The NIH Record

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National Institutes of Health

Dr. Gordon Wallace Gets Veterinary Prize

Dr. Gordon Wallace, now on detail from NIH to serve as a senior policy analyst in the Office of Science and Technology Policy, Executive Office of the President, received the James A. McCallam Award of the Association of Military Surgeons of the United States on Oct. 31. The award was presented during the Association's 1983 meeting in San Antonio.

Dr. Wallace

Before undertaking his current duties in May 1983, Dr. Wallace had served since 1962 in the National Institute of Allergy and Infec-

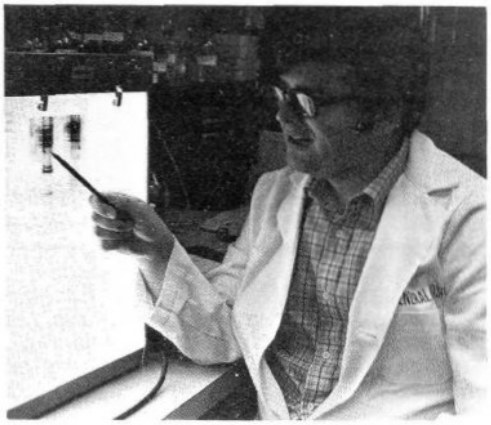
(See VET PRIZE, Page 4)

Huntington's Disease Genetic Marker Found by NIH-Supported Scientists

A long-sought genetic marker for Huntington's disease, a fatal nervous system disorder, has been discovered in humans by a scientific team supported by the National Institute of Neurological and Communicative Disorders and Stroke and the National Institute of General Medical Sciences.

This landmark finding—locating the marker for the defective gene which causes Huntington's disease on a specific chromosome—is the critical step in developing a diagnostic test for the disease, according to Dr. James F. Gusella, the NINCDS grantee who led the research team and is a member of the Institute-sponsored Huntington's Disease Center Without Walls at Massachusetts General Hospital.

"I am optimistic that presymptomatic and prenatal diagnostic procedures will emerge in the near future," he said.



NINCDS grantee Dr. Gusella examines a DNA sequence for possible variations that could help locate a Huntington's disease gene.

Farther down the road, it is hoped the discovery will lead to improved treatments and even a cure for the disease, which causes involuntary movements, emotional disturbance, and intellectual impairment.

More than 25,000 Americans suffer from Huntington's disease, which afflicted the late folksinger Woody Guthrie. Another 100,000 Americans live with constant dread and anxiety that the same catastrophic fate will befall them.

Each child of a parent with Huntington's disease stands a 50 percent chance of inheriting the disorder. Since the illness usually does not appear until age 35 or later, children carrying the defective gene may marry and pass the gene on to the next generation before realizing that they have the disease.

Until now, there had been no way to tell who had inherited the disease gene and who was free of it.

The search for the all-important marker led from a tiny village built on stilts in a remote lagoon of a Venezuelan lake to Dr. Gusella's Boston laboratory which uses the most sophisticated recombinant DNA technology. The discovery is the culmination of years of NIH-sponsored basic research directed at finding the marker.

Among Dr. Gusella's collaborators were Dr. Nancy S. Wexler, a former NINCDS staff member who now heads the Hereditary Disease Foundation, and Dr. P. Michael Conneally, a grantee of NINCDS and NIGMS,

(See MARKER, Page 7)

NEI Sets Nationwide Test On New Drug, Sorbinil, For Possible Prevention of Diabetic Eye Damage

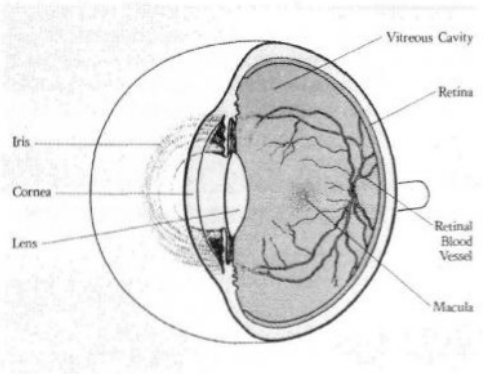
People who have had diabetes for 3 to 10 years are invited to participate in a nationwide study to find out if the eye problems and nerve damage which may develop in diabetes can be prevented or their development slowed.

