

the



Record

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

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NATIONAL INSTITUTES OF HEALTH

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



Dr. Lybrand has served as a consultant to NIH, the National Research Council of the National Academy of Sciences, and the Department of School and Higher Education of UNESCO.

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 1955, he joined Psychological

(See DR. LYBRAND, Page 4)

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—by the Chemical Society of Washington on March 11.

Dr. 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."

Pres. Nixon Creates New Group to Plan, Direct Expanded Cancer Research Effort

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 to 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 pro-

(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 also will 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 Grants 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.

(See DEDICATION, Page 6)



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HEW Employees and Families Invited to Join PHS Fly Club

The PHS Flying Club invites all HEW employees and their families who are interested in flying and in learning how to pilot a plane to get in touch with a representative club member. Both pilots and beginning students are welcome.

The organization, based in Montgomery County Airpark, right outside of Gaithersburg, uses a Cessna Model 172 Skyhawk # N3704R.

Membership rates are low and a half-hour demonstration flight is available to prospective members for a nominal fee.

For additional information call David Wood, office: 443-2073; home: 538-5803.

NIH Television, Radio Program Schedule

Radio

DISCUSSION: NIH

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

March 5

Dr. Frank J. Rauscher Jr.,
Scientific Director for Etiology, NCI
Subject: Virus and Cancer

March 12

Ralph A. Simmons, Associate
Director for Computer Engineering Services, NLM
Subject: Computer Role at the NLM

Interview takes place during intermission of the Library of Congress concerts.

Note: NIH REPORTS, the television series which has appeared on WRC, Channel 4, will be rescheduled at a later date.

Clerk-Typist Training Program Offers Chance For Job Advancement

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-conditional 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 13 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 July 13. It 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, but no higher than GS-3, 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 salary.

Applicants should complete Form 171, available in I/D/B personnel offices. Forms may be sent to Mrs. Jenean McKay, Bldg. 31, Rm. B2B-13, Tube Station DS-7, by March 10. For additional information, call Ext. 62146.

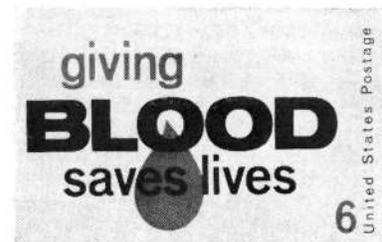
Stamps Honoring Blood Donors Will Be Issued By Gotham Postmaster

The U.S. Postal Service will issue a stamp to salute blood donors and to also urge others to participate in this vital program. The Clinical Center announced the issuing of the stamp.

A similar stamp, used in France, was credited with tripling the amount of blood contributed in that country.

In honor of National Blood Donor Month this past January, President Nixon stated: "Among the noblest acts of personal generosity is the gift of one's blood for the benefit of another. It is a contribution to health and life for which there is no substitute."

The 6-cent stamp will be issued



in New York City. NIH philatelists may request first day cancellations from the Postmaster, New York, N.Y. 10001. Orders should be sent in by March 12; include name, address, zip code and remittance.

Alcoholism Discussed in Film; EHS Offers Counseling Aid

Alcoholism is the subject of "Time for Decision," the March movie presented by the Employee Health Service.

The Employee Health Service offers confidential counseling service to employees who feel alcohol has become overly important in their lives.

The movie will be shown at the Jack Masur Auditorium, CC, on Wednesday, March 17, at 11:30 a.m. and 12:15 p.m., and at the Westwood Building, Conference Room D, Thursday, March 18, at 1:15 and 2 p.m.

Scientists Record at CC For VOA Broadcast

Dr. Irwin Kopin, chief of the NIMH Intramural Research Laboratory of Clinical Science and an associate, Dr. Louis Lemberger, recently participated in a round table discussion on drug research conducted by the Voice of America.

The program, recorded in the Clinical Center, will be heard first on the Voice of America's Far East Network.

Dr. Erminio Costa and Dr. Aurora Revuelta of the Mental Health Intramural Research Program's St. Elizabeths Hospital laboratories

Distinguished Committee To Examine Activities Of PHS Comm. Corps

HEW Secretary Elliot L. Richardson recently announced the formation of an eight-member committee of distinguished citizens to examine the long-range mission, purpose, and future of the PHS Commissioned Corps.

Former government officials, educators, and representatives of the medical profession make up the Secretary's Committee to Examine the Public Health Service Commissioned Corps.

