the NIH Record

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

September 26, 1972
Vol. XXIV, No. 20

NATIONAL INSTITUTES OF HEALTH

Dr. Robert Gordon, Jr., Named 1 of 4 Winners Of 1972 Stouffer Prize

Dr. Gordon is the first to win the Stouffer Prize for research conducted at the National Institutes of Health.

Dr. Robert S. Gordon, Jr., clinical director, National Institute of Arthritis, Metabolism, and Digestive Diseases, has been named one of the four winners of the Stouffer Prize for 1972. He will receive the award at a dinner to be held in Cleveland, Oct. 20.

Cited for NHI Research

Dr. Gordon was cited for research on free fatty acids conducted during the mid and late 1950s when he was on the staff of the National Heart Institute.

Awarded yearly by the Vernon Stouffer Foundation, the prize consists of a medal, citation, and $50,000.

An international selection committee chooses the person or persons for achievement in prevention, understanding, and treatment of arteriosclerosis and hypertension, the diseases most responsible for heart attacks and strokes.

The citation reads, in part: Dr. Gordon's "discoveries have laid a foundation for better understanding of fat transport and metabolism, a subject highly relevant to prevention of premature arteriosclerosis."

Dr. Gordon will share the prize with Dr. Vincent P. Dole, Jr.,

(See DR. GORDON, Page 7)

Neuroscience Society Covers Basic Research At Oct. 8-11 Meeting

Major problems affecting the brain, nervous system, and behavior will be discussed at the second annual meeting of the Society for Neuroscience in Houston, Tex., Oct. 8-11.

More than 50 scientists from NIH—most of them from the National Institute of Neurological Diseases and Stroke—and from the National Institute of Mental Health will attend.

Among those participating will be Nobel Laureates Marshall Nirenberg, National Heart and Lung Institute, and Sir John Eccles, Distinguished Professor of Physiology, State University of New York at Buffalo, an NINDS grantee.

Dr. Nirenberg will speak on Developing a Model System for Encoding and Decoding Neural Information.

Major conference topics include: amphetamines—their mode of action and effects; the nature and treatment of pain, and how neurochemical and electrical information is transmitted.

Also, how the nervous system develops; how psychoactive drugs affect nerve cells, and processes involved in chemical senses such as taste and smell.

A great number of grantees are

(See NEUROSCIENCE, Page 5)

Scientists Report on Animal Studies Using Anti-TB Vaccine to Fight Cancer; Meeting Evaluates Tests

A team of scientists at the National Cancer Institute and the Atomic Energy Commission's Oak Ridge National Laboratory have reported on how stimulation of the immune, or disease-fighting, systems of animals with cancer can result in complete disappearance of their cancers.

Dr. Michael G. Hanna, Jr., head of the Immunology of Carcinogenesis Group, Biology Division, Oak Ridge National Laboratory, Dr. Berton Zbar, head of NCI's Cellular Immunity Section, and Dr. Herbert J. Rapp, chief of the Institutes' Biology Branch, reported their results in a recent issue of the *Journal of the National Cancer Institute.*

Explain Immune System

Their studies suggest that when white blood cells are continually activated by BCG, a stimulant of the body's immune defense system, they summon the body's scavenger cells which, in turn, cause rapid destruction of the cancer.

In these experiments, the investigators treated guinea pigs that had developed cancer with BCG. These animals were selected because of similarities between their immune systems and that of man's. Both, for example, are highly sen-

(See REPORT, Page 6)

An international conference on the use of BCG—bacillus Calmette-Guerin—an anti-tuberculosis vaccine that is being evaluated for treating cancer, will be held Oct. 5-6, at the National Cancer Institute.

About 80 scientists from 10 countries have been invited to participate in the first such meeting of experts studying BCG. The conference will be sponsored jointly by NCI's Division of Cancer Cause and Prevention and the Division of Cancer Treatment.

Dr. Borsos Is Organizer

It is being organized by Dr. Tibor Borsos, associate chief of the Biology Branch.

At the meeting scientists testing BCG treatment against cancer in animals, and researchers using it experimentally to treat human cancer will discuss the validity of the animal tests as models for human therapy, and how knowledge obtained from experiments on animals can be applied to the treatment of cancer patients.

Inoculations with BCG have been used experimentally against several kinds of human cancer. Results have been variable, but in some cases this treatment has been dramatically successful in causing regression of the disease.

Scientists think that BCG works by stimulating the patient's immune system, mobilizing the body's defensive cells such as lymphocytes and phagocytes, or scavenger cells, which then attack the cancer cells.

Anticipate More Reliability

It is hoped that the results of experiments on animals will shed light on how to make its use in human therapy more reliable.

The rationale behind the therapeutic use of BCG dates back to the mid-19th century, when a German physician, Dr. Carl von Rokitansky, reported that persons with tuberculosis rarely got cancer.

Subsequent evidence for and against his theory of the protective action of TB, and attempts to apply it in fighting cancer, have often caused great controversy.

Recently, additional confirming

(See MEETING, Page 7)

Dr. Leon Rosen (far right) explains the studies conducted on several islands by NIAID's Pacific Research Section, Laboratory of Parasitic Diseases, at the dedication of new facilities in Honolulu. Participants include (l to r): Dr. Franklin A. Neva; Dr. Robert Q. Marston; Dr. Richard K. C. Lee, and Dr. Terence A. Rogers. (See story on Page 5.)

the NIH Record

Published biweekly at Bethesda, Md., by the Publications and Reports Branch, Office of Information, for the information of employees of the National Institutes of Health, Department of Health, Education, and Welfare, and circulated by request to interested writers and to investigators in the field of biomedical and related research. The content is reprintable without permission. Pictures are available on request.
The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper and the Department of Health, Education, and Welfare.

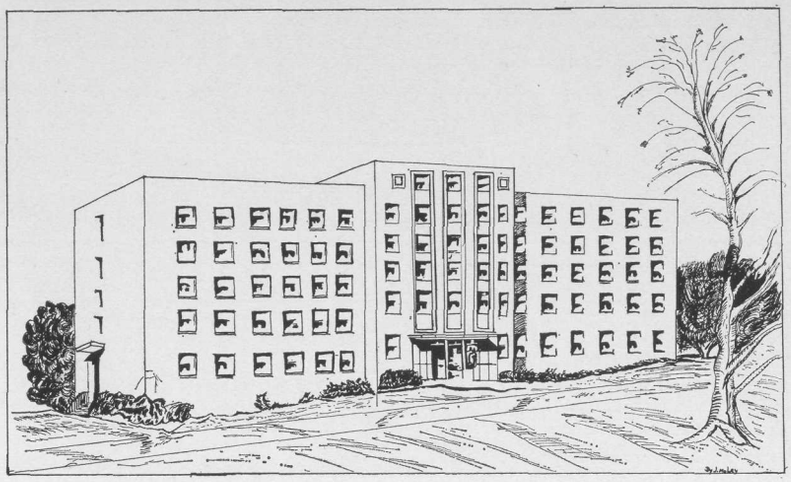
NIH Record Office ..... Bldg. 31, Rm. 2B-03. Phone 49-62125

Editor ..... Frances W. Davis
Assistant Editor ..... Fay Leviero
Staff Writer ..... Ed Driscoll

Staff Correspondents

ADA, Robert Manning; BHME/OD, Florence Foelak; CC, Ann Bainbridge; DAHM, Laura Mae Kress; DCRT, Joan Chase; DDH, Carolyn Niblett; DMI, Marian R. Fox; DN, Evelyn Lazzari; DPHPE, Eleanor Wesolowski; DRG, Sue Meadows; DRR, Jerry Gordon; DRS, Robert Knickerbocker; FIC, Lois P. Meng; NCI, Elizabeth Shollenberger; NEI, Bonnie Friedman; NHLI, Bill Sanders; NIAID, Krin Larson; NIAMDD, Katie Broberg; NICHD, Lloyd Blevins; NIDR, Sue Hannon; NIEHS, Elizabeth Y. James; NIGMS, Wanda Warddell; NINDS, Carolyn Holstein; NLM, Roger Gilkeson.

