Scientists Discover Gaucher's Disease
Biochemical Defect

Scientists at the National Institute of Neurological Diseases and Blindness have discovered a specific biochemical defect in a disorder which may be associated with mental retardation.

The defect occurs in persons with Gaucher's disease, a disorder of the body's use of its own fats (lipids). The cause of the disrupted fat metabolism has remained a mystery since its discovery by Phillip Gaucher in 1882.

Symptoms Noted

Babies with Gaucher's disease rapidly develop a bulging abdomen from their enlarged liver and spleen. They often become mentally retarded, spastic, and convulsive. Most infants with Gaucher's die before the age of two.

In the adult with Gaucher's, the bone marrow, liver, and spleen also become involved, destroying health over longer periods. Early signs of the disease include patchy coloring of the face, pain in the thigh bone (the femur), and a tendency to bleed from the gums and skin.

Scientists investigating this affliction in the past found abnormally large quantities of a complex known as "glucocerebroside" in the liver and spleen of Gaucher's patients.

500 Distinguished Guests Expected at NLM Centennial Honoring 1st Director

The National Library of Medicine will observe the 100th anniversary of its beginning as a national resource with ceremonies and addresses by three of the Nation's leading health legislators on June 17.

Sen. Lister Hill of Alabama, Rep. John E. Fogarty of Rhode Island, and Rep. Oren Harris of Arkansas will be the principal speakers at the John Shaw Billings Centennial in a public program to be presented at 2 p.m. on the front steps of the Library.

The Billings Centennial will commemorate Dr. John Shaw Billings, first Director of the Library.

Mental Illness May Result From Child, Parent Relations

New evidence supporting the theory that "unhealthy" parent-child relationships may cause mental illness was reported recently by scientists of the National Institute of Mental Health.

During the past several decades, a major innovation in the study of schizophrenia has been the widening of focus from the patient as an isolated entity to the family as an integral unit.

NIMH investigators recently described research in which three matched groups of five families each were studied for five years.

Families Described

The families consisted of two parents and a child who was either schizophrenic, delinquent, or well-adjusted. Each family included a second child who served as the study's normal control.

Findings — based on results of two projective tests plus a third test in which families were observed as they tried to resolve differences of opinion — revealed significant differences in ways family members acted toward one another.

Families with normal offspring were well organized, the father was recognized as leader, and family

(See MENTAL, Page 6)

Dr. Huebner Lectures in Soviet Union, France

Dr. Robert J. Huebner, Chief of the Laboratory of Infectious Diseases, NIAID, recently attended an international symposium on tumor antigens in Sukhumi, U.S.S.R., where he delivered a lecture on "Non-virion Neoantigens in Virus-induced Tumor Cells and In Infected Cells."

While in Europe, Dr. Huebner also gave a Pasteur Lecture at the University of Paris entitled "Neoantigens in Virus-induced Tumors."

Before returning to NIH, Dr. Huebner consulted with colleagues at research institutes in Czechoslovakia and Sweden as well as France and the U.S.S.R.

(Continued on Page 6)
Credit Union Announces 2 New Loan Programs

The Board of Directors of the NIH Federal Credit Union has announced that two new loan programs—for home improvements and vacation or travel—have been approved and put into effect for its members.

The first permits FHA Title I home improvement loans, under which members may borrow from $1,000 to $3,500. Under law, the repayment period may extend up to 60 months. The CU interest rate for such loans is 7/10 of one percent per month on the unpaid balance or an annual cost of $4.55 percent on borrowed dollars. These also carry the life and total disability insurance that insures each borrower’s total indebtedness to the credit union in case of death or loss.

The second program allows loans to be made to members who require extra funds for vacations or travel, or who would like to have “emergency money” available with them if needed. Interest on these loans is one percent per month on the unpaid balance, with the first payment due no more than 60 days from the date of disbursement. Checks are disbursed in $100 increments and unused checks may be returned to the CU prior to the date of the first payment without any interest charges on them.

Senators-Tigers Game To Benefit Retarded; R&W to Sell Tickets

On July 4 the Washington Senators baseball team will play the Detroit Tigers, with a percentage of the advance ticket sales going to Help for Retarded Children, Inc., the D.C. chapter of the National Association for Retarded Children and member of the Health and Welfare Council, National Capital Area.

Help for Retarded Children provides school and training for youngsters 3-16 years of age, personal and social adjustment training, job training and orientation, and a sheltered workshop for those 16 and over who are not able to work in the community.

The Recreation and Welfare Association of NIH will cooperate in taking advance reservations for the game at $1.50 for general admission, $2.50 for reserved grandstand, and $3 for box seats. No discount will be offered for this game.

During the season, R&W will be able to offer discounts on selected games, such as the June 29 Senators-Yankee game.

The NIH Orchestra, under the direction of Mark Ellsworth, will present its final concert of the current season next Friday, June 4, at 8:30 p.m. in the CC auditorium.

