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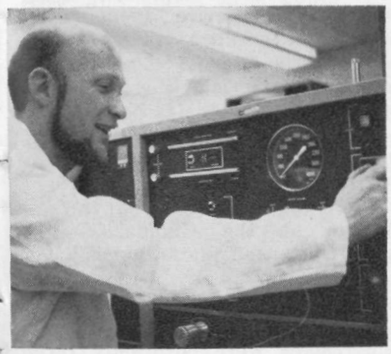
NATIONAL INSTITUTES OF HEALTH

New Pharmacology Lab To Develop, Test Drugs For Treating Epilepsy



Dr. Kupferberg is running the liquid chromatograph which separates the metabolites of anticonvulsant drugs. The new lab's research is vital to NINDS's epilepsy drug evaluation programs.

A Pharmacology Laboratory, directed by Dr. Harvey J. Kupferberg, has been established in the National Institute of Neurological Diseases and Stroke to speed the development and testing of new drugs for treating epilepsy.

It is part of the Applied Neurologic Research Branch, headed by Dr. J. Kiffin Penry.

Scientists in the new laboratory will investigate how anti-epileptic drugs reach the brain, how they are absorbed, metabolized and excreted, and how they work in combination or with other drugs.

Basic pharmacology—the search for new drugs—will be one of the main interests of the researchers.

Studies Vital

Their studies on how to measure the levels of new, experimental drugs in the bloodstreams of epilepsy patients will be vital to NINDS's epilepsy drug evaluation programs.

These programs are of special interest because about 40 percent of the country's 2 million epilepsy patients are not adequately controlled by existing antiseizure medications.

According to Dr. Kupferberg, investigators will use gas-liquid chromatography in many of their studies. GLC is a standard method

(See NEW LAB, Page 5)

Dr. George Todaro Receives Gustav Stern Award

Dr. George J. Todaro, chief of the Viral Leukemia and Lymphoma Branch of the National Cancer Institute, received the Gustav Stern Award during the eighth biennial Gustav Stern Symposium on Perspectives, in Virology held in New York, Feb. 7-8.

It is presented to a young scientist for outstanding accomplishments in virus research. An honorarium of $1,000 accompanies the award.

The award cited Dr. Todaro's contributions to cancer and molecular biology research; his development of the well-defined 3T3 and 3T12 mouse embryo cell lines now used extensively by cancer virus investigators, and his development of assay systems to study both RNA- and DNA-containing tumor viruses in animal cells and in human cells.

Currently, one of his major interests concerns the preparation of antibody to certain cancer virus enzymes, in an attempt to identify and characterize potential human cancer viruses.

Is Prolific Author

Dr. Todaro has authored or co-authored almost 50 publications in 7 years.

He graduated from New York University School of Medicine in 1963. After internship there in 1964, he joined the staff as an assistant professor.

In 1967 Dr. Todaro came to NCI's Viral Carcinogenesis Branch, becoming head of the Molecular Biology Section in 1969, and chief of VLLB in 1970.

Dr. Todaro was one of Ten Outstanding Young Men of America named by the U.S. Jaycees in 1970 and the recipient of a DHEW Superior Service Award last year.

Increased Funds Earmarked For Projects to Renovate Research Animal Resources

An additional $1.5 million has been earmarked for increased emphasis on projects to improve institutional animal resources.

The stepped-up grant program of the Division of Research Resources' Animal Resources Branch is designed to improve the quality of biomedical research using warm-blooded animals.

Aids Policy Compliance

The program will also assist institutions in complying with the Animal Welfare Act of 1970 and NIH policies on the care and treatment of animals.

There will be no specific dollar limitation on the grants except in the renovation category, according to Animal Resources Branch officials.

Although new construction is not authorized under the program, renovation funds up to $75,000 may be awarded.

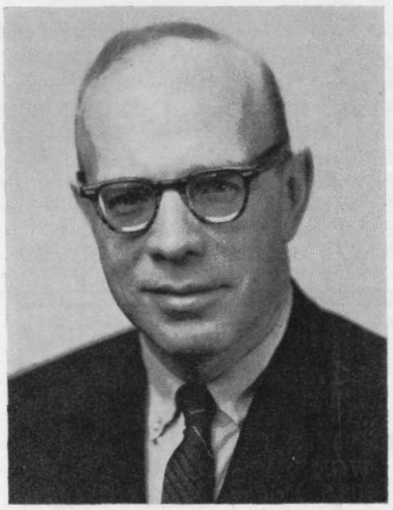
Funds may be obtained to purchase equipment such as cages, cage washers, and autoclaves. Support will also be made available for travel, consultant services, and key professional and supervisory personnel for the improved management of the animal resource.

AHA Names Thomas D. Hatch To Its Roll of Honor for 1971

Thomas D. Hatch, acting director of the Division of Allied Health Manpower, BHME, is one of five Federal employees named to the American Hospital Association 1971 Roll of Honor.

Mr. Hatch was cited for his outstanding contribution toward improving the health care system through work on the Special Committee on Career Mobility.

Leon Schwartz Is Associate Director For Administration



Mr. Schwartz, who holds NIH's top administrative post, received the DHEW Superior Service Award while with the Office of Education.

Leon M. Schwartz has been appointed Associate Director for Administration at NIH.

Mr. Schwartz comes here from the National Science Foundation, where he has been Deputy Assistant Director for Program Management for the past year.

He will act as principal adviser to the Director on administration and on the management implications of NIH's plans and programs.

Duties Outlined

In addition, he will be responsible for overall management and administrative policy, including financial and personnel management, planning of new NIH construction and operation of its present physical plant, central administrative services, and contracting and grants management activities.

Mr. Schwartz, 43, was Deputy Assistant Commissioner for Administration, then Assistant Commissioner, with the Office of Education from 1967 to 1971.

He spent some 7 years with NASA's Goddard Space Flight

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the NIH Record

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NIH Television, Radio Program Schedule

Radio

DISCUSSION: NIH

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

February 18
Dr. Robert S. Northrup, DBS
Subject: Cholera (Part 2)

February 25
To be announced.
Interview during intermission, Library of Congress concerts.

Television

PANORAMA

(Ask the Doctor)
WTTG-TV, Channel 5, 12:30 p.m.

February 17
Dr. Alfred S. Ketcham, NCI
Subject: Facts about Cancer

February 22
Dr. Jerome B. Block, CC
Subject: Modern Trends in Research Hospitals

February 24
Dr. John P. Adams, G.W.U. (NIH Fellowship—NIGMS)
Subject: Trauma

February 29
Dr. Ralph E. Johnson, NCI
Subject: Radiation and Cancer

Vida Jo Niebuhr, First Chief, Physical Therapy Service, Dies

Vida Jo Niebuhr, the first chief of the Physical Therapy Service, CC Rehabilitation Department, died on Feb. 7 in West Allis, Wis., of a cerebral hemorrhage.

