

the



Record

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NATIONAL INSTITUTES OF HEALTH

Federal Woman's Award Given to Dr. M. U. Nysten For Her Dental Studies



In 1970, Dr. Nysten received an award from the International Association for Dental Research for her contribution in the field of crystallization and mineralization.

Dr. Marie U. Nysten, National Institute of Dental Research, is one of six recipients who will be presented with the Federal Woman's Award at a banquet to be held this evening (Wednesday, Dec. 3) at the Shoreham Americana Hotel in Washington, D.C.

Dr. Nysten, chief of NIDR's Laboratory of Biological Structure, is being lauded for her research on morphology of tooth enamel—she is considered one of the world's foremost experts in this field—and her contributions to refining the electron microscope as an aid in dental research.

Her dental studies have added to scientific knowledge in areas such as the ultrastructural morphology of teeth and bones, and the calcification of tissue.

Dr. Nysten's findings of the effects of tetracycline on dental enamel of experimental animals contributed to restrictions on the use of this antibiotic in humans. She is also being cited for her administrative abilities.

The awards will be presented to the Federal employees by Jayne B. Spain, Civil Service Commissioner, who is CSC Vice Chairman and Chairman of the Board of Trustees, Federal Woman's Award.

Dr. Zora Griffio Named Special Programs Officer

Dr. Zora J. Griffio has been appointed to the new position of Special Programs Officer in the Office of Dr. Thomas E. Malone, NIH Associate Director for Extramural Research and Training.

Dr. Griffio's duties will entail coordinating NIH research and training activities and programs for minority institutions. The programs include the Minority Biochemical Support Program, Division of Research Resources, and MARC, the acronym for Minority Access to Research Careers; that program is under the aegis of the National Institute of General Medical Sciences.

The research and training activities of other NIH Institutes that are geared to minority scientists will also come under Dr. Griffio's responsibilities. In addition, she will head the NIH-wide Coordinating Committee on Minority Programs which provides advice and recommendations to the Office of the Director, NIH.

In announcing Dr. Griffio's appointment, Dr. Malone said, "Heretofore we had a sort of piecemeal approach to the problem of de-

(See DR. GRIFFIO, Page 8)



DR. MATHEWS COMES TO THE CAMPUS. On Thursday, Nov. 13, Dr. David Mathews (r), HEW Secretary, visited the Clinical Center and met with a number of researchers. Dr. Donald S. Fredrickson, NIH Director, accompanied Dr. Mathews on the tour. Other photos of the visit are on page 8.

NICHD's New Perinatal Center Admits First Infants to Special Care Nursery

On Nov. 26, the first tiny patients were admitted to the Special Care Nursery of the Perinatal Center, National Institute of Child Health and Human Development.

Completed earlier this year, the Perinatal Center was built atop the Clinical Center's D Wing. The 8th floor contains laboratories; the 9th has hospital rooms for mothers, infants, and children, visiting rooms for family members, and a nursing station. The Special Care Nursery is on the 10th floor.

According to Dr. Norman Kretchmer, NICHD Director, "The Center brings together the facilities, staff, and environment necessary to study, diagnose, and treat some of the more difficult problems in pediatrics. These are the metabolic, nutritional, genetic, endocrine, gastrointestinal, and growth and development difficulties of infants, particularly of low birthweight infants."

A program for the care and study of the low birthweight (LBW) infant will evaluate those requiring chronic support and diagnostic studies rather than intensive respiratory care or major surgical procedures.

LBW infants are those born weighing less than 2,500 grams (5.5 pounds). They may be premature, or small for gestational age (SGA), or both.

All facets of infant growth and development and selected aspects of nutritional and metabolic adaptation will be included. Studies will compare, for example, the nutritive value of breast milk and commercially available formulas, none of which has been developed specifically for LBW infants.

The program will include infants of any gestational age with unexplained metabolic acidosis (probable inborn errors of metabolism), infants with suspected endocrinopathies such as hypothyroidism, and those with symptoms of hypoglycemia and hypocalcemia. A limited number of babies with congenital malformations will also be studied.

The Special Care Nursery, directed by Dr. Philip M. Farrell, chief of the NICHD Neonatal and Pediatric Medicine Branch, has completely independent utilities and a back-up emergency power



Dr. Hansen, NICHD neonatologist, determines the ionized calcium content of a blood sample from a premature baby, using an automated electrode procedure. The instrument measures calcium in less than one-half ml of whole blood.

source. Air is changed 20 times per hour and maintained within close tolerances for temperature

(Continued on Page 7)

All-Day HBIG Workshop Will Be Held on Dec. 17

An all-day workshop to discuss clinical data on Hepatitis B Immune Globulin will be held from 9 a.m. to 5 p.m., on Wednesday, Dec. 17, in Wilson Hall.

The workshop has been organized by several NIH Institutes, FDA's Bureau of Biologics, the Center for Disease Control, and the Veterans Administration.

During the morning session, scientists will present their recent evaluation of HBIG clinical trials, and the results of clinical studies.

The afternoon session will focus on the testing requirements, potency, and dosage of HBIG. That session will also include a general discussion on further studies and licensure of the product.

the NIH Record

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Musical Film for Children Presented on Sunday, Dec. 14

A film, "Babes in Toyland," a Disney adaptation of a Victor Herbert musical, will be given on Sunday, Dec. 14, at 1:30 and 3:30 p.m., in the Clinical Center's 14th floor auditorium.

The movie is one of a series for children presented by the Parents of Preschoolers, Inc. Tickets may be obtained at the FAES Bookstore in the CC, or at the nursery school in Bldg. 35.

The tax deductible contribution will go toward the school's tuition aid fund. For further information call Ext. 65144.



Mrs. Anwar Sadat, wife of the President of Egypt, recently visited NIH where she toured the Clinical Center's laminar air-flow and pediatric oncology units. Mrs. Sadat attended a discussion about the work of the NCI Breast Cancer Task Force and the programs of the American Cancer Society. She was welcomed by Dr. Donald S. Fredrickson (l), and Dr. Guy R. Newell, NCI deputy director.