The annual garden party for the NIH community will be held at the residence of Mr. James P. Shannon on Saturday, June 5, from 7:00 to 10:00 p.m. The program begins with the National Capital Orchestra, under the direction of Dr. Jacob Robbins, NIAID, Bldg. 31, Rm. 4A35.

Sponsor: Dr. W. Ray Bryan, NCI, Bldg. 6, Rm. 318.

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Mr. Wood also announced that the Board of Directors has rescinded the $100 per month limitation on account deposits.
NIH Employees Establish 5-Acre Camp for Needy Children and Mothers

By Frances Dearman

Would you like to participate in the poverty program? Right here at NIH, Mrs. Octavie Jacobs of NINDB's Intramural Research staff is looking for volunteers to help staff and finance a summer camp for Washington Area school children and their mothers.

A 2-week stay at camp could provide some of these youngsters with their first look at a cow or a vegetable garden. For their mothers it offers needed training in marketing, meal preparation, and balanced diets. For both it provides hope for a brighter future.

The first campers will be selected from the Cardozo area—the most densely populated, lowest per capita income area in the City of Washington. The project, officially known as the Greater Washington and Maryland Youth Center, is being aided by the Northwest Settlement House, a UGF agency which has served the families of the Cardozo area for more than 30 years.

Camp Integrated

The camp is integrated, and it is hoped eventually to include both white and colored children from all parts of the Washington Area.

The project was initiated by Mrs. Jacobs who owns a 5-acre tract adjacent to her parents' farm in Prince Georges County. Nearby is the Cedarville State Forest, ideal for hiking and for learning about growing things.

Mrs. Jacobs and her co-worker in this endeavor, Miss May Ferrari, budget clerk in the Neurology Institute's Intramural Administrative Office, early this year submitted proposals to the United Planning Organization for money to operate a permanent camp housing 50 or more children and five mothers.

Alcoholism Study in Urban Area Reveals Striking Social Patterns of Distribution

The incidence of alcoholism in an urban residential area shows striking patterns of distribution by education, marital status, race, and other sociological parameters, according to a recent study sponsored by the National Institute of Mental Health.

Interviews in the Washington Heights Health District of New York of 4,887 families with 8,062 persons twenty years of age and older revealed an overall rate of 19 alcoholics per 1,000 population.

Males Outnumber Females

There were 5.6 times as many males as female alcoholics, a ratio considerably lower than those reported in earlier surveys.

The highest alcoholism rates were found among widowers, 105 per 1,000 population while widows had an extremely low rate of only 5 per 1,000 population. Divorced or separated persons of both sexes showed high alcoholism prevalence (men: 68; and women: 19 per 1,000 population).

NICHID Sponsors 4-Day Conference on Language Development in Children

The National Institute of Child Health and Human Development recently sponsored a 4-day Conference on Language Development in Children for the purpose of reviewing existing and potential directions of study, and to identify the roles that the various disciplines can and do play in expanding knowledge in the area of human communication.

The conference, one of several being sponsored by the Institute's Human Communication Program, was held at Old Point Comfort, Fort Monroe, Va.

Topics Give Broad View

At this conference, authorities in many fields discussed a wide range of topics to give a broad view of how children learn language skills.

Approximately 20 outstanding investigators from different parts of the country and from England attended the conference.

Conference co-chairmen were Dr. Frank D. Cooper, Johns Hopkins, Baltimore, Maryland; Dr. George Miller, Center for Cognitive Studies, Harvard University.

Last year 64 children were brought to the campsite for weekends. They lived in tents, cooked meals on open fires, and helped a Boy Scout troop clear some of the land.

Even if the United Planning Organization does not come through with operating funds, a limited program is planned for this summer. NIH employees and others interested in learning more about this project may call Miss May Ferrari, Ext. 62296.

Background Listed

A native of Washington, D.C., Dr. Michalski received his M.A. from Johns Hopkins in 1940 and his Ph.D. from Princeton in 1942. From 1942-46 he saw duty with the Air Force. Subsequently he taught at the University of Tennessee and Emory University.

From 1952-53 he served with the Wound Ballistics Unit in Japan, and in 1957 was associated with the AEC's biomedical project, Operation Plumbob, at the Nevada Test Site.

He is a member of numerous professional societies including the New York Academy of Science, Sigma Xi and the American Society of Zoologists. Since 1961 he has been a member of the Scientific Advisory Group of the Civil Air Surgeon, Federal Aviation Agency, and since 1963 has been Professorial Lecturer in the Biology Department of American University.

Dr. Michalski Appointed to Newly Established Position in NIAMD

Dr. Joseph V. Michalski has been appointed Research Grants Officer, a newly established position in the Office of the Associate Director for Extramural Programs at the National Institute of Arthritis and Metabolic Diseases.

Previously Dr. Michalski was Assistant Chief of the NIH Review, Research Grants Review Branch in the Division of Research Grants, which has been associated with NIH since 1958.