Miss Niebuhr had served 30 years with the Federal Government, including 17 years at the Clinical Center.

Upon her retirement last August (see the *NIH Record*, Aug. 17, 1971), she had returned to her home town in Wisconsin.

Sailing Club Plans Busy Program For Coming Season—Apply Now

The NIH Sailing Association, sponsored by the Recreation and Welfare Association, is planning a number of spring activities.

Qualified members may charter —at low rates—one of the three Flying Scot sailing vessels maintained by the association.

The club's activities include informal racing, cruising, and a training program in the rudiments of sailing.

For further information call: Stu Wright, Ext. 67851; Steve Leighton, Ext. 64426; Jack Leach, Ext. 65270, or Rick Newell, Ext. 64957.

Federal Professional Association Holds Annual Meeting Feb. 23

The NIH-NIMH Chapter of the Federal Professional Association will hold its annual meeting on Wednesday, Feb. 23, at 3 p.m. in Conference Room 10, Bldg. 31.

Civil servants in the classification series that goes to GS-13 or higher and commissioned officers are eligible to join.

Members and eligible employees are invited to attend. For further information, call Dr. Harold M. Davidson, Ext. 67055.

Housewife Has Triplets—Is Star Student In NICHD Program on Infertility Causes

A Montgomery County housewife with an infertility problem recently gave birth to triplets—two boys and a girl—whose combined weight totaled 15 pounds, one ounce.

The housewife, whose infants were born in George Washington University Hospital, has been a participant of a research program on the diagnosis and treatment of infertility at the Reproduction Research Branch, National Institute of Child Health and Human Development.

Because of this problem, affecting 15 percent of couples in the U.S., she was referred to the program in 1970 by her obstetrician-gynecologist.

In an effort to determine the malfunctioning area that causes infertility, researchers at the NICHD Branch study the reproductive cycle of each patient who undergoes tests for hormonal abnormalities and anatomic defects.

Examination Explained

Laparoscopy — an examination of the pelvic organs with an endoscope (an instrument for inspecting any cavity of the body) —may determine some anatomic defects.

Biopsies, taken through an abdominal incision of less than one-half inch, also help to identify problems.

The housewife was in that part of the NICHD program having to do with female infertility resulting from the stoppage of the menstrual function. The Institute is also undertaking research on male infertility.

Dr. Jay Grodin, who directed the study program in which the mother of triplets was enrolled, sees his patients at 8 every morning. Most of the women are working wives and come to the clinic en route to their jobs.

The women also have their own personal counselor—Irene Morelli —nurse supervisor for the group.

Fertility drugs are administered in cycles corresponding to ovulation; the young mother underwent many cycles of treatment prior to the conception of triplets. Hers is the only multiple pregnancy that has so far occurred in this program.

Dr. Grodin and Miss Morelli guessed that a multiple pregnancy had taken place, and arranged for sonography in a District hospital.

Sonography is a process using a recording device (sonograph) which sends ultra sound waves through the uterus on to a sonogram (chart) detecting the number of children.

This was taken at 6 weeks of gestation, and indicated three or possibly four babies. Subsequent studies distinctly showed three—X-rays at the Clinical Center here confirmed the diagnosis.

At delivery, Dr. Grodin was with the patient's obstetrician to aid in the birth of the triplets. The babies were born only three weeks premature.

Weight Given

Mark Louis, the firstborn, weighed in at 5 lbs. 11 oz., David Jay, the smallest, weighed 4 lbs. 3 oz., and last to arrive, Lisa Annette, weighed 5 lbs. 3 oz.

Mark and Lisa were placed in the hospital nursery with the other full term babies, and only David went to the Intensive Care Nursery, where preparations had been made to accommodate the three infants.

The patient and her husband are elated at the successful outcome of her pregnancy, and both are extremely happy that all three babies were born healthy.

Lisa, the youngest of the triplets, flanked by her two brothers, Mark (l) and David exercises her lungs while the boys peacefully nap. All three were to stay in the Intensive Care Nursery, but only David, the smallest, was sent there for a short time.

Teaching Machine, Autotutor Allows Students to Study Courses at Their Own Pace

A number of courses using the Autotutor—a teaching machine—is being offered by the Office of Personnel Management. This machine allows a "student" to study a course by himself and at his own pace.

The Autotutor employs a method described by educators as "programmed instruction." This type of teaching separates a lesson into components, and asks the student questions on that material.

If he knows the answers he moves ahead to more complex material—if he is wrong he goes back and starts over again.

Resembles TV Set

The Autotutor looks like a television set with a series of buttons on the front of the machine that may be punched for multiple choice answers. Each course is on a filmstrip that is loaded into the machine.

Autotutor courses that are offered through May include: Introduction to Computer Mathematics; Computers—a Four Part Course in Programming; Elementary Electronics, and Basic Statistics.

Other courses that will be scheduled for a later date include: Effective Executive Practices; Introduction to PERT; Improving Your Punctuation, and Improving Your Writing.

A student ponders over what button to punch in answer to a question by the Autotutor. Each course is on a filmstrip loaded into the machine.

For further information call B/I/D personnel offices, or Betty Kitterman, Training and Employee Development, Ext. 62146.

Statistics on Foreign-Born Ph.D.'s

About 19 percent of Ph.D.'s in the U.S. are foreign-born. Almost 15 percent are foreign citizens, and from 1965 to 1968, 43 percent of these planned to remain in this country.—*Mobility of Ph.D.'s.*

Thelma Fletcher's Breads, Jellies, Pickles Win Ribbons at Fairs, Plaudits of Friends

By Bonnie Friedman

What happens when a green thumb is combined with culinary expertise? For Thelma R. Fletcher the answer is a blue ribbon—several, in fact.

Mrs. Fletcher won 26 first-place blue ribbons for her canned and baked goods at the Montgomery County and Maryland State Fairs this year alone.

Despite all the time she spends peeling, paring, slicing and dicing the ingredients for her canned goods, Mrs. Fletcher still manages to work full-time.

Mrs. Fletcher, whose co-workers in the NINDS Medical Neurology Branch enjoy the fruits of her labors, displays her prize-winning canned goods and the ribbons they have earned.

She is a laboratory technician in the Medical Neurology Branch, National Institute of Neurological Diseases and Stroke.

Early Morning Baker

In her spare time she enjoys canning various vegetables, fruits, and meats, as well as baking breads and cakes. Sometimes her "spare time" is at 2 or 3 in the morning.

Mrs. Fletcher doesn't mind the hours, though. "It's what keeps me going," she explains. "I'm from a large family where we always canned and baked. I enjoy it and like to try new recipes."