Perkins Is Chairman

Dr. John A. Perkins, HEW Under Secretary, 1957-58, is chairman.

Staff assistance to the committee will be under the direction of Richard L. Seggel, NIH Associate Director for Administration.

Secretary Richardson has asked the committee to examine facets of the Commissioned Corps, ranging from the use of PHS personnel in the ghettos under the Emergency Health Personnel Act of 1970 to the role of the PHS in providing medical care for seamen and Indians.

"The conclusions you reach will be of great assistance in determining the future role of the health components of the Department," the Secretary told members of the committee.

The committee will report its findings by May 31.

The Public Health Service's 6,000-member Commissioned Corps, as presently constituted, is engaged in a wide spectrum of activities ranging from health services delivery to biomedical research.

Members Listed

Committee members include former U.S. Senator from Massachusetts, Leverett Saltonstall; Lincoln Gordon, President of The Johns Hopkins University; Charles L. Schultze, former director of the U.S. Bureau of the Budget and presently a senior fellow of the Brookings Institution, and James Q. Newton, Jr., a foundation executive.

Also, Hollis S. Ingraham, physician, and Commissioner of Health for the New York State Department of Health; Mary E. Switzer, former Administrator for HEW's Social and Rehabilitation Service, and Marshall E. Dimock, educator and former executive with the Departments of Justice, and Labor, and the Immigration and Naturalization Services.

joined in the discussion, moderated by Alan Strong of VOA.

It reviewed current knowledge of the metabolism of marijuana, amphetamines, and other drugs, including alcohol.

Importance of continued research was stressed by the scientists,

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 Noted

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 HEW, 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.

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

By Bonnie Friedman

"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-Havers.

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. Sessoms, 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-Havers. He will serve a one-year term.

In addition to the 12 appointed members, representatives from the Associate Director's office, Grants Associates 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, DRG; James O'Donnell, DRR; Laurence H. Miller, NIAMD; Ann Kaufman, NLM; Arthur Heming, NIGMS; and William Gay, NIAID; also, Richard Hopkins, NICHD, and Robert Townsend, NCI.



Dr. Bruno (l) submits a STEP Committee proposal for Dr. Lamont-Havers' approval.

ert Townsend, NCI.

Their main concern is the training of extramural personnel.

In order to accomplish this end, the committee operates on two levels. In addition to serving as an advisory group to the Associate Director for Extramural Research and Training, STEP acts as a steering committee on the recommendations accepted by Dr. Lamont-Havers.

Dr. Bruno has set four goals for the coming year.

The first is an indoctrination program for direct-hire personnel. The chairmen explained that employees who come on board directly, not through the Grants Associates Program, need a special orientation.

Proposes Seminar

He therefore proposes an initial one-day seminar to explain NIH activities by bringing together senior staff personnel from the various institutes, the Clinical Center, and the Office of the Director.

As part of the program, the committee is working on identifying important documents, such as Congressional committee reports related to NIH, which will be presented to each employee at the seminar.

Each employee will receive several important documents upon which to build his own personal reference library. In addition to the usual basic organizational handbook, such documents as the Fountain Committee Report and selected reading from Science and Public Policy seminars will be included.

Dr. Bruno plans, as follow-up to the orientation seminar, to conduct bi-monthly afternoon workshops where participants will discuss issues based on materials contained in these documents.

His second proposal is an ongoing training program. Under this plan,

(See STEP GOALS, Page 8)

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.

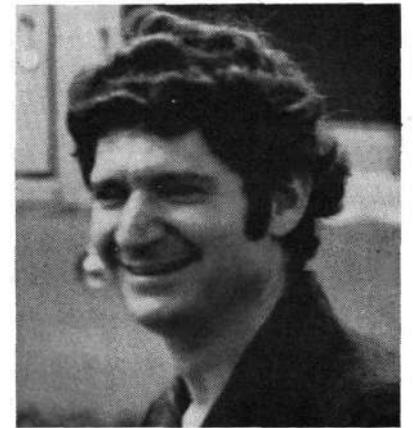
To facilitate this research, the Biochemical Genetics Section, headed by Dr. M. E. Gottesman, will function as a part of the laboratory.

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 1957 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*.



Dr. Pastan has been concerned with the part AMP plays on gene activity.

Young Artist 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. It 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.



5 P.M., snow on the ground, anxious to get home! How would YOU get out of the NIH parking lot if your car was in the center of a three-deep lane of cars? One can just imagine the chaos on the campus the day this photo was taken. In an emergency it would be difficult—if not impossible—to move. It would be considerate, and much safer, to observe NIH parking regulations.—Photo by Al Godwin.

