cold sores, canker sores, and other common infectious diseases such as cold.

It is also apparent that the state of feeling associated with an attack of canker sores are different from those associated with cold sores and illness.

This study is significant in that information about the student is collected before the sore mouth occurs, and so is directly influenced by the students’ feelings during an attack.

To take this into account has been a problem with previous studies which have collected information only when a patient reports for treatment of a sore mouth.

The center is one of five dental research institutes established in various parts of the country under grant support from NIDR to broaden and strengthen the scientific base for oral health research.

This system removes uremic waste products from the patient through repeated flushing of his abdominal cavity.

Another subject discussed was the continued development of ingestible sorbent materials, such as “oxy starch.”

“Oxystarch” will combine with uricemic toxins in the intestine and remove them from the body in a direct fashion, resulting in less frequent use of the very expensive dialysis procedure.

The final goal is an inexpensive, compact, and self-contained kidney machine paralleling the size and utility of a portable TV set.

NEW GROUP (Continued from Page 1)

Dr. Charles McPherson
Chief of DRR Branch

Dr. Charles McPherson has been named chief of the Animal Resources Branch, Division of Research Resources.

He succeeds Dr. Willard H. Eye­stone, who became a branch chief with the Division of Physical and Health Professions Education, BHME.

Dr. McPherson will be in charge of the Laboratory Animal Medicine and Primate Research Centers programs of the Animal Resources Branch.

Through these two programs the branch supports resources in institutions throughout the nation where medical researchers can investigate human health problems, using laboratory animals. A PHS commissioned officer, Dr. McPherson joined NIH in 1956.

He served for 10 years with the Laboratory Aids Branch of the Division of Research Services before coming to the branch as chief of the Laboratory Animal Medicine and Vivialar Sciences Section in 1966.

Dr. McPherson received his D.V.M. degree from the University of Minnesota in 1956, and also holds a M.P.H. from the University of California.

A member of several professional societies, he is president of the District of Columbia Veterinary Medical Association.

Implementation by a program of special project grants to help achieve special goals, such as “improving planning and management, shortening curriculums, expanding enrollments, team training of physicians and allied health personnel training Health Maintenance Organizations for local populations.”

2) Establishment of Federal special support programs to help low income students enter medical and dental schools. He recommended that the “scholarship grant program for these students be almost doubled—from $15 to $29 million.”

Student Needs Considered

“At the same time, this Adminis­tration would modify its proposed student loan programs better to meet needs of medical students,” the President said.

3) A 50 percent expansion of allied health personnel training programs over 1971 levels. to $29 million, with $15 million of this amount devoted to training physicians’ assistants.

The President also said that his Administration would expand nationwide its current MEDIHC program.
Screening for Hepatitis Made Possible Through NIH-Licensed Reagent

A reagent essential in screening donor blood for hepatitis is now commercially available.

The product, known as hepatitis-associated antibody (anti-Australia), has been licensed by NIH.

Federal standards designed to ensure its safety, purity, and potency were formulated by the Division of Blood Standards.

The first license was issued to Spectra Biologicals Division of Benton, Dickinson and Company, Oxnard, Calif.

Annual Incidence High

Hepatitis constitutes a serious risk in the administration of blood and blood products. Transfused blood is known to cause more than 30,000 cases of overt hepatitis with 1,500 to 3,000 deaths every year in the U.S.

Although there are many subclinical cases, the annual incidence has been estimated to be as high as 150,000.

STEP GOALS (Continued from Page 9)

- selected direct-hire professionals may have access to the Grants Association seminars and other possible programs.
- In addition, he plans to establish a program directed toward committee and task force assignments for direct-hire personnel.

- Under this proposed exchange program, employees would be assigned positions on committees and task forces that cross program and institute boundaries. They, therefore, would benefit from the work assignment as well as the direct contact with senior staff of various institutes.

- The third proposed program is expanding the Extramural Forum. The monthly speaker-discussion seminar is now only easily accessible to employees of the Westwood Building. Dr. Bruno plans to make the forum available to all of NIH.