As for the green thumb, it belongs to Mrs. Fletcher's husband, Reynold, who is also a laboratory technician at NIH.

In the yard of their Gaithersburg home, he grows many of the vegetables she uses in her prize-winning recipes.

"My husband enjoys gardening," Mrs. Fletcher explains, "and besides, he says there's no sense in cutting the grass when we can grow something out there to eat."

Mr. Fletcher has also won ribbons for the quality of his vegetables, particularly his peppers and onions.

Each year Mrs. Fletcher cans hundreds of pints of vegetables, pickles, fruits, and preserves, but only cans beef and chicken for fair entries.

At both the County and State Fairs Mrs. Fletcher's pear preserves and cantaloupe pickles won first place; her peach butter also won top billing at the State Fair.

While canned fruits, vegetables, and meats are judged on the basis of color, texture, and appearance in the jar, pickles, preserves, and jellies are actually sampled by the judges.

It is personal taste, Mrs. Fletcher believes, that is most important in the judges' decisions. Her own favorites are sweet relish and bread and butter pickles.

Mouth-Watering Description

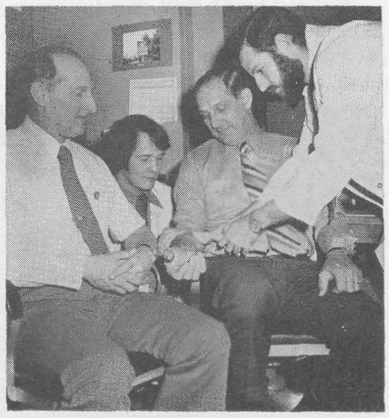
But her German chocolate cake and banana and Hawaiian breads have won ribbons. She also prepares a personal specialty which she calls "glorified banana bread." This includes chocolate chips, bananas, maraschino cherries, and nuts.

This year Mrs. Fletcher won 55 ribbons at the County Fair, including 20 first-place entries. She also won 22 ribbons at the State Fair, six of which were first place.

Each year the Montgomery County Fair awards an engraved silver tray to the participant who earns the most blue ribbons.

Three years ago Mrs. Fletcher

(See THELMA FLETCHER, Page 7)



Two brothers, David and Harold Boesch (seated), as CC normal volunteers, are taking part in an NCI Dermatology Branch test in which Dr. A. E. Miller (standing) and Dr. William Levis use a special tool to obtain skin biopsies. The tool, a keratome, cuts so close to the surface—superficially—no scars result. The test will help develop a system for studying homograft rejection (rejection of donated organ or tissue) in vitro.

Richardson Calls Report On Women's Programs An 'Agenda for Action'

In a series of briefing sessions for the press, agency heads, EEO officers, Federal Women's Program coordinators, and women's organizations, HEW Secretary Elliot L. Richardson presented the report of the Women's Action Program.

He called it an "agenda for action, focusing on HEW programs and policies for women and looking beyond them to an overall change in the treatment of women in our society."

Terms Prejudice 'Ironic'

Terming sex prejudice as "perhaps the most ironic of our national injustices," Secretary Richardson described women as "the largest single majority group in our population against which America has traditionally practiced discrimination."

The report also outlined provisions for the continuing development and monitoring of the program at HEW. On the department level, the responsibility has been placed in the offices of the Assistant Secretaries for Planning and Evaluation and for Administration and Management.

At the agency level these functions are assigned to the Federal Women's Program coordinators.

Pinpoints Problems

The employment problems of women in three grade level groupings—GS 1 through 7 and their equivalents, 8 through 12, and 13 through 18—are pinpointed.

Recommendations stress the increased participation of female employees in upward mobility programs, the changing of attitudes towards women in management and supervisory positions, and increasing the number of women in program management positions.

In addition, the report lists proposals on child care, maternity leave, and part-time employment policies.

Report Clarified

That part of the report dealing with equal employment opportunity for all women with particular relevance to NIH programs include: the development of legislation to prohibit discrimination in employment by institutions receiving grant funds, and proposals to end sex typing in the health professions.

Copies of the full report are available from Adele Nusbaum, coordinator of the Federal Women's Program, NIH, in Room 2B-32, Bldg. 31.

Computer Information Undergoes Study in CC's Newly Established Office

The establishment of a new office—the Office of Clinical and Management Systems—has been announced by Dr. Thomas C. Chalmers, Clinical Center Director. It will be responsible for studying and modifying CC information systems, including the increased use of computerized information.

Dr. Rourke (standing) analyzes a computer printout with Dr. Lewis (l) and Mr. Macks. Their office will help plan a management analysis program for hospitals.

Among the projects that are being considered is an information system which would enable researchers to obtain a list of patients with their diagnosis, the medications that they have received, and the results of their laboratory tests.

The newly established office will also help plan and carry out a hospital management analysis program.

Dr. Rourke Is Chief

Dr. Anthony J. J. Rourke, Jr., has been named chief of this office. Before joining CC in 1970, Dr. Rourke was a postdoctoral fellow in the Computer Program and Information Science Department, University of Missouri Medical Center.

He specialized in computer information systems that are geared to medical hospital environments; he also served as a consultant in hospital design.

Dr. Thomas L. Lewis and Gerald C. Macks have been named assistants to Dr. Rourke.

Dr. Lewis, a clinical associate, served his internship at Yale Medical School. He was a computer systems analyst at the Harvard University Computer Center for 4 years, and a consultant in health care delivery systems for the Census Bureau.

Mr. Macks, a management analyst, has had considerable experience in studies of hospital systems stressing computer applications.

He holds a B.S. in Industrial Engineering and an M.S. in Personnel Administration.

Children Chew Gum Containing Phosphate In NIDR Study; May Reduce Tooth Decay

A school is actually giving its pupils chewing gum. The gum, which contains a phosphate, is being tested as a tooth decay preventive.

The University of Alabama in Birmingham (UAB) is doing the study with support from the National Caries Program of the National Institute of Dental Research.

Today 98 percent of Americans have tooth decay; the average child has three decayed teeth by the time he enters school and 11 by age 15.

Dr. Sidney B. Finn, UAB School of Dentistry's Institute of Dental Research, is testing the effectiveness of sodium trimetaphosphate in children because studies with laboratory animals have shown that it can reduce tooth decay.

Simple Way to Prevent Decay

If it works as well in children, then dentistry would have a pleasant and simple-to-use way to help prevent decay.

Participating in the research are 600 children who live at the Florida School for the Deaf and Blind during the academic year. Both the children and their families are enthusiastic because the youngsters receive dental care and may benefit from a new preventive.

The participants enjoy free gum every school day as well as on vacations when enough gum is provided for the entire family.

Four groups of children are being compared. The first group chews a sugarless gum with the phosphate, the second, a gum containing both the phosphate and sugar, the third, a plain sugarless gum, and the fourth group receives no gum.