John C. Reese, OD, Dies; Worked 10 Years at NIH in Financial Management

John C. Reese died Friday, Nov. 7, after a heart attack. A supervisory accountant in the Division of Financial Management, OD, he served as chief of the Indirect Cost Management Section—a position he had held since the centralized Indirect Cost Management System was implemented for NIH research grants in July 1970.

Mr. Reese joined the Fund Management and Cost Analysis Section, DFM, in January 1965.

A graduate of the University of Notre Dame with an accounting major, he had previously been an auditor with the U.S. Air Force Auditor General, and material control coordinator and senior accountant with General Motors Corporation, both in Syracuse, N.Y.

He is survived by his wife, Marion M.; two sons, four daughters, a brother, and three sisters. His sister, Helen Jordan, works in DRG, and his daughter, Regina, is a CC employee.

Sympathy may be expressed by donations to the Heart Fund.

FEW Has Bicentennial Speaker

The Maryland Suburban Chapter of Federally Employed Women will meet at 11:45 a.m. on Tuesday, Dec. 16, in Conference Room E, Parklawn Bldg.

From noon to 1 p.m. Carey C. Roberts, executive director of the Montgomery County Bicentennial Commission, will speak on Women in the Revolution. Everyone is invited.



Clutching a plastic bag that holds a coloring book and crayons, a young patient (like the child above), accompanied by his parents, waits to be admitted to the Clinical Center. The Patient Emergency Fund is often used to enable parents to remain nearby while their youngster undergoes surgery. Send YOUR contributions to PEF, CC Social Work Department, Room 1N-254. It helps in many ways.

Clothing for Kids Needed — Fill the Striped Boxes

NIH employees are being asked to participate in the D.C. Council on Clothing for Kids campaign again this year.

Clean serviceable clothing for preschool and school age children through high school may be placed in the red and white striped boxes in Bldgs. 1, 10, and 31, and in the Landow Bldg.

Bring to Fire Station

Apparel may also be brought to any fire station in D.C. or money may be sent to aid the Children's Boutique, where more than 15,000 children received clothes last year.

The drive will culminate on Saturday, Dec. 13, with a televised Clothe-A-Thon on WMAL-TV, Channel 7, from 10 a.m. to 8 p.m. During this time donations can be pledged by telephone or in person.

For further information, call Jane Aswell, Ext. 64713, Annie Collins, Ext. 62311, or Tom Flavin, Ext. 65343.

D.C. Youth Chorale Dec. 10 Concert Sponsored by SHER

The D.C. Youth Chorale will sing in the Clinical Center's 14th floor auditorium at noon on Wednesday, Dec. 10.

The group of students—the official Bicentennial chorale for the District of Columbia—holds rehearsals and voice classes at the Western High School-School of the Arts.

Directed by Edward Jackson, the group has previously sung at NIH, the U.S. Pavilion at Expo

Md. Traffic or Parking Violations May Lead To Triple Fines, Arrest

The NIH Security and Management Branch urges anyone receiving a traffic or parking violation notice to respond promptly and not to ignore tickets that are issued. Pay immediately, or request a hearing and appear in court on the appointed date.

The U.S. District Court of the District of Maryland has amended the Forfeiture of Collateral Schedule as follows:

This Is What Happens!

"Should an alleged violator fail to pay the collateral set on any Violation Notice or fail to notify the Central Violations Bureau of his or her desire to stand trial within fourteen (14) days from the date the Violation Notice is issued, the said collateral shall automatically double."

"Should it be necessary for the Court or United States Magistrate to issue an arrest warrant as a result of any alleged violator's failure to appear, the amount of collateral shall automatically triple from the amount originally set on the Violation Notice."

'74, and the White House, and toured Romania in 1973.

Three chorale members have parents employed at NIH: Maggie Johnson's son Raycurt, Henry Bynum's daughter Linda, and Norman Miller's son Calvin.

The concert is sponsored by the NIH Self Help for Equal Rights group.

Dr. Andres Discusses Complexities of Aging Research at Meeting

In a speech before gerontologists attending the 28th annual scientific meeting of the Gerontological Society held recently in Louisville, Ky., Dr. Reuben Andres, National Institute on Aging, talked on the complexities of studying aging in humans.

He suggested that asking the right questions and designing the right kind of experiments would lead to understanding processes of aging.

Dr. Andres is NIA's acting clinical director and assistant chief of the NIA Gerontology Research Center.

Dr. Bertram Brown, Director of the National Institute of Mental Health, who spoke at a symposium on mental health and aging, expressed optimism about the Federal Government's effort to improve mental health programs for the aged, and about the scientific research on all aspects of aging.

Awards Given at Banquet

At the Society's annual banquet, awards were presented to Dr. Klaus Riegel and Dr. Ollie Randall. Dr. Riegel, department of psychology, University of Michigan, received the Robert W. Kleemeier Award for outstanding contributions to aging research.

Dr. Randall received the Donald P. Kent Award for the member setting the highest standards of leadership in gerontology. She was one of the first presidents of the Society and a founder of the National Council on Aging.

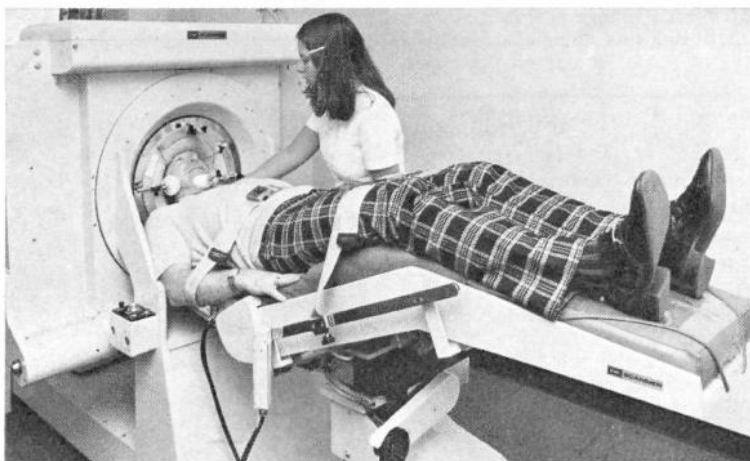


Dr. Andres stated that research on aging must be carried out in order to understand the aging processes and to develop medical standards of normality for older people.