Under NIAMD's Associate Director for Extramural Programs, Dr. Ronald H. Lamont-Haddorn, Dr. Michalski will be responsible for the administration of research grants programs at the Institute. His responsibilities will cover three broad areas:

- He will advise program directors on problems of policy and general administration of research grants;
- he will assist them in the analysis of research grants in their respective areas, and will advise the Associate Director and Institute Director on all matters relating to the research grants program.

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Study Reports on Drugs That Help Curb Cardiac Response to Vigorous Exercise

National Heart Institute scientists have reported that drugs which selectively block beta receptors of the sympathetic nervous system help to curb the increases in heart rate and blood work normally elicited by vigorous exercise.

A major means whereby heart rate, heart output, and systemic blood pressures are increased during exertion or stress is through increases in sympathetic activity.

The effects of sympathetic activity are mediated through the stimulation of two specific types of receptors. Stimulation of alpha receptors causes blood vessel constriction but has no direct effect upon the heart.

**Beta Stimulation Reported**

Beta stimulation increases heart rate and the vigor of cardiac contractions, dilates arteries, and dilates arterioles. All of these effects tend to boost heart output and systemic bloodflow.

Recently, a number of compounds have been developed that interact specifically with one or the other of these two types of receptors.

The Heart Institute scientists used propranolol, an agent that blocks beta adrenergic receptors, to study the role of beta receptors in mediating the cardiac responses to vigorous exercise in normal human subjects.

In these studies, a number of indices of heart performance were determined in normal subjects at rest and during vigorous exercise on a treadmill. The indices included heart rate, heart output, left ventricular work performed per minute, mean arterial pressure, and cardiac index and stroke index. (The last two values expressed overall heart output and stroke volume in terms of the subject's size.) All determinations were then repeated in resting and exercising subjects after beta blockade with propranolol.

In resting subjects, beta adrenergic blockade produced slight reductions in all indices except stroke index. When the subjects subsequently performed vigorous exercise, these reductions were more pronounced.

For example, beta blockade reduced average heart rate by 17 percent, left ventricular work/minute by 28 percent, and cardiac index by 18 percent. Total body oxygen consumption also fell significantly.

All of these determinations clearly indicated that beta blockade substantially reduced the intensity of the heart's response to vigorous exercise, indicating the importance of beta stimulation in adapting heart performance to the shifting circulatory demands of the body.

The findings further suggest that beta adrenergic and blocking agents may prove valuable for the clinical management of patients with angina pectoris.

**Exercise Tolerance Increased**

The time-honored therapeutic agent, nitroglycerine, owes its remarkable effectiveness against anginal pain at least in part to its ability to hold heart work down to a level more commensurate with its limited available blood supply. Used alone or in combination with nitroglycerine, beta blocking agents may prove even more effective for increasing the exercise tolerance of angina victims, enabling them to resume activities that formerly would have brought on disabling chest pain.

These findings were reported at the recent Federation meetings in Atlantic City by Drs. Brian F. Robinson, Richard L. Kahler, Stephen E. Epstein, and Eugene Braunwald, of the Cardiology Branch, NHI.

**Organizes Curriculum**

From 1947 to 1950, while on the executive faculty of the University of Washington's new School of Dentistry in Seattle, Dr. Nelsen organized and often conducted his teaching duties at Georgetown University Dental School.

Prior to that, from 1950 to 1956, he was a Research Associate with the American Dental Association, assigned to the Bureau of Standards in charge of clinical research.

There, his work in the field of dental restorative materials produced several original inventions—the turbine dental drill, front surface dental mirror, and an intricate clinical camera—all now widely used by the dental profession.

He has also written and produced an award-winning film presenting the problems of radiation hygiene in dentistry.

**Dr. Nelsen Is Appointed Chief of NIRF Office**

The appointment of Dr. Robert J. Nelsen as Chief of the Collaborative Research Office, National Institute of Dental Research, was announced recently by Dr. Francis A. Arnold Jr., Institute Director. In his new position Dr. Nelsen will administer NIDR's wide-ranging cooperative research projects in laboratories and institutions throughout the country.

Dr. Nelsen brings to this post an extensive clinical research, and academic background. For the past nine years he has combined a private practice with teaching duties at Georgetown University Dental School.

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**Mental**

(Continued from Page 1)

relationships were flexible and consistent.

There was genuine expression of emotion without restraint and anxiety, warmth toward offspring, and mutual understanding.

Parents did not compete with one another, but encouraged offspring to act independently, recognizing children's need for self-expression. Discipline was firm and reasonable, and family members were able to communicate with one another.

Families with delinquent offspring showed loose, unstable organization. It was unclear who had leadership, and families seemed to abide by their position of leadership. Emotion was artificial and uncontrolled. There was open conflict among family members who teasingly manipulated and competed with one another. Parents did not trust in their children's ability, and discipline was harsh and inflexible.

In contrast, families of schizophrenic children were rigidly stable, with distant, absent parents. Children were bewildered and often forced into apathy or inactivity.

There was little warmth, emotion was overcontrolled, and anxiety and hostility were frequently expressed. Discipline was harsh and often forced parent-child interaction was geared toward meeting parents', not children's, needs.

