

# The NIH Record

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of  
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## Scientists Achieve Breakthrough in Gene Transfer Research

In a major advance in genetic engineering, scientists have transferred a gene for growth hormone from rats to mice, resulting in mice that grew to twice the normal weight. "This is the first time we have seen such dramatic expression of a transferred gene throughout an entire animal," said Dr. William Sadler, chief of the Reproductive Sciences Branch in the National Institute of Child Health and Human Development, which supported the research.

This breakthrough was reported in a recent issue of *Nature* by a group of scientists including Richard Palmiter from the University of Washington, Ralph Brinster from the University of Pennsylvania, Michael G. Rosenfeld from the University of

## New 24-Hour Herpes Test Developed By NINCDS for Pregnant Women

By Diane Striar

A new 24-hour test to detect herpes simplex infections in pregnant women and their babies has been developed by scientists in the Infectious Diseases Branch of the National Institute of Neurological and Communicative Disorders and Stroke.

The new test is almost 100 percent accurate and takes only 1 day to complete rather than the 7 days required by most currently available tests.

"The most important value of the 24-hour herpes test is to pregnant women who may have an active genital herpes infection," said branch chief Dr. John L. Sever. "These women should be tested as close to the time of delivery as possible so that their children

are not exposed to infection."

By establishing a diagnosis of herpes (or no herpes) near the time of delivery, the new test will help physicians decide whether to perform a cesarean section to prevent transmitting the infection to the newborn.

With most standard tests, a woman near term may not find out that she has an active case of herpes until she has already delivered her baby vaginally, and perhaps passed on the infection. About 1 in 7,000 babies is born with herpes.

Infected babies may suffer serious consequences—including seizures, permanent brain damage, and mental retardation. The virus is dangerous to newborns because  
(See *HERPES TEST*, Page 9)

## 36 Senior NIH/NIMH Staff Members Receive Bonuses for Outstanding Performance

Thirty-six Senior Scientific and Senior Executive Service staff members of the National Institutes of Health and National Institute of Mental Health recently received outstanding performance awards ranging from \$6,000 to \$12,000. Bonuses were delivered from Health and Human Services Secretary Richard S. Schweiker, Dec. 23, along with congratulatory letters to the recipients.

Initiated under the Civil Service Reform Act of 1978, this is the third year the awards have been presented. The SES/SSS started in 1979 with approximately 200 members from NIH/NIMH opting to leave their super-grade level positions to join the SES and become eligible for these yearly performance bonuses.

The process for selection of award recipients and determination of the dollar amount of each award is extremely thorough and rigorous. Each SES/SSS member in the Department received an initial performance appraisal from his or her supervisor based upon the objectives and standards spelled out in the individual's performance plan.

Members of the SES/SSS were considered for nomination by six performance review boards (PRB's) made up of top-level NIH management officials. The nominations were reviewed by the Director's Advisory PRB, which collated the six lists from the first PRB's. Final recommendations were

then made to NIH Director Dr. James B. Wyngaarden.

Dr. Wyngaarden made recommendations to the Assistant Secretary for Health, which were then combined with other Public  
(See *NIH/NIMH BONUSES*, Page 6)

## Dr. Murray Goldstein Appointed NINCDS Institute Director

Dr. Murray Goldstein, who holds the rank of Assistant Surgeon General in the Public Health Service, has been appointed Director of the National Institute of Neurological and Communicative Disorders and Stroke. The appointment was announced Dec. 23 by NIH Director Dr. James B. Wyngaarden.

Dr. Wyngaarden also announced the establishment of two new executive positions within NINCDS: associate director for communicative disorders, and associate director for neurological disorders. A search is under way for candidates for these positions.

Dr. Goldstein has been Acting NINCDS Director since February 1981. During a 23-year career with the Institute, he has also served as deputy director, NINCDS (1978 to 1981), director, stroke and trauma program  
(See *DR. GOLDSTEIN*, Page 10)



The mouse on the left received a gene for rat growth hormone, and grew to nearly twice the size of its littermate on the right.

California—San Diego, and Ronald M. Evans from the Salk Institute for Biological Studies, along with their colleagues Drs. Robert Hammer, Myrna Trumbauer, and Neal C. Birnberg.

Scientists have speculated for some years about the possibility of transferring genes from one animal into another, as a way of replacing defective or missing genes with normal genes from another source.

Until recently, however, it was not clear that this would be technically feasible or, if it were, whether the transferred genes would work properly in their new host.

(See *GENE TRANSFER*, Page 4)

# The NIH Record

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## Training Tips

The following courses sponsored by the Division of Personnel Management are given in Bldg. 31.

	Course Starts	Deadline
<i>Supervisory and Management</i>		
Managing Performance Feedback	2/7	1/25
Committee Dynamics	1/26	1/10
Time Management	2/23	2/9
<i>Communications Skills</i>		
Principles of Editing	2/28	2/9
Effective Listening	3/17	2/17
<i>Office Skills</i>		
Medical Terminology II	3/3	2/14
Files Maintenance and Disposal	3/1	2/14
Proofreading	3/7	2/11

To learn more about these and other courses, contact the Development and Training Branch, DPM, 496-6371.

## NICHD Seeking Women Volunteers for Study

The National Institute of Child Health and Human Development is seeking women to participate in a study of fluctuation in hormone levels and moods. Candidates should be between the ages of 18 and 50 and not be taking oral contraceptives.

Participants will keep daily records of their moods and come to NIH for a blood test and interview once weekly for 10 weeks. Compensation is \$400 for the 10-week study.

For more information call Dr. Michele Koppelman at 496-4686. □



Dr. Harald Loe (l) was officially sworn in as the fifth Director of the National Institute of Dental Research during a ceremony held Jan. 10 in Wilson Hall. NIH Director Dr. James B. Wyngaarden (r) officiated, while Mrs. Loe assisted. Dr. Loe is widely recognized for his contribution in the field of periodontology and service in dental education. He was formerly dean of the University of Connecticut School of Dental Medicine.

## New Inclement Weather Policy Issued for Handicapped Workers

Are you mobility impaired? Do you need a wheelchair, braces, crutches, or a cane to get around? If so, you may find it extremely difficult during icy winter conditions to reach your office.

Did you know that in such cases there is a way to be granted administrative leave?

HHS and the Division of Personnel Management, NIH, have issued policy memorandums stating reasonable accommodations for handicapped employees during severe, inclement weather.

This policy provides for a separate liberal leave policy agreement to be developed between the employee and his or her supervisor. The agreement must specifically detail the conditions under which travel would be unreasonably hazardous for the employee.

The key to providing such hazardous

weather leave is that identification of the individual employee affected must be made by the BID in advance of inclement weather, and a mutual agreement must be made in advance, documented and signed by the employee and supervisor.

Copies of each employee/supervisor agreement must be retained either in the Administrative Office, or in some other central location within the BID.

The NIH Handicapped Employee Advisory Committee suggests that any employee or supervisor who thinks that he/she or someone under their supervision may fit into the mobility impaired categories listed (e.g., use of wheelchair, crutches, etc.) contact their BID personnel office or special placement officer for further details on this policy. □

## "Operation Clean-Up" Starts in February

The 17th annual "Operation Clean-Up" will be conducted at NIH during the month of February. The campaign's objective is to effect economies in the government by utilizing idle equipment and supplies.

Last year, the campaign resulted in identifying 611 line items of equipment valued at \$450,860, which were subsequently transferred to Property Utilization and reissued to other NIH or government activities.

Willie Bowles, Jr., assistant director for materiel management, DAS, states that each NIH component should initiate a "house cleaning" in order to make the campaign successful.

NIH organizational segments are requested to organize internal "walk-thru" teams, to be accompanied by a representative of the Personal Property Branch. The teams hope to identify administrative, laboratory and scientific equipment which can be

made available for redistribution on a cost-free basis to other activities.

In the interest of safety, fire hazard, and general appearance, it is suggested that special attention be given to cluttered hallways and/or storage areas. BID property representatives will notify areas of specific dates of the walk-thru.

It is requested that NIH personnel cooperate and make this year the most successful "Operation Clean-Up." □

## SINGERS WANTED

It's not too late—the NIH Singers resumed rehearsals Jan. 17. Among the events planned for this spring is a joint concert with the NIH Chamber Orchestra. There are still openings available in all voice parts.

To arrange an audition or obtain additional information, please contact Tony DeMarinis, 496-6442. □

# 'NIH Record' Editor, Jerry Gordon, Retires

Jerry Gordon, *NIH Record* editor for the past 2 years, retired Dec. 31, after a colorful and varied career in communications. Before coming to the *Record*, Jerry was assistant information officer for the Division of Research Resources for 10 years.