Every day each child will chew the same type of gum for at least 10 minutes after breakfast, after lunch, and shortly before bedtime.

All the children eat the same foods, an important factor because diet affects dental health.

The children's teeth are checked for decay at the start of the study and again every 6 months. Group comparisons will indicate whether the phosphate protects the teeth against decay.

Jane Wynn Hay Will Direct Regional Nursing Programs

Jane Wynn Hay, Division of Nursing, BHME, has been chosen regional nurse program director for the HEW Regional Office in Boston, Mass.

Mrs. Hay will consult with agencies and institutions in the New England states on improving conditions in nursing education and practice.

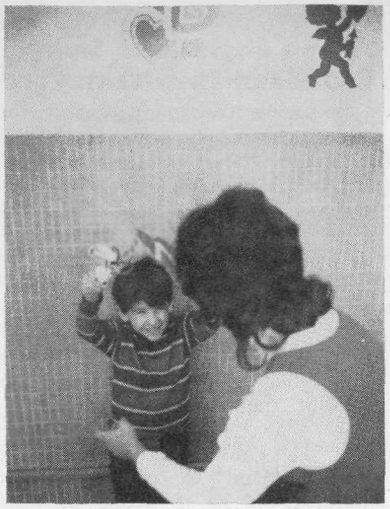
Coordinates 6-State Area

She will coordinate DN programs with related programs in the six-state regional area, and help determine health and welfare priorities.

Mrs. Hay, with the Federal nursing services since 1961, has been with DN for the past 4 years as the assistant regional nurse program director in the HEW New York office.

Earlier, she was with the Heart Disease Control Program and the Division of Medical Care Administration.

The Royal Harmonizers, spiritual singers, receive awards from the Canaan Baptist Church for outstanding contributions to community betterment—they have given many church benefit performances. L to r are: Victor Chance, CC, Fuller Ming, NIGMS, and James Ridgley, NCI. Two other Harmonizers not pictured are Berkley Bell, M.C. School Board employee, and William Ridgley, EPA.



Clinical Center patients observed Valentine's Day with parties for adults and children, a bingo game with a Valentine theme, and a crafts workshop where children made lace and flower valentines for their mothers.

Growing Interest in Use Of Audiovisuals Noted By N. Tucker in Speech

Equating the present state of the use of audiovisuals in medical education with the Tower of Babel, Norman Tucker delivered the keynote address at the National Audio-Visual Association's Midwinter Conference in Key Biscayne, Fla., last month.

Mr. Tucker is with the Division of Physicians and Health Professions Education, BHME.

He stressed the need for manufacturers of audiovisual equipment and programs to gear products to the needs of consumers.

Problems Described

"Incompatability of soft and hardware, confusion, lack of foci for clearinghouses, and standardization are but a few of the traits that have compounded this Tower of Babel," he said.

Interest in the development of multimedia approaches to health manpower education has been slow in getting started, he noted, but suddenly, in 1971, at the Media 70's Conference in Cincinnati, there was an explosion of interest. Instead of the customary 300-400 participants, 1,000 attended.

Mr. Tucker observed a growing Federal concern directed to the use of audiovisuals.

In July 1971 the Office of Audiovisual Educational Development was established in BHME to serve as a national focal point to investigate and promote the uses of these new technologies for medical education.

This Office coordinates Bureau programs in the multi-media teaching field with the National Library of Medicine's National Medical Audiovisual Center.

Program to Evaluate 3 Common Risk Factors In Heart Disease Begins

The National Heart and Lung Institute will undertake a large-scale clinical trial to determine to what extent illness and death from coronary heart disease can be reduced by modifying or eliminating three common risk factors.

NHLI's Clinical Applications Program is inviting contract proposals to develop and conduct a Multiple Risk Factor Controlled Clinical Trial.

Purpose Defined

Its purpose is to determine whether a preventive program aimed at reducing elevated serum lipids, blood presure, and cigarette smoking among high-risk males aged 40-59 can achieve a significant reduction in heart attacks and death from coronary heart disease over a 6-year period of medical supervision.

Approximately 80 percent of death and disability from cardiovascular diseases occurs among persons having one or more of these risk factors working against them.

Framingham Data Noted

Two or more risk factors are commonly present in the same individual, and those with all three risk factors are an especially high risk from arteriosclerosis and acute heart attacks.

For example, data gathered from the NHLI-sponsored Framingham Heart Disease Study show that men with one risk factor had a clinical incidence of coronary heart disease of 1.9 times the rate of men with none of these risk factors.

With two risk factors, the incidence was 3.4 times higher, and with all three factors, the incidence was 10.6 times that found among men with none.

Select Best Contractors

Contracts for the Clinical Trial will be awarded to medical investigators judged best qualified to handle and maintain the program from its start through the 6-year follow-up period.

Each center must have adequate clinical facilities for at least 600 men with high risk factors and manage at least 300 high risk participants in the study group.

They will be seen at least 4 to 6 times per year. Members of the control group will be seen once a year.

Men recruited by each center will receive medical and laboratory evaluation at the start of the program and periodically over 6 years of follow-up.

A special program relating to diet, blood pressure reduction, and reduction or discontinuation of cigarette smoking will be undertaken for one half of the participants.

The remainder will be referred back to their personal physicians or usual medical care centers.

NEW LAB

(Continued from Page 1)

of measuring small quantities of substances in solution that has been recently adapted to determine drug blood levels.

Blood levels are important because it is the amount of a drug in a patient's body, not the amount taken, which helps to prevent seizures. And it is known that individuals differ in their absorption, excretion, and metabolic rates.

Investigators Use GLC

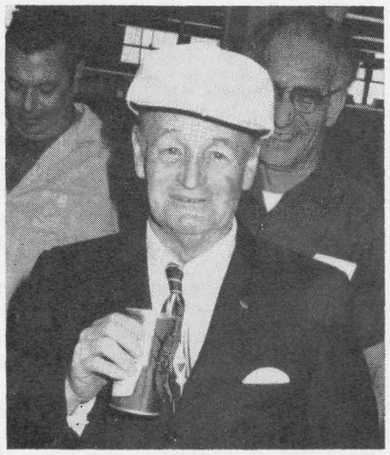
For each new drug proposed for clinical trials, investigators will use GLC to establish reliable data about the effectiveness and side effects, and to set blood level guidelines.

Three new experimental drugs for epilepsy are now being tested in clinics at several research centers. The clinics are under contract with the Applied Neurologic Research Branch.