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 20 Indian children has now permitted study of the toxic manifestations of this compound in human beings.

Follow-up Study Made

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 disorder.

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 leafy borders typical of Indian childhood

Aerosol Spray Gases Can Be Dangerous, May Affect Heart, Cause Sudden Death

By Bari 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

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 Study 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.

on by inhaling these gases deliberately and among asthma patients who use bronchial sprays excessively.

This study, supported in part by the National Heart and Lung Institute, was conducted by George J. Taylor IV and Dr. Willard S. Harris at the University of Illinois Hospital.

Methodology Described

In studies with laboratory animals, the researchers first exposed groups of mice to the propellant gases used in aerosol sprays.

When 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 fluoroalkane gases, many of which are called Freons, as propellants. Because of the deadly slowing of the heartbeat they produced in test animals by the combination of the gas and lack of oxygen, 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. This situation combines the cardiac effects of the propellant gases with the lack of oxygen in the plastic

DR. LYBRAND

(Continued from Page 1)

Research Associates in Arlington, Va., as research scientist and for the next several years served in positions of increasing responsibility with several research and training institutions.

In 1960, Dr. Lybrand joined the staff of The American University as Director, Basic Studies Division, Special Operations Research Office, subsequently assuming the additional responsibilities of Adjunct Professor in the School of International Service.

Following a leave of absence from the university, 1964-65, to serve with the Agency for International Development as Director, Human Resources Division, Office of Research and Analysis, Dr. Lybrand returned to The American University.

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 gas may gravitate down the air passage and become trapped in the tiny air sacs in the patients' lungs, thereby increasing 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 gases in the 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.



Indian children are participating in weekly follow-up studies to evaluate effects of protein malnutrition.



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 evinced in a model of the double standard helix 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

Patients who use corticosteroid eye drops, such as cortisone, over a long period of time to relieve contact lens irritation run a risk of developing glaucoma and cataracts.

Patients who are nearsighted or have a family history of glaucoma are especially prone to develop a rise in intraocular pressure on these medications.

These side effects from the prolonged use of corticosteroid drops and high risk groups have been previously reported.

Warn of Excessive Use

However, the large number of contact lens wearers, especially young myopic patients, and the use of corticosteroid drops to alleviate lens irritation has led two NIH grantees recently to caution against the unwarranted use of these drugs.

Citing the continued referral of young people with corticosteroid-induced glaucoma and cataracts, Drs. Ronald M. Burde and Bernard Becker of the Department of Ophthalmology of the Oscar Johnson Institutes, Washington University School of Medicine, reported on two illustrative cases.

Their study was done with grant support from the National Eye Institute and the National Institute of Neurological Diseases and Stroke.

The first, a 17-year old girl, had been wearing contact lenses for 2 years but had difficulty in adjusting to them.

Her ophthalmologist had prescribed corticosteroid eye drops, and she renewed the prescription and continued its use for 16 months without his knowledge.

She developed glaucoma and cataracts in both eyes and suffered

a permanent visual field loss.

The second patient, a 20-year old woman, had been wearing contact lenses for 6 years, with continuing discomfort. She had been using a prescribed corticosteroid medication over a 4-year period to reduce this discomfort.

During the year prior to her examination at Washington University, she had been bothered by hazy vision and headaches.

When seen by the investigators, she was found to have glaucoma, cataracts, and a reduced visual field.

According to the investigators, the cases demonstrate the tragic side effects that can accompany the prolonged topical use of corticosteroids.

May Lead to Glaucoma

They feel that the clear definition of high risk groups should reduce the frequency of such occurrences, but point out that approximately 40 percent of the normal population will respond to corticosteroid drops with an increase in intraocular pressure which could lead to glaucoma.

The investigators conclude that the physician who sees a contact lens patient suffering from corneal irritation "must resist the inclination either to initiate or to increase the dosage of topically administered corticosteroids and thus induce or aggravate an existing pathologic situation."

Dr. Levy Named Chief Of Newly Established Lipid Metabolism Branch

Appointment 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 series of Lipid Research Clinics at medical centers and other research institutions to carry out targeted research designed to improve the detection and

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. Steinfeld, PHS Surgeon General.

"Community Health Preventive Medicine" will include speakers 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.