Investigators at 12 eye care centers, including the Clinical Branch of the National Eye Institute, will administer a new, investigational drug called sorbinil in the hope that it will protect the sight of people who do not yet have signs of these eye problems, specifically diabetic retinopathy.

Diabetic retinopathy is a common complication of diabetes which threatens the sight of more than 300,000 Americans. It results from damage to blood vessels in the retina of the eye and eventually can cause visual loss.

Only those patients who have not yet developed any significant sign of diabetes-related eye damage are eligible for the study. They must be between 18 and 40 years old. Women must be either postmenopausal, surgically sterilized, or have an intrauterine device (IUD) in place.

All participants must have insulin-dependent (Type I) diabetes and have had no recent, significant change in the frequency of insulin injections or in blood glucose managemnt within 3 months of entering this study.



Diabetic Retinopathy (DR) is a common eye complication of diabetes. In DR, retinal vessels develop balloon-like swellings which can leak fluid into the light-sensing tissues of the retina. These fluid leaks can cause blurred vision.

The investigational drug, sorbinil, is an aldose reductase inhibitor. Researchers in NEI's Laboratory of Vision Research previously identified aldose reductase as an enzyme that may be implicated in the destructive effects of diabetes throughout the body.

Their laboratory findings suggested that inhibitors of aldose reductase, such as sorbinil,

(See EYE TEST, Page 5)

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*
Office Skills		
Scientific Terminology	2/7	1/17
Executive, Management and Supervisory		
Federal Budget Process	1/25	1/9
Manage Your Meetings	1/24	1/6
Understanding and Managing Stress	2/22	2/6
Managing Performance Feedback	2/8	1/20
Communication Skills		
Assessment One: Job Analysis	1/11	12/12
Interpersonal Problem Solving	1/24	12/19
Effective Oral Communication	2/27	1/23
Advanced Assessment	3/5	1/30
DELPRO		
* Delegated Procurement	1/9	12/22

* For new Delpro users only.

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

Remember the Patient Emergency Fund

The holiday season is a time for giving. NIH employees have a special opportunity to give by donating to the Patient Emergency Fund. The PEF provides services not supported by appropriated funds, such as assistance to families who are here to give patients emotional and physical support. The PEF also assists in transportation expenses. The continued support of the NIH employees can make an enormous difference in the lives of the CC patients. Contributions can be mailed to the R&W Office, Bldg. 31A, Rm. B1W30, or to the Social Work Department, Bldg. 10 (ACRF), Rm. 1C144, or dropped at any R&W Gift Shop. □

Dr. James B. Wyngaarden, Director of NIH, (seated), signs a letter encouraging members of the NIH community to join the Recreation and Welfare Association. Looking on are (l to r) Randy Schools, R&W general manager, Leo Buscher, 1st vice president, and Agnes Richardson, president of the R&W.

R&W Begins 1984 Membership Drive

The NIH Recreation and Welfare Association begins its 1984 membership drive in December and early birds can save 40 percent by purchasing their cards during December and January. For these 2 months only cards can be purchased at all R&W gift stores or from BID representatives for $3, a savings of $2 over the regular annual $5 fee.

Why join R&W? What are the advantages of membership? How about a whole range of activities from sports clubs—softball, golf, hiking—to groups for shutterbugs or computerniks? Or, if you prefer travel, group package rates to the Caribbean, Mexico, Europe, or just a weekend of backpacking or white water rafting.

Then, there are the R&W stores offering a wide range of gifts for all occasions or just to show you care—watches, pens and pencils, cards, small appliances, or exotic teas and candies. Those interested in protecting their families can obtain group insurances rates for dental care, hospital insurance, automobiles, or term life.

The overall welfare of employees and patients is not overlooked either. The R&W holds many educational seminars for all employees at NIH and supports the NIH Patient Emergency Fund and special events on the campus on a regular basis.

The R&W invites NIH workers to join with more than 10,000 of their coworkers as members of the R&W. Watch for special membership drives in the BIDs, see your representative, or come to the R&W stores or activity desk to join. You will receive the handsome calendar with discount merchants and special events listings, and enjoy another exciting year of R&W activities. □

NIH Sons of Italy To Present Italian Food Xmas Celebration

Italian food lovers: Attenzione!