NCI Section Moves to Med Br.

The NCI Cytogenetic Oncology Section has been transferred from the Office of the Associate Director to the Medicine Branch, Division of Cancer Treatment. Dr. Jacqueline Peng will continue to head that Section.

CC's Computerized EMI Scanner Helps Scientists to Diagnose Brain Disorders



Radiology technologist Susan Inscoe positions former NIH'er William Sweeney in the EMI Scanner. The controls and computer are in an adjacent room which has a window for observation of the patient.

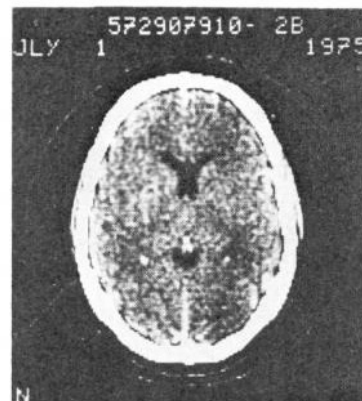
The Clinical Center recently acquired an EMI scanner, a newly-developed computerized X-ray device used to diagnose brain disorders. The new scanner provides more useable and precise information than conventional methods, with less X-ray exposure for the patient.

There are other advantages as well: the scanner does not produce the unpleasant and sometimes hazardous side effects associated with conventional methods—such as pneumoencephalograms or carotid angiograms—and does not require hospitalization of the patient.

Unlike traditional techniques, injection of contrast media is not always required and the procedure can be done in a half hour to an hour while the patient rests quietly.

The scanner uses advanced X-

ray techniques and a mini-computer to produce a series of cross-section images of the brain. The X-rays pass through the head in a series of exposures which sensitive crystals register and transmit to the mini-computer.



This Computerized Axial Tomogram (EMI Scan) shows a cross section of the normal brain. The black portion in the center has the characteristic "butterfly" appearance of the intracranial ventricles.

The computer produces a print-out and a picture on a cathode ray tube which may be photographed with a Polaroid camera to form a permanent record. Doctors can then visualize multiple levels of the brain to determine the presence and extent of any abnormalities.

The only Federal hospital in the area to have an EMI scanner, the Clinical Center has used the scanner to examine more than 600 patients since May.

About half have been CC patients; the remainder were referred from other Government hospitals such as Walter Reed Army Medical Center and the National Naval Medical Center.

NIGMS Council Meets, Includes 4 New Members

Four recently appointed members were among those attending the National Advisory General Medical Sciences Council meeting held Nov. 19-20 at NIH.

The Council meets three times a year to review applications for research and research fellowship awards and to advise the National Institute of General Medical Sciences on policy matters and science manpower needs.

Dr. John C. Norman, professor of surgery at the University of Texas and director, Cardiovascular Surgical Research Laboratories, Texas Heart Institute, will serve on the Council through September 1977.

In 1962 Dr. Norman was an NIH Extramural Fellow at the University of Birmingham, England. Later that year he joined the faculty at Harvard Medical School, where he remained until 1972.

Appointed to Council terms through September 1979 are: Dr. Daniel L. Azarnoff, Dr. George J. Brewer, and Frank J. Mares.

Dr. Azarnoff, professor of medicine and pharmacology, director of the Clinical Pharmacology-Toxicology Center, and distinguished professor of the University of Kansas Medical Center, was a National Institute of Neurological Diseases and Blindness special trainee from 1958 to 1960.

Was Fulbright Scholar in Sweden

He has been a John and Mary R. Markle Scholar, a Burroughs-Wellcome Scholar in Clinical Pharmacology, and a Fulbright Scholar at the Karolinska Institut.

Dr. Brewer, a professor in the department of human genetics, University of Michigan Medical School, previously directed the Army Malaria Research Project of the University of Chicago from 1961 to 1963.

Mr. Mares, a third-year medical student at the University of New Mexico School of Medicine, received his B.S. degree from Colorado State University, where he also studied veterinary medicine for 2 years.

Plan End-of-Year Leave; Carry-over Is 240 Hours

The 1975 leave year ends at NIH on Jan. 3.

Employees whose projected accumulation of annual leave exceeds the maximum allowable for carry-over into the 1976 leave year—generally 240 hours—should be making plans to reduce the excess to avoid having to forfeit it.

Mummies, Other Relics of the Past Reveal Ancient Diseases, Says Dr. Giacometti

Dr. Luigi Giacometti, director of Extramural Programs in Cataract and Corneal Diseases, National Eye Institute, has somewhat esoteric extra-curricular interests—paleohistology, the study of tissues from pre-historic remains and mummies, and paleopathology, the study of diseases in ancient times.

Dr. Giacometti, who came to NIH in 1972 as a Grants Associate, first studied mummies while he was an associate scientist in the department of cutaneous biology at the Oregon Regional Primate Research Center.

There he met a visiting scientist and fellow Italian, Dr. Bruno Chiarelli, who was chairman of the department of anthropology in Turin and director of a museum of Egyptian antiquities.

Remains Date Back to 4,000 B.C.

Dr. Chiarelli had with him fragments of mummy skin dating back to predynastic times, about 4000 B.C. From exhumations in a cemetery in Asyut, Egypt, in 1905-1910, the museum in Turin has large quantities of mummified remains for scientists to examine.

Careful archeological digs and scientific investigation of ancient remains may be a recent development, but use of mummified remains is not, Dr. Giacometti points out. In the Middle Ages, mummies were used in witchcraft or ground into powder and used as drugs.

In fact, Dr. Giacometti has heard there is a drug store in New York that still dispenses ground mummy at \$40 an ounce. In the Renaissance the powder was used by painters, who called the pigment "mummy." Actually, the color may derive from the tarry materials used as preservatives as well as from the bodily remains.

Drs. Giacometti and Chiarelli undertook three types of study. First, they performed gross anatomical and then histological examination. Rehydration previous to embedding and sectioning proved quite difficult, as the tissues were in various states of preservation.