Dr. Kupferberg Develops Tests

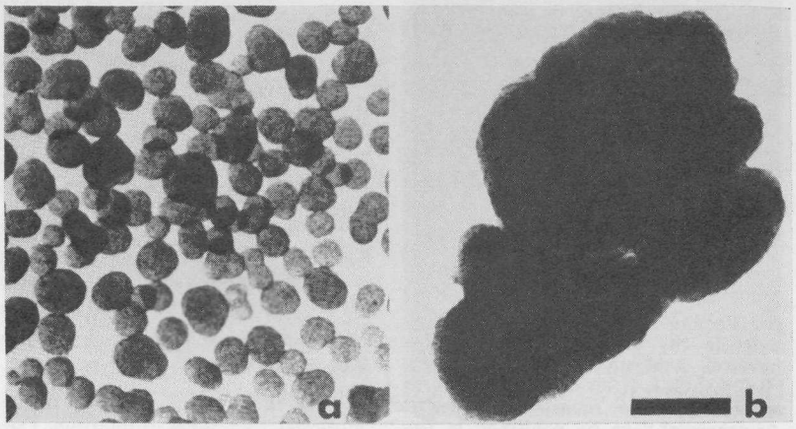
The GLC test and evaluation methods used in these trials were developed by Dr. Kupferberg before he came to NIH last fall. Then, he was an assistant professor in the Department of Pharmacology at the University of Minnesota.

From 1963-65, Dr. Kupferberg served as a staff fellow in the Laboratory of Chemical Pharmacology, National Heart and Lung Institute.



Albert T. Lenz, a plasterer in the Carpenter Shop, Plant Engineering Branch, ODA, retired after 30 years Government service—19 with NIH. Friends and coworkers held a farewell party for him last month.

Isolation of Brain Cell 'Glue' Facilitates Tissues' Synthesis From Test Tube Cells



EMBRYONIC TISSUE was constructed in vitro—individual cerebrum cells (l) from 14-day mouse embryos aggregate only slightly after 24 hours. The cerebrum cell-ligand, a "glue"-type material which has been isolated accelerates the aggregation. The cells group closely together after 24 hours (r). The bar in Figure b represents 0.5 millimeter.

University of Chicago scientists have constructed embryonic brain tissue *in vitro* from suspensions of single brain cells during research supported by the National Institute of Child Health and Human Development.

They performed this feat with cells isolated from the cerebrum of mouse embryos and with a specific cellular "glue"-type material which they obtained from cerebrum cells.

This material, referred to as *cerebrum cell-ligand,* links together only cerebrum cells. Other kinds of brain cells appear to produce their own specific ligands.

Two biologists, Drs. Ayon A. Moscona and Beatrice B. Garber, explain that the cerebrum cell-ligand material coats the surfaces of the cerebrum cells which produce it.

"Because of its molecular properties this material makes these cells stick together to form brain tissue," said Dr. Moscona.

Cells Identify Each Other

"Moreover, it enables cells to 'identify' each other by 'coding' the cell surface with molecular identification markers.

"This makes cerebrum cells 'recognize' each other as being distinct from other nerve and from nonnerve cells and causes them to associate with each other to form cerebrum tissue.

"If they are mixed with cells from other tissue, cerebrum cells distinguish like from unlike and adhere only to each other."

This is the first instance of isolation of such a specific cell-binding material from mammalian cells. The possibility of obtaining them from brain cells and of "synthesizing" tissues from cells in the test tube opens up new ways of studying tissue formation and brain development.

Dr. Moscona presented these findings last autumn at an international symposium in London and the complete reports of his and Dr. Garber's work appeared in the February 1972 issue of *Developmental Biology.*

All tissue-cells in the embryo are believed to carry on their surfaces such ligands for mutual recognition and selective adhesion of cells into tissues. In fact, similar ligand materials were previously obtained by Dr. Moscona and his associates from other kinds of cells.

Aims Explained

"The aim of this work was to explain one of the most important and hitherto elusive problems in biology—how cells associate into tissues? How different kinds of cells in the embryo recognize each other and assemble into complex systems?" commented Dr. Moscona.

"The discovery of specific cell-ligands represents a major step towards solution of these problems. It now becomes possible to study the biochemical nature and detailed mode of function of these specific cell-ligands.

Has Important Implications

"Such information will contribute not only to fundamental biomedical knowledge, but may have eventually important medical implications, especially with respect to birth defects and cancer," he said.

Dr. Moscona is professor in the Department of Biology and on the Committee on Genetics in the Division of the Biological Sciences and The Pritzker School of Medicine at the University of Chicago. Dr. Garber is assistant professor in the Departments of Biology and Anatomy.

Dr. Deanne E. Knapp, social psychologist in the Office of Social and Behavioral Analysis, Division of Dental Health, BHME, is included in the fourth volume of "Two Thousand Women of Achievement," to be published in November 1972.

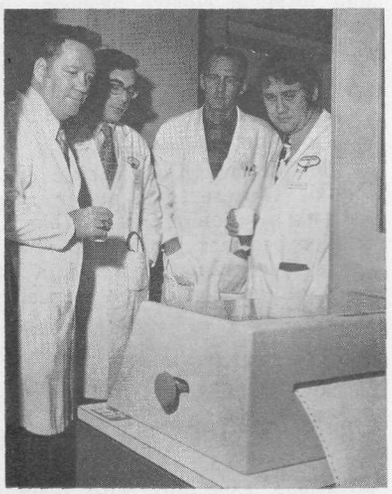
Society Invites Pathologists To Join New Organization

A Society of Pharmacological and Environmental Pathologists, recently formed in New Jersey, is comprised of members from the pharmaceutical industry, the government, universities, and private practice.

The president of the society is Dr. Hans Keysser, Director of the Pathology Department, Squibb Institute for Medical Research.

Objectives include fostering the discipline of pharmacological and environmental pathology and establishing a registry of naturally occurring and induced diseases in laboratory animals.

Interested pathologists should contact Dr. Howard M. Hartman, secretary-treasurer, P.O. Box 276, Florham Park, N.J. 07932.



Four visitors watch the computer give donor information at the Clinical Center Blood Bank. Some 400 NIH employees attending an Open House Jan. 31 learned about the work of the Blood Bank and its urgent need for more donors. Levi Carter, DRS, won the 17-inch color portable donated by the NIH R&W Association. A 4-year-old CC patient drew his name from a pool of over 3,000 names of employees who had donated blood since last Aug. 1.

Hebrew Medical School Attempts Studies On Treating Cancer by Immunotherapy

The National Cancer Institute is funding cancer research studies at an Israeli medical school in Jerusalem to treat the disease by immunotherapy—bolstering the body's natural defense against cancer.

The principal investigator for this research is Dr. David Weiss, chairman of the Department of Immunology, Hebrew University Hadassah Medical School in Jerusalem.

Dr. Weiss will try to discover how the body's natural immunity is most likely stimulated by a tuberculosis vaccine extract called BCG.