Originally from Brooklyn, N.Y., and one of six brothers, Jerry grew up during the Depression years. Starting his career in 1937 earning \$12 a week with the Butcher's Advocate Publishing Company in New York, he first learned writing and editing skills there that benefitted him in later years.

"These early years really set the course for the rest of my life," he said. "I knew I wanted to write for my livelihood."

In 1938, Jerry came to Washington, D.C., married in 1939, and began working for Muzak, Inc., eventually becoming general manager, writing all advertising and planning promotional campaigns for the next 14 years. During World War II, he enlisted in the Coast Guard and became company correspondent. After the war, he took all the communication courses offered by American University.

Jerry moved to Pueblo, Colo., in 1953, where he was an account executive and later national sales manager of the NBC-affiliated television station KCSJ. At the station, he wrote commercials, produced, announced and acted in programs, which were sold to various sponsors. "I was able to do all the things I love to do," he said.

One program he created was called "Judge for Yourself," a "People's Court" type program in which citizens "sounded off" on various issues. He was also the weekly host of "The Late Night Movie," and coproduced *A Christmas Carol*, starring as Scrooge.

His favorite character creation, however, was named "Fryin' Pan," who appeared in a weekly program featuring a live barn dance complete with Clydesdale horses.



Jerry is shown hosting the "Late Night Show" on station KCSJ-TV in Pueblo, Colo.

From Pueblo, Jerry returned to Washington to become public relations director of the Warren Adler Ltd. advertising agency. On one occasion, on very little notice, he was asked to write a telegram greeting the Israeli government to be signed by former President Richard M. Nixon.

### Wrote Presidential Telegram

One thousand American rabbis were scheduled to go to Israel for a symposium and the president wanted to send a telegram of friendship with them. His two-page telegram was eventually accepted and signed by Mr. Nixon.

He also wrote ads and planned publicity for Levitt, well-known home builders and community developers, Adler's biggest account. Levitt had constructed several major housing developments in Bowie, Md., and retained the agency to promote

their houses.

Jerry produced a series of free children's shows, but the audience had to pass through the model homes area to get to the outdoor theater. Employing Bob Freed, a booking agent and wrestling announcer as emcee, the two booked and produced 12 different shows for the Levitt development.

The themes ranged from a Mexican fiesta to a circus, with trained dogs and horses and even featured retired welterweight Bobby Foster in a boxing exhibition. A tremendous success, children loved the show, parents were delighted with the free professional entertainment, and Levitt enjoyed the sales.

Jerry eventually became a free-lance writer, covering Washington for 2½ years for a string of trade publications. He was known as "Your Man in Washington." He later became associate editor of *Life Association News*, a monthly insurance magazine published by the National Association of Life Underwriters.

In March 1971, he joined DRR's Office of Science and Health Reports. In 1979, he won the First Award for Distinguished Medical Writers from the American Medical Writers Association.

Drama and entertaining are Jerry's favorite pastime. He has directed the Mt. Olivet players; a Masonic dramatic group; has written three plays, one of which was based on the life of John Wesley (founder of the Methodist Church) and produced nationally. The play, *The Warm Heart*, has been copyrighted and donated to the United Methodist Church.

He is an active member and past president of the NIH Toastmasters Club. Throughout his years at NIH, he has acted as master of ceremonies at special NIH functions and also entertained with his unique characterizations. Some of these were "Fryin' Pan," "Professor Grantswinger," "The Preacher," and as a carnival barker.

In 1981, Jerry became editor of the *NIH Record*. He described the position as "demanding, with a lot of headaches, but also a lot of fun."

In retirement, he plans to relax. "Then I will probably do some free-lancing here and there. It won't be technical writing; I'd like to do more creative work! No more '9 to 5,'" he said.

Jerry may take advantage of his recently earned certificate on the "Art of Clowning" from Northern Virginia Community College as "Old Dusty," a tramp (shades of Emmett Kelly). □



Jerry as "Fryin' Pan" (second from l) appeared with country singer Roy Acuff (c) and the Grand Old Opry Gang on KCSJ's live barn dance show.

### R&W Travels to 'Big Apple' To See Hit Play, 'CAT'S'

R&W is offering a weekend trip to New York City on Saturday, Apr. 23, to see the Broadway play *CAT'S*. The cost is approximately \$150 per person and includes a night's stay at the Milford Plaza Hotel, ticket to *CAT'S*, bus transportation, and more. A deposit of \$25 is required.

For further information contact the R&W Activities Desk, Bldg. 31, Rm. 1A18. □

## Dr. George Brooks Retires; Leaves for Saudi Arabia

Dr. George T. Brooks, associate director, Division of Extramural Activities, NIADDK, will retire Jan. 21 after 33 years of government service to become medical research administrator and advisor at King Faisal University in Saudi Arabia.



Dr. Brooks

During his 8 years at the Institute, Dr. Brooks directed the scientific and administrative management of NIADDK's program for awarding research and training grants, and served as principal advisor to the Institute Director in planning and administering programs, policies, and operating procedures.

From 1971 to 1974, he was associate director for Extramural Collaborative Programs, National Eye Institute, and was deputy director of the Division of Research Grants from 1969 to 1971.

Dr. Brooks performed his undergraduate and graduate work at the University of Kansas. He received his Ph.D. degree in entomology from that university in 1949, and spent the following 3 years in teaching and research.

In 1952, he joined the Information Cooperation Administration, the forerunner of the Agency for International Development, as a research specialist in entomology. He was initially assigned to advise the government of Nepal on establishing a plant protection service and malarial control program.

Katmandu, Nepal, a country high in the

Himalayas, had been closed to foreigners for 100 years. According to Dr. Brooks, he and his family were among the first Americans to be admitted to the country. "When we got to know the Nepalese, we realized the universality of human values." During this time, he became friends with an elderly Nepalese man and his young son. The man was very concerned about the son's future.

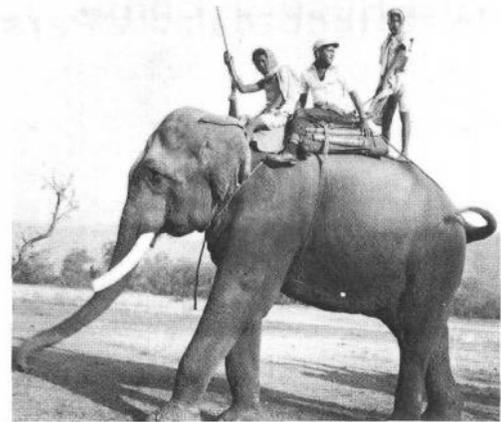
"One day the boy appeared on my doorstep with a note from his father asking me to take him and rear him as my own," Dr. Brooks said. "The boy was about 13. We put him in a local private school and when our assignment was completed, left enough money in the bank to cover his college expenses. Being very bright, the boy won several scholarships, today, that young man is one of the outstanding textile engineers in Nepal."

Dr. Brooks' own two sons, who were babies in Nepal, are now grown. One serves in Brazil as assistant manager of a bank in Belo Horizonte, and the other works as food production manager of a Chicago hotel.

After living in Nepal for 5 years, he and his family began a series of assignments in Pakistan, Lebanon, and Iran, where he assisted and advised the governments of the Middle East, North and East Africa, and south Asia on the control of locusts and other pests.

In 1962, he became a grants associate with NIH, and in 1963, was appointed training consultant to the National Institute of Child Health and Human Development. In 1965, he became director of the NIAMD Hematology Grants Program. He was made deputy chief of NIH's Latin American Office in 1966, and appointed chief of that office in 1968.

His honors include nomination in 1954 for the Arthur S. Flemming Award, which recognizes outstanding young people in the



Dr. Brooks and his family spent 5 years living in Nepal, one of the many countries where he advised governments on the control of locusts and other pests.

Federal Government in scientific and administrative careers. In 1960, he was selected to organize the first U.S. government-sponsored seminars on insect control for all independent countries in Africa. In 1973, he received the Department's Superior Service Award.

With his new assignment as advisor at King Faisal University, Dr. Brooks and his wife will return to the Middle East. Mrs. Brooks, an avid art collector, has bronzes, sculptures, and paintings from all over the world. She was formerly the oriental art consultant with a local department store.

"Our new assignment will give us an opportunity to travel to new and interesting places," he said. "I have enjoyed working with people at NIH, but now it's time to move on. This is a good time to start a new career—I think I have a few good years left," Dr. Brooks concluded. □

## GENE TRANSFER

(Continued from Page 1)

In the last 3 or 4 years, several reports have appeared of the transfer of genes from one cell type into another, and even from one animal into an animal of a different species.