Next they performed biochemical studies. For instance, analysis of fatty acids in the skin showed them to be indistinguishable from those of persons today.

Finally, tissues were subjected to the scanning electron microscope.

The skin was generally well-preserved, more by the dry climate than by the elaborate embalming methods employed. Although the hair follicles were mostly destroyed, the hair itself could be studied. Erythrocyte-like structures were found intact and in clumps, indicating the location of blood vessels whose walls had disappeared.

In an article in *Science* (Vol.

180, 1973), Dr. Michael R. Zimmerman of the University of Pennsylvania confirmed the existence of red blood cells in a 2000-year-old American Indian mummy.

Through these and other studies, scientists at many institutions around the world are developing lists of diseases found in ancient populations and are comparing the prevalence of those diseases then and now.

Subsequent to publication by Drs. Giacometti and Chiarelli of their studies of mummy skin (*Archives of Dermatology*, June 1968), an international meeting of paleohistologists was held in Turin.

Now that Dr. Giacometti is working at NEI, has he studied that organ in the mummies? Impossible, he says.

Egyptians Replace Eyeballs

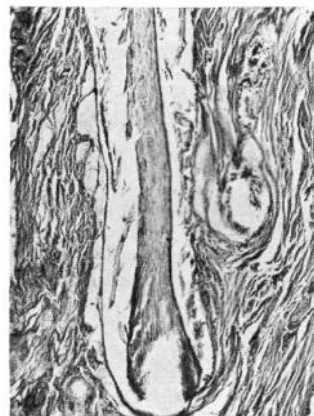
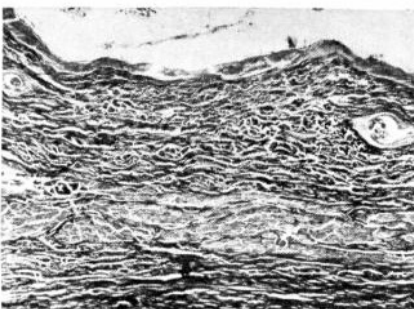
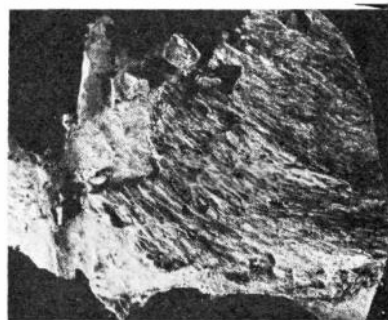
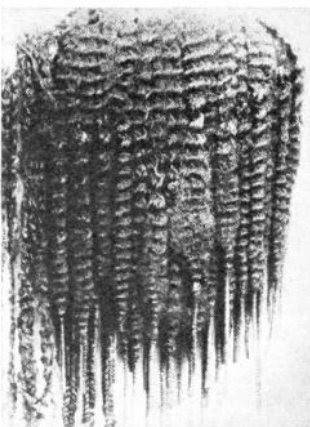
Because the eyes lose their bright glister after death, the Egyptians removed and replaced eyeballs to retain a life-like appearance. Depending on the status of the person and the time of burial, a mummy's "eyes" might



Dr. Giacometti, who also teaches Italian classes for FAES, mixes business and pleasure in his office surroundings. A diagram of the human eye shares wall space with a photo of the Duomo in Florence.

be painted stones, cloth stuffed with sand, or even small onions!

Dr. Giacometti has continued his interests in mummies since coming to NIH and has undertaken studies of disease in more recent times as well. Recently he completed a paper on skin, the hand, and the thumb, including observations on Queen Mary Tudor of England and the painter Albrecht Durer, who both had the anomaly of ricket thumbnail, as shown in their portraits.



Mummies often appear to have great masses of hair—actually wigs made of animal hair like this braided one (above l). A portion of scalp as it appeared before rehydrating treatment, sectioning, and staining for histologic study (above r). A section of eyelid skin (below l), showing epidermis, compressed collagen fibers, and the orbicular muscle on the lower left. An unusually well-preserved hair (below r).

Hoover, Li, Mulvihill Head Sections in NCI Epidemiology Branch

Several appointments have recently been made in the Epidemiology Branch of NCI's Division of Cancer Cause and Prevention: Drs. Robert N. Hoover, Frederick P. Li, and John J. Mulvihill.

Dr. Hoover has been appointed head of the Environmental Studies Section, where studies of cancer in large population groups are conducted to identify environmental factors that may play a role in causing cancer.

Clues to such factors may be found in studies of groups that differ in diet, occupation, air pollution exposure, or other defined environmental characteristics.

Dr. Hoover joined the Epidemiology Branch in 1972. From 1971 to 1972 he was a teaching fellow at the Harvard University School of Public Health.

He received a B.A. degree from the University of Notre Dame in 1964; an M.D. degree from Loyola University of Chicago in 1968, and a Master of Science in Hygiene from Harvard in 1970.

Dr. Li Heads Boston Station

Dr. Li has been named head of the Boston Field Station, where he will maintain a regional registry of childhood cancer survivors and their offspring in an effort to obtain new leads to cancer causes.

Studies at the station include patients at the Children's Cancer Research Foundation and other hospitals in Boston.

Some research is also done in collaboration with epidemiologists at the Harvard School of Public Health and its affiliated hospitals.

Dr. Li joined the Epidemiology Branch in 1967. From 1969 to 1971 he worked in the hematology division of the Peter Bent Brigham Hospital, and the oncology division, Tufts and New England Medical Center. In 1971 he rejoined NCI at the Boston Field Station.

He received a B.A. degree from New York University in 1960, and an M.D. degree from the University of Rochester in 1965.

Dr. Mulvihill, who joined the Epidemiology Branch in 1970, has been appointed head of the Clinical Genetics Section. This section's research concerns genetic characteristics that can lead to higher-than-average occurrence of cancer in family groups.

It also collaborates with other NIH investigators in studies to clarify mechanisms of susceptibility to cancer.

He received a B.S. degree from The College of the Holy Cross in 1965; a B.M.S. degree from Dartmouth Medical School in 1967, and an M.D. degree from the University of Washington School of Medicine in 1969.