Eat a light lunch (if any) on Tuesday, Dec. 20, because the new NIH Lodge of the Order Sons of Italy in America (OSIA) will have a special treat for you that afternoon from 3 to 5 p.m. in the Bldg. 10 cafeteria.

The newly organized lodge is sponsoring a "Buon Natale" (Merry Christmas) celebration, featuring favorite Italian food delicacies. The proceeds will be donated to the NIH Patient Emergency Fund in the Clinical Center.

Food can be eaten in the cafeteria or taken home. Some of the available homemade items are: pasta, meatballs, cheese, cannoli, sausage, pizza sauce, soups, zucchini bread, Italian bread, desserts.

During the celebration, you can relax, sip your coffee, and enjoy listening to seasonal musical recordings of Italian Childrens' Choirs. □

Parking Changes

Beginning Tuesday, Jan. 3, 1984, all carpool spaces will be reserved for carpools only until 10:30 a.m., instead of 2 p.m. After 10:30 a.m., employees with general parking permits will be permitted to park in all carpool spaces. This change is being made to help alleviate the present mid-morning parking problems.

Reserved parking for carpoolers until 10:30 a.m. will ensure continued convenient, close-in parking for carpoolers when arriving at the NIH.

NIH encourages all employees to carpool, as carpooling allows each of us to conserve energy and protect the environment.

Parking Past 3 p.m.

After 3 p.m., employees will be able to park in any designated space: general employee, carpool, preferential (red), and visitor areas. This does **not** include reserved (numbered), handicap, and Day Care Center spaces. □

New Shuttle Bus Schedule Takes Effect Jan. 1

On Tuesday, Jan. 3, 1984, the NIH shuttle bus which travels between the campus and the Westwood, Federal, Landow, and Bloch Bldgs. will begin an all-new, improved schedule. The number of daily round trips will be increased and the quality of vehicles improved. The shuttle schedule serving the Blair Bldg. will not be changed.

Forty (40) shuttles will travel between the campus and the Westwood Bldg. daily. Shuttles will leave both locations at 25-minute intervals. The first shuttle going to the Westwood Bldg. will leave Bldg. 10 at 8 a.m.; the last at 3:55 p.m. A separate shuttle going to the NIH campus will leave the Westwood Bldg. at 8:25 a.m.; the last at 4:20 p.m. Throughout each day a total of 20 shuttles will leave both the campus and the Westwood Bldg.

Thirty-nine (39) of the shuttles will stop at Bldgs. 10 and 31, and the Federal, Landow, and Westwood Bldgs. The 4:20 p.m. shuttle leaving the Westwood Bldg. will go directly to Bldg. 10.

Thirteen (13) shuttles will stop at Bldgs. 12A, 36, and 38; 10 shuttles will stop at the Bloch Bldg. The remaining 16 shuttles will be express shuttles, stopping only at Bldgs. 10 and 31, and the Federal, Landow, and Westwood Bldgs. The complete shuttle schedule serving the Westwood Bldg. is shown below.

To provide a more comfortable, smoother ride, full-size busses now in use will be replaced with newer 12- and 15-passenger vans.

The Vehicle Dispatch and Shuttle Section will operate this new shuttle schedule as a 3-month trial, monitoring ridership. After 3 months, further changes in the schedule may be made as necessary.

Suggestions for additional improvements to the shuttle service are welcome. Please forward your comments to Cheryl Amatucci, Bldg. 31, Rm. 4B30.

N.I.H. SHUTTLE SCHEDULE
WESTWOOD TO N.I.H.