Parents treated their children as extensions of themselves and did not permit self-expression or autonomy in their offspring. Families with schizophrenic or delinquent offspring had characteristics in common: they showed disturbances in thought processes, and major difficulty communicating with, or in the family. Normal families scored higher in conceptual ability than the other two family groups.

The study by Dr. James R. Stabenau, Dr. Joe Turner, Martha Weaver, and Dr. William Pollin of the Adult Psychiatry Branch, NIMH, was reported in Psychiatry.

Assembly of Scientists, NCI, Sponsors Meeting On Burkitt's Lymphoma

A one-day conference on "Possible Role of Viruses in Human Leukemia and Lymphoma: An Evaluation of the Burkitt African Lymphoma," was held recently in the Clinical Center auditorium, under sponsorship of the National Cancer Institute Assembly of Scientists.

Burkitt's lymphoma is of interest because of the climatic and geographical factors which determine its distribution. These factors suggest that a transmissible vector-borne agent may be involved in causation.

Dr. W. Ray Bryan, Associate Scientific Director for Viral Oncology, NCI, moderated the symposium. Other NCI participants were Drs. Albert J. Dalton, Chief, and Sarah Stewart of the Laboratory of Viral Carcinogenesis; Dr. Mary Fink of the Laboratory of Viral Oncology; and Drs. Gregory T. O'Connor and Alan S. Rabson of the Pathologic Anatomy Branch.

Other Participants Named

Participants in the symposium included Dr. Denia Burkitt, a surgeon at Makerere Medical College, Uganda, Africa, who was the first to recognize the malignant nature of a childhood tumor peculiar to Central Africa; and Dr. M. A. Epstein of Middlesex Hospital, London, England, who has reported the growth in tissue culture of three cell lines isolated from several cases of Burkitt's lymphoma.

Also Dr. Dennis Wright, a pathologist at Makerere Medical College, who has done extensive studies on the histology of the lymphoma cell; and Dr. Werner Henle, University of Pennsylvania, Philadelphia, Pa., who, for the past two years, has been the temporary director of the Institute of Dental Research, was an affiliate member of the American Association of Dental Research, and holds membership in several other professional organizations, including the American Association for the Advancement of Science, the American College of Dentists, the American Academy of Craniomandibular Disorders, and the American Society of Orthodontists.
Research on Red Cell Blood Group I Links PPLO to Leukemia

Investigators of the Division of Bacteriology and the Clinical Center have reported evidence of in vitro interference by mycoplasma (PPLO) of anti-I blood group agglutination as a possible explanation of the failure of anti-I to agglutinate red cells of patients with leukemia.

The cold agglutinins of patients with primary atypical pneumonia and leukemia often have red blood cell group I specificity. Mycoplasma Pneumoniae, previously shown to be the cause of primary atypical pneumonia, is presumed to be responsible for development of cold agglutinins, since mycoplasma can alter red blood cells by hemadsorption, hemaggglutination, and hemoagglutination.

Earlier Study Cited

In an earlier Clinical Center-National Cancer Institute study, it was shown that an association exists between the red blood cell group I and neoplastic disease, particularly leukemia. Whereas blood donors are rarely negative for red blood cell antigen I (< .001), one blood donor in 1000 was negative. More than one percent of patients with leukemia (15/45) were found to be I-negative.

The presence of antigen I fluctuates with relapse and remission of the disease, suggesting that the I antigen was blocked or destroyed during the course of the disease, possibly by a microorganism.

The present study was initiated in an effort to determine whether mycoplasms could alter the I agglutinability of normal I-positive red blood cells.

Forty-five microbial agents—including mycoplasma, viruses, and bacteria—were added in vitro to I-positive red blood cells from normal donors.

Findings Noted

Eighteen of the 25 mycoplasmas strains tested, including three derived from human tumor tissue, were shown to block or destroy the I-receptors of normal red cells, thus mimicking the findings on patients with leukemia.

Neither of the two species of bacteria and only one of 11 of the viral agents tested showed trace inhibition of the anti-I agglutination.

The investigators, Drs. Michael F. Barile, of the Laboratory of Bacterial Products, DBS, and Paul J. Schmidt, Chief of the Blood Bank Service, CC, consider this in vitro interference by mycoplasma of anti-I agglutination a working hypothesis to explain the failure of anti-I to agglutinate red cells of patients with leukemia.

Dr. Barile presented a paper on PHS to Open Pesticides Research Lab in Florida

The Department of Health, Education, and Welfare recently announced that a Public Health Service research laboratory will be established on the south campus of the University of Miami at Richmond, Fla.

The laboratory will have a scientific staff of about 35 persons who will be engaged by NIH's Office of Pesticides in research aimed primarily at learning whether pesticides can cause long-term effects on human health.

Award to Be Presented Dr. Gordon H. Seger

A Distinguished Alumni Award will be presented to Dr. Gordon H. Seger, Associate Director of the National Institute of General Medical Sciences, by Northern Michigan University in Marquette.