CFC Reports Indicate NIH Can Reach Quota If More Participate

Despite a slow start, the NIH Combined Federal Campaign—which ends next week on Dec. 9—is coming down the homestretch with a chance of surpassing its quota.

Last week's reports show that NIH has reached 79 percent of its goal of \$199,400. Total contributions are \$158,005, with the individual gift averaging \$35.99. Employee participation, which was also lagging early in the campaign, has increased to 45 percent.

Donations Jump 18%

The largest increase in contributions came after CFC Week, Nov. 10-14, with donations jumping 18 percent. Heavy rain slowed CFC Day activities on Nov. 12, when a CFC truck decorated with banners and playing recorded music circulated around the campus to spark interest in the campaign.

Miss Maryland World, Erinn Pittenger, rode on the truck with campaign officials who introduced her to employees at Bldgs. 1, 31, 35, and 38.

"Full participation has been a problem . . .," according to Dr. Carl Kupfer, NEI Director and CFC vice-chairman. "Those who have contributed have done so generously, as shown by our average gift per person. But less than half of NIH employees have made contributions so far," he said.

It's the Act That Counts

"I would therefore remind employees who have not yet contributed to the CFC that the amount of the gift is not as important as the act of giving.

"I am confident that enough people will respond favorably in the final days of the campaign to put us over the top again this year," he commented.



Despite the rain, CFC Day activities on Nov. 12 stirred up enough interest to produce the largest weekly increase in NIH contributions, from 49 to 67 percent of the quota. But San-wich the Clown implores NIH to increase its donations and go over the top for the third straight year.

With only a few days left in the campaign, seven NIH units have now surpassed 100 percent of their quotas: NIA, 168%; NIGMS, 163%; NLM, 136%; DRG, 135%; NEI, 130%; FIC, 114%, and NICHD, 104%.

Other NIH units which still have a chance to go over the quota are: NHLI, DCRT, and NIAMDD, all with 97%; NINCDS, 93%; NIDR, 92%, and DRR, 90%.

Those with outstanding percentage of employee participation thus far are: NIGMS, 100%; DRR, 95%, and FIC, 93%.

Highest average gifts have been donated by: NIAMDD, \$75 per person; DCRT, \$64.71; FIC, \$57.76, and NICHD, \$56.15.



During a long, wet tour of the NIH reservation, CFC workers take a break. L to r are: NIH Guard Harry Levine; San-wich the Clown (Bernard Hamburger); Tony Anastasi; Fran Goff; Marty Walsh; Vivian Ray, former Miss Teenage America contestant; Erinn Pittenger, Miss Maryland World; driver Charles Brown, and NIH Guard Kenneth McDermon.

Testis Cell Surface Hormone Receptors Isolated, Studied by NICHD Scientists

Scientists have identified and isolated the surface membrane components of testicular cells which regulate production of the male sex hormone, testosterone, according to a recent report by Dr. Maria L. Dufau, David W. Ryan, Albert J. Baukal, and Dr. Kevin J. Catt of the National Institute of Child Health and Human Development in the *Journal of Biological Chemistry*.

Isolation of these "receptor" molecules—which are activated when occupied by a pituitary hormone (LH, luteinizing hormone) carried in the bloodstream to the testis—marks the first time that such receptors have been isolated in a highly purified form.

Although the findings were derived from experiments with rat testis cells, similar receptors are present in the rat ovary and in the human testis and ovary.

In the male, normal receptor function and consequent testosterone output are necessary for the production of mature sperm needed to fertilize the female ovum, or egg.

In the female, the receptors are necessary for ovarian production of female sex hormones, and for maturation and release of the ovum, under the influence of pituitary hormones.

The report by Dr. Dufau and colleagues mainly concerns the hormone receptors of the testis cells, each containing about 6,000 receptor sites.

Maximum testosterone production occurs when only 50 to 100 of these sites are occupied by LH released from the pituitary gland, and the uptake of additional LH by receptors does not further increase testosterone output.

Similar results were obtained when a chemically similar hormone from the placenta (HCG, human chorionic gonadotropin) was used in place of LH.

The receptors controlling testosterone production were found to be proteins linked to carbohydrates and fats; they exist as an integral

part of the cell membrane. Each receptor has a radius of 64 angstroms, or about one-half millionth of a centimeter.

Compared with other proteins, the LH receptor molecule is relatively large, with a molecular weight of 194,000, contrasted with 6,000 for a molecule of insulin, and about 67,000 for hemoglobin.

When the receptor is occupied by LH, the molecular weight of the complex is increased by about 15 percent, indicating that each receptor combines with one LH molecule.

The NIH scientists separated the receptors from testis tissue by breaking the cells, purifying the fragments by centrifugal force, and releasing the receptors by adding detergents. In these experiments, radioactively labelled pituitary hormone was used to identify the testis cell receptors.

Process Described

By measuring the amount of radioactivity, the receptors' physical characteristics such as molecular size and weight could more readily be determined. Affinity chromatography, a process by which the receptors are trapped by HCG attached to agarose beads, was used to purify the receptors.

The scientists noted that for some years the hormones LH and HCG have been available for treatment of certain forms of male infertility and that the recent identification of receptor components should lead to greater understanding of the mechanisms involved in testosterone production and male fertility.

Dr. Dufau also described several aspects of the research at the Ninth Males International Symposium on Cell Membrane Receptors, held at Johns Hopkins Medical School in Baltimore.

Dr. Mary Maver Dies; On Original NCI Staff

Dr. Mary E. Maver, a retired cancer researcher, died recently in Bethesda. Dr. Maver joined the PHS Hygienic Laboratory—a forerunner of NIH—in 1930. She was a member of the original staff of the National Cancer Institute, where she worked until her retirement in 1961.

Dr. Maver's research included the isolation and characterization of proteinases from tissues and diagnostic tests for cancer-related substances in body fluids.

She received both her B.S. and Ph.D. degrees from the University of Chicago, and later, was a Douglas Smith Fellow at that university.

SHER Holds Discussion Dec. 4

On Thursday, Dec. 4, several officers of the NIH Self Help for Equal Rights organization will answer questions on how to prepare for a desk audit and other topics. The meeting, open to all, will be held at 3 p.m. in Conference Room D, Westwood Building.