James Mabry's Sketch Reveals Artistic Talent



National Institute of Dental Research, Bldg. 30, sketched by James Mabry.

A pen and ink sketch of Bldg. 30, drawn by James M. Mabry, will hang in the National Institute of Dental Research.

Mr. Mabry, a full-time animal caretaker at NIDR and part-time art student, has presented the sketch to the Institute.

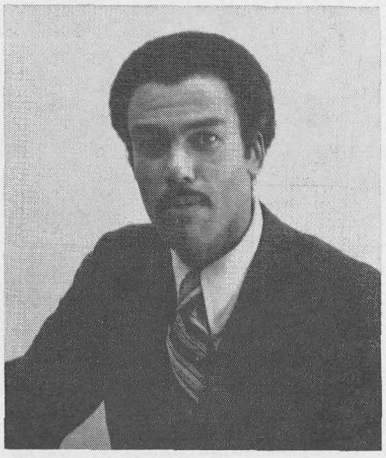
The North Carolinian spent 6 years in the U.S. Army before joining NIDR in 1963.

The NIDR Animal Care Committee has commended Mr. Mabry for accepting additional responsibilities during emergencies, allowing numerous experiments to continue without interruption.

He was also recently cited for completing a course in laboratory animal care.

Mr. Mabry—always interested in sketching and painting—has improved a natural ability through courses at the Corcoran School of Art, and hopes to use his talents in the medical arts field.

Howard F. Manly Joins Sickle Cell Disease Br.



Mr. Manly is presently attending George Washington University working toward a master's degree in Comprehensive Health Planning.

Howard F. Manly has been named special assistant to Dr. Rudolph Jackson, chief of the Sickle Cell Disease Branch, National Heart and Lung Institute.

NHLI has been designated the Federal agency which will coordinate the National Sickle Cell Disease Program.

Mr. Manly was formerly the assistant director, Division of Student Affairs of the Association of American Medical Colleges, where he administered a program to increase medical and allied health student education opportunities.

Before joining AAMC, he was administrative assistant to the vice president for Health Affairs at Howard University.

Prior to that, he served as an assistant director for the White House Conference on Children and Youth.

First Four Wage Grades Receive Pay Adjustments

The Cost of Living Council, under the Economic Stabilization Program, has raised the national substandard rate of pay from $1.90 to $2.75 per hour. The Civil Service Commission has authorized the pay adjustment which became effective on Aug. 20 at NIH.

This authorization has resulted in a pay increase for the first four Wage Grades ranging from a maximum of 9 cents to a minimum of 1 cent per hour above the previous scale.

The pay adjustment will not affect the results of the full scale wage survey that has taken place in the Washington, D.C. area. WG-5 and above, WL, and WS are not affected by the Aug. 20 adjustment.

Dr. Harriet P. Dustan Appointed To NHLI Nat'l Advisory Council

Dr. Harriet P. Dustan, vice chairman of the Research Division of the Cleveland Clinic Foundation, has been appointed to a 4-year term on NHLI's National Advisory Heart and Lung Council.

An internationally-known authority on arterial hypertension, Dr. Dustan will participate in the evaluation of NHLI research and training programs directed against cardiovascular and chronic lung disorders.

NIH Television, Radio Program Schedule

Radio

DISCUSSION: NIH

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

September 29
Kenneth Kempner, DCRT
Subject: Computers and Patient Care (R)

October 6
Dr. Milton Puziss, NIAID
Subject: Venereal Disease (R)
Interview takes place during intermission of *Music Room.*

HERE'S TO YOUR HEALTH

WGMS—12:20 p.m.

October 11
Dr. Thomas B. Friedman, NIMH
Subject: Genetic Research

Institutions Awarded NCI Funds

The National Cancer Institute announced the award of $622,800 in research contract funds to six institutions as the first phase of a new attack on cancer of the prostate.

The disease kills some 18,000 American men a year; it is the third most frequent cause of cancer death among males in the U.S.

Dr. Richard R. Bates, chief, Experimental Pathology Branch, NCI, is directing the program.

D.C. Residents Helped By Operation Black Vote

Operation Black Vote, an organization composed of Howard University students and volunteers, is conducting a non-partisan registration drive to register D.C. residents to vote in the upcoming elections. The drive began on Sept. 19.

In cooperation with the group, 10 NIH employees have volunteered their services and have been trained and deputized to register District residents.

Hours, Sites Listed

Employees who reside in the District and have not registered may do so from 12 noon to 2 p.m., Monday through Friday, at the following locations:

Bldgs. 35 and 10, at the cafeteria entrances; Bldg. 31, in the A Wing lobby; Bldg. 13, adjacent to the snack bar, and the Westwood Building in the lobby.

Registration will continue through Oct. 6. All employees are urged to register.

Duckpin League Begins Season; Regulars and Substitutes Needed

The NIH-Parklawn R&W Duckpin Bowling League has started its winter season, but still needs bowlers for its substitute list and team vacancies. R&W members and their families are eligible.

The league plays at Silver Spring Bowl every Thursday at 7 p.m. Cost, including bowling fees, banquet, and prize money, is $3 per week for regular bowlers. Substitutes bowl free.

Interested duckpin bowlers may contact Donald Sylvain (Parklawn), league president, at 443-1970 (IDS 153-31970).

Bay State Artist Colony Will Be Future Haven For Mary Beach, CC

Mary Beach, chief of the Occupational Therapy Service, Clinical Center Rehabilitation Department, is looking forward to pursuing her hobby—painting—upon her retirement on Sept. 30.

After a leisurely one-month tour of England, Miss Beach will move to Rockport, Mass., an artists' colony, where she plans to paint, sing in a community chorus, and perhaps do volunteer work.

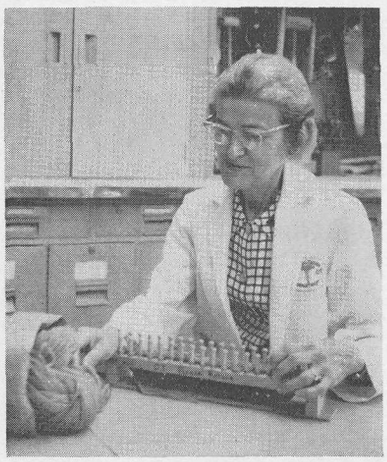
Miss Beach will have completed 28 years of Federal service, 18 of them at the CC.

In 1954 she came to the campus as the first chief of the Occupational Therapy Service.

She has been responsible for developing and supervising programs in that department, and changing them according to the demands of research and the patients' needs.

Programs are geared to rehabilitating the patient with a physical and/or mental disability, by preparing him to function in a work or home setting.