In an earlier study funded by NICHD, Drs. Palmiter and Brinster were among the first to successfully transfer nonmouse (viral) genes to mice, where the genes produced a viral enzyme. But until now, there had been no indication that transferred genes worked in a useful manner.

The critical feature of the experiments reported in *Nature* is the fusion of a strong and active regulating genetic element to a useful gene.

The investigators combined the gene that produces growth hormone in the pituitary gland of rats with a regulating element from a blood protein gene of mice. This fused gene complex was transferred to fertilized mouse eggs by a sophisticated microinjection procedure.

The eggs containing the injected gene complex were then placed in surrogate mothers where they continued their development. A number of the injected eggs gave rise to healthy embryos which were born after the usual gestation period.

Although the newborn mice appeared normal, within the next few weeks many of them grew very rapidly and continued growing until their body weights were almost twice that of normal mice.

The accelerated growth of these animals clearly indicated that the injected genes were working in the developing mice. This was confirmed by chemical analyses of their blood, which showed that the rapidly growing mice contained unusually large amounts of growth hormone.

The investigators discovered that growth hormone was being produced in substantial amounts by the liver, presumably because the gene-regulating element is normally active there.

Although it is impractical to apply this technology to humans, it nevertheless has a number of important implications. The experiments show that it is possible to transfer genes from one animal to another and to have the transferred genes function in a more or less normal way.

Applications of this technology to large farm animals may have practical consequences; for example, it may allow the production of important biological products such as hormones which are not now available or are available in only limited amounts.

Also, the ability to accelerate growth rates in domestic animals could have beneficial

effects by increasing the yield and quality of meat and milk. An especially important advantage is that the injected genes should be passed to the animal's offspring which, in turn, are likely to produce large amounts of the desired gene products.

Finally, these discoveries will provide productive lines of experimentation in laboratory animals, allowing new approaches to studying how and why genes turn on, or "express" themselves. Through research on gene expression, a central mystery of modern molecular biology, a better understanding of both congenital diseases and cancer should be gained. □

## January Is Voluntary Blood Donor Month

January is Voluntary Blood Donor Month, and the Clinical Center Blood Bank is sponsoring its fifth annual month-long blood drive. The 1983 voluntary blood donor theme is "Every tomorrow needs blood donors today."

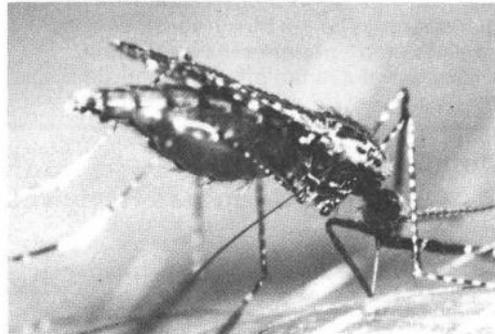
The need for whole blood and blood components for various kinds of operations and therapy of patients has greatly increased in the past year. The Blood Bank depends on employees, their families and friends to make these products available for those who need them in the CC.

Call the Blood Bank at 496-1048. □

# Highly Sensitive Tests Developed To Detect Malaria Parasites in Mosquitoes

Tests that can detect malaria parasites in infected mosquitoes have been developed by a scientific team from New York University and the National Institute of Allergy and Infectious Diseases.

The tests are radioimmunoassays and grew out of research designed to develop a malaria vaccine. Proven successful in the



Radioimmunoassay tests can now detect malaria parasites in infected mosquitoes. "Anopheles" mosquitoes are important malaria vectors in tropical Africa.

laboratory and with wild-caught mosquitoes, the assays could improve our understanding of the epidemiology of malaria.

Malaria occurs when protozoan parasites of the genus *Plasmodium* are inoculated into the bloodstream by the bite of *Anopheles* mosquitoes carrying the infective, or sporozoite, stage of the parasite.

Until now, the only way to detect sporozoites in the mosquito was by hand dissection and microscopic examination of the tiny salivary glands of individual freshly caught mosquitoes. Not only was this tedious, but the species of the parasites could not be determined.

Thus, one had no way of knowing whether observed parasites belonged to one of the four species infective to man or were species that infect animals.

The dissection technique was also time-

consuming, since most mosquitoes, even in tropical areas where malaria exists, are not infected. During African malaria epidemics, 1 percent to 5 percent of the mosquitoes may be infected, but in Central or South America or Asia, infection rates may be as low as 1 in 1,000.

The new techniques simplify detection of malaria parasites since they rely on readily automated procedures based on immunologic principles (the reaction between antigens and antibodies) rather than laborious dissection and microscopy.

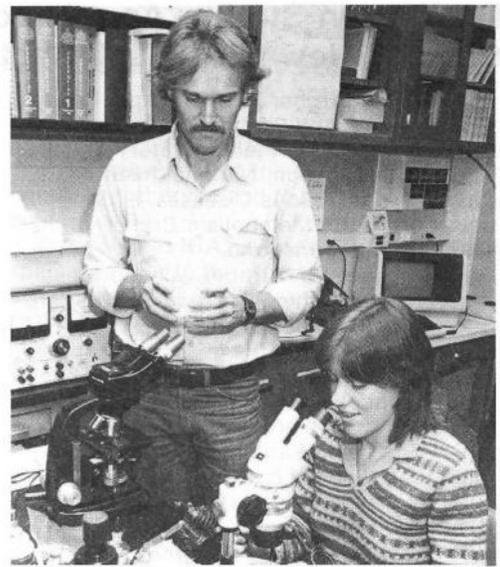
Highly specific monoclonal antibodies, produced by hybridoma technology, indicate the presence and identity of sporozoites. If two or more species are present in a mixed infection, they can be identified simultaneously by labeling each species-specific monoclonal antibody with a different radioactive isotope.

The assays have two additional advantages: (1) mosquitoes can be tested in groups as well as individually since the techniques are sensitive enough to detect one infected mosquito in a pool of 25, and (2) the assays can be performed on dead, dried mosquitoes long after collection, with no special storage required. Keeping the dried mosquitoes at room temperature for months will not affect the test results.

The assays will enable epidemiologists to determine what percentage of a mosquito population is infected and therefore capable of transmitting malaria to man. Being able to calculate mosquito infection rates will allow scientists to study patterns of malaria transmission and to assess the effect of control campaigns using antimalarial drugs or insecticides.

If mosquitoes are separated by species before testing, it is also possible to determine which mosquito species are transmitting which malaria species, so that mosquito control programs can be aimed at the appropriate vector.

Funded primarily by the U.S. Agency for



After 6 weeks in Africa, Drs. Patricia Graves (r) and Collins demonstrate how they sorted some 3,000 mosquitoes by species and sex (only the female mosquito transmits malaria). Half of the mosquitoes were examined by the old dissection method and half by new radioimmunoassays.

International Development and the World Health Organization, a team from NIAID and NYU has evaluated the tests under field conditions in The Gambia, West Africa.

When confirmed, these techniques could be applied to malaria studies throughout the world, and similar tests using specific monoclonal antibodies could be used to detect other vector-borne parasites of humans or animals.

This study was initially reported in *Nature* (Oct. 21, 1982) by Drs. F. Zavala, R. S. Nussenzweig, and V. Nussenzweig of NYU and by Drs. R. W. Gwadz and F. H. Collins of NIAID. □

## Visiting Scientist Program Participants

11/1 Dr. Marina Stojanov, Yugoslavia, Developmental and Metabolic Neurology Branch. Sponsor: Dr. Roscoe Brady, NINCDS, Bg. 10, Rm. 3D04.

11/1 Dr. Charles Theillet, France, Laboratory of Cellular and Molecular Biology. Sponsor: Dr. Robert Callahan, NCI, Bg. 37, Rm. 1A07.

11/1 Dr. Wang Lai-che, China, Immunology Branch. Sponsor: Dr. Dinah Singer, NCI, Bg. 10, Rm. 5B17.

11/3 Dr. Robert Craigie, United Kingdom, Laboratory of Molecular Biology. Sponsor: Dr. Martin Gellert, NIADDK, Bg. 2, Rm. 322.

11/4 Dr. Aydin Tozeren, Turkey, Biomedical Engineering and Instrumentation Branch. Sponsor: Dr. Seth Goldstein, DRS, Bg. 13, Rm. 3W13.

11/5 Dr. Joanne Chou, China, Laboratory of Pre-clinical Pharmacology. Sponsor: Dr. Erminio Costa, NIMH, St. Elizabeths Hospital.

11/8 Dr. Osborne Almeida, United Kingdom, Developmental Endocrinology Branch. Sponsor: Dr. George Merriam, NICHD, Bg. 10, Rm. 10B09.