Call Lulie Terry, Ext. 67391, or Hope Taylor, Ext. 64045, for further information.

In 1950 Dr. Maver was chosen Woman of the Year by the Soroptimist Club. She was cited for her professional achievements, interests in the community, and contributions to the social and economic advancement of other women.

BLOOD DONOR PROFILES

Family, Friends, and Neighbors Roll Up Sleeves; Fill Heart Surgery Patient's Need

Third in a series

When Ruby Pence of Beltsville had open heart surgery this fall at the Clinical Center, she required 13 pints of replacement blood, including—like all patients placed on heart-lung machines during operations—7 pints of blood to prime the machine.

Mrs. Pence is doubly fortunate. She recovered quickly, and by the time she was resting at home she also found that she had 15 friends and relatives who had volunteered to replace the blood used for her surgery.

Non-Donor Assists, Too

Her husband, Kenneth, had already given blood before the operation. George White, a friend who knew he was disqualified as a blood donor, offered to organize other donors—mostly members of Greenbelt Baptist Church and neighbors—and arranged to have doctors and nurses available at the CC Blood Bank on Saturday, the time most convenient for the donors.

Four relatives, 11 friends, Mr. Pence, and Mr. White convened in the Blood Bank about 10 a.m. Three at a time, they were asked the standard medical history questions.

All cheerfully rolled up their sleeves—Blood Bank personnel to work and donors to give—so that 12 pints were collected in just under 2 hours. Three of the 15 people were unable to donate for reasons such as low hemoglobin, recent dental work, or medication they had taken that day.

Encourages Group Appointments

"We really like to get scheduled groups like this," says Dr. Harvey Klein, acting chief, Blood Services Section, CC Blood Bank Department. "I don't mind coming in on Saturday or during the evening so that we can really help people with major blood needs. A large group of donors can be handled more efficiently this way rather than spacing them through our daily routine schedules."

"Since we have personnel on duty in the Blood Bank on Saturday, we're happy to set up appointments for people who have schedule conflicts that make it difficult to donate during regular working hours. It's no trouble as long as we know in advance."

"It's really gratifying to see a group like this that knows they're helping someone special in an irreplaceable way. We could use lots more like them."

Groups or individuals wishing to make special appointments for blood donations may call Ext. 61048.

Relatives of NIH employees and of NIH patients may also be volunteer donors. Special times for donations may be arranged, for

instance, on Saturday, Sunday, or during early evening hours.

A doctor is on duty in the Blood Bank during regular hours including Saturdays and on-call at all times.

While whole blood can be stored 21 days before use, and some blood products can be stored frozen indefinitely, almost all blood obtained by the NIH Blood Bank is used fresh that day or within 5 days.

Cardiac surgery patients, in particular, must have fresh blood—they can't wait until tomorrow.



Three at a time, prospective donors are asked questions about their health and have their blood pressure, temperature, and hemoglobin checked. L to r: George White, Gary Perkins—a fourth cousin and friend, he says—and Hilda White answer the nurses' questions. Elaine Collins (c) is more usually found at the computer terminal in the Blood Bank, but helped out with refreshments for the Saturday donors, including Ms. White (l) and Ms. Schultz (r).



Rachele Schultz, an experienced blood donor and a church friend of Mrs. Pence, chats with Mr. Pence and Mr. White (r) halfway through her donation. The first donor finished, Mrs. Pence's nephew, Charles Pence (far r) relaxes and has another chocolate chip cookie.



Gerry Ritacco (l), a first-time donor, smiles and tells nurse Virginia Weber if he'd known giving blood was this easy, he would have done it sooner. William Shields and Rev. Dallas E. Pulliam (r), pastor of Greenbelt Baptist Church, wear gauze bandages that show they've earned their coffee, juice, and cookies.

NIH Visiting Scientists Program Participants

11/6—Dr. Asok Ganguly, India, Laboratory of Tumor Cell Biology. Sponsor: Dr. Anthony Shrecker, NCI, Bg. 37, Rm. 5C12.

11/9—Dr. Ibrahim Aykac, Turkey, Laboratory of Chemical Pharmacology. Sponsor: Dr. Gopal Krishna, NHLI, Bg. 10, Rm. 8N107.

11/9—Dr. S. Subramanian, India, Laboratory of Molecular Biology. Sponsor: Dr. G. Felsenfeld, NIAMDD, Bg. 2, Rm. 301.

Visits from Poland

11/10—Dr. Hanna Maria Swiderska, Poland, Laboratory of Infectious Diseases. Sponsor: Dr. Robert Purcell, NIAID, Bg. 7, Rm. 202.

11/16—Dr. Maria Fiore Meldolesi, Italy, Clinical Endocrinology Branch. Sponsor: Dr. Jacob Robbins, NIAMDD, Bg. 10, Rm. 8N315.

11/10—Dr. Jaroslav Rejnek, Czechoslovakia, Laboratory of Infectious Diseases. Sponsor: Dr. Rose Mage, NIAID, Bg. 10, Rm. 11D10.

Sir Geo. Godber, FIC Scholar, Gives Talk at AMWA Chapter

At a recent meeting of the Mid-Atlantic Chapter of the American Medical Writers' Association, Sir George Godber, FIC Scholar, discussed the national health services in Great Britain.

Dr. Godber, who was former chief medical officer of the British Department of Health and Social Security, is delivering a series of lectures—at NIH—on the work of the department he headed.

The chapter also presented a plaque to Dr. Godber "for his long service in medical writing and interpretation of the health system of Britain."

Dr. Richard Feinberg, NINCDS, is president of the AMWA chapter.

John J. Lewis, NIMH, Dies; Photographer Here Since 1957

John J. Lewis, a medical photographer in the Laboratory of Neurophysiology, Intramural Research Program, National Institute of Mental Health, died Nov. 5 at age 62.

Mr. Lewis began his Federal career in 1940 as a photographer with the Department of Agriculture Aerial Photography Laboratory, and worked as a medical photographer at the Walter Reed Army Medical Center from 1949 until he came to NIH in 1957.