MER to Be Tested

BCG is a living culture of tuberculosis bacteria (Bacillus Calmette-Guerin) and the methanol-extracted residue to be tested is called MER.

In previous NCI studies of immunotherapy in animals, whole BCG has been used in a mixture with live cancer cells, and regression of the cancer growth has resulted.

Problems associated with the use of live bacteria—for example, development of abscesses in lymph nodes, and complications in lungs and other organs—are less severe when MER is used.

Resistance Increased

Dr. Weiss previously demonstrated in mice and other animals that immunologic capacity and resistance to experimentally induced tumors are increased after inoculation with MER, and the incidence of spontaneous tumors is decreased.

Now he will investigate the protective activity of MER against leukemia in mice under conditions resembling those affecting cancer patients—for instance, after the leukemic mice have been treated with irradiation or drugs.

Objectives Noted

The effect of MER will also be tested in mice with impaired immunologic responsiveness due to aging, irradiation, and cancer-producing chemicals.

The aim of this study is to find out the circumstances under which MER is more likely to stimulate immunoglobulin formation, and the cellular responsiveness of animals to their own tumors.

Dr. Brigid G. Leventhal, senior investigator in NCI's Medicine Branch, is the project officer for this research.

She explained that to date, mice used to test MER have not been previously subject to irradiation, surgery, or chemotherapy as are cancer patients to whom MER may eventually be administered.

In the studies, pre-treated mice will be used in order to achieve pretesting conditions more closely resembling the human situation.

One of these studies will be carried out jointly by Drs. Weiss, Ilana Eron, and Eliezer Robinson, chairman of the Department of Oncology of Rambam Hospital, Haifa.

"In recent years," Dr. Weiss explained, "it has become increasingly evident that the capacity of chemical and physical agents to suppress immunity is related to their cancer-producing capabilities.

"It may be that immunosuppression is an essential characteristic of cancer-producing stimuli such as irradiation or aging.

"It would follow that raising the immunity level to overcome the suppression of immunity automatically caused by a cancer-producing agent may prevent an incipient tumor from developing progressively as a malignant growth."

Solution Sought to Satisfy Teenage Desire for Snacks Without Rise in Tooth Decay

Scientists are seeking ways for teenagers to satisfy their desire for snacks without suffering an accompanying rise in tooth decay—through a study supported by the National Institute of Dental Research.

Under a contract from the National Caries Program—in an effort by NIDR to make tooth decay preventable—a team headed by Basil G. Bibby of the Eastman Dental Center, Rochester, N.Y., will determine which common snack foods contribute most to decay.

Snack Foods Studied

Laboratory, animal, and human studies will be conducted to find out whether sugar-free snacks, such as potato chips, are more or less conducive to decay than sweet snacks, such as chocolate cookies.

Once snack foods have been categorized for their decay—causing potential, investigators will determine whether teenagers can be persuaded to substitute less damaging foods, and whether the change reduces decay.

The scientists will test hard and chewy candies, gum, cookies, cakes, breads, doughnuts, crackers, peanuts, and some fruits and beverages.

In the laboratory, they will determine which foods soften or demineralize enamel slabs.

To relate laboratory findings with what happens in the mouth, tooth-sized enamel slabs—worn by volunteers like an artificial tooth on a partial denture—will be compared with enamel exposed in the laboratory.

NLM's Exhibit Features Collection of Photographs By Dr. William Feldman

A collection of portrait photographs of distinguished American pathologists—taken by an eminent scientist whose boyhood hobby led him to improvise equipment and take his own photomicrographs—are being featured in the National Library of Medicine's educational exhibit through May 26.

Widely known for basic studies in chemotherapy, Dr. William Hugh Feldman, former staff member of the Mayo Clinic, found his favorite photographic subjects among his professional friends and colleagues.

Many of the pictures in the collection, which he recently gave to the Library, were taken during scientific meetings, in the laboratory, or in his home.

Dr. Feldman, now 80, was chief of laboratory research in pulmonary diseases at the Veterans Administration, Washington, D.C. from 1957 to 1967.

With a twin lens reflex camera, Dr. Feldman would converse with his subjects waiting for certain facial expressions, which resulted in warm and personable likenesses of the pathologists.

The exhibit, Pathology: The Study of Disease, in conjunction with the "Year of Pathology 1971-1972," is designed to acquaint the medical profession and the public with the expanding role of pathology in modern health care.

In addition to the Feldman collection, the exhibit will present portraits of antiquarians in pathology, including Bonet, Morgagni, Virchow, and Bichat. Also presented are classical textbooks and manuscripts, and first editions of modern works in pathology.

Other displays include pathologic specimens prepared by Nobel Laureate Dr. Peyton Rous and Dr. Max Lurie.

Inventory of Programs That Support Health Manpower Training Published by DMI

An Inventory of Federal Programs That Support Health Manpower Training, 1970, has been issued by the Division of Manpower Intelligence, BHME.

The 92-page publication lists 144 Federal programs which supported health manpower training in 1970 under 13 Federal departments and independent agencies.

Support Listed

Of the 144 programs, 94 were exclusively for health manpower training. Ninety-seven, or more than two-thirds of the total number of programs, were the responsibility of HEW, 42 of them administered by agencies within NIH.

The inventory may be purchased for $1 per copy from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Educators and others concerned with health-related training, may obtain a single free copy from the Division of Manpower Intelligence, BHME, Bethesda, Md. 20014.

Requests should list the title and number: DHEW Publication Number (NIH) 72-146.

Three New Members Named To NINDS Advisory Council

Three new members have been named to the National Advisory Neurological Diseases and Stroke Council.

They are Dr. Lyle Albert French, Vice President for Health Science Affairs and professor of Neurosurgery, University of Minnesota Medical School; Dr. Delyte W. Morris, President, Southern Illinois University, and Marie Plummer Orsat Daniel, Weldon, N. C., an active volunteer worker.

Dr. French received his M.D. and Ph.D. degrees from Minnesota and has served there as a member of the faculty since 1947.

Achievements Noted

A past president of the American Speech and Hearing Association, Dr. Morris has been involved in speech development and disorders for almost 40 years.

He was graduated from the University of Maine with an M.A. and from the University of Iowa with a Ph.D. He serves as a consultant to the Veterans Administration.

Mrs. Daniel, a member of various civic and church organizations, received a B.S. degree from St. Augustine College. She attended Howard University for graduate studies and also received special training in elementary education at Savannah State College.