11/8 Dr. Doris G. Pfeiffer, West Germany, Developmental Endocrinology Branch. Sponsor: Dr. George Merriam, NICHD, Bg. 10, Rm. 10B09.

11/8 Dr. Bahige Baroudi, Lebanon, Laboratory of Molecular Oncology. Sponsor: Dr. George Vande Woude, NCI, Bg. 41, Suite 100.

11/8 Dr. Indira Krishnan, India, Laboratory of Pathophysiology. Sponsor: Dr. Pradman K. Qasba, NCI, Bg. 10, Rm. B1B42.



A team from NIAID and NYU evaluated the new radioimmunoassays on mosquitoes collected from bed netting in village huts in The Gambia, West Africa. Dr. Graves (l), an NIAID Fogarty visiting fellow, accepts a bit of breakfast from a Gambian woman during early morning collection rounds.

## Dr. Warren Strober Appointed Chief of New NIAID Lab Section

Dr. Warren Strober has been appointed chief of the recently created mucosal immunity section in the Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Diseases. He was previously in the Metabolism Branch of the National Cancer Institute.

As MIS chief, Dr. Strober will coordinate research on the immune processes that are associated with the wet surfaces, or mucosal membranes, in the gastrointestinal and respiratory tracts.

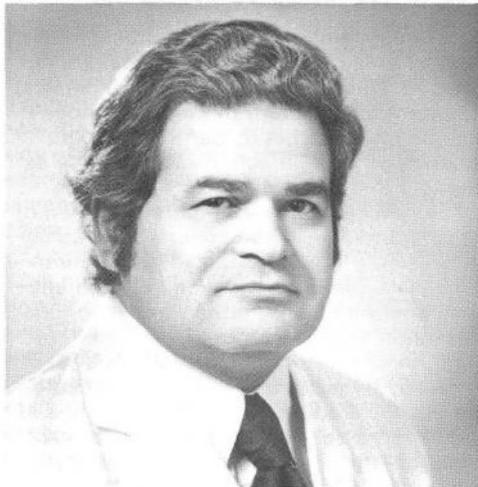
In the mucosa, white blood cells known as B lymphocytes produce a greater proportion of one type of antibody, called immunoglobulin A (IgA), than of other classes of antibody (IgG and IgM). One major research thrust of the new section is to discover why this is so, and what regulates the production of IgA.

Another area of investigation is diseases of the mucosal system that have an immunologic basis. The primary focus is inflammatory bowel disease, consisting of Crohn's disease, which usually affects the small intestine, and ulcerative colitis, an inflammation of the large bowel. The exact cause of these diseases is not known, but they appear to be due to an imbalance in the mucosal immunity system, which leads to chronic inflammation.

The symptoms of Crohn's disease, or ileitis—a not uncommon disorder from which President Eisenhower suffered—initially include abdominal pain, diarrhea, weight loss, and fevers. As the disease progresses, fistulas, or small open passages, can develop through the wall of the intestine, causing intense pain and sometimes infections. Intestinal blockage may also occur.

There is no cure, but treatment with anti-inflammatory drugs such as sulfasalazine or with steroids is useful. Surgery is sometimes necessary but usually not curative.

In collaboration with Dr. Hidenori Kawaniishi, a guest scientist from the Veterans Administration, Dr. Strober is studying blood from patients with Crohn's disease



Dr. Strober has received several honors, including a PHS Distinguished Service Award in 1979 and the Distinguished Achievement Award from the American Gastroenterological Association in 1981.

and plans to examine diseased intestinal tissue removed at surgery for evidence of abnormal immune function.

A native of Brooklyn, N.Y., he began his NIH career in 1964 as a clinical associate in the Metabolism Branch of NCI. In 1967 he was promoted to the position of senior investigator and became head of the immunophysiology section in 1977.

Recognized as an authority on the breakdown of immunoglobulins, Dr. Strober is particularly known for his work on celiac disease, in which patients have a sensitivity to bread and other cereal products, due to the presence of gluten. He was involved in proving that this disease is mediated by an immune process.

Another career highlight centered around his study of immunodeficiency diseases, a group that includes the much publicized hypogammaglobulinemia of homosexuals with Kaposi's sarcoma. He was among the first investigators to study patients with Wiskott-Aldrich syndrome and ataxia telangiectasia at the Clinical Center. □

## Former FIC Scholar Dies

Dr. Hans Lindner, 60, Director, Adlai Stevenson Institute of Endocrinology, at the Weizmann Institute of Science, Rehoboth, Israel, died recently. He was a Fogarty scholar-in-residence at NIH from Aug. 5, 1980, through Aug. 4, 1981.

Dr. Lindner was well-known for his pioneering work in reproductive endocrinology. During his long career he made important contributions to knowledge of the mechanisms of steroid hormone action with particular reference to the biosynthesis of estrogenic steroid hormones, as well as the regulation of ovarian progesterone synthesis by prolactin.

## Opportunities for Research In Developing Countries Reviewed

The National Institute of Allergy and Infectious Diseases, Fogarty International Center, and the Agency for International Development hosted two collaborative workshops to determine how biomedical research can be expanded or more effectively directed in developing countries.

Participants at the first workshop, held Dec. 13-15, 1982, considered the potential for improving health and productivity on a global basis; the Dec. 16-17 workshop focused specifically on Latin America and the Caribbean.

Approximately 50 internationally recognized scientists from developed and developing countries made recommendations for research that would be aimed at four major disease groups considered serious impediments to socioeconomic development processes: acute respiratory diseases (including tuberculosis) and diarrheal, parasitic, and viral infections.

These diseases have a particularly disastrous effect on three population groups: children under age 5, women of childbearing age, and the labor force, which in developing countries includes a disproportionately large percentage of women.

The recommendations can be grouped into three areas— (1) epidemiologic field studies to determine the frequency, distribution, and patterns of disease, (2) accelerated development and use of rapid diagnostic techniques, and (3) expanded field trials of new drugs and vaccines in areas of high disease prevalence.

It was judged that research agencies in industrialized countries and international agencies such as the World Health Organization currently provide marginal to inadequate research support in these three priority areas. The panels emphasized that sustained support for a minimum of 5 to 10 years will be required to derive the most benefit from projected research. They recommend that AID explore flexible administrative mechanisms that would allow the stability required for this time frame.

The panels also discussed ways to strengthen independent research in developing countries and stressed that country-specific priorities are needed to guide allocation of scarce resources. Opportunities for collaborative research between scientists in developing and industrialized countries were also recommended. □

## NIH/NIMH BONUSES

(Continued from Page 1)

Health Service nominees. After Departmental review, the final list was approved by the Secretary.

The 1982 awardees were:

Philip D. Amoroso	NCI
Dr. W. French Anderson	NHLBI
Dr. Julius Axelrod	NIMH
Dr. Edwin D. Becker	OD
Barbara S. Bynum	NCI
Dr. Elliot Charney	NIADDK
Dr. Louis A. Cohen	NIADDK
Dr. William G. Cooper	NLM
Dr. Erminio Costa	NIMH
Dr. John C. Dalton	NINCDS
Dr. John W. Daly	NIADDK
Dr. Carl D. Douglass	DRG
Dr. Murray Eden	DRS
Dr. Gunther L. Eichhorn	NIA
Dr. Edward V. Evarts	NIMH

Carl A. Fretts	OD
Dr. Sara A. Gardner	NIGMS
Dr. Clarence J. Gibbs, Jr.	NINCDS
Dr. Victor Ginsburg	NIADDK
Dr. Eli J. Glatstein	NCI
Dr. Eugene K. Harris	DCRT
Dr. Thomas J. Kindt	NIAID
Dr. Lloyd W. Law	NCI
Dr. Robert A. Lazzarini	NINCDS
Dr. Claude J. Lenfant	NHLBI
Norman D. Mansfield	OD
Dr. George R. Martin	NIDR
Dr. Franklin A. Neva	NIAID
Dr. James F. O'Donnell	DRR
Dr. Betty H. Pickett	DRR
Dr. Lester B. Salans	NIADDK
Dr. Kenneth W. Sell	NIAID
Dr. Yale J. Topper	NIADDK
Storm H. Whaley	OD
Michael F. White	NHLBI
Dr. Marian R. Yarrow	NIMH

## Dr. Feinleib Named Director, NCHS

Dr. Manning Feinleib, associate director for epidemiology and biometry and chief of the Epidemiology Branch of NHLBI's Division of Heart and Vascular Diseases, has been appointed Director of the National Center for Health Statistics.

In his new position, Dr. Feinleib will assume the responsibility for coordinating the collection of statistical information about the Nation's health and its dissemination.