Several investigators with whom he worked during his 18 years here cited his technical skill and the consistent excellency of his work.

Mr. Lewis is survived by his wife, Elaine, and three sons.

New NIAID Councillors Represent Many Facets Of Research Experience

Five new members have been named to serve on the National Advisory Allergy and Infectious Diseases Council: Dr. Wilford S. Bailey, Dr. C. Edward Buckley III, Gloria Goldstein, Dr. Samuel L. Kountz, and Dr. Paul G. Quie.

The appointments of Drs. Bailey and Quie will be effective through September 1978. Those of Dr. Buckley, Mrs. Goldstein, and Dr. Kountz extend through September 1979.

Dr. Bailey is research professor of parasitology at Auburn University School of Veterinary Medicine and has many years of experience in dealing with health problems caused by parasitic diseases. He has been a member of the Auburn staff for most of his professional career.

He left Auburn in 1972 when he was appointed chief of the Parasitology and Medical Entomology Branch of NIAID's Extramural Programs and returned there in 1974 to assume his present position.

From 1964 to 1969, he was a member of the NIAID Training Grant Committee, serving as chairman from 1968 to 1969.

Duke Professor Named

Dr. Buckley is associate professor of medicine and assistant professor of immunology at Duke University Medical Center. He has an extensive background in clinical medicine with a special research interest in immunologic and allergic diseases.

He developed an elemental chemical to reduce the number of intestinal bacteria in patients with severe allergic disorders and/or compromised immunity. His diet, designed to provide nutrients in the same form as they are found in the human body, has been used successfully to treat patients with chronic urticaria and with disabling asthmatic bronchitis.

Directs Public Affairs

Mrs. Goldstein is director of public affairs at the University of Alabama in Birmingham. She has held several posts on the Birmingham campus during the last 14 years, with major responsibility for public relations at the University's medical and dental institutions. She assumed her present position in 1963.

Active in a number of local and national service, educational, and health organizations, Mrs. Goldstein was presented a special award earlier this year for service to the Red Cross Blood Program.

Dr. Kountz has been professor and chairman of the department of surgery at the SUNY Down-

ENERGY TIPS



Do you know how to dress to help save energy?

- Three garments are warmer than one. Dress warmly when going outdoors, but in layers that can be adjusted to changing temperatures.

- Choose fabrics appropriate for the temperature. 100 percent wool is warmest. Avoid polyester knits if warmth is a major consideration.

- Pantyhose can be worn under almost anything. Ribbed or opaque ones are warmest.

- Vests or linings can be attractive as well as warm.

- Flannel nightwear, afghans, and blankets can keep you toasty warm while the thermostat is turned down or you are less active, for instance reading or watching TV.

- Buy durable clothing. Replacement of less durable items requires more energy. Also, some items require cleaning, ironing, and other care that uses energy.

state Medical Center since 1972.

A pioneer kidney transplant surgeon, he has done extensive research on the use of organs from unrelated cadaver donors, suppression of the immune reaction, typing of kidney tissue, and techniques of preserving human kidneys for transplants.

He joined the Department of Surgery at Stanford University School of Medicine in 1959 and remained until 1967. From 1967 until 1972 he served as associate professor of surgery at the University of California San Francisco of Medicine.

Dr. Quie, an international authority on white blood cells and infectious diseases, has been professor of pediatrics, laboratory medicine, and pathology at the University of Minnesota since 1968.

His research interest in strep-

NEW PERINATAL CENTER NURSERY OPENS

(Continued from Page 1)

and humidity.

Incubators, in conjunction with monitoring instruments, regulate the quantity, composition, humidity, and temperature of the breathing gases as well as continuously following heart rate, body temperature, and lung function.

The Center is to be one of the first units in the CC equipped with a computerized information system for gathering, transmitting, and storing medical information. The system records and displays physician's orders, nursing plans, admission and discharge data, and clinical research protocols.

Staff, Facilities Described

The Center staff includes 12 pediatricians, nursing staff, child psychologist, child nutritionist, and social worker.

Up to 10 patients can be admitted during the initial period, to be increased in time to 20 or more.

The care and study of small infants require frequent, biochemical analyses for diagnostic purposes, to check the progress of treatment, and to indicate the need for modifying medication or special formulas.

Because of the infants' size and condition, only minute samples of blood may be obtained—usually from the heel with a tiny capillary tube.

Sensitive Tests Aid Diagnosis

Highly sensitive, precise, ultramicrolevel blood chemistry procedures accomplish the necessary tests with the small samples available. Today multiple tests are performed with a sample that a few years ago would have been sufficient for only a single determination.

The Special Care Nursery is now prepared to accept newborns on referral from physicians—particularly babies with metabolic disorders offering special diagnostic and therapeutic challenge. Patients are usually transferred from other medical institutions in transport incubators with an NICHD staff pediatrician and a professional nurse assisting.

Mothers may be admitted when necessary—for example, in studies of breast feeding and behavioral interaction.

The NICHD outpatient clinic provides intensive follow-up of in-

tococcal and staphylococcal infections led to his appointment in 1974 as American Legion Memorial Heart Research Professor. Through his research on white blood cells, Dr. Quie has also made major contributions to understanding of the body's immune systems.

fant's under study for long periods.

In addition, with the approval of Dr. Farrell, Ext. 65581, or Dr. James Hansen, Ext. 69111, physicians in other Institutes may admit patients to the Nursery where NICHD pediatricians will provide care for infants under study.

There are about 50,000 deaths each year in the U.S. of babies up to 28 days of age. Roughly half of these are LBW infants.

Slow Growth Causes Difficulties

The LBW infant either was denied the growth spurt normal fetuses experience in the last 12 to 16 weeks before birth, or its rate of growth *in utero* was retarded. Because the LBW infant's life support mechanisms are poorly developed, it may experience difficulty in regulating its body temperature, feeding, breathing, growing, and developing essential metabolic functions.