Some patients are assigned to help in various CC sites—the library, laboratory, or office—where



In addition to her supervisory duties, Miss Beach sometimes pinch hits for the therapists. She prepares rake knitting materials for a patient who is making a shawl.

they can acquire experience.

Miss Beach has been an officer or member of about 15 organizations, including the PHS Board of Civil Service Examiners and the American Association of Military Surgeons.

She holds a B.A. degree from the University of Minnesota and a diploma from the Boston School of Occupational Therapy, now part of Tufts University.

At her retirement party, Miss Beach was given a certificate signed by CC Director Dr. Thomas C. Chalmers citing her dedication to patient care, and a certificate from the PHS Therapist Career Development Committee for her contributions to the profession.

Move Over Bobby—We Have Our Own Chess Master—DCRT's Dr. James Slagle

Dr. James Slagle, head of the Heuristics Laboratory, Division of Computer Research and Technology, was a recent contestant in the U.S. Open Chess Tournament in Atlantic City.

This was the first time he competed in the Open Chess Tournament—he was the only totally blind competitor.

Dr. Slagle has been a serious chess player for about 5 years and is a team member in the D.C. Chess League. He won the U.S. Braille Chess Championship for 1971-72 and was a member of the U.S. team which played in the Blind Chess Olympiad held in Pula, Yugoslavia, last April.

Dr. Slagle uses a special chess set in which the pieces are shaped so that they can be distinguished by touch. A colleague who has played chess with Dr. Slagle described the experience.

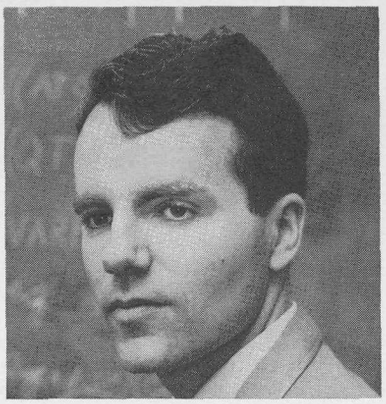
"He sits there and feels the pieces and thinks. Then he makes a devastating move. He almost always beats me!"

Dr. Slagle is a student of book chess (opening moves in chess that are collected in books), and knows such variations as the English opening and the Nimzo-Indian Defense.

There are five children in the Slagle family, and every one of the five, from 12-year-old Paul on down to his 6-year-old sister Ann, is a budding chess player.

Heuristic programming—Dr. Slagle's specialty—has been applied to produce chess-playing machines for computer programs.

Since the best the machines can do to date is to play at about a Class C level, and Dr. Slagle tied for third place in the Class A levels at the Open Tournament, it proves that man—at least Dr. Slagle—is still ahead of the machine!



"He . . . feels the pieces and thinks. Then he makes a devastating move," is the way a colleague of Dr. Slagle describes his chess playing, adding the encomium, "He almost always beats me."

CC Nursing Dept. Issues Booklet

The Clinical Center Nursing Department has published the eleventh in a series of monographs on Nursing Clinical Conferences, *Professional Progression in the Nursing Department.*

Hilda M. Malcolm Dies; Prepared NINDS Copy

Hilda M. Malcolm, Laboratory of Neuropathology and Neuroanatomical Sciences, NINDS, died suddenly last month of a cerebral hemorrhage.

She had worked for 10 years as secretary in the LNN Sections on Nerve Regeneration and Neurocytology, and more recently in the Section on Functional Neuroanatomy. She was noted for her skill in manuscript preparation.

Miss Malcolm, a native of Moorefield, W. Va., where she maintained her family home, was buried there.

An avid gardener and hiker, her favorite hobby was the collection and identification of wild flowers in her native state and Maryland. She is survived by two brothers, Ward A. and Boyd Malcolm, Jr.

'Record,' Camera Club Sponsor Photo Contest

The NIH Record and R&W's Camera Club are sponsoring a photography contest for NIH employees.

The theme will be "The National Institutes of Health"—judged in three areas: landscape, human interest, and scientific activities.

Three prizes in each category will be donated by the Camera Club.

Rules for the contest will be:

1. All participants must be NIH employees and *amateur* photographers.
2. Photo sizes are restricted to: not smaller than 3¾" x 3¼" (polaroid) and not larger than 11" x 14"—all must be black and white (negatives will not be accepted).
3. Photos must have been taken within the past year.
4. A title, date, description of the scene, an identification of all primary subjects, and the photographer's name and extension must accompany each picture.
5. Photos submitted will be retained by the *Record.*
6. Photos, accepted until Nov. 21, may be sent to the *NIH Record.*

Dr. Waterman Retires; NICHD Program Chief

Dr. Allyn J. Waterman, chief, Biomedical Grants Program, in the Population and Reproduction Grants Branch, Center for Population Research, NICHD, retired Aug. 31 after 45 years of professional service.

Since coming to NICHD in 1967, he has directed its extramural research and training programs in the biological and physiological aspects of population research.

Dr. Waterman, who has an international reputation as an eminent teacher, researcher, and administrator, came to NICHD when he retired from Williams College.

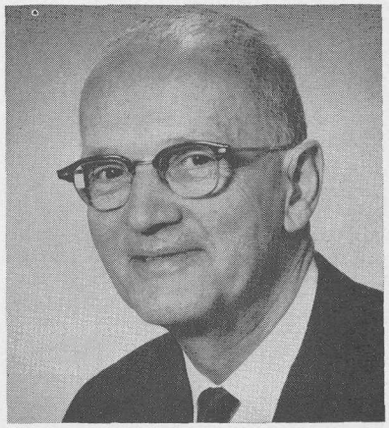
During his 35 years at Williams he taught biology and was engaged in independent research in the fields of experimental embryology and reproductive endocrinology.

He has published 85 papers, abstracts, and chapters in two books related to his research interest.

Throughout his teaching career, he served on several scientific committees, and organized and directed summer institutes for college teachers of biology for the National Science Foundation.

Dr. Waterman devoted several summers and two periods of sabbatical leave for research on sea animals on the East and West Coasts and at several foreign marine laboratories.

In the course of these studies, he worked with a wide range of specimens, including embryonic and



Dr. Waterman is collaborating on a book on reproductive physiology.

newly-hatched turtles, young alligators, sea urchins, sting rays, parrot fish, hagfish, and dogfish.

Dr. Waterman received his B.A. degree in Zoology from Oberlin College, his M.A. in Biology from Case Western Reserve University, and his Ph.D. in Biology—reproduction and embryology—from Harvard University in 1931.

During the 1930s, he served on the staff of the Marine Biological Laboratory, Woods Hole, Mass.

Although semi-retired, Dr. Waterman now works as an NICHD consultant.

Jerry Palen holds a scroll presented to him at his recent retirement party. Mr. Palen, a contract specialist in the Construction Contracts Unit, Procurement Branch, OAS, retired after 30 years Federal service. Marian Eaton, a co-worker, assists him with the scroll.

Hospital Accreditation Commission Lauds CC

Late last month, representatives of the Joint Commission on Accreditation of Hospitals completed a 2-day bi-yearly survey of the Clinical Center to determine if the quality of patient care meets accreditation standards.

CC procedures and administrative documents were reviewed, conferences with CC Director Dr. Thomas C. Chalmers and the hospital staff took place, and each department was inspected.

After the survey, JCAH representatives stated:

"The medical staff and administration are commended upon the excellent facilities, organization, and staffing of the hospital, and upon the multiple evidences of good patient care observed."