He began his career at NIH in 1966 as a research epidemiologist for what was then the National Heart Institute. His research activities have included the establishment of the Framingham Offspring Study, a continuation of the Framingham Heart Study to a second generation, and the NHLBI Twin Study.

Dr. Feinleib has published extensively on many aspects of cardiovascular epidemiology as well as on biostatistical and genetic methodology. He has served as vice-chairman of the NIH Epidemiology Committee since its establishment in 1977 and was instrumental in setting up the PHS Epidemiology Training Program.

In addition to his positions at NIH, he is a visiting lecturer on epidemiology at Harvard University, clinical professor in the department of community medicine and international health at Georgetown University, and associate at the Johns Hopkins University.

During 1971-1972, Dr. Feinleib served as president of the Society for Epidemiologic Research, and in 1972 he received the



**Dr. Feinleib has published extensively on many aspects of cardiovascular epidemiology as well as on biostatistical and genetic methodology.**

Speigelman Gold Medal Award from the statistics section of the American Public Health Association.

He is the immediate past president of the American Epidemiological Society and, in 1982, received the PHS Superior Service Award.

Dr. Feinleib received his A.B. degree from Cornell University, his M.D. from the State University of New York Downstate Medical Center, and his M.P.H. and Dr. P.H. from Harvard University. □

## NIAID Laboratory Secretary Wilma Paxton Retires

Wilma Paxton, laboratory chief secretary with the National Institute of Allergy and Infectious Diseases for the past 19 years, retired Dec. 31.

For the past 13 years, Ms. Paxton was secretary to Dr. Franklin A. Neva, chief of the Institute's Laboratory of Parasitic Diseases, and for 6 years was secretary to his three predecessors.

Not content with the "usual" retirement story, she composed her own farewell to NIH as well as her thoughts on the importance of secretaries in all laboratories. Below is her story.

"To my fellow co-workers:

"For 19 years I have traveled the 'Yellow Brick Road' in Bldg. 5. I have worked under the aegis of laboratory chiefs Drs. Leon Jacobs, G. Robert Coatney, Geoffrey M. Jeffery and Franklin A. Neva (Laboratory of Parasite Chemotherapy and the Laboratory of Parasitic Diseases). It has been an edifying and vivid experience.

"I think that people who have not had the opportunity of working in a laboratory atmosphere have missed the experience of being in the thick of the action, for I believe that the laboratory is the 'heart' of the NIH.

"There, scientists enthusiastically conduct important experiments, and the secretary must acquire scientific knowledge and rapidly learn new terminology.

"Here I wish to commend the lab chief secretary because I believe that—in many



**Ms. Paxton acquired a lot of scientific knowledge during her 19 years' secretarial experience in the laboratory.**

cases—she can be the font of much wisdom for the laboratory. Ask her a question and she has the answer, or knows where to obtain the information.

"As for my future plans, I shall play things by ear. I will spend some time in Florida this winter and am looking forward to seeing the Passion Play in Oberammergau (Germany) in 1984. Now, that's called looking ahead!" she added. □

## NIA Launches Prevention Effort On Accidental Hypothermia

The National Institute on Aging has begun its yearly effort to warn the public of the dangers, especially to the elderly, of accidental hypothermia and to advise on ways to prevent it.

According to NIA, winter weather poses a special danger to the elderly because, with age, the body becomes less able to respond to the cold. Accidental hypothermia, a drop in body temperature to 95 degrees or below, can be fatal if not detected and treated properly.

### Precautions Listed

Listed in NIA's "Aging Update," the best precautions against hypothermia are:

- Dress warmly even when indoors, eat enough food, and stay as active as possible.
- Because hypothermia may start during sleep, keep warm in bed by wearing enough clothing and using blankets.
- Heat only one or two rooms of the house to save fuel costs.
- Ask a doctor whether some of the medications being taken—especially those to treat anxiety, depression, nervousness, or nausea—might affect the body's temperature.
- Have friends or neighbors look in regularly, particularly during a cold spell. Some communities have a telephone check-in or personal visit service for the elderly or homebound.

In addition to preparing press releases and radio spots, the NIA has sent material to utility companies across the Nation suggesting that brief advisories on preventing hypothermia be sent to customers with billing notices or in customer newsletters.

Caution, common sense, and prompt medical care can help older people have a healthy winter. A copy of NIA's brochure *A Winter Hazard for the Old: Accidental Hypothermia* may be obtained by calling 496-1752 or writing NIA, Bldg. 31, Rm. 5C35, Bethesda, Md. 20205. □

## Judo Applications Accepted

The NIH Judo Club is accepting applications for the winter beginner's class, to be sponsored by the NIH Recreation and Welfare Association.

Ten classes in basic judo will be held on Tuesdays from 6 to 7:30 p.m., beginning Feb. 1, in the old gymnasium, Stone Ridge School, at the corner of Cedar Lane and Wisconsin Avenue.

Dr. Thomas E. Malone, NIH Deputy Director, will serve as chief instructor, or sensei. He has had extensive experience as a judo instructor and holds a second degree black belt (nidan). Dianne Moore will be coinstructor.

The fee for the 10 sessions is \$35. Application forms can be obtained from Kathleen Thomas or Dr. Malone, Bldg. 1, Rm. 132, 496-2121.

For further information, call Susan Allyn, 496-7195. □

# Surgery Unit of Veterinary Resources Branch Provides Excellent Care for Research Animals

A visit to the surgery unit of the Veterinary Resources Branch, Division of Research Services, points up the invaluable services the unit renders to NIH biomedical researchers.

Investigators from many Institutes perform animal surgery there, assisted by unit personnel, following aseptic surgical standards established and maintained by the unit.

"The animal care here is quite excellent; this facility is patterned after a human operating room," said Ursula Spenner, R.N., operating room nurse in the unit. "Our program includes complete pre- and post-operative veterinary care."

Veterinary surgeon John D. Bacher supervises a staff of seven in the unit, part of VRB's veterinary medicine and surgery section, headed by Dr. David K. Johnson. The unit is located in Bldg. 14E, which was completely remodeled over a 4-year period ending in 1980.

"This is an ideal environment for aseptic surgery on laboratory animals," Dr. Bacher said. "It meets current and proposed animal care requirements, and we're accredited by the American Association for Accreditation on Laboratory Animal Care."

Upon request, Dr. Bacher will perform

care to the animals held there before or after surgery.

Research surgery on monkeys has included brain tissue grafts for the treatment of Parkinson's disease, and the development of new techniques for intrauterine treatment of hydrocephalus, spina bifida, and other developmental abnormalities. Surgery on sheep has included pituitary investigations and blood-brain barrier studies.

Dogs have been used for heart studies, pancreatic transplantation, tendon transplants, and the testing of synthetic vascular grafts. "The range of studies is wide," Dr. Bacher said. "For example, miniature pigs are used to study rotavirus enteritis, hypertension, and malignant hyperthermia."

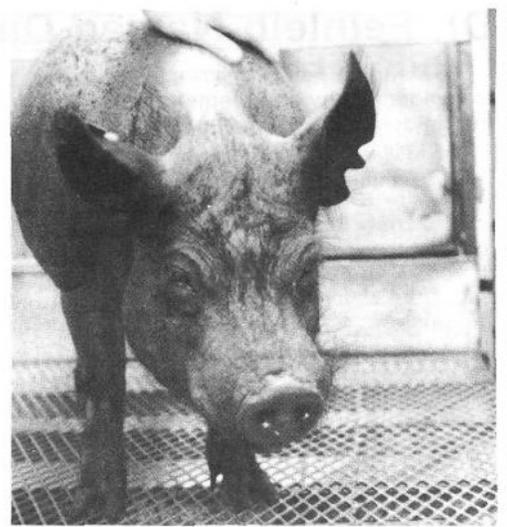
"The unit staff's assistance to investigators is very like the work in a human surgery," Mrs. Spenner said. "We set up and maintain the operating rooms, sterilize the instruments and supplies, premedicate the patient, induce anesthesia, clip and scrub the animal, maintain proper levels of anesthesia so that the animal will feel nothing, monitor EKG and blood pressure during the procedure, and monitor the patient during recovery."

The operating rooms look remarkably like those used for human surgery. Conveniently near the operating tables is an array of equipment that includes anesthesia machine, ventilator, defibrillator, and emergency drug cart. Wall-mounted outlets for oxygen, nitrous oxide, vacuum, and anesthetic evacuator are available.

Other equipment present includes monitors that give digital readouts of heart rate, temperature, and systolic-diastolic and mean blood pressures.