LBW infants require highly spe-



Dr. Farrell places a sample coil containing plasma from a newborn in an automated amino acid analyzer. Samples of 0.1 ml of blood or urine are processed automatically through ion exchange columns for measurement of all 21 common amino acids. Final results appear on printed tapes within 3 hours.

cialized nursing care and elaborate equipment that may not be available in many hospitals. Intensive care for an LBW infant has cost as much as \$80,000.

Recent Changes Cited

High mortality rates for LBW infants have been reduced dramatically by recent developments in rapid diagnosis and intensive life support techniques.

Hyaline membrane disease, a fairly common lung disorder for which there was no effective treatment prior to 1971, can now be diagnosed prenatally and treated successfully.

Despite such advances, the U.S. ranks 13th among developed nations in infant mortality.

DR. GRIFFO

(Continued from Page 1)

veloping a precise series of activities to improve the status of institutions with minority enrollments. Now we have an individual who will do just that; who has a personal commitment to the problems, and a responsibility to develop this area in concert with other components of NIH including awarding institutes, the Division of Contracts and Grants, and the EEO Council."

Dr. Malone stated that Dr. Griffo will also serve as coordinator for STEP, and the Grants Associate Program. He termed the programs eminently successful and he considered that under Dr. Griffo's guidance both programs will be further strengthened.

Joined NIH in 1969

Dr. Griffo has been at NIH since 1969. She came here as a Grants Associate; one year later she was named chief of NIDR's Developmental Biology and Anomalies Program. After a year there, she was named chief of NIDR's Caries Branch Program.

In 1973, Dr. Griffo was among seven who were selected for the Potential Executive Development Program. After completing the one-year program she was assigned to Dr. Malone's office.

Dr. Griffo received her B.S. from St. Bonaventure University in New York, and her Ph.D. from the University of Buffalo Graduate School where she specialized in cardiovascular physiology.

From 1959 to 1961, she did research in the thoracic physiology laboratory at Washington University in St. Louis. For several years after this assignment, Dr. Griffo continued her research and scientific writing on a free-lance basis before joining NIH.



Dr. Griffo was assigned to Dr. Malone's office after completing the one-year Potential Executive Development Program. She was one of seven selected for that program.



During his visit here, Dr. Mathews' tour of the CC included Institute laboratories and the CC Radiology Department. The scientists explained their research and displayed the tools that are used in their studies. (Below left) Dr. Jean R. L. Heidt (right), deputy chief of the CC Radiology Department, told about the workings of an EMI head scanner to Dr. Mathews and Dr. James F. Dickson III, HEW Acting Deputy Assistant Secretary for Health. (Above) NHLI's Dr. Walter L. Henry explains to the visitors and Dr. Fredrickson how moving pictures of the heart are taken with ultra sound. Dr. Julius Axelrod (below right), NIMH, is introduced to Dr. Mathews. Dr. Axelrod, whose lab is in the CC, is one of the three Nobel laureates on the campus.—Photos by Tom Joy.

Succession, Designation of Beneficiaries Detailed

Must I designate a beneficiary to make sure my survivors will receive any benefits to which they are entitled?

The answer to this frequently asked question is NO—unless you want to name a person who is not included in the usual "order of precedence," or if you want benefits to accrue to survivors listed in a different order or to name a firm, corporation, or other legal entity as beneficiary.

Usual Order Listed

The usual "order of precedence" for the beneficiary of Federal Employee's Group Life Insurance, Civil Service Retirement, and any unpaid compensation is the first of the following persons alive on the date of a Federal employee's death.

1) *The widow or widower.* In insurance claims, the courts have ruled that "widow" means lawful widow. Accordingly, a woman who contracted marriage with a man who had a living undivorced wife is not entitled, upon his death, to the insurance as his

widow.

2) *If neither widow or widower is alive, the beneficiary is the child or children in equal shares, with the share of any deceased child distributed among the descendants of that child.*

3) *If neither widow, widower, nor children are surviving, the parents are the beneficiaries in equal shares or the entire amount to the surviving parent.*

4) *If neither (1), (2), or (3) of the above are surviving, the executor or administrator of the estate is the beneficiary.*

5) *If none of the above, the next of kin—as determined under the laws of the State in which the insured was domiciled—is the beneficiary.*

The Division of Personnel Management reminds employees who wish to depart from the above "order of precedence" to contact their personnel office to obtain and execute appropriate Designation of Beneficiary forms.

Chemical Index Guide Available; Interrelates 3 Previous Systems

A new publication designed especially for users of the TOXLINE data base provides a chemical index guide to substances cited in the first three volumes of *Abstracts on Health Effects of Environmental Pollutants* (HEEP).

This guide, a result of cooperative efforts by NLM, BioSciences Information Service (BIOSIS) of Biological Abstracts, and Chemical Abstracts Service (CAS), relates CAS registry numbers cited in the HEEP portion of TOXLINE to the names of the chemicals they identify.

Project officer for this cooperative effort is Bruno M. Vasta of NLM's Specialized Information Services.

Refers to Published Studies

TOXLINE—toxicology information on-line—is NLM's computerized data base containing over 375,000 references to published human and animal toxicity studies, effects of environmental chemicals and pollutants, adverse drug reactions, and analytical methodology.

The guide contains about 28,000 chemical names and is organized in two parts: the Substance Name Section includes chemical names, common and generic names, and trade names, all with specific CAS registry numbers; the Number Section includes all names and synonyms in the CAS nomenclature file for any registry number cited in HEEP.

Subscribers to the current volumes of HEEP will receive a free copy of the chemical index guide; additional copies may be purchased separately from BIOSIS.

For further information write: Office of Research and Development, BioSciences Information Services of Biological Abstracts, 2100 Arch Street, Philadelphia, Pa. 19103.

Dr. Robert J. Huebner Wins Immunology Research Award

Dr. Robert J. Huebner, chief of NCI's Viral Carcinogenesis Branch, and 16 other scientists were recently honored by the Cancer Research Institute, New York City, for outstanding achievements in the field of immunology.

Dr. Huebner received a medal and cash award for his pioneering studies, particularly for his discovery of T antigens in tumors induced by the DNA tumor viruses—adenovirus, SV-40, and polyoma.

The Cancer Research Institute inaugurated the annual awards program this year to honor scientists conducting outstanding research in immunology.