The award, presented each year during the June commencement, is given to alumni who have distinguished themselves through significant professional achievement, outstanding citizenship, and selfless support of worthy endeavors. Dr. Seger is one of four alumni to receive the award this year.

His career in the Public Health Service dates back to 1940. He was at one time Chief of State Personnel Administration for the Bureau of State Services, where he initiated the development of personnel policies for state and local health departments.

During his association with NIH, he has served as Executive Officer of the National Cancer Institute; Chief of Extramural Programs, National Institute of Neurological Diseases and Blindness; and Chief of the Special Programs Review Branch, Division of Research Grants, before joining the then Division of General Medical Sciences in 1962.

Dr. McElroy Appointed

Dr. William D. McElroy, Chairman of the Department of Biology and Director of the McCollum-Pratt Institute at Johns Hopkins University, has been appointed to serve on the Special Programs Review Branch, Division of Extramural Research Centers, National Institute of General Medical Sciences, by Northern Michigan University.

The appointment, announced by Dr. Luther L. Terry, Surgeon General of the Public Health Service, is effective through September 30, 1968.

Dr. McElroy is a member of the American Society for Microbiology in Atlantic City.

Editor Offers Suggestions for Bridging Gap Between Scientists and Writers

By Helen Neal

Some of the misunderstanding and suspicion between scientists and journalists can be avoided if the scientist, as well as the journalist, can make some statements public. The scientist, in turn, should understand the meaning of "exclusive story" and abide by the restriction.

To give the reporter a better background, the scientist may want to make some statements "off the record." But there should be no doubt about which statements are in this category.

The scientist should not expect the reporter to group each idea as rapidly as he expounds it and should realize that the vocabulary so familiar to him may ring strangely in the reporter's ears.

Scientists Are Cautious

Naturally cautious, scientists become even more so when they know their names are to appear in print. They tend to downgrade the significance of their research, from any claims that might bring about an accusation of being publicity seekers.

But there are certain statements they can make with the knowledge the research they are conducting, and this information the reporter needs to put the story into perspective for readers.

Mr. Wilds suggests some ways of bringing about an accommodation between scientists and journalists. Both should do homework to prepare for the interview.

Suggestions Listed

The scientist, he says, should clarify in his own mind the relation of his work to the facts for which there is some general public understanding. He should round up data, reprints, and other material for his own reference during the interview and to give the reporter.

The reporter, for his part, should consult some published accounts of the subject or at least the general area of the research, and check the Who's Who account of the scientist.

He suggests that the ground rules should be clearly understood at the outset of the interview. The scientist should know whether he will have a chance to look over the story before publication.

Jazz Concert Scheduled at NIH Friday, June 11

The Recreation and Welfare Association of NIH has arranged a special program for jazz buffs—"Jazz at NIH"—to be presented at 8:30 p.m. Friday, June 11, in the Clinical Center auditorium. The concert will feature seven talented musicians and a singer, all from NIH.

They are Dr. Gordon Tomkins, NIAMD, alto sax; Dr. Burton Sobel, NIH, piano; Andrew DeRocco, NIAMD, tenor sax and clarinet; Dr. Robert Rosnik, NIAMD, drums; Dr. Edward Harris, NIH, bass; David Buck, NIH, normal volunteer, trumpet; and Betty Foster, NCI, vocalist.

The concert will present traditional songs, new songs, ballads and blues, up-tempo pieces, and a specially arranged NIH medley.

DHew Surplus Report

Surplus property for which the Federal Government paid $101.8 million was made available to the states for education, public health, and civil defense purposes during the first quarter of 1965 by the Department of Health, Education, and Welfare. Real property accounted for $3.5 million and personal property for $98.3 million.
DRS Host to Public at Animal Center

(Continued from Page 1)

at the center.

Eventually the primate quarantine and rabbit and rodent production programs, currently housed on the reservation, will be located there.

The orientation sessions provided an opportunity for interested persons to see the new facilities and discuss laboratory animal programs with the LAB staff. Besides the many NIH personnel who attended, others included professionals outside the NIH, representatives of the animal welfare groups, residents of the Poolesville area, and the press.

Programs Outlined

At the beginning of each session, Dr. Robert J. Byrne, Chief of the Laboratory Aids Branch, outlined the current and projected programs of the center. LAB staff then conducted visitors on a tour of the new facilities.

The Farm Animal Building has a central service area and two barn wings with associated outdoor pens and pastures to house the larger animals such as cattle, horses, sheep, goats and burros. These animals are largely used as a source of blood and serum.

The central area of the building contains 34 box stalls, 10 of which have radiant-heated floors for convalescent animals. In the service wing, which is fully heated and air-conditioned, there is an X-ray and operating room, pharmacy, autopsy room, and facilities for other veterinary services.

About a five-minute walk away is the Kennel Building, which will be used for the quarantine and holding of dogs and cats. Here, two permanent, run-type kennels lead off one side of a service wing.