JCAH, comprised of four organizations—American College of Physicians, American College of Surgeons, American Hospital Association, and American Medical Association—establishes standards to evaluate patient care.

Dog Sled to Satellite Radio Network—Project Assists Remote Alaskan Villages

By Dr. Brian Beattie

Alaska Satellite Field Project Officer

Imagine yourself in an Athabascan Indian Village of 150 people, 100 miles north of the Arctic Circle and 75 miles from the nearest village or airplane. The pain in your belly has been unbearable for the past 8 hours. Nothing you eat will stay down. You are shivering in spite of the close warm air inside your cabin —shivering because your body temperature is rising rapidly.

The village health aide who has come to see you knows you need a doctor and a hospital soon. This means an airplane. If you are lucky, the weather and local airstrip conditions will be such that a plane can pick you up. This eliminates part of your problem.

If you are again lucky, someone can call for an airplane. You are flown to a hospital 200 miles away, your recently burst appendix is removed, and you leave the hospital in a couple of weeks.

If you are unlucky . . . well, I'll leave that to your imagination.

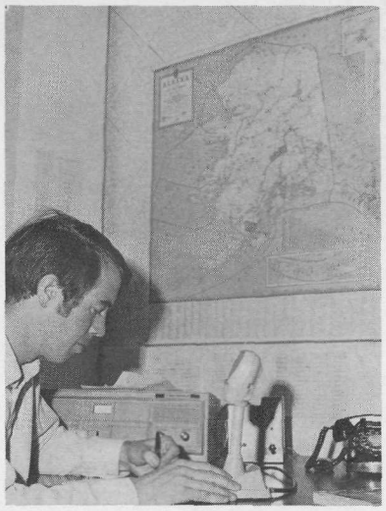
I have spent the last year in Alaska working on the Alaska Biomedical Satellite Communications Project.

Using funds from the National Library of Medicine's Lister Hill Center, project director Glenn Stanley and the University of Alaska's Geophysics Institute have provided reliable two-way voice communication via satellite radio to 26 locations in the state.

Use Radio Extensively

Twelve of these villages have no telephone service. They use the satellite radio extensively for non-emergency medical problems, drug orders, transportation arrangements, reporting on hospitalized patients, and administrative matters.

The radio is available for emergency use at least 8 hours a day.



Underneath a map pinpointing 26 locations in Alaska where 2-way voice communications have been provided, Dr. Beattie prepares a reply to a query concerning a medical problem.

I have visited several of the Indian villages along the Yukon River and its tributaries in interior Alaska. The satellite radio has provided crucial communications in some emergency cases over the past year.

Perhaps even more important, though, is the establishment of a reliable radio communications network for medical use. For the first time, village health aides in this part of the state communicate regularly with physicians of the Native Health Service in Tanana. Medical problems can be followed on a day-to-day basis if necessary.

In addition to medical traffic between village health aides and physicians, the satellite radio has provided network experimental health education programs for native village people, as well as some medical education programs for physicians at more remote hospitals.

Plans Outlined

There are plans to use the satellite radio in linking the Alaska Health Sciences Information Center with the NLM in Bethesda to make use of the MEDLINE computerized literature search service.

The Biomedical Communications Project offers several contrasts. On one hand, it provides simple voice communication for tiny villages of log houses, often without electricity or running water, hundreds of miles from the nearest doctor.

On the other hand, it furnishes a means to send printed material or pictures from one spot to another instantaneously and makes possible the use of a highly sophisticated computer for more rapid access to medical information.

Equipment used ranges from an ordinary car battery to a highly sophisticated communications satellite.

Recipients of the Third Annual Summer Employee Awards Assembly, held recently in the Jack Masur Auditorium, CC, heard Dr. John F. Sherman, NIH Deputy Director (pictured far right with one of several groups), extoll their work and voice the hope that their NIH experience would result in a further interest in health care careers. Dr. Sherman presented 59 summer aids and 78 employees appointed under other programs with certificates for their "outstanding contribution to the Federal Summer Employment Program for Youth." They also received special achievement cash awards.

NIH Visiting Scientists Program Participants

8/15—Dr. Margaret O. James, United Kingdom, Pharmacology and Toxicology Branch. Sponsor: Dr. Theodore E. Gram, NIEHS, Research Triangle Park, N.C.

8/28—Dr. Shlomo Z. Ben-Sasson, Israel, Laboratory of Immunology. Sponsor: Dr. William E. Paul, NIAID, Bldg. 10, Rm. 11N309.

8/31—Dr. Artemio Ovejera, Philippines, Drug Research and Development. Sponsor: Dr. Abraham Goldin, NCI, Bldg. 37, Rm. 5E26.

9/1—Dr. Bang-Ling Chu, Taiwan, Drug Development Branch. Sponsor: Dr. John S. Driscoll, NCI, Bldg. 37, Rm. 6D22.

9/1—Dr. Sou-yie Chu, Taiwan, Drug Development Branch. Sponsor: Dr. John S. Driscoll, NCI, Bldg. 37, Rm. 6D22.

9/1—Dr. Vadiraja V. Murthy, India, Pathologic Physiology Branch. Sponsor: Dr. Robert L. Dixon, NIEHS, Research Triangle Park, N.C.

9/1—Dr. Geoffrey Peng, Taiwan, Drug Development Branch. Sponsor: Dr. John S. Driscoll, NCI, Bldg. 37, Rm. 6D22.

9/1—Dr. Elizabeth A. Robertson, Canada, Section on Human Learning. Sponsor: Dr. David Arenberg, NICHD, Gerontology Research Center, Baltimore, Md.

9/1—Dr. Jacques Suaudeau, France, Laboratory of Technical Development. Sponsor: Dr. Theodor Kolobow, NHLI, Bldg. 10, Rm. 5D12.

9/5—Dr. Jean-Pierre Abita, France, Laboratory of Neurochemistry. Sponsor: Dr. Seymour Kaufman, NIMH, Bldg. 36, Rm. 3D30.

Japanese Researchers Visit

9/5—Dr. Ken Fujitani, Japan, Section on Child Neurology. Sponsor: Dr. Anatole DeKaban, NINDS, Bldg. 10, Rm. 4N248.

9/5—Dr. Katsuiku Hirokawa, Japan, Immunology Section. Sponsor: Dr. Nathan W. Shock, NICHD, Gerontology Research Center, Baltimore, Md.

9/5—Dr. Kalman Perk, Israel, Viral Oncology. Sponsor: Dr. John B. Moloney, NCI, Bldg. 37, Rm. 1A13.

9/5—Dr. Nobuhiko Saito, Japan, Laboratory of Molecular Biology. Sponsor: Dr. Terrell L. Hill, NIAMDD, Bldg. 31, Rm. 9A47.

9/6—Dr. Elizabeth Simpson, United Kingdom, Immunology Branch. Sponsor: Dr. William D. Terry, NCI, Bldg. 10, Rm. 4B18.

The Mathilde Solowey Neurosciences Lecture Established by FAES

The Mathilde Solowey Annual Lecture in the neurosciences will be established in 1973 by the Foundation for Advanced Education in the Sciences, a non-profit organization at NIH devoted to continuing biomedical education.

Dr. Solowey

The lecture series will honor an outstanding scientist specializing in research on neurobiology or diseases of the central nervous system, according to Dr. Robert Goldberger, Laboratory of Chemical Biology, NIAMDD, and a member of the Foundation's Board of Directors.