Water from a heat exchanger is available to maintain normal body temperature or produce hypothermia. Much of the equipment has been modified to allow easy access and use during surgery.

"We monitor EKG's and temperature on



The Yucatan pig, originating in Mexico, serves as a research animal model for studying diabetes.

all surgical patients," Dr. Bacher said. "Smaller animals under anesthesia become hypothermic very quickly. Heating pads are used to maintain body temperature as near normal as possible."

A blood gas machine can measure the animal's partial pressures of oxygen and carbon dioxide and its pH (hydrogen ion concentration), calculate other variables from these values, and print the results on a card that can be taken into the operating room.

"Besides being valuable for monitoring the surgical patient, this information often helps evaluate the underlying pathophysiology in various experiments and helps determine the treatment regimen in acid base disorders," Dr. Bacher said.

After surgery, the animals are placed in intensive care cages that are both oxygen and temperature controlled for optimal recovery.

A digital readout of the temperature and relative humidity gives a rapid means of monitoring the environment. An oxygen analyzer is used to maintain a 40 percent oxygen supply during the recovery.

"This unit provides for optimum recovery of the surgical patient," said Dr. Bacher. "It was developed to promote improved experimental results through the best possible surgical and postsurgical care." □



Dr. Bacher stands in front of a blood gas machine which can measure an animal's partial pressures and other variables before surgery.

surgery on animals in collaboration with specific experimental protocols or assist in developing new animal models. He frequently consults MEDLINE and MEDLARS to search for new surgery techniques and recent drug conversions for animals.

Because surgery is especially important in the research of the National Heart, Lung, and Blood Institute, part of Bldg. 14E is occupied by NHLBI, which conducts its own research program there, making use of VRB's preparation and recovery room, sterilization rooms, and other VRB resources.

The surgery unit was designed primarily for use of the larger species of laboratory animals such as the monkey, sheep, goat, miniature pig, dog, and cat, although smaller animals have also been used in recent studies.

Most of the large animals are housed in VRB's comparative medicine unit in nearby Bldg. 28 while on research protocol. Monkeys are housed in the primate research unit in Bldg. 14D. The veterinarians in charge of these units provide veterinary



The surgery room contains the same type of equipment that can be found in a human operating room.

## R&W Offers Computer Classes

R&W is sponsoring hands-on computer classes with a maximum of two students per computer, now being offered by Electronic Learning Facilitators, at the Bethesda Country Day School, approximately one-half mile from the NIH campus.

Courses for adults in basic programming will be held every evening and on Saturday mornings. Special classes for families are available during the winter session.

A 10 percent discount is available to all R&W members and their families. Brochures containing complete course descriptions, class dates and times, and registration forms for the winter session can be obtained at the R&W Activities Desk, Bldg. 31, Rm. 1A18. □

## HERPES TEST

(Continued from Page 1)

their immune systems are not fully matured.

The new test is simple enough that hospitals with virology labs can readily use it. However, "personnel trained in tissue culture techniques are essential," said NINCDS immunologist Dr. Lata S. Nerurkar, the principal investigator on the research team that developed the test.

Like currently available tests for herpes, the new technique involves growing the possible virus on human cells in tissue culture. The suspected virus is grown in eight-



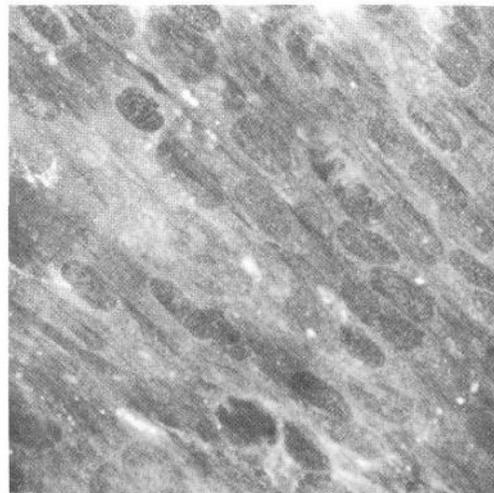
Dr. Nerurkar was the principal NINCDS investigator on the research team that developed the 24-hour herpes test.

chambered slides which have been inoculated with specimens obtained from genital lesions of maternity patients.

"This method allows for an increase in the ratio of the virus to tissue culture cells, making the test more sensitive," said Dr. Nerurkar.

The cultures are allowed to grow in the slide chambers for at least 24 hours before staining. The staining technique developed by the NINCDS scientists involves the use of herpes-specific antibody, chemically bound with biotin (a B-vitamin). The fixed cultures are allowed to react with this antibody for 1 to 1½ hours.

The slides are then washed and stained



Cells stained during the 24-hour genital herpes test show: (l) uninfected human tissue culture cells; and (r) the same cells infected with herpes simplex.

## NIEHS Has Successful CFC Campaign

The National Institute of Environmental Health Sciences scored a record success in its participation in the Research Triangle Area Combined Federal Campaign for 1982-83, raising a total of \$16,276.50 in cash donations and payroll deduction pledges for the coming year. This surpassed by \$3,992 last year's contributions, and by \$1,750.50 the previous record year, 1980-81.

"That this extra effort has been made in a time of economic difficulty, when even prosperous households feel the pinch, shows a real commitment to helping," NIEHS Director Dr. David P. Rall said.

Executive officer Paul G. Waugaman served on the Research Triangle Area CFC Steering Committee. Chairperson this year was Ernest W. Chapman of NIEHS' Office of Administrative Management, and Cochairperson was Carol Matheny, NIEHS Extramural Program.

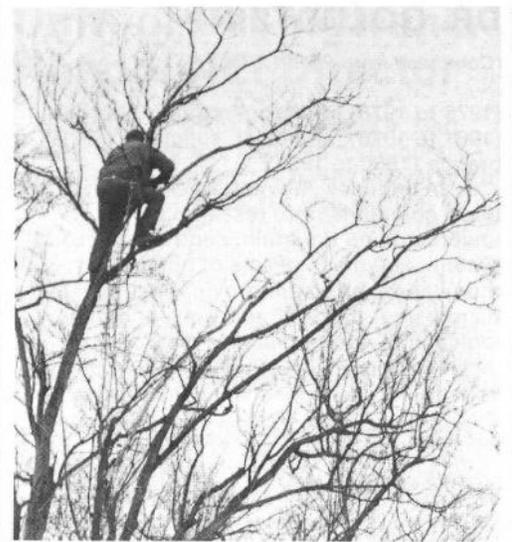
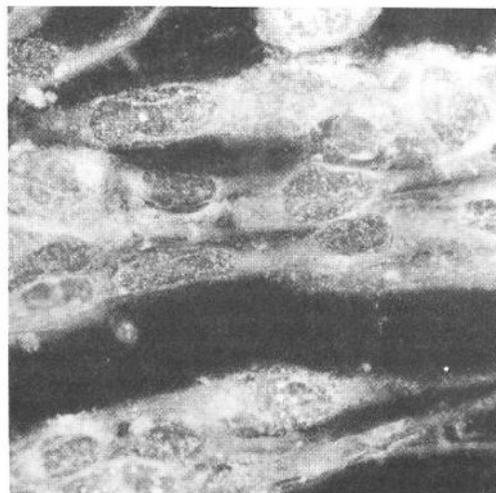
From a permanent pool of 468 employees, 236 contributed for 50.4 percent participation. Cash contributions were made by 83 employees totaling \$1,755, and average cash contribution of \$21.14.

Payroll deduction contributions were made by 153 employees for \$14,521, with the average payroll deduction being \$94.91. Average contribution Institute-wide was \$68.97, for all employees was \$34.78. □

with avidin-bound fluorescein. Avidin is a protein which has a high affinity for biotin. The staining process makes any herpesvirus in the culture fluorescent so it can be seen under a microscope.

The new test, described in the January 1983 issue of the *Journal of Clinical Microbiology* (Vol. 17, pp. 149-154), is the first reported use of the "biotin-avidin-fluorescence" stain method for the detection of viruses.

This method may eventually be used to detect other viruses. For now, the NINCDS Infectious Diseases Branch is working on an even shorter herpes test. "We're really aiming for a 10-minute test," said Dr. Sever, "but a 24-hour test is a significant step in the right direction." □



Vernon N. Taylor gets a good view 40 feet up of the surrounding NIH scenery on North Drive next to Bldg. 31B. As a tree maintenance worker in the Grounds Maintenance and Landscaping Branch, DES, ORS, Mr. Taylor has been pruning dead wood lately from the largest grouping of sugar maple trees on campus. The 50-year-old trees, part of the original Wilson "Tree Tops" estate, line the road leading to Bldg. 15K, the estate home. The Wilsons donated a total of 92 acres to NIH by 1942.