A third kennel wing is planned for the third phase of construction, and the design of the building is such that three more kennel wings can be added if needed.

Each kennel wing contains 100 runs—50 on each side of an 8-foot-wide central corridor—for a total of 200 runs, all of which have indoor and outdoor areas. The inside portions and corridors have radiant-heated floors and each run has a separate air exhaust.

The service wing, fully heated and air-conditioned, has a surgery room and treatment room, as well as six cage rooms for animal isolation. There are also the usual office and locker room areas, a pharmacy, food preparation room, and clinical pathology laboratory.

The heating and cooling of the center's facilities are provided by the new Central Utilities Building, which was especially designed for expansion of its capacities to handle all future buildings. An electronic control board monitors the entire utilities system and points any problem that may occur.

The most prominent landmark at the center is the 150,000-gallon water tower. The water is obtained from three wells and is treated prior to storage in the tower. A small dam provides an emergency water supply.

Other Facilities Described

The center also has its own waste treatment and disposal facilities, a transformer substation for electricity, and telephone service. All major roads are paved. There are two residences, one occupied by a primate caretaker, the other by an animal caretaker.

Future construction will include a primate quarantine and holding facility, a natural habitat area for animal behavior studies, rodent and rabbit production facilities, and support and service buildings.

The Animal Center is expected to be fully operational by 1971, at which time some 140 scientists and technical personnel will be employed there.

Goats are used for rhinovirus antisemum studies. — Jerry Hecht Photo.

Five Institutions Receive PHS Research Grants

The award of five grants totaling $904,165 to establish or expand general clinical research centers was announced recently by Surgeon General Luther L. Terry of the Public Health Service.

The grants, to be administered by the Division of Research Facilities and Resources, include:

- $623,531 to the University of Miami Medical School, Fla., to establish a new 10-bed general clinical research center.
- $220,936 to the Rockefeller Institute Hospital, N.Y.C., to expand its center from 20 to 44 beds.
- $11,500 to the University of Texas, Galveston, to expand its center in John Sealy Hospital from 10 to 12 beds.

Other Grants Listed

- $10,892 to the Children's Hospital of Los Angeles, to provide support for a biochemist and additional nurses in its center.
- $7,256 to the University of California, San Francisco, for additional personnel in its center at Moffitt Hospital.

The award to the Rockefeller Institute for expansion of its hospital's general clinical research center will make possible the expansion of existing projects and initiation of new ones and will permit more post-doctoral training in clinical research.

Among the research being carried out at the Rockefeller Institute Center is the use of the synthetic drug, methadone, which has successfully maintained "incurable" drug addicts in an excellent and productive functional state and which requires no progressive increase in dose.

Findings show that such patients are more responsive to rehabilitation than those from whom all drugs are withdrawn. Longer range clinical studies seek to identify metabolic disturbances which may be responsible for the addictive process itself.

The award to the University of Miami Medical School, like other grants for general clinical research centers, provides support for initial renovation costs, equipment, operating costs including supplies for research study, hospitalization costs, and core personnel.

NINDB Scientist Finds LDH-5 Levels Low in Neuromuscular Diseases

A National Institute of Neurological Diseases and Blindness investigation of the iso-enzyme lactate dehydrogenase-5 in skeletal muscles has demonstrated that deficiencies occur in some neuromuscular disorders.

Levels of lactate dehydrogenase-5, an iso-enzyme involved in the conversion of glucose to energy in muscle contraction, are significantly low in the skeletal muscles of many patients with certain neuromuscular diseases other than muscular dystrophy.

Previously, the enzyme deficiency had been noted only in association with muscular dystrophy.

The present study, in which the enzyme level was found to be below normal in 13 neuromuscular disorders, demonstrated that deficiency of muscle LDH-5 constitutes a sign of non-specific abnormality in the neuromuscular system.

No continuing observations were made with the same patients to see if the LDH-5 level changed in the individual.

256 Patients Studied

In this study, LDH-5 activity was measured by performing starch gel electrophoresis on biopsied skeletal muscle specimens obtained from patients with a variety of neuromuscular diseases and at autopsy from 20 patients with no apparent neuromuscular disease.

Significantly low levels of the enzyme were observed in 43 of the 256 affected patients, but normal electrophoretic patterns were found in all of the patients with no apparent neuromuscular disease.

All the patients with deficient LDH-5 had some form of neuromuscular disease such as muscular dystrophy, amyotrophic lateral sclerosis, infantile spinal muscular atrophy, and myotonic dystrophy.

The low level of LDH-5 iso-enzyme in muscle occurred both in acquired and in hereditary disorders of muscle or of nerve, and in adults as well as in children.

These findings were reported by Dr. Irwin A. Brody, of the Medical Neurology Branch, NINDB, in Neurology.
Study Implicates Specific Antihistamine Fraction In Congenital Defects

National Institute of Dental Research investigators have demonstrated in laboratory animals that the antihistaminic property of drugs is not responsible for embryologic defects.