The annual series results from a gift contributed to FAES by Dr. Mathilde Solowey, an NIH scientist dedicated to continuing advancement of central nervous system disease research.

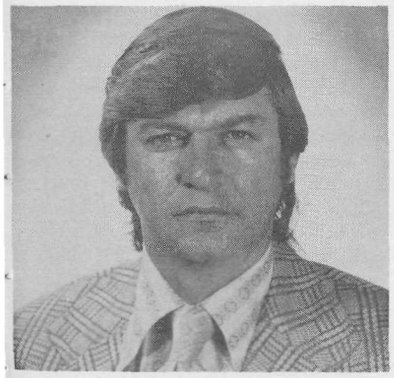
Now associated with the National Cancer Institute, Dr. Solowey became interested in diseases of the nervous system during her 12 years with the National Institute of Neurological Diseases and Stroke.

Motivation Explained

She was motivated to make her contribution when 75 colleagues, representing the NINDS Program-Project and Clinical Center Review committees, gave her a check in recognition of her service and achievements at NINDS.

Dr. Solowey directed that the gift, together with her own funds, be used to finance a lectureship under the aegis of FAES.

Her contribution will include travel and other expenses of guest lecturers and will provide a modest honorarium. Lectures will be presented at NIH.



Alvin L. Wade, Jr., has been appointed personnel officer for NIEHS, Research Triangle Park, N.C. Previously, he held that post in DCRT. Mr. Wade received a B.S. in Business Administration from the University of North Carolina.

Internat'l Researchers Discuss Enviromental Hazards of Phthalates

International researchers from the U.S., Canada, Great Britain, and Germany who are involved in research on phthalic acid esters (PAEs) attended a conference to evaluate the effect of the chemicals on human health, and to consider if phthalates presented an environmental hazard.

The 2-day meeting, sponsored by the National Institute of Environmental Health Sciences, Research Triangle Park, N.C., was held on Sept. 6-7 in Pinehurst.

Phthalate esters are substances used in plastics to make them flexible (See *NIH Record*, Aug. 1, 1972). About a billion pounds are produced annually. Such everyday products using the chemicals include food packages, luggage, handbags, coated cloth, and waterproof boots and shoes.

Other Uses Noted

Industry also utilizes phthalate ester plasticizers for electrical insulation and industrial hose and tank liners.

Scientists found that PAEs could migrate from plastics to human tissues where they could be stored and produce toxic reactions. The researchers were predominantly concerned with the possibility of phthalates leaching from polyvinylchloride plastic food wraps and blood bags.

Dr. Lloyd B. Tepper, associate commissioner for Science, Food and Drug Administration, emphasized that the finding of phthalates in body tissues, such as the lung and liver, is significant *per se* because these chemicals are foreign to the body.

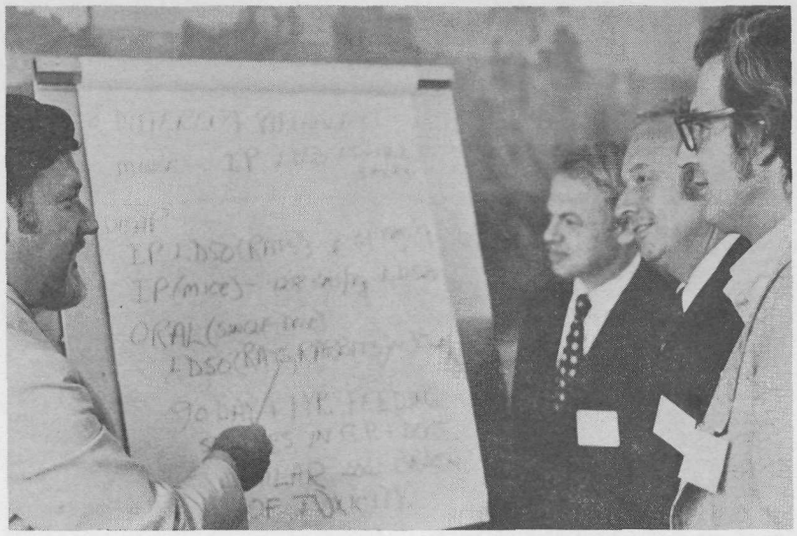
Dr. Tepper also pointed out that the biological significance of this finding is not known.

Stresses Precautions

The FDA scientist explained that laboratory equipment such as solvents and syringes may contain PAEs. He stressed that precautions must be taken in using this equipment in order to prevent the contamination of test materials. Such contamination may very well result in errors in research findings.

Conferees pinpointed areas in which extensive research is further required. Those areas include the chronic effects of repeated exposure to PAEs, and the oral administration of low-level doses of the chemicals in contrast to larger doses administered intravenously.

NIEHS's Journal — *ENVIRONMENTAL HEALTH PERSPECTIVES* — will publish conference proceedings in the January issue.



Dr. Robert J. Rubin, School of Hygiene and Public Health, Johns Hopkins University (far left), discusses pharmacologic and toxicologic effects of phthalates. Observing are (l to r) Frederick C. Gross, NASA; Paul Graham, Monsanto Chemical Company, and Dr. David P. Rall, NIEHS Director.

NIAID's Far Field Station for Parasitic Diseases Research Is Dedicated in Hawaii

New facilities for the most remote field station in the National Institute of Allergy and Infectious Diseases—the Pacific Research Section of the Laboratory of Parasitic Diseases—were dedicated on Aug. 14 in Honolulu, Hawaii.

NIH Director Dr. Robert Q. Marston spoke at the ceremony. Others attending were Dr. Leon Rosen, director of the Section; Harlan Cleveland, president, University of Hawaii; Dr. Terence A. Rogers, dean of the University's School of Medicine; Dr. Richard K. C. Lee, executive director of the University's Research Corporation; Dr. Franklin A. Neva, chief of NIAID's Laboratory of Parasitic Diseases, and members of the staff of the School of Medicine.

In his dedicatory address, Dr. Marston cited the research accomplishments the laboratory has made in diseases common to the Pacific and Southeast Asian areas, such as eosinophilic meningitis, toxoplasmosis, and dengue fever.

Formerly housed in the Queen's Medical Center, the Section is now in newly renovated facilities in Leahi Hospital, which is operated by the University of Hawaii and is near the University's Department of Tropical Medicine and Medical Microbiology.

Established on July 1, 1962, for the study of eosinophilic meningitis, the section includes five NIAID employees who conduct most of their research in the field—primarily French Polynesia, New Caledonia, and the U.S. Trust Territories in the Pacific.

The members are often consulted by U.S. and foreign governmental officials and scientists in connection with disease problems of the Pacific.

Their study of dengue outbreaks in French Polynesia has increased the understanding of the viruses involved. Also, their work on "toxo" demonstrated the relationship between the rat-cat population and the incidence of human toxo infection on some Pacific islands.

NEUROSCIENCE

(Continued from Page 1)

Dr. Arthur A. Ward, Jr., an NINDS grantee at the University of Washington School of Medicine, will speak on what to expect from brain research.

actively participating.

Dr. Neal E. Miller, of Rockefeller U. and an NICHD grantee, will deliver the Presidential address on Oct. 9.

On the evening of Oct. 10, NINDS grantee Dr. Stephen W. Kuffler, professor and chairman of the Department of Neurology, Harvard Medical School, will deliver the Grass Foundation lecture.

He will speak on the use of combined techniques to map the nerve synapse and view reception of the neurotransmitter.