Final Proposal Discussed

The new chairman's fourth and final proposal involves the NIH's semi-annual seminar retreat.

Conducted first at Fort Belvoir and then at the Belmont House in Elkridge, Md., the seminar takes approximately 20 people away from their desks for 3 or 4 days of uninterrupted study and discussion.

Dr. Bruno plans to establish a subcommittee to consider how to make this program more relevant.

"At the very least we ought to be able to establish plans to carry out the program for 7 or 4 days of uninterrupted study and discussion," Dr. Bruno said.

"In the least we ought to be able to establish plans to carry out the program for 7 or 4 days of uninterrupted study and discussion," Dr. Bruno said.

Dr. Myers is chief of the NINDS laboratory, which has been studying the effects of severe oxygen deprivation on the nervous system of 89 rheum monkeys.

Recent study in rheum monkeys indicates that the central nervous system is more tolerant to episodes of severe oxygen deprivation (lack of oxygen) than had previously been believed.

Their evidence suggests that central nervous system ischemia may be tolerated as long as 16 minutes with almost complete recovery.

Because of the new evidence, the investigators recommend review of clinical practices which discourage efforts at resuscitation when arrest of blood flow to the brain lasts longer than 4 to 5 minutes.

Research Reassessed

Reassessment is recommended because the investigators report that central nervous system damage reports do not result from the arrest of circulation, but from the period of low blood pressure which follows the arrest, because the heart cannot maintain adequate post-arrest blood pressure.

They therefore suggest that efforts at resuscitation be continued but with particular attention to maintaining adequate blood pressure levels by pharmacological or mechanical means.

To carry out this study, episodes of circulatory arrest were produced in anesthetized rheum monkeys by reversibly blocking the main artery which carries blood from the heart to the tissues and the two major veins which return "oxygen-poor" blood to the heart.

Some blood flow was allowed in the common carotid artery circuits to protect the heart itself from direct insult. Following the release of obstructed vessels, the monkeys were resuscitated with 100 percent oxygen.

The animals were then classified according to the comparative extent of neurological damage during long term survival.

Results showed that the animals tolerated up to 20 minutes of arrest, with only minor neurological impairment in certain cases. Some of the animals tolerated up to 24 minutes of total circulatory arrest with considerable recovery.

Total Recovery Possible

Although the more severely insulted monkeys required periods of up to 30 days to fully recover, the scientists, according to Dr. Myers, were impressed by the severity of deficits from which total or near total recovery was possible.

In general, the monkeys gradually began to show signs of recovery through pupil constriction, righting reflexes, returning eye, and reflexes, increasing muscle tone, breathing spontaneously, sitting up unassisted, and later actively moving around their cages.

Results showed that the animals tolerated up to 20 minutes of arrest, with only minor neurological impairment in certain cases. Some of the animals tolerated up to 24 minutes of total circulatory arrest with considerable recovery.

Low blood pressure persisting through the post-arrest period after releasing the blocked vessels, for example, was found to greatly increase the neurological damage and to completely alter the pattern of brain tissue damage produced.

This work, recently reported by Dr. Myers with Dr. James R. Miller, now at the New York Neurological Institute in New York City, is a part of a larger study in the Laboratory of Perinatal Physiology of the National Institute of Neurological Diseases and Stroke, following a study of 89 rheum monkeys.

All Effects of Total Arrest of Circulation On Central Nervous System Reappraised

Despite the presence of deep and lasting coma, patients who have suffered severe lack of oxygen in their tissues (as might occur in circulatory arrest) should still be considered salvageable if the pupil reacts or electrical activity of the brain shows signs of recovery.

This is the conclusion of scientists in the Laboratory of Perinatal Physiology, National Institute of Neurological Diseases and Stroke, following a study of 89 rheum monkeys.

According to Dr. Ronald E. Myers, chief of the laboratory, their work indicates that the central nervous system is more tolerant to episodes of severe oxygen deprivation (lack of oxygen) than had previously been believed.

Their evidence suggests that central nervous system ischemia may be tolerated as long as 16 minutes with almost complete recovery.

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