Recent concern over the thalidomide incident (1962) has spurred scientists to investigate the pharmacology of a number of commonly-used drugs.

Last year Dr. Cecil T. G. King of NIDR's Laboratory of Biochemistry, demonstrated that the anti-histamine meclizine hydrochloride (Bonine), a widely-used anti-nausea drug, when given in high dosage, can induce cleft palate along with other malformations in 100 percent of experimental rats.

Structure Studied

Subsequent research by NIDR investigators on the structure-activity relationship of a number of antihistamines indicates that the teratogenic properties of the drug do not necessarily parallel the antihistaminic actions, but lie in the chemical structure of the drug. The most potent teratogens require a tertiary amine in a heterocyclic ring attached to two benzene rings.

The investigators administered cyclizine hydrochloride and chlorcyclizine hydrochloride, two antihistamines which have the above chemical moiety in their structure.

They were administered in high doses during the gestation period shown to be critical for palate development in the strain of rat used (days 12 through 15).

As with meclizine, which has the required ring structure, the investigators produced a high percentage of cleft palate and other specific malformations.

Breakdown Product Identified

A breakdown product of meclizine and chlorcyclizine was found in the fetuses and identified by paper chromatography and ultraviolet absorption spectrometry as nor-chlorcyclizine.

This metabolite, nor-chlorcyclizine, is able to produce the same malformations as the other teratogenic antihistamines when it is administered to pregnant rats in considerably lower doses.

Although the incidence of malformations is 100 percent when chlorcyclizine is administered from day 10 through 15, when the same dose is administered from day 1 to 15 an incidence of malformations of less than 10 percent is produced.

This clearly emphasizes the fact that prolonged administration of a drug will not necessarily yield the same results as brief administration during a critical period.

NCI Publishes Pamphlet On Cancer of Larynx

"Cancer of the Larynx," the latest pamphlet in the National Cancer Institute's revised series on cancer of different body sites, has been issued by the NCI.

Cancer of the larynx, or voice box, is mainly a disease of white men in their fifties and sixties, according to the pamphlet. If diagnosed early, when it is commonly limited to one vocal cord, it can be cured. Ninety percent of such patients will have a normal voice.

Hoarseness lasting more than three weeks, change in voice pitch, a lump in the throat, coughing, difficulty or pain in breathing or swallowing, or even earache might be symptoms of the disease, and should be investigated by a doctor.

Single copies of "Cancer of the Larynx"—PHS Publication No. 1284—are available without charge from the Public Health Service, Washington, D.C. 20201. The pamphlet may be bought in quantity from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at five cents a copy or $2.75 per 100 copies.

NCI's Laboratory of Biochemistry, NIDR, produced a high percentage of cleft palate and other specific malformations is 100 percent when the same results as brief administration during a critical period.

On a recent visit to the Clinical Center Blood Bank, Dr. Von Der Aue, newly appointed Medical Director of the Washington Regional Red Cross Blood Program (right), chats with donor Charles B. Hammond, M.D., of the Endocrinology Branch, NCI. Dr. Paul J. Schmidt, CC Blood Bank Department Chief, explains that NCI employees play an important role in the blood donor program here. Marqueta H. Rawen, R.N., of the Blood Bank staff, keeps a close watch on the donor.—Ralph Fernandez Photo.
Dr. Coghill, NCI, Retires After Noted Career in Drug Development Field

Dr. Robert D. Coghill, Special Assistant for Industrial Relations, Office of the Director, National Cancer Institute, retired May 21 after eight years at NCI.

In October 1957 Dr. Coghill joined the staff of the Cancer Chemotherapy National Service Center as Special Assistant to the Chief, with responsibility for industrial relations in the program to develop new or more effective drugs for the control of cancer.

Later, as Acting Chief of the Center, he played an important part in coordinating the multifaceted program—from chemical procurement to clinical trial of new drugs and therapeutic regimens.

In July 1963, at the request of the Institute Director, Dr. Kenneth M. Endicott, Dr. Coghill made a biomedical survey of industry and developed a roster of over 200 potential NCI contractors and their resources.

Develops New Process

Dr. Coghill came to the Institute with long experience in the drug development field. In 1939 he was named Chief of the Fermentation Division of the Northern Regional Research Laboratory, U.S. Department of Agriculture at Peoria, Ill.

His laboratory explored the development of new fermentation processes and was one of the first in the country to study problems of penicillin production. He was named Associate Director of Research of Abbott Laboratories in 1940, and then Director of Research in 1946, and in 1952 was made a member of the firm's Board of Directors.

Born in Providence, R.I., Dr. Coghill received the A.B. and M.S. degrees from the University of Kansas and the Ph.D. in organic chemistry from Yale University in 1924.

Teaches at Yale

He spent the next two years at Yale as a National Tuberculosis Association Research Fellow, studying nucleic acids and proteins of the tubercle bacilli and related organisms. He then taught pre-medical organic chemistry at the university until 1939.

