IRAN PHYSICIAN VISITS NIH

A rocke-dilution boat used for testing drugs for anti-malarial activity is examined by Dr. Zabihollah Ghorban of Iran and Miss Jane Taylor, Parasitologist in NMI's Laboratory of Tropical Diseases.

CLINICAL CENTER PLANS FOR INTERIORS MAPPED

Interior decorating plans for the Clinical Center, worked out in cooperation with the Public Buildings Service, have been presented to the NIH planning staff by Mr. Colin C. McLean, Chicago interior design consultant.

Mr. McLean, who is serving as adviser on furnishings for patients' rooms, public areas, and allied facilities, has been conferring in recent weeks with members of the planning staff regarding color schemes, furniture coverings, draperies, style and finish of furniture, and other decorating details.

The Chicago consultant has been an adviser on many similar medical projects, among them the Menninger Psychiatric Clinic in Topeka, Kans., the psychiatric units at the University of Pennsylvania, and Strong Memorial Hospital, Rochester, N.Y., and the Moses Cone Memorial Hospital, Greensboro, N.C.

Dr. Ghorban, health officer for a province of Iran, is spending four months in the United States as a guest of the State Department. He is interested in medical and nursing education and general public health problems. His visit here has been arranged by PHS's Division of International Health.

In addition to serving as health officer for a province with a population of some two million, Dr. Ghorban is also Dean of the medical school in Shiraz. The school has two courses for physicians. One requires high school graduation and six years of training, the other admits students with a year less of high school and gives four years of training.

These men are sent out as local health officers. Later, they may return to the medical school for three years additional training leading to an M.D.

The Iranian health officer received his M.D. in 1930 from the American University of Beirut in Lebanon.

NMI AWARDS 102 GRANTS FOR OUTSIDE STUDIES

Evaluation of several of the newer drugs used in the treatment of tuberculosis will be supported under a dozen or more grants recently awarded by NMI.

Approved by Surgeon General Leonard A. Scheele, these grants are among a total of 102 grants amounting to $1,088,952, recommended by the National Advisory Health Council.

Investigations will be made of the resistance of tubercle bacilli to antituberculosis agents that appear effective in early stages of treatment but often prove to be disappointing in continued use. Not clear at present is the exact nature of bacterial resistance to such drugs as streptomycin or para-aminosalicylate. Researchers are studying several factors concerning the tubercle bacillus itself and the interaction of antituberculosis agents with normal body processes in an effort to find the answer to this problem.

Because of the tendency of tuberculosis to relapse, several grantees will continue observations over a period of years of those patients who have recently responded to chemotherapy. Frequency and severity of relapse will be determined in different types of tuberculosis treated with different drugs. Evaluations will also be made of certain ill effects caused by drugs -- for example, impairment in hearing, which sometimes occurs long after initial treatments.

Studies of such diseases as malaria, leprosy, Q fever, meningitis, encephalitis, and several tropical diseases will be supported by other grants awarded by the Microbiological Institute.
Electrolyte Studies At NIH

No. 53 of a Series

NHI's Section on Kidney and Electrolyte Metabolism has as its goal the clarification of forces that go into regulating the body's mineral content and determining distribution of the mineral substances among the various component divisions of the body fluids. The section is headed by Dr. Robert W. Berliner, whose staff numbers five.

In recent years the importance of mineral substances in various disorders has been increasingly recognized, especially in heart ailments associated with overaccumulation of body fluids (edema). Most of the manifestations of heart failure are directly attributable to the increased volume of extracellular fluid that develops.

Since the mineral concentration of extracellular fluid can vary only slightly, an increase in the volume of this fluid compartment can occur only if a corresponding amount of mineral substances, largely sodium and chloride, is also available. Thus, an understanding of the mechanism by which these electrolytes are excreted or retained is fundamental to an understanding of heart failure.

More subtle but perhaps ultimately more important are the relationships between the electrolyte composition of tissue cells and the normal metabolic function of these cells. It is well known that a normal composition of minerals is necessary for the normal function of nerves and normal contraction of muscles (the heart, of course, is a muscle). It is also known that optimum function of many enzymes depends on an environment containing certain electrolytes.

As the organ which largely determines the amount of electrolyte in the body, the kidney plays a central role in electrolyte metabolism. A major interest of the section concerns the biochemical processes by which the kidney carries out electrolyte excretion.

One such mechanism currently under study by Dr. Berliner and his associates, Dr. Thomas J. Kennedy and Dr. Jack Orloff, is that by which potassium is secreted by the kidney tubules. As sodium passes down the kidney tubules, part of it is reabsorbed back into the body, potassium being excreted in its place. In a similar manner, some of the sodium ions are exchanged for hydrogen ions. These two processes are normally maintained in balance. Recently, however, it has been shown that they are interdependent, that a deficit of hydrogen ions in the body (alkalosis) leads to loss of potassium in its place, while a deficit of potassium allows excessive excretion of hydrogen ions and leads to alkalosis.

Scientists Cited

The House Committee on Interior and Insular Affairs recently adopted a resolution commending a group of scientists for their work in preparing for Congress an appraisal of the Nation's basic natural resources. The group, which included Dr. Dean Burk, NCI, undertook the study in cooperation with the Library of Congress.

Representative John R. Murdock, committee chairman, stated that the report demonstrated the need Congress has for the help of science in meeting its responsibilities to the Nation.

Training Course

A ten-session training course to acquaint secretaries, supply clerks, and other requisitioning personnel with the rudiments of purchase, property, and supply procedures will get under way at NIH the week beginning August 13. The course is sponsored by the Purchase and Supply Branch.