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



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.

disorders through central pooling of data and use of common protocols, and seek improvements in diagnostic and therapeutic procedures.

Dr. Levy received his A.B. (with highest honors) from Cornell in 1957. He attended Yale University Medical School, where he received his M.D. degree, *cum laude*, in 1961 and also won the Kees Prize for his research thesis.

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 satisfac-



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.

tory, 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 1969 (see *NIH Record*, July 23, 1969). The first class started last July with 32 freshman 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.

25 Percent of Young Glaucoma 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. Waltman, 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.

Glaucoma 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 analyzing 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

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

Drs. Wilford 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.

an undetected developmental defect of the anterior chamber of the eye. However, for practical clinical purposes, these young patients resemble adults with the same condition.

The researchers conclude that "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*.



Delphis C. Richardson, a second year medical student, views an anatomic drawing that leads to questions in the endocrinology submodule; the computerized instruction allows students to set their own pace in medical studies.

DEDICATION

(Continued from Page 1)

valuable research animals. Most of the pathogen-free animals in this new building, however, will be the more familiar rats, mice, rabbits, and guinea pigs.

One of the new units is an aerosol toxicology building having 15 rooms for inhalation studies and 12 laboratories for investigating pulmonary problems.

Dr. Robert T. Drew, NIEHS inhalation toxicologist, hopes Institute scientists can move quickly into studies on the effect of chronic inhalation of pesticides and on the effect of industrial or household preparations available in aerosol sprays.

Toxic Effects Studied

Using new inhalation chambers, investigators will first determine short-range toxic effects in such substances and then move into studies of the effects of chronic exposure.

For example, perhaps 100 rats, 100 hamsters, and 2 or 3 rabbits and guinea pigs will be exposed 8 hours a day, 5 days a week throughout their lifetimes.

Scientists will look for effects such as life-shortening, an increase in pulmonary diseases, and effects on organs other than the lungs.

In a third building, the focus of one program will be on toxins produced by fungi.

Dr. Robert Owens, Cell Biology Branch chief, said mycotoxins have been of particular interest since one toxin found on pressed peanut cakes killed hundreds of thousands of turkey poults in Britain a decade ago.

Researchers at NIEHS studying fungi that produce potent toxins have found 20 variants of one species. They will isolate toxins in this group and study their potential health hazards.

"Where one easily runs into trouble with mycotoxins in food is in some underdeveloped countries," Dr. Owens said. "Some toxins are known to be associated with liver cancer."

"Scientists will continue to study how the mammalian body puts enzymes to work to get rid of these toxins," he added.

Other Research Listed

Other investigators in this building will study the harmful effects of microwaves. In addition, toxicologic investigations will be carried out in heavy materials such as mercury, cadmium, and lead.

Researchers want to know how long and in what chemical stages such metals stay in tissues and how the body reacts to their presence.

The fourth of the new NIEHS buildings has equipment to service the other three, such as massive filtering systems and an emergency generator.

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



Dr. G. Donald Whedon, NIAMD Director, welcomes Dr. Carmelo Giordano, of the University of Naples, Italy. Dr. Giordano, who developed starchy compounds to remove poisons from the uremic patient, participated in the Fourth Annual Artificial Kidney Contractors' Conference.

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 sys-

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—often associate emotional stresses with the start of an attack. This relationship is a familiar one to doctors and 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 states 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 not directly influenced by the students' feelings during an attack.

Failure 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.

tem.

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 "oxystarch."

"Oxystarch" will combine with uremic 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)

jects now in existence but cutting across established organizational lines," the President said, "I am directing the Secretary of Health, Education, and Welfare to establish a new Cancer Conquest Program in the Office of the Director of the National Institutes of Health.

"This program will operate under its own Director who will be appointed by the Secretary and supported by a new management group.

"To advise that group in establishing priorities and allocating funds, and to advise other officials, including me, concerning this effort," the President said, "I will also establish a new Advisory Committee on the Conquest of Cancer."

In his fiscal 1972 budget request, the President proposed \$100 million in appropriations for the new cancer program (see *NIH Record*, Feb. 17, 1971), in addition to asking \$232 million for regular activities of the National Cancer Institute.

Seek 'Sickle Cell' Solution

A "second targeted disease" for "concentrated research should be sickle cell anemia, a most serious childhood disease which almost always occurs in the black population," the President declared.

"It is estimated that one out of every 500 black babies actually develops sickle cell anemia.