## NEI Grantees Win Awards for Excellence

Four National Eye Institute grantees are recipients of this year's Research to Prevent Blindness, Inc. awards for research of unusual promise.

Dr. Robert Eugene Anderson, an NEI grantee for the past 11 years, received \$60,000. This is the largest individual award for eye research given annually by a private philanthropic organization.

His work explores the role of lipids in degeneration of the photoreceptors, the light-sensitive retinal cells that send visual signals to the brain.

A professor of biochemistry at Baylor University in Houston, Dr. Anderson is a pioneer in the study of photoreceptor lipid metabolism in rod cells. His work raises the possibility that certain retinal degenerations may result from oxidative damage to photoreceptor membrane lipids.

In humans, this type of photoreceptor cell degeneration results in blinding eye diseases such as senile macular degeneration in the aging and retrolental fibroplasia in premature infants. These two diseases are major causes of blindness in the United States.

Dr. Dean Bok of the University of California at Los Angeles, whose investigations of how cell renewal in the retina may relate to retinal degenerations, was recognized with a \$35,000 award.

Dr. Henry F. Edelhauser, Medical College of Wisconsin, Milwaukee, was awarded \$25,000 to continue research on factors which cause corneal edema in humans—natural causes, surgery, and drugs. □

Dr. Robert F. Miller, Washington University, St. Louis, will receive assistance in establishing a tissue culture laboratory to expand his studies of basic retinal neural circuitry. □

## DR. GOLDSTEIN

(Continued from Page 1)

(1976 to 1978), director, extramural program (1961 to 1976), and chief, special projects branch (1960 to 1961).

In an interview, he reaffirmed the Institute's commitment to research aimed at understanding the brain, central nervous system, and mechanisms of human communication, and at improving methods for diagnosing, treating, and preventing neurological and communicative disorders.

"Of all major systems of the body, the nervous system remains the least understood," Dr. Goldstein said. "We need to discover how the brain and nervous system work, why they fail to work, and how to prevent these failures. And when disorders do occur, we need to find ways to minimize their effect."

Research on stroke, the number one neurological problem in the United States, will remain a top Institute priority, according to Dr. Goldstein. "There has been major progress against stroke mortality over the past two decades," he said, "and neurological research being supported at this time offers the promise of even more success for the prevention of brain damage and the return of threatened body function."

"Research on brain and spinal cord injury—particularly on nerve cell regeneration—will also still be a major priority of the Institute."

Calling communicative and sensory disorders "the most poorly appreciated of the serious disturbances of mankind," Dr. Goldstein pointed to several programs the Institute is organizing to remedy this problem.

Two intramural laboratories for communicative disorders have been established, one for basic research, the other for clinical studies.

In the NINCDS extramural program, communicative disorders and sensory disorders research centers are being funded in which multidisciplinary teams will address such problems as hearing loss, language impairment, and disorders of taste and smell.

Commenting on the Institute's contribution to basic research, he said, "Past research has given us the insights and methods needed to develop a more meaningful model of how the brain works. We are on the threshold of knowing how the nervous system acts as the master regulator and



Dr. Goldstein is a member of the editorial boards of the *International Journal of Neurology*, the *Journal of Neuroepidemiology*, and *Osteopathic Annals*, and associate editor of *Stroke*.

coordinator of most body functions."

Dr. Goldstein believes that basic neuroscience research is preparing scientists for achieving the Institute's most important goal: prevention.

"We will be giving even greater attention to identifying the vulnerable points in pathogenesis at which therapy can intervene to prevent the death or malfunction of the nerve cell," he said, adding that prevention "will receive even greater emphasis in the years to come."

A native of New York City, he holds the degrees of doctor of osteopathy and master of public health. From 1967 to 1968, he was a visiting scientist in neurology with the Mayo Clinic and Graduate School.

Dr. Goldstein has been a medical officer in the PHS Commissioned Corps since 1953, when he entered service with the NIH as assistant chief of the Grants and Training Branch, National Heart Institute. He has also held positions with the NIH Division of Research Grants.

He is a consultant to the World Health Organization, and holds membership in the major professional neurological and neuroscience societies, including the American Academy of Neurology, the Society for Neuroscience, the American Heart Association Council on Stroke, and the World Federation of Neurology. He is second vice-president of the American Neurological Association. □

## Four FIC Scholars Arrive in January

Four Fogarty International Center scholars-in-residence are arriving this month at NIH.

Dr. Meir Wilchek, professor of biophysics and head of the department at the Weizmann Institute of Science, Rehoboth, Israel, is well-known for his pioneering studies on "affinity" techniques for the purification of enzymes and proteins. These methods are now widely used in all areas of biology for the purification and identification of important compounds in complex mixtures.

Trained originally as an organic chemist, he has successfully applied synthetic methods to many biological problems particularly in the area of peptide chemistry and the modification of proteins.

Dr. Franx von Lichtenberg, professor of pathology at the Harvard Medical School, is an internationally recognized authority on human and experimental schistosomiasis to which he has devoted most of his career. He will be associated with both the Laboratory of Parasitic Diseases, NIAID, and the Laboratory of Pathology, NCI.

Dr. David Ingvar, professor of clinical neurophysiology at the University of Lund, Sweden, is a leading figure in the study of cerebral circulation of the blood in man and on its behavior in normal and abnormal states. During his scholarship, Dr. Ingvar will participate in ongoing studies in NINCDS, NIA and NIMH.

Dr. Shmuel Shaltiel is professor of chemical immunology at the Weizmann Institute of Science and dean of the Feinberg Graduate School, Rehoboth, Israel. He is internationally recognized for his research on enzymatic control mechanisms, particularly through his studies of glycogen phosphorylase and the development of hydrophobic affinity chromatography.

This technique has proven to be useful for cell separation and for probing cell surfaces. In recent years he has studied diverse subjects including pollen antigens, cAMP-dependent protein kinase histones and membrane function.

The four Fogarty scholars have offices in Stone House and can be reached at 496-1213. □

## NCI Awards \$2.3 Million To University of Chicago

The National Cancer Institute has awarded \$2.3 million to the University of Chicago Cancer Research Center to fund its continuing programs in cancer research, treatment and education over the next 3 years.

Now in its ninth year of support from NCI, the center coordinates a diverse range of basic scientific research programs and clinical activities to solve the problem of cancer.

Major investigations are under way in virology, tumor immunology, cell biology, carcinogenesis, radiation therapy and radiation physics, steroid hormone cell surface receptors and many areas of clinical research.

Treatment involves almost every medical specialty. Over 1,100 new cancer patients started treatment during the past year. □



The R&W Theatre Group donated \$1,000 to the NIH Patient Emergency Fund from proceeds of their "successful three seasons." Alice Page Smyth, chairperson, presents the check to Jerry Stiller, R&W president. Others attending the presentation included (l to r): Sally Richardson, Adele Weeks, Ms. Smyth, Todd Triem, Mr. Stiller, Millie Fenton, Walter Bauman, and Randy Schools.

## Measuring of Infant Perception Explored

How well do newborns hear and see? How can their hearing and vision best be measured? Some 20 scientists from the United States and Canada deliberated on techniques used to measure these sensory systems in infants during a recent conference.

The meeting, Measurement of Audition and Vision During the First Year of Life, was sponsored by the Human Learning and Behavior Branch of NICHD's Center for Research for Mothers and Children.

Drs. Norman A. Krasnegor, HLB branch chief, and Gilbert Gottlieb, chairman of the department of psychology at the University of North Carolina, cochaired the event.

"An estimated 1 to 2 percent of children and youth are hearing-impaired in the United States. Some 3 percent are believed to suffer from amblyopia or dimness of vision," said Dr. Krasnegor.

Since hearing and vision are essential for full development of speech, language, and reading skills, their proper functioning is crucial for the intellectual and social development of the child.

In the past 10 years, improved testing techniques and the establishment of norms have allowed earlier detection and treatment of sensory dysfunctions in infants than ever before.

Development of the inner and middle ear of the human fetus starts in the third week of gestation and much of the structural architecture is finished by mid-pregnancy.

Hardening of the cartilage continues throughout pregnancy and postnatally. However, many scientists believe that the fetus, suspended in an aquatic environment, already is quite capable of hearing during much of the last trimester in utero.

Most of the eye structure is completed in the first trimester, but the retina continues to develop during the second and third trimester and after birth.

Most experts concur that by 3 months of age, a child's vision can accurately be measured for acuity, pattern and color, although these functions continue to develop through the first few years of life.

At the conference, scientists discussed

various behavioral and physiological techniques for assessing visual and auditory development in infants.