Lecture Appointment

Dr. Howard L. Andrews, Chief of the Section on Nuclear Radiation Biology, NIAMD, has been appointed a special lecturer at the Naval Medical School, Bethesda Naval Hospital. The appointment is in recognition of Dr. Andrews' assistance to the school with its course in medical aspects of special weapons and radioactive isotopes.

Epilepsy Program

Training in the latest methods of treating epilepsy will be provided for doctors and members of related professions under a program scheduled to start soon at the University of Illinois. PHS and Children's Bureau grants will help support the project.

Accident Survey

In cooperation with PHS, 13 States have inaugurated a program for collecting uniform statistics on fatal home accidents. Results of the study will be utilized in planning home accident prevention programs. Home accidents last year accounted for about 27,500 deaths in this country.
Scientists whose shelves are bulging with professional journals no longer consulted can now get in a lick of overdue housecleaning and at the same time do a good turn for NIH Library.

To fill in gaps in their collections and build up a reserve, the Library is asking scientists to take inventory of their periodicals and dispose of their surplus. If any further incentive is necessary, the safety angle might be considered. Another journal added to a waver­ing stack might topple the column on someone’s noggin.

The Library here swaps duplicates with other domestic and foreign libraries in return for publications of special value to NIH. Just such an exchange was made recently with Queens University, Belfast, North Ireland. NIH received a file of the Transactions of the Ophthalmological Society of the United Kingdom and dispatched a packet of miscellaneous American publications covering the war years.

EYE INJURIES COMMON ACCIDENT TYPE HERE

Like the Heinz 57 brands, eye injuries at NIH show remarkable variety.

During the past year, Safety Officer James B. Black reports, employees sustained 57 such injuries, most of which could have been prevented if goggles or shields had been employed against known hazards.

Here are some of the types of eye accidents that happened at NIH on an average of about five a month: splashes from chloroform, cleaning acids, cresol, acetone, zylene, and HCL; sprays from DDT, botulinus, Zenker’s solution, polio, and Treponema pallidum (causative agent of syphilis); glass particles from capillary tubes, etching slides, stirrers, and other glassware; stainless steel from lathe operation; ultra-violet burns; soap powder and sawdust; flame back from boiler; operating incinerator; cleaning animal cages; watching welding; eye strain from using microscopes and translating poor print; and flying staples.

Many such eye hazards could be eliminated by using the protective aids available at NIH.

NEW PURCHASE PLAN OPERATING AT NIH

An emergency procurement system has been set up at NIH to help laboratories and offices on special occasions when supplies are urgently needed.

The plan, now in operation, was worked out by the Purchase and Supply Branch. Mr. James B. Davis, Acting Branch Chief, emphasized its emergency nature and asked that requisitioners employ it only when use of normal channels would clearly hamper operations.

Under the new procedure, the requisitioner telephones Purchase and Supply’s emergency procurement clerk, Ext. 561, supplying the necessary information. A telephone order is then given to the vendor, and this is followed by a confirming purchase order. Delivery is made direct to the requisitioner. However, before payment can be effected, the requisitioning office must certify delivery on a copy of the purchase order.

Average time now required to process supply orders through normal channels is slightly less than five days. This compares with 27 days in 1941, when the Purchase and Supply Branch was established.

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HOW TO HOUSECLEAN, HELP LIBRARY TOO

Not every person is lucky enough to parlay a hobby into a profitable and satisfying vocation. A man who spends his spare time tinkering with model boats, for example, is in little danger of being tapped by the Navy to design a dreadnought, or for that matter even a modest landing barge.

'NIH's "Bill" Trantham can claim exception to common experience. He owes his present job as instrument maker in the Section on Technical Development to a native knack for handling tools and an invertebrate interest in all things mechanical.

Bill came to the Heart Institute last year as an office worker, found paper-shuffling moderately boring, soon found himself casting a covetous and appraising eye at the bench apparatus in the nearby labs. His interest in scientific equipment brought him to the attention of Dr. Bowman and other scientists, who found him knowledgeable and decided to latch on to his services.

Before a scientist can start an experiment, special equipment in many cases must be designed, built, tested, modified, retested—an often slow process with plenty of roadblocks between the birth of a bright idea and the pay-off in successful operation. Bill’s job is finding practical ways to put across a scientist’s ideas on how equipment should function to bring results.

One of his current projects is fabricating and adapting parts for a mechanical pump used in Dr. Kennedy’s studies of the kidney function. For other investigations he has devised special parts for optical equipment, worked on X-ray apparatus, fash-
In 1944, a long-range controlled study on the effects of adding fluoride to a previously fluoride-free water supply was inaugurated in Grand Rapids, Mich. The pictures on this page illustrate various aspects of this program, undertaken by the Public Health Service (NIDR and Division of Dental Public Health) in cooperation with the Michigan Department of Health, University of Michigan, and city of Grand Rapids.

At the beginning of the study, 32,000 school children in Grand Rapids and 8,000 in nearby Muskegon (control city) received complete dental examinations to establish a base line rate of dental decay. Each year, NIDR examines a certain number of children in the two cities and compares the caries scores. Preliminary reports indicate that fluoridation of the water supply has reduced dental decay in the younger children by two-thirds.

Daily checks of fluoride concentration are made by Grand Rapids filtration plant personnel. At regular intervals, water samples are sent to NIDR for checking by Dr. Elias Elvove.

Just exactly how fluoride protects the teeth against decay is not known. One aspect of NIDR research on this problem concerns bacteriological and chemical studies of saliva. Each year NIDR collects 1,200 saliva specimens in Grand Rapids and 600 in Muskegon.