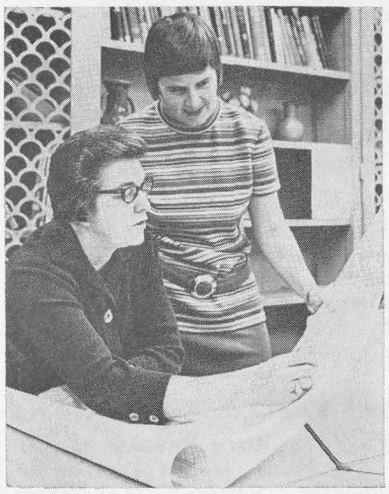
Temporary Home Assists Patients, Families Adjust To Long-Term Disability

A modular home—a specially-designed prefabricated unit to be installed at the Stanford University Medical Center—will serve as a "temporary home" for hospital patients and their families prior to returning to their own abode.

The unit is part of a physical therapy training project supported by a grant from the Division of Allied Health Manpower, BHME.

Entitled "Family Focus," the project will enable physical therapy students to work closely with patients and families who must make the difficult adjustments to long-term disability.

The only project of its kind in



Helen Blood (seated) acting director, Stanford's Division of Physical Therapy, looks over blueprint plans for the prefab modular home with Kay Shepard, physical therapy instructor and project coordinator. The dwelling will be used during the "adjustment period."

the country, Family Focus was jointly planned and will be jointly implemented by Stanford's Division of Physical Therapy and the Mental Research Institute, a private, non-profit institute based in Palo Alto.

Apart from the academic benefits, the project is expected to have a significant impact upon the patients and families involved, said Dr. John E. Bell, Director of MRI and clinical associate professor of Psychiatry at Stanford.

Dr. Bell, who teaches a course called "The Family in the Hospital," will take part in the instruction and supervision of students in the project, along with other MRI staff members.

He emphasized the importance of the family in physical therapy. "A patient who returns home with a handicap really upsets things," he said.

"The family has to take over some aspects of physical therapy which the therapist performs when the patient is at the hospital. In the past, we've been acutely aware that some families don't do a very good job.

"The physical therapist can really get involved with the family and do something about this. The new program gives us this opportunity.

"By using the modular home, we can provide the family with a preview of how life will be when the patient returns home, and help them all cope with it."

The modular home will be set up to allow the family to engage in independent living. Adjacent, but separate from the living quarters, will be a combined staff office and observation room.

With the family's permission, students will observe rehabilitation training and family-patient-staff conferences concerned with family readjustments.

Stanford Institute Begins Research on Carcinogenic Effect of Chemicals

A study on the carcinogenic (cancer-causing) effect of environmental chemicals in combination with other chemicals is being carried out by scientists at the Stanford Research Institute, Menlo Park, Calif.

The National Cancer Institute awarded a contract for this research. It will be administered by NCI's Carcinogenesis Area.

Dr. Richard R. Bates, chief of NCI's Experimental Pathology Branch is project officer for the study. Dr. David C. L. Jones, senior immunologist, of the SRI Life Science Division, is the principal investigator.

The effect of single chemicals causing cancer will be compared with their carcinogenic ability when combined with other chemicals.

Researchers hope to identify chemicals that inhibit the cancer causing effect of other chemicals as well as identify those chemicals that increase it.

THELMA FLETCHER

(Continued from Page 3)

won the tray, but according to the Fair rules, she must wait 2 more years before she can claim it again.

That stipulation certainly doesn't stop Mrs. Fletcher's activities, for her fan club extends beyond the judges at the fairs.

Friends, relatives, and co-workers are often given samples of her culinary masterpieces. And it's not a one-way street either. While traveling, these people often collect various fruits and vegetables for Mrs. Fletcher's kitchen.

One avid admirer is a young cousin who, when offered ice cream and cake at her home, would rather sample her canned relish or vegetables.

Mrs. Fletcher plans to reward him with a variety of her canned goods for his birthday.

Dr. J. Reese Joins DDH For 1 Year Assignment

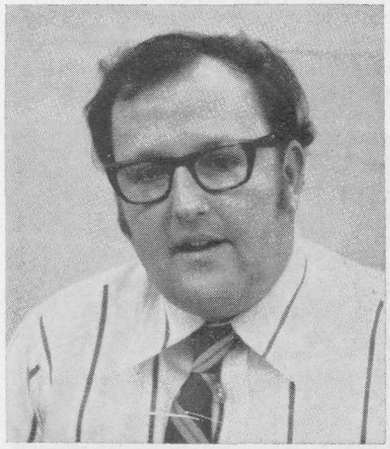
Dr. Reese will observe dental programs here, both intramural and extramural.

Dr. Joyce A. Reese, a dentist with experience in health care programs for underprivileged and minority groups, has begun a one-year assignment with the Division of Dental Health, BHME.

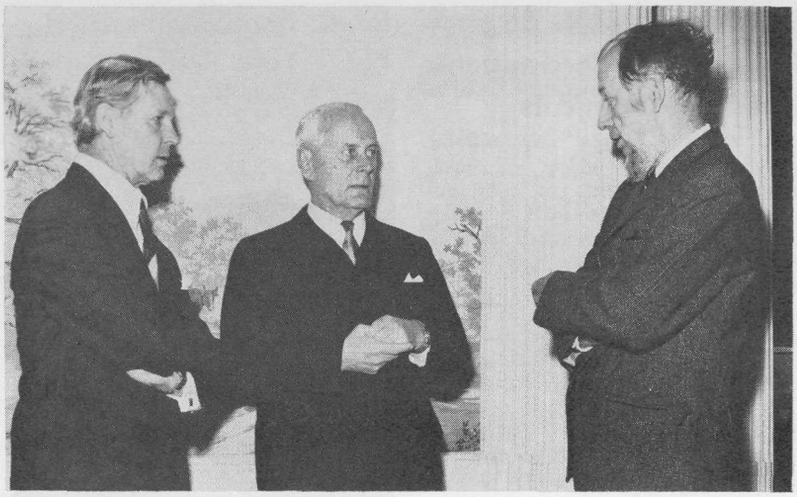
Dr. Reese, who is a dental officer with the D. C. Department of Public Health, will spend a year on the staff of the Division's Education Development Branch, working on projects which provide direct dental care to minority group patients.

Her employment in DDH is made possible through an intergovernmental training agreement between NIH and the D.C. Government.

She received her B.S. degree from Virginia Union University in 1957 and her D.D.S. degree from Howard University Dental School in 1963.



Robert H. Cross has been named personnel officer for the National Library of Medicine. Mr. Cross came to NIH in 1965 as a personnel management specialist in NCI. He has served as personnel officer for NICHD, NEI, and DRR.



Three Fogarty Scholars-in-Residence talk things over prior to a reception given in their honor at Stone House on Jan. 28. L to r: Prof. Frank Fenner, Australia, Prof. Ragnar A. Granit, Sweden, and Prof. Rollin D. Hotchkiss, U.S.

President's New Cancer Panel Promises Quick Start on Fight Against Disease

After the three-man Cancer Panel met with President Nixon on Jan. 31, Chairman Benno C. Schmidt introduced the two new panel members, Drs. Robert A. Good and R. Lee Clark, and also promised an immediate start on their efforts to combat cancer.