In 1947 Dr. Coghill received the University of Kansas Distinguished Service Award, and in 1948 President Harry S. Truman awarded him the President's Medal of Merit in recognition of his wartime development of a method for mass-producing penicillin.

The St. Louis Section of the American Chemical Society named him for its Midwest Award in 1949, and in 1952 Bradley University, Peoria, Ill., conferred upon him an honorary Doctor of Science degree. Dr. Coghill also served as Vice President of the Industrial Research Institute, 1955-56, and as President, 1956-57.

Dr. Coghill is the author of more than 50 technical papers. He is a member of the American Chemical Society, American Association for the Advancement of Science, Society of American Bacteriologists, American Society of Biochemists, and New York Academy of Sciences.

Lou Cook of the Heart Information Center, National Heart Institute (left), and Tony Anastasi, NHI Press Officer, discuss distribution plans for the second of the "Know Your Heart" radio series. The first series of 10 two-minute spot programs on heart research drew more than 1,100 requests from radio stations in each of the 50 States and territories. The second series will be available to stations this summer. Dr. John D. Turner, formerly of NHI, served as technical advisor and narrator.—Photo by Ed McCoy.

Dr. Coghill

Dr. Herbert A. Sober, Chief of the Laboratory of Biochemistry, National Cancer Institute, presents a superior performance award to Joan K. Shores "in recognition of her sustained superior performance in efficiently and economically keeping the Laboratory provided with the necessary chemicals, supplies and equipment."—Photo by Ralph Fernandez.

Dr. Coghill

Lou Cook of the Heart Information Center, National Heart Institute (left), and Tony Anastasi, NHI Press Officer, discuss distribution plans for the second of the "Know Your Heart" radio series. The first series of 10 two-minute spot programs on heart research drew more than 1,100 requests from radio stations in each of the 50 States and territories. The second series will be available to stations this summer. Dr. John D. Turner, formerly of NHI, served as technical advisor and narrator.—Photo by Ed McCoy.

GAUCHER’S (Continued from Page 1)

Patients. This large molecule contains simple sugar (glucose), sphingosine, and fatty acid.

Now a further advance in solving this enigma may have been made by a team of researchers under Dr. Roscoe O. Brady Jr., Head of the Section on Lupid Chemistry, Laboratory of Neurochemistry, NINDB.

They discovered that the effectiveness of a newly-identified enzyme which normally splits the glucose from glucocerebroside is markedly diminished in patients with Gaucher's disease.

Findings Allow Postulation

These recent findings allow scientists to postulate about the biochemical events leading to Gaucher's disease. The compound appears to be a normal intermediate in the process of disposing of senescent red blood cells. In healthy individuals the material is completely catabolized.

However, in Gaucher's disease, the enzyme which catalyzes the breakdown of glucocerebroside is far less active than normally. The compound therefore accumulates in certain organs and impairs their vital function.

How can this new knowledge of a biochemical abnormality in this disease help the patient with Gaucher's disease? Dr. Brady's group is purifying the enzyme they discovered in the hope that it will have a future application in the diagnosis and treatment of the disease.

These findings were reported in the latest issue of Biochemical and Biophysical Research Communications.

The month of June was named from juvenis, Latin for "youth."—Information Please Almanac.

NIMH Booklet Describes Research Advances in Mental Health Program

A new publication, "Research Activities of the National Institute of Mental Health," describing some of the most recent advances in the Federal Government's mental health program, has been released.

More than 175 studies are mentioned in the publication, with emphasis on activities and findings in 10 areas of mental health.

These areas cover biological, developmental, psychological and inter-personal factors in mental health and illness; drugs and the treatment of mental illness; psychophysiology and psychosomatic illness; and neural mechanisms and behavior.

Also effects of social change and cultural deprivation; the community and its mental health resources; surveys of mentally ill populations and treatment facilities; and international research.

Yolles States Mission

In the foreword to the booklet, Dr. Stanley F. Yolles, NIMH Director, points out an "important feature of the Institute's mission is its emphasis on mental health, that is, on research designed to enhance human potential—intellectual, emotional, social and cultural—as well as on research intended to resolve specific problems of psychopathology.

Although the publication does not cover all the Institute's research efforts, it cites examples to show how, within the areas specified, the NIMH basic, clinical and field programs of research form a meaningful whole.

The booklet was prepared under the direction of Dr. Julius Segal, Chief, Program Analysis Branch, Research Grants Branch, NIMH.

Single copies of "Research Activities," PHS Publication No. 1291, may be obtained without charge from the Public Information Section, NIMH, Bethesda, Md. 20014.

Copies in bulk may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at 40 cents each, or at quantity rates.

Jean R. Bernstein Dies, Was Secretary at NIH

Jean R. Bernstein, 49, former secretary to the National Heart Institute's Biometrics Research Branch Chief, died May 14 at Suburban Hospital of heart complications.

Mrs. Bernstein joined the Heart Institute in 1955. Her first Federal service was with the War Shipping Administration in 1946. In 1950 she transferred to the Federal Security Agency, and in 1953 to DHEW.