Building	West-wood	Landow	*Federal	38	12A	** 36&37	RAB	31	10
	8:25	8:38	8:40					8:46	8:48
	8:50	9:03	9:05				9:09	9:12	9:13
	9:15	9:28	9:30	9:34	9:35	9:37		9:38	9:39
	9:40	9:53	9:55					10:00	10:03
	10:05	10:18	10:20				10:24	10:27	10:28
	10:30	10:43	10:45	10:48	10:49	10:51		10:53	10:54
	10:55	11:08	11:10					11:19	11:20
	11:20	11:33	11:35	11:39	11:40	11:42		11:44	11:45
	11:45	11:58	12:00				12:04	12:07	12:08
	12:10	12:23	12:25	12:29	12:30	12:32		12:34	12:35
	12:35	12:48	12:50					12:55	12:56
	1:00	1:13	1:15	1:19	1:20	1:22		1:24	1:25
	1:25	1:38	1:40					1:48	1:49
	1:50	2:03	2:05				2:09	2:12	2:13
	2:15	2:28	2:30	2:34	2:35	2:37		2:39	2:40
	2:40	2:53	2:55					2:59	3:00
	3:05	3:18	3:20				3:24	3:27	3:28
	3:30	3:43	3:45	3:49	3:50	3:52		3:54	3:55
	3:55	4:08	4:10					4:15	4:20
	4:20								4:55

*Pickup across street at Commerce Lane entrance.
**Pickup bus at S.W. corner of building 29A.

How To Cope With Holidays Blues

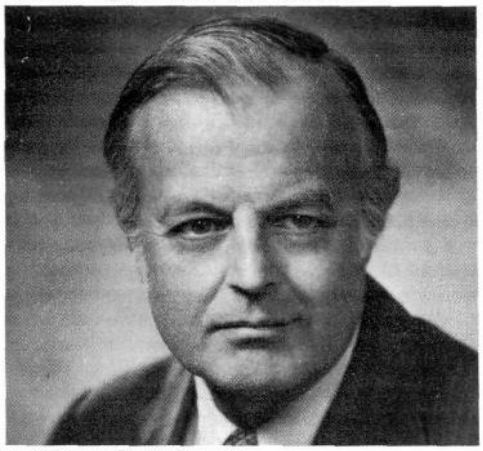
The Employee Assistance Program of the Occupational Medical Service will present the annual program, "How to Cope with the Holiday Blues," on Wednesday, Dec. 14, from noon to 1 p.m. in Bldg. 31, Rm. B2B57.

Morris Schapiro, mental health counselor, will offer several different methods on how to deal with the problem as well as place it in historical perspective. For further information, call 496-3164. □

Dr. DeCesare, DRR, Dies of Heart Attack

Dr. William R. DeCesare, director of the General Clinical Research Centers Program in the NIH Division of Research Resources, died of a heart attack Nov. 22. He was 50 years old.

Born in 1933 in East Orange, N.J., Dr. DeCesare graduated cum laude from



Dr. William R. DeCesare

Dartmouth College in 1955 and was awarded his medical degree from Harvard Medical School in 1958. He interned, did a residency, and was a research fellow at the Dartmouth Medical Center from 1958 to 1963.

He then spent 3 years at Georgetown University Medical School in Washington, D.C. as a research fellow and instructor in medicine before joining NIH in 1966 as assistant director of the General Clinical Research Centers Program. In 1968, he was named director of the program which funds 75 special hospital units for clinical research purposes at academic medical centers throughout the country.

Dr. DeCesare was awarded a Commendation Medal in 1978 from the Public Health Service for introducing significant innovations which have expanded the capability and cost effectiveness of General Clinical Research Centers.

He was the author of numerous publications in clinical research, hematology, and radiobiology. Dr. DeCesar served on several NIH committees and was a member of the American Federation for Clinical Research, the American Association for the Advancement of Science, and the Society of Clinical Trials.

The Dean, faculty, clinical researchers and staff of the New York University Medical Center paid high tribute to Dr. DeCesare. "Dr. DeCesare was a wise, skillful and committed shepherd of an important aspect of our national quest to comprehend and apply advances in basic research in the care of our people," said Dr. Saul J. Farber, dean provost and chairman of medicine, NYU Medical Center. "His studious, thoughtful and imaginative leadership were instrumental in nurturing clinical research in this country," he added.

Survivors include his wife, Eleanor, and three daughters, Carolyn, Martha Jane and Robin Ray, all of Bethesda, and a brother, James C. of Kansas City, Kan.

Monoclonal Antibodies Isolated in Autoimmunity Studies

What do diabetes, arthritis, systemic lupus erythematosus, and rheumatic heart disease have in common? These are just a few of many diseases that may involve an immunological "mistake" in which the body produces antibodies against itself.