"It is a sad and shameful fact that the causes of this disease have been largely neglected throughout our history. We cannot rewrite this record of neglect, but we can reverse it.

"To this end," he continued, "this Administration is increasing its budget for research and treatment of sickle cell anemia fivefold, to a new total of \$6 million."

In his message the President also cited the need to "produce more health professionals" and to "educate more of them to perform critically needed services."

He set forth several measures to accomplish these purposes, including:

1) A "new" method for financing medical education, called "capitation grants," the size of which would be determined by the number of students graduated by schools of medicine, dentistry, and osteopathy.

He recommended "\$60 million in new money" for the capitation grant system, with the capitation grant level "set at \$6000 per student."

This capitation grant program, the President wrote, should be sup-

Dr. Charles McPherson Chief of DRR Branch

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

He succeeds Dr. Willard H. Eye-stone, who became a branch chief with the Division of Physician 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 Vivarium 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.

plemented 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, and starting 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 the 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.



Dr. McPherson

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 antigen, human), has been licensed by NIH.

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

The first license was issued to Spectra Biologicals, Division of Becton, 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.

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

During the past 2 years, the identification of hepatitis-associated antigen has led to the development of effective screening tests to identify hepatitis-contaminated blood and to exclude it from administration to patients.

Although testing by presently available techniques does not eliminate the threat of serum hepatitis, approximately 25 percent of bloods containing hepatitis-associated antigen can be identified and excluded from medical use.

The reagent licensed for distribution by Spectra can be employed in two such tests—the agar gel diffusion test and the counterelectrophoresis test.

The two screening tests differ in some particulars, but both are based on a reaction between hepatitis-associated antigens in the blood of infected donors and plasma containing antibodies directed against these antigens.

Other Reagents Considered

Additional reagents currently under consideration by DBS are expected to be licensed as testing and evaluation programs are completed.

It has been established that the agent of hepatitis can be transmitted by the transfusion of whole blood, plasma or plasma components.

Transfusion of blood or derivatives containing hepatitis-associated antigen results in a high rate of clinical hepatitis correlated with the appearance of the antigen in the serum of the recipients.

Hepatitis-associated antigen has been found present for as long as 3 years in the serum of carriers, but it has also been reported that in most patients with clinical diag-

STEP GOALS

(Continued from Page 3)

selected direct-hire professionals may have access to the Grants Associates 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. This 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 committee'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.

"There is no reason why we can't achieve some of these goals," Dr. Bruno said.

"At the very least we ought to be able to establish plans to carry out the programs," the chairman said; "that in itself would be an accomplishment."

Dr. Carbone Is Chairman, Eastern Oncology Group

Dr. Paul P. Carbone will assume chairmanship of the Eastern Cooperative Oncology Group today (March 2). He was recently elected to this post.

Dr. Carbone is chief of the National Cancer Institute's Medicine Branch.

The Eastern Cooperative Oncology Group is one of 22 cooperative clinical cancer research groups in the U.S. sponsored by NCI to evaluate drugs and other therapies in carefully controlled studies of patients with cancer.

nosis of serum hepatitis the hepatitis-associated antigen disappears several months following the acute phase of the disease.

Although limited sensitivity of currently available methods for detecting the antigen or virus makes it impossible to detect hepatitis-associated antigen in all blood and blood products, thousands of cases of hepatitis could be prevented annually by presently available tests.

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 pupils react or electrical activity of the brain show 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 monkeys.

According to Dr. Ronald E. Myers, chief of the laboratory, their



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

recent study in rhesus monkeys indicates that the central nervous system is more tolerant to episodes of severe oxygen deprivation (ischemia) 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 have found that central nervous system damage results not 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 rhesus 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 coronary and pulmonary 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 pupillary constriction, onset of gasping, return of corneal reflexes, increasing muscle tone, breathing spontaneously, sitting up unassisted, and later actively moving around their cages.

However, there was considerable variation of clinical outcome exhibited by the animals, even when they had undergone similar periods of circulatory arrest. This may have been due to factors other than length of circulatory arrest, according to Dr. Myers.

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 to learn more about how prolonged oxygen deprivation affects the central nervous system of both infants and adults.

R&W Schedules Initial Meetings For Organizing Softball Teams

NIH's Recreation and Welfare Association is urging softball enthusiasts to organize now.

The Men's Fast Pitch Softball League meets March 4; the Co-Rec Softball League meets March 8. Both meetings are scheduled for noon in Bldg. 36, Rm. 2A-03.