At a press conference held at the White House, Mr. Schmidt said that the President had charged the panel to "give the American public the best cancer program that American science and American medicine can provide today."

Mr. Nixon also emphasized, Mr. Schmidt revealed, that he wanted the effort to be an international effort—both in benefits developed and in drawing upon the professional skills of scientists and doctors in all other parts of the world.

Dr. Good, a noted immunologist, is a professor of Pediatrics at the University of Minnesota.

Dr. Clark is a distinguished surgeon and president of the University of Texas M. D. Anderson Hospital and Tumor Institute.

In answer to a reporter's query, Mr. Schmidt noted two areas of "encouraging progress," acute leukemia and breast cancer.

Dr. Clark assured another reporter that they will take a very careful look at all available means of treatment. He noted that since 1956 the National Cancer Chemotherapy Program has tried around 250,000 drugs with 40 effective in treatment of some types of cancer.

What makes Dr. Good optimistic about the problem of cancer, he disclosed, is the tremendous development of basic knowledge of cells during the last 20 years. He feels that a vigorous approach will lead to understanding the causes and defense against cancer.

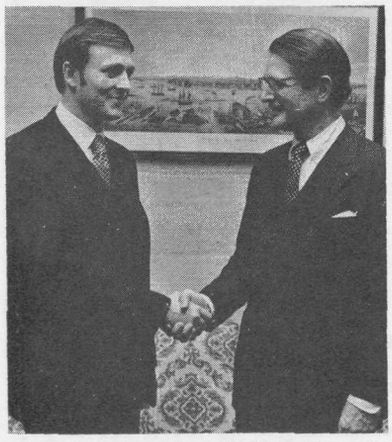
NIH Visiting Scientists Program Participants

1/1—Dr. Zvi Vogel, Israel, Laboratory of Biochemical Genetics. Sponsor: Dr. Marshall Nirenberg, NHLI, Bldg. 10, Rm. 6D18.

1/26—Dr. Alan M. Jeffrey, United Kingdom, Laboratory of Chemistry. Sponsor: Dr. John W. Daly, NIAMD, Bldg. 4, Rm. 227.

1/31—Dr. Vidula Bangdiwala, India, Analytical and Synthetic Chemistry Branch. Sponsor: Dr. Edward Oswald, NIEHS, Research Triangle Park, N. C.

1/31—Dr. Hiremagalur N. Jayaram, India, Laboratory of Toxicology. Sponsor: Dr. David A. Cooney, NCI, Bldg. 37, Rm. 5B22.



HEW Secretary Elliot L. Richardson (r) congratulates Dr. William E. Bunney, Jr., on his appointment as Director of the Division of Narcotic Addiction and Drug Abuse, NIMH. Dr. Bunney will also continue as chief of the Section on Psychiatry, Laboratory of Clinical Science, in the NIMH Division of Clinical and Behavioral Research at NIH.

Think of the years wasted trying to get along with people! And all the while we were supposed to *relate* to them.—*Changing Times.*

Sessions on Natural Family Planning Held in Warrenton

A conference on natural family planning, sponsored by the National Institute of Child Health and Human Development and the Human Life Foundation, was recently held at Airlie House in Warrenton, Va. It was attended by researchers from medical, scientific, and social science backgrounds.

At one of the sessions during the 3-day meeting, Dr. Alan E. Treloar discussed the lack of information in the field of human reproduction.

He suggested the establishment of a central data bank for storing instant retrieval information about conception and its regulation to permit interpretation free of personal viewpoint.

Dr. Treloar, head of NICHD's Reproduction Anthropometry Section, was lauded for his suggestion by the investigators attending the meeting.

The conference was co-chaired by Dr. William A. Uricchio, chairman, Department of Biology, Carlow College, and Dr. Philip A. Corfman, director of the Center for Population Research, NICHD.

Dr. Uricchio is also a member of the Board of the Human Life Foundation, a non-sectarian research organization interested in studies of natural methods of fertility control. Its work includes the exchange of information with a number of countries.

DRS Changes Branch Name To Veterinary Resources

The name of the Division of Research Services' Laboratory Aids Branch has been changed to the Veterinary Resources Branch.

The new name clarifies the branch's overall mission of providing NIH investigators with living models and life support systems for biomedical research.

These include research animals, tissue cultures, and microbiologic media.

In addition, the branch provides developmental and consultative services on the selection of research models, research animal housing and care, and techniques of animal experimentation.

The branch—in Bethesda and at the NIH Animal Center in Poolesville, Md.—provides NIH researchers with facilities for the conduct of experimental surgery and the holding of research animals.

It also serves as a repository for animal strains with special heritable characteristics from which investigators throughout the world obtain breeding stock.

MR. SCHWARTZ

(Continued from Page 1)

Center in Greenbelt, Md., and served as chief of Program Review and Resources Management prior to joining the Office of Education.

Mr. Schwartz was assistant treasurer and chief accountant of Carpel, Inc., from 1954 to 1960.

He served as an instructor in Accounting at Baltimore Institute from 1958 until 1963.

Mr. Schwartz, who is a Certified Public Accountant, received his B.A. degree in Economics from Johns Hopkins University in 1950.

Honors accorded him include a 4-year Alumni Scholarship at Johns Hopkins University and the DEHW Superior Service Award.

Dr. Edward Driscoll Wins 1972 Heidbrink Award

Dr. Edward J. Driscoll, chief of the Anesthesiology Section of the National Institute of Dental Research's Oral Medicine and Surgery Branch, is the recipient of the 1972 Heidbrink Award.

Dr. Driscoll

This highest honor given by the American Dental Society of Anesthesiology is presented annually to an individual who has made a significant historical contribution to anesthesiology in dentistry.

Dr. Driscoll received the award at the Society's recent meeting in Chicago.

He is recognized for his investigations in the physiology of dental patients receiving anesthesia of an ambulatory basis and for his leadership in assuring the safety of modern anesthetic procedures in dentistry.

Dr. Driscoll has also played a key role in the development and administration of the new NIDR program in pain control.

He is a Diplomate of the American Board of Oral Surgery, a member of the American Society of Oral Surgery, a Fellow of the American College of Dentists, and a special consultant to the Council on Dental Therapeutics of the American Dental Association for Anesthesiology and Oral Surgery.

Dr. Driscoll also holds the coveted Horace Wells Club Award presented in 1967.

Dr. Brown Appointed to Council

Dr. Barbara Illingworth Brown, research associate professor in the Department of Biological Chemistry at the Washington University School of Medicine, St. Louis, has accepted membership on the National Advisory General Medical Sciences Council.

Dr. Brown's term will run through September 1974.