The techniques involve blinking or tightening of eyelids, startle reflex, eye movement, nonnutritive sucking, respiration, heart rate, skin resistance, and pupil size, as well as cortical and brainstem-evoked potentials (electrical activity).

Among overt motor responses, nonnutritive sucking and conditioned head turning appear to be the most useful in testing vision and hearing in infants.

"Conditioned head turning was described by Drs. Bruce A. Schneider and Sandra E. Trehub of the Center for Research in Human Development at the University of Toronto. They tested infants ages 6, 12, and 18 months.

The subject was placed on its mother's lap in one corner of the testing booth. When the infant was quiet and looked straight ahead, the researcher would present a signal at one of five different sound levels from one of two speakers placed on either side of the baby.

The signal remained on until the infant made a head turn of 45 degrees or more toward either side. If the child moved its head toward the sound, a toy above the speaker would light up for 4 seconds. This would reinforce the response and keep the baby's interest high.

The procedure allowed Drs. Schneider and Trehub to determine auditory thresholds for the three age groups. The results demonstrated that the 6-month-old group was approximately five to eight decibels less sensitive than the older infants at the lower frequencies but that the auditory threshold for the 12- and 18-month-olds was similar across the frequency range studied.

By developing more powerful methods of measuring vision and hearing in infants, researchers should become able to more precisely assess what infants hear and see during their first year of life.

Ultimately, such new methods should stimulate the development of screening procedures for early detection and treatment of visual and auditory deficits.

—Tineke Bodde □

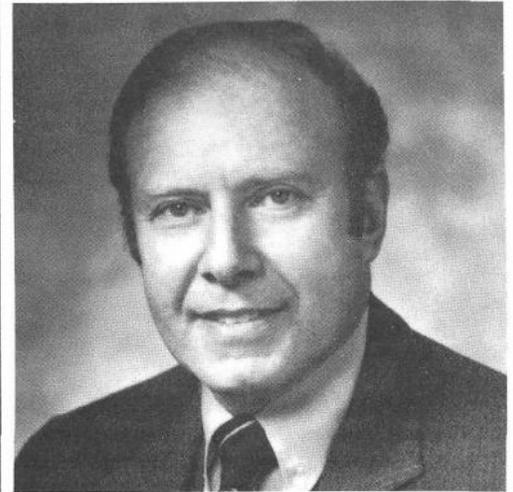


Gifts to the NCI recently made possible the acquisition of the R.A. Bloch International Cancer Information Center, formerly the Credit Union building, on Old Georgetown Road. It will house the staff of the International Cancer Research Data Bank, *Journal of the National Cancer Institute*, Division of Cancer Treatment Scientific Information Branch, and headquarters of PDQ, an information service for physicians and patients to obtain information on cancer treatment. Participating in the Dec. 16 closing were l to r: Robert Namovicz, deputy executive officer, NCI; Ellen Cook, attorney, Department of Justice; Robert Lanman, NIH legal advisor; Louis Mancuso, Office of General Counsel, HHS; Jeff Bolotin, attorney, Rozansky and Kay Construction Co.; Richard N. Brown, Shannon and Luchs Realty; Ronald Resh, attorney, NIH Federal Credit Union; Jerry deSeve, comptroller, NIH Federal Credit Union; not visible is John Cooney of Metro Title Corp.; Fred Kruhm, manager, NIH Federal Credit Union; and Dr. Normand Goulet, president, NIH Federal Credit Union.

## Univ. of Pennsylvania Honors NEI Director

National Eye Institute Director Dr. Carl Kupfer recently was awarded an honorary doctor of science degree by the University of Pennsylvania. The degree was given at a convocation marking the 10th anniversary of the University's Scheie Eye Institute.

Sheldon Hackney, university president, conferred the honor on Dr. Kupfer, commending him as "a distinguished and articulate administrator, a dedicated researcher, and a compassionate physician."



Dr. Carl Kupfer was commended for his encouragement of research on nutritional blindness and other eye diseases that are of great public health significance in other parts of the world.

Dr. Kupfer was cited in the award presentation for his leadership in employing collaborative clinical trials to solve major problems in ophthalmology. NEI-supported trials on laser treatment of diabetic retinopathy and senile macular degeneration were also singled out for special mention.

In addition, he was praised for his continued involvement in glaucoma research and in patient care.

Dr. Kupfer in delivering the convocation address outlined the major challenges and needs facing the vision research community between now and the end of the century. Vision researchers must foster the clinical applications of ideas and technology arising from the current scientific revolution, he said.

They must continue to make progress in research in an era of stable or diminishing financial resources. New ways must be found to prevent the aging-related eye diseases that are becoming more frequent as the proportion of aged people in the world increases. Finally, researchers must take responsibility for ensuring that advances in ophthalmology reach people in developing nations.

Receiving honorary degrees along with Dr. Kupfer at the convocation were three longtime NEI grantees—Nobel laureate Dr. Torsten Wiesel of Harvard, Dr. Arnall Patz of the Retinal Vascular Center at Johns Hopkins University Medical School, and Dr. Charles Schepens of the Retina Foundation in Boston. □

# NIH Achieves 90% of CFC Goal

Final contributions have been counted and the names of raffle winners drawn, marking the end of a successful drive that helped NIH achieve 90 percent of its Combined Federal Campaign goal.

NIH CFC chairman Dr. Carl D. Douglass, DRG Director, commenting on the fact that although only 39 percent of NIH employees participated, NIH was still able to achieve 90 percent of its goal, said: "This year's campaign represented an extremely positive effort on the part of many NIH employees and I would like to express my appreciation to the CFC keyworkers for their dedicated efforts and to those NIH employees who gave so generously."

As an incentive to contribute during the CFC, contributors were given a raffle ticket



Dr. Douglass, CFC chairman, picks winning CFC raffle tickets.

for every \$26 donated. Four winning tickets were drawn by Dr. Douglass on Jan. 3.

The first prize, a \$50 R&W gift certificate, was awarded to Kathleen O'Brien, secretary, Division of Heart and Vascular Diseases, NHLBI.

Second prize, a \$20 R&W gift certificate, was awarded to Dr. William A. Eaton, acting chief, Laboratory of Chemical Physics, NIADDK.

Third prize, a \$10 R&W gift certificate, was awarded to Fred Yamada, computer systems analyst, DCRT, and fourth prize, an original drawing of NIH's Stone House by artist Brent Jaquet, was awarded to Ronald Washington, tool and parts attendant, Division of Engineering Services, OD.



CFC raffle winners hold up their prizes, R&W gift certificates and an original drawing of NIH's Stone House. They are l to r: Mr. Washington, OD; Ms. O'Brien, NHLBI; and Mr. Yamada, DCRT.

Final contributions for each BID are as follows.

BID*	GOAL	AMOUNT OF CONTRIBUTIONS (%)	NUMBER OF CONTRIBUTORS
NEI	\$ 4,144	\$ 5,280 (127%)	52
NICHD	12,411	15,522 (125%)	198
DRR	3,515	4,283 (122%)	72
NIGMS	6,146	7,168 (117%)	109
NIA	3,320	3,738 (113%)	72
NIDR	9,976	11,293 (113%)	126
NIADDK	17,223	18,236 (106%)	186
DRG	16,523	17,314 (105%)	211
NLM	16,532	17,195 (104%)	253
NHLBI	22,252	21,044 (95%)	227
DCRT	8,106	7,620 (94%)	78
DRS	8,414	7,827 (93%)	148
NINCDS	17,090	15,780 (92%)	240
OD/ORS	50,098	40,017 (80%)	1,358
CC	27,610	20,939 (76%)	826
NCI	48,578	34,983 (72%)	464
FIC	2,868	1,943 (68%)	27
NIAID	19,250	12,963 (67%)	244
NIHS*	—	685	10
<b>TOTALS</b>	<b>\$294,056</b>	<b>\$263,745 (90%)</b>	<b>4,901 (39%)</b>

\*NIHS, located in Research Triangle Park, N.C. was not included in the National Capital Area CFC Campaign. (See page 9 for NIHS campaign results.) □

## News Branch 'Adopts' Chinchilla at Philadelphia Zoo

The NIH News Branch has become the proud parents of "Andy"—a chinchilla who lives at the Philadelphia Zoo. Andy is one of the many animals available for adoption under the zoo's ADOPT program—Animals Depend On People Too.

For a modest sum, individuals or groups can finance the care and feeding of the

animal of their choice for 1 year.

To make visiting more feasible, the News Branch would have preferred to adopt an animal at the National Zoo, but it has no such program. However, staff members hope to visit Andy in Philadelphia on "Parent's Recognition Day" for a family picture. □

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