Simulated Dental 'Patient' Wins I. R. 100 Award

A model dental patient, who submits to prolonged treatment without complaint, has been selected as one of the 100 most significant new technical developments of the year by the Industrial Research Editorial Advisory Board.

The patient, a manikin head with a synthetic but life-like skin, was originally developed by the Division of Dental Health. It is fitted with plastic teeth that can be treated just like those of a person.

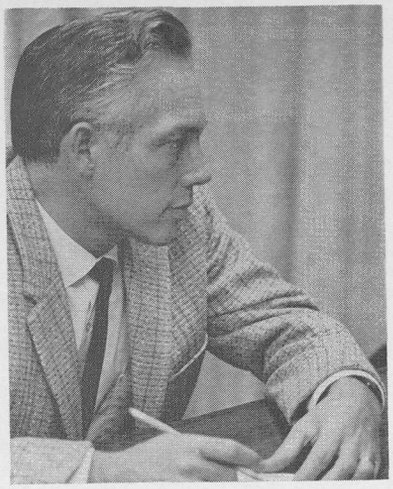
The Division's Dental Manpower Development Center in Louisville, Ky., employs six manikin patients in training programs for auxiliaries and in short-term courses for faculty of dental school Training in Expanded Auxiliary Management programs.

Using the patient simulators

The model patient, held by a dental auxiliary, has life-like skin and replaceable plastic teeth.

helps the trainees gain familiarity with the four-handed dentistry techniques and equipment used in the center's clinic, and enables them to practice the procedures on the manikin which they will perform later on humans.

The number of dental procedures which can be performed on the simulated patient is almost unlim-



Dr. Dean Darby, Division project officer during the development of the patient simulator, received the "I.R. 100" award on behalf of DDH at the Sept. 21 awards ceremony in Chicago.

ited because the teeth are removable and can be replaced with new ones as often as necessary.

Several modifications have been made in the patient simulators in the 1½ years they have been in use at the center.

The latest award-winning model was developed jointly by the Division and DEN-TAL-EZ Mfg. Co.

New Section Established In NIAMDD Laboratory

A Section on Protein Conformation in the Laboratory of Chemical Biology has been established in the National Institute of Arthritis, Metabolism, and Digestive Diseases.

The new Section, headed by Dr. Hiroshi Taniuchi, is responsible for crystallographic studies of protein structure.

Research will focus on structural and functional relationships of proteins and chain folding of staphylococcal nuclease molecules.

Dr. Taniuchi, who was born in Japan, received his Ph.D. from Kyoto University Graduate School in 1962. He has been with the NIAMDD laboratory since 1963.

REPORT

(Continued from Page 1)

sitive to BCG.

BCG was used to stimulate the animals' immune system which was not functioning effectively enough to destroy the cancer cells.

However, when live BCG was injected directly into the cancers, a local inflammatory reaction was observed within 24 hours, with swelling and redness of the skin around the injection site.

This was followed by the development of a delayed hypersensitivity reaction which is indicative of an immune response.

The size of the cancers gradually decreased with the disappearance at the original sites of implantation, and the elimination of distant cancer cells within 25 days.

Other animals with cancers of the same type, treated either by surgical removal of the cancer or by injections of nonreactive salt solution into the cancers, did not experience tumor regression.

Microscopic study of tissue samples from tumors and lymph nodes of cancerous animals indicated the presence of abnormally large numbers of lymphocytes, white blood cells in the body that recognize foreign material, and the scavenger cells, or histiocytes.

It is believed that lymphocytes are activated by the BCG, which they recognize as foreign material and call forth the histiocytes that act as killer cells to the tumor.

Study of tissue samples from the tumors and lymph nodes revealed that as early as 4 days after BCG treatment, small clusters of histiocytes, known as granulomas, had developed at the injection site and within neighboring lymph nodes.

Seen near these granulomas were many cancer cells showing signs of degeneration, indicating that the histiocytes were the major cell type responsible for cancer cell death.

Results of another study reported by Drs. Hanna, Zbar, and Rapp indicated that it is the chronic nature of the delayed hypersensitivity reaction caused by BCG which leads to cancer cell destruction.

Experiments using several chemicals, such as turpentine, which are known to produce brief, local inflammatory reactions, showed that the short-lived reactions produced by these agents did not suppress tumor growth.

It has been suggested, therefore, that it was not the inflammation itself, but rather its duration, that was a determining factor in the inhibition of cancer cell growth.

Earlier experiments in this field have been reported by Drs. Rapp and Zbar in collaboration with Dr. Edgar E. Ribi, of NIAID's Rocky Mountain Lab., Hamilton, Mont.

The researchers stated that the cell wall, or outer coat of the BCG, may be responsible for the chronic nature of the delayed hypersensitivity it induces, and for the subsequent tumor destruction observed in these experiments.

Dr. Rapp said the investigators now plan to attempt to isolate the chemical substances from the BCG cell wall which are responsible for the anti-cancer activity of the BCG.

These and subsequent results will be presented at NCI's international conference in early October.

BEIB Offers Scientific Equipment at a Savings

The Division of Research Services operates a scientific equipment rental program—based primarily upon loans from a pool of used instruments—for NIH intramural investigators. It is administered by the Biomedical Engineering and Instrumentation Branch.

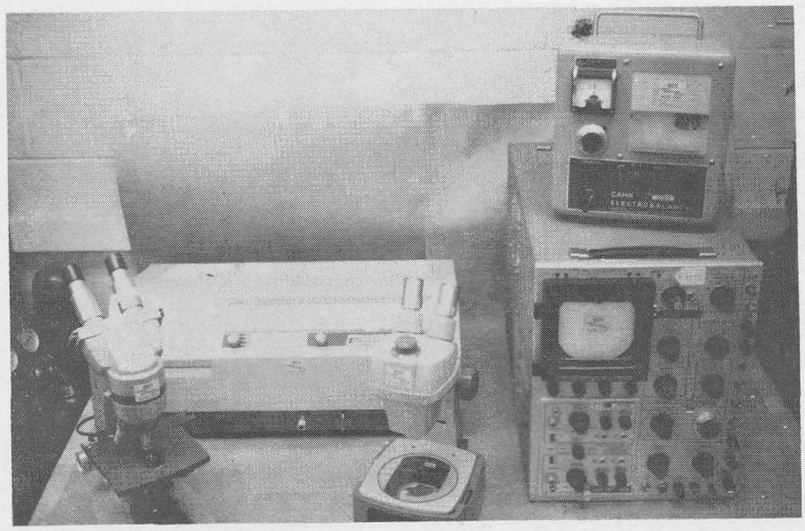
Equipment that has general research utility, but is not used sufficiently by laboratories to warrant permanent possession, is maintained in working condition by BEIB.

A variety of scientific apparatus is available to all intramural programs on a completely optional basis. A nominal rental fee is charged to make the program self-supporting and viable.

Services provided by this program reduce delays in obtaining equipment for ongoing or new projects.

Also, it lowers capital investment in equipment costs, especially for short- and intermediate-term studies.

For information regarding the program and equipment rental, call BEIB, Systems Maintenance Section, Ext. 64131.



BEIB keeps equipment such as microscopes, balances, spectrophotometers, centrifuges, and oscilloscopes in working condition for ready use.

Dr. Clair Gardner Directs Extramural Programs, NIDR

Dr. Clair L. Gardner has been named associate director for Extramural Programs, National Institute of Dental Research.

He is also NIDR deputy director, and will continue to serve in this position as well as direct the Institute's Extramural Programs.

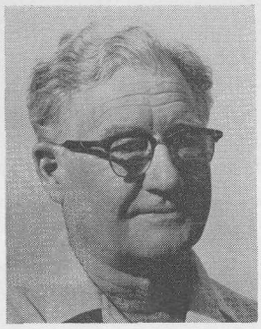
Dr. Gardner was formerly NIDR associate director for Special Programs and earlier was the Institute's Program Planning officer.

Before joining NIDR, Dr. Gardner was Area Dental officer in the PHS Indian Health Area Office, Aberdeen, S.D.

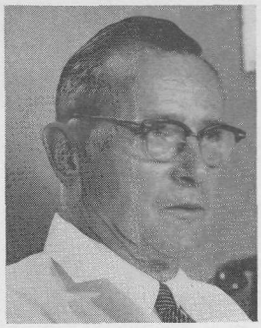
He entered the PHS in 1955, after receiving his D.D.S. degree from Loyola University of the South, New Orleans.

New Fogarty Scholars at Stone House Will Follow Special Areas of Interest

Sir Sydney



Prof. Rushton



Dr. Christie

Dr. Denny-Brown

Dr. Watson

Five new Fogarty Scholars will be residing in Stone House this month: Sir Sydney Sunderland, Dr. Ronald V. Christie, Prof. William A. Rushton, Dr. Derek Denny-Brown, and Dr. Cecil J. Watson.

Dr. Denny-Brown, now professor emeritus at Harvard Medical School where he was previously professor of Neurology, was born and educated in New Zealand. He spent a number of years in London before joining the Harvard faculty in 1941.

Actively engaged in research on the physiology of the nervous system, he is the author of numerous scientific publications on this subject. The latest of these are concerned with the physiology of movement.

Schedule Outlined

While here Dr. Denny-Brown will spend considerable time writing on neurophysiology, take part in some seminars, and present some lectures.

He and Mrs. Denny-Brown will reside in Stone House until next June.

Dr. Watson, since 1964 Distinguished Service Professor of Medicine and Director of the Unit for Teaching and Research in Internal Medicine, Northwest Hospital, Minneapolis, has had a distinguished career.

He has written extensively on liver and biliary tract diseases as well as porphyrin metabolism.

From 1951 to 1954, Dr. Watson served on the National Institute of Arthritis and Metabolic Diseases Council. From 1957 to 1960, he was chairman of the Institute's Board of Scientific Councillors, and in 1964 a member of that board.

He will devote a significant portion of his time to the clinical area, but will also do some writing, lecturing and participating in seminars.

Dr. and Mrs. Watson will remain in Stone House through this December.

Sir Sydney Sunderland, Dean of the Faculty of Medicine at the University of Melbourne, Australia, was knighted by the Queen this past year.

Sir Sydney, who was professor of Anatomy and Histology at the University from 1939 to 1961, was appointed to his present post in 1953.

A fellow in the Royal Australian College of Surgeons, he has served on a number of medical research and education committees for his Government.

As a Fogarty Scholar his activities will center on medical education and the book he is writing concerned with neurology.

Sir Sydney and Lady Sunderland will reside in Stone House for the next 8 months.

Dr. Christie is in the Office of the Dean, Faculty of Medicine, McGill University, Montreal, Canada.

He joined McGill University's faculty in 1955 as chairman of the Department of Medicine, and in 1964 became Dean, Faculty of Medicine.

Though he relinquished the deanship in 1968, Dr. Christie continued to pursue his very deep interest in medical education. While a Fogarty Scholar he will devote a major portion of his time to writing and engaging in activities in this field.

Dr. Christie will be a resident of Stone House through May 1973.

Professor Rushton, a neurophysiologist at Trinity College in Cambridge, has had a distinguished career, particularly in visual physiology.

Since 1968 he has been a Distinguished Research Professor at Florida State University where he spends a number of months each year.

He is the author of numerous papers on nerve excitation and conduction, visual pigments, and on the mechanism of vision.

Professor Rushton will devote a major portion of his time to writing; however, he will also be working with NIH staff members, particularly those in the National Eye Institute.

He and Mrs. Rushton will reside in Stone House for the next 8 months.

MEETING

(Continued from Page 1)

evidence has come from studies by scientists in Quebec and Chicago. The researchers said that there are fewer cases of leukemia among children vaccinated with BCG than among unvaccinated children.

The conference will be opened by Dr. Frank J. Rauscher, Jr., NCI Director, and Dr. James A. Peters, acting director, Division of Cancer Cause and Prevention.

Participation in the conference is by invitation only.

DR. GORDON

(Continued from Page 1)

Rockefeller University, DRR grantee; Dr. John W. Gofman, Laurence Radiation Laboratory, and Dr. John L. Oncley, University of Michigan, NHLI grantee.

Drs. Dole and Gordon are being honored for their discovery, independently, of the importance of a tiny fraction of the fats in blood—the free fatty acids.

Beginning about 1956, from their separate studies emerged a coherent picture of an energy transport mechanism featuring this almost unknown fraction of the circulating fat as the major fuel for life processes in muscle, liver, and other body tissues during the times when the supply of non-fat calories runs low.

Thus, as the calories entering the blood from a digested meal are exhausted, body fat, or adipose tissue, is prompted to release stored calories to the tissues in the form of free fatty acids.

Without this energy transport mechanism the calories stored in adipose tissue would be unavailable to the organs and starvation would impend between meals, even in the presence of obesity.

They also showed that an emotional stress such as fear, by increasing adrenalin, releases free fatty acids, and that insulin blocks their release.

Manpower Bureau Staff Receives Special Honors For Its EEO Promotion

Dr. Kenneth M. Endicott, Director of the Bureau of Health Manpower Education, and 10 Bureau employees received Special Achievement Awards for their work this past year in promoting Equal Employment Opportunity.

Receiving awards with Dr. Endicott in a ceremony held Sept. 13 in Bldg. 31 were: Thomas D. Hatch, Director, Division of Allied Health Manpower; Dr. Harry W. Bruce, Jr., Director, Division of Physician and Health Professions Education, and Donald C. Parks, Dr. William Bennett, Joseph Morabito, and Blanche Perry, also of DPHPE.

Also, Dr. Robert J. Lucas, Division of Nursing; Arthur Testoff, Division of Dental Health, and James Walsh and Mildred Freeman, Office of the Bureau Director.

Career opportunities for minority employees at BHME have improved over the past 2½ years under Dr. Endicott's leadership.

At a conference in May 1971 the Bureau adopted a commitment to improve employment opportunities for minorities. They followed this up by increasing the number of black employees in BHME 50 percent by the end of June 1972.

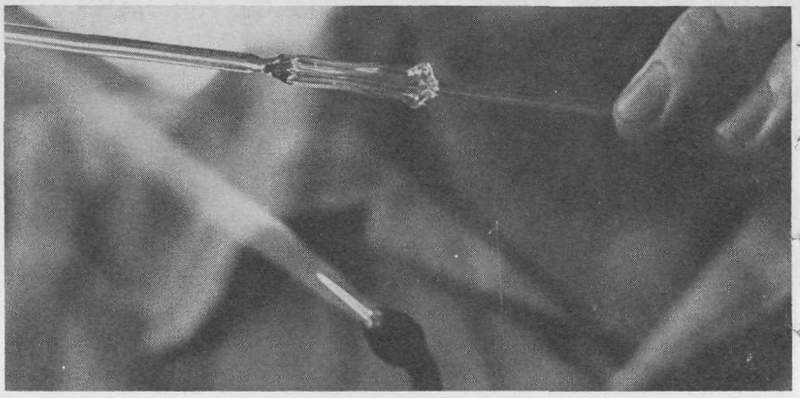
Black employees were hired in grades ranging from GS-2 to GS-15, and employment histories of all minority employees were reviewed for possible promotions or training opportunities.

Also, 12 training positions were established for minority employees during Fiscal Year 1972.

Dr. Endicott (l) receives an EEO Award from Dr. Robert Q. Marston, NIH Director. Dr. Endicott, 10 Bureau employees, and the Division of Allied Health Manpower were cited for their work promoting EEO.

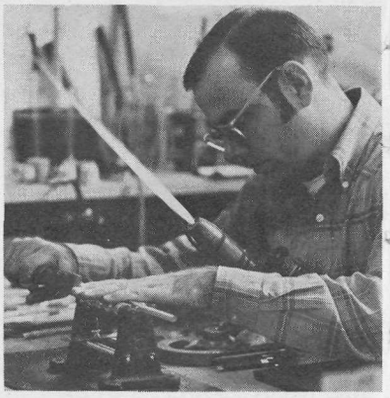
DRG's Glassblowing Unit Says, 'Design It—We'll Make It'

Scientific glassblowing requires special equipment and an enormous amount of talent, patience and artistry. The six men in the Glassblowing Unit of the Biomedical Engineering and Instrumentation Branch, Bldg. 13, have more than their share of these requisites. They devise apparatus for the chemists, biologists and other scientists at NIH. Each piece of equipment is constructed to meet demanding technical specifications. NIH glassblowers, who may well be regarded as co-workers with research scientists, are aware of the chemical and physical principles involved in glass-making. Their work also reflects the superb dexterity of their hands. The glassblowers in the BEIB unit are: William Kump, head; Joseph Fox, Robert Gerhart, Walter Gladd, William Dehn, and Carroll Toms.

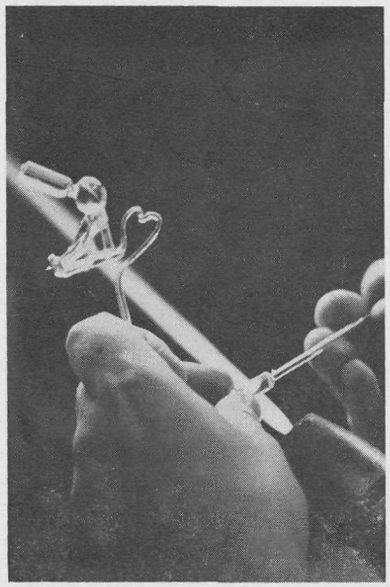


A micropipette with five barrels (infinitesimal tubes that may be seen only with a microscope), is used for neural cell research. The device was developed in the unit.

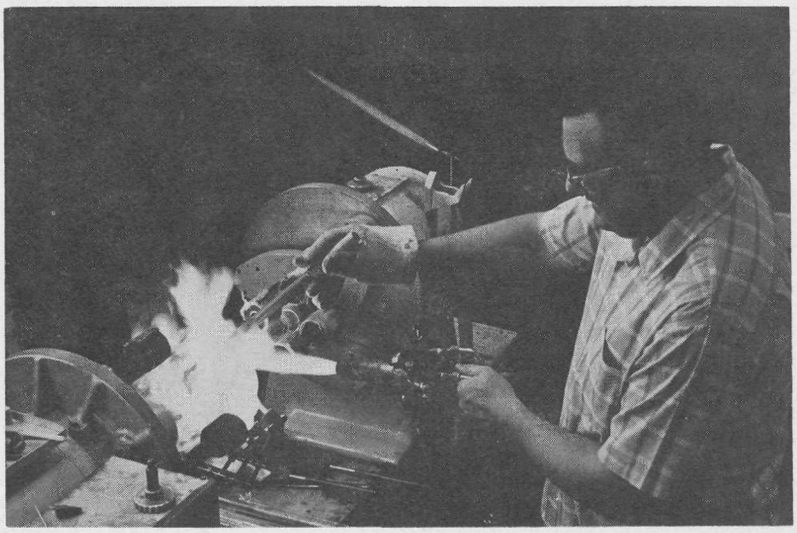
Photos by Sue Miller *Summer Information Aide*



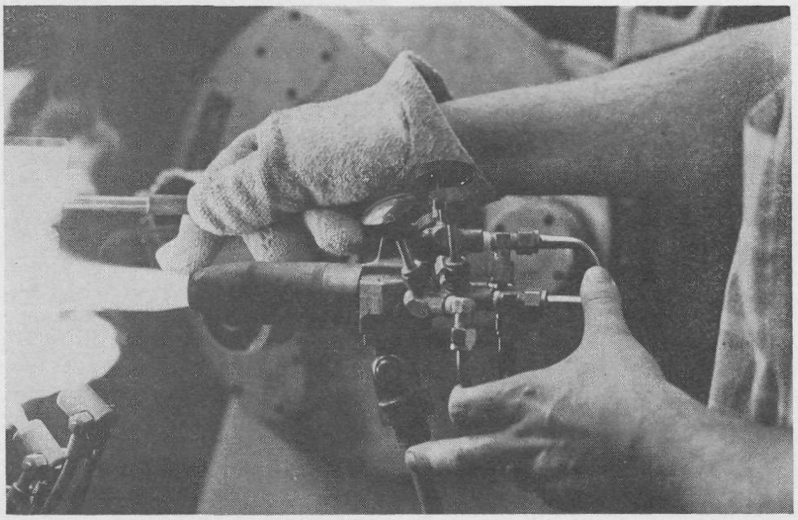
Carroll Toms, an apprentice, has had one year of training—with several years to go before becoming a full-fledged glassblower. NIH is sending him to Frederick Community College for math and mechanical drawing.



Young Clinical Center patients wait for an invitation to tour the Glassblowing Unit—they always return to the CC with interesting novelties. And there's Snoopy.

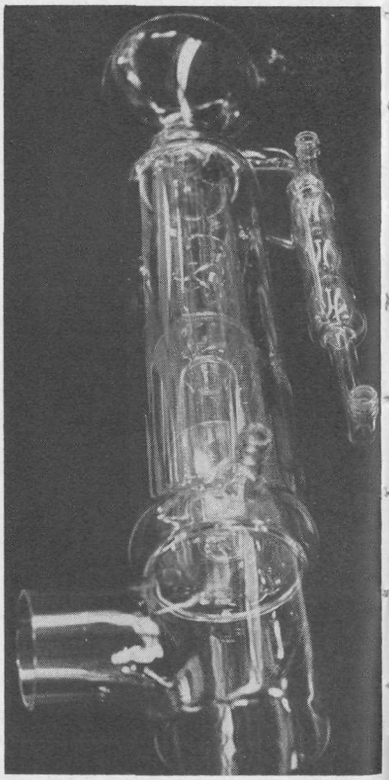


William Dehn shoots a spray of intense flame to what is the beginning of a diffusion pump.



The intricate mechanism of a highly pressurized burner is controlled by the dexterous hands of a BEIB glassblower.

Strong-armed Walter Gladd is holding oversized cold traps for freezing liquids. He made them.



A diffusion pump, one of the most essential pieces of lab equipment, eliminates air in vacuum systems.