Usually, immune responses destroy invading bacteria, viruses, and tumors. However, when misdirected, they may destroy the patient's own tissues.

Although scientists know little about what triggers the production of these autoantibodies, viruses have been suspected as one of the possible causes.

Under the direction of Dr. Abner Louis Notkins, chief of the National Institute of Dental Research Laboratory of Oral Medicine, scientists are examining the role of viruses and immunity in human and experimental models of diabetes. Recently, these investigators advanced their exploration through the successful production of mouse and human monoclonal autoantibodies in culture.

The availability of large quantities of these autoantibodies should allow the scientists to identify the antigens these antibodies recognize, the role these antibodies play in autoimmune diseases, and whether different individuals with the same disease develop autoantibodies against the same molecules.

Autoantibody Reaction

In certain autoimmune diseases, autoantibodies are found that react with a number of organs. One of the difficulties in studying these diseases has been determining whether a variety of autoantibodies actually exist, each reacting with a different organ, or whether the autoimmune response is more restricted, with only a limited number of autoantibodies recognizing common antiagens in different organs.

Researchers in the Laboratory of Oral Medicine had previously shown that mice infected with the virus known as reovirus type 1 develop an autoimmune disease of the endocrine glands characterized by mild diabetes mellitus and retarded growth.

Autoantibodies against the pancreas, pituitary gland, and mucous-secreting cells of the digestive tract were found in blood samples from these mice. The presence of an immunological component was confirmed when immunosuppression was shown to prevent autoantibody formation, diabetes, and growth retardation.

In order to learn more about the role these autoantibodies actually play, the scientists needed a larger amount of the antibodies than could be isolated from blood samples.

Using cell hybridization techniques, Dr.Notkins, together with Drs. Martin V. Haspel, Takashi Onodera, Bellur S. Prabhakar, Masakazu Horita, and Hoshibumi Sukui, conducted experiments in which they fused spleen cells from mice with virus-induced autoimmune disease with myeloma cells. Individual hybridomas were cultured, each producing a clone of cells that produced large amounts of identical antibodies.

The scientists were able to generate a large panel of autoantibody-secreting hybridomas, including 14 that reacted with cells in the islets of Langerhans, the insulin-producing part of the pancreas that fails in diabetes millitus.

Twenty-four of the hybridomas made antipituitary autoantibodies, eleven made autoantibodies against gastric mucosa, and five made antinuclei antibodies. Several of the antigens recognized by these monoclona antibodies have been identified as hormones, including glucagon, growth hormone, and insulin.

In addition to autoantibodies that react with single organs, the NIDR scientists isolated autoantibody-secreting hybridomas from infected and uninfected animals that reacted with multiple organs. The findings suggest that these monoclonal autoantibodies either recognize the same molecule present in different organs or a common antigenic determinant of different molecules found in multiple organs.

In humans, many children with insulin-dependent diabetes mellitus (IDDM) have autoantibodies in their blood that react with pancreatic islet cells. In some cases, these islet cell antibodies precede the development of IDDM by months, or even years. These antibodies appear to be a useful prognostic indicator for identifying individuals at risk of developing the disease.

Carrying their research one step further, Dr. Notkins and Drs. Jo Satoh, Bellur S. Prabhakar, Martin V. Haspel, and Fredda Ginsberg-Fellner successfully isolated autoantibodies from humans that react with antigens in multiple organs.

Peripheral blood lymphocytes from patients with insulin-dependent diabetes and other autoimmune abnormalities were fused with either mouse or human myeloma cells. Human monoclonal autoantibodies were obtained that reacted with multiple endocrine (hormone-secreting) and nonendocrine tissues.

The NIDR investigators postulate that these antibodies may be a partial explanation for the multiple organ autoimmunity seen in certain autoimmune diseases.

Using these monoclonal antibodies, the scientists are beginning to isolate the specific tissue antigens with which these antibodies react. Thus, these monoclonal antibodies are making it possible to identify some of the autoantigens involved in human autoimmune diseases.—**Jody Dove**

Note: This research has been reported in Science, Apr. 15, 1983; Nature *July 7, 1983, and* the New England Journal of Medicine, July 28, 1983. □

NHLBI Seeks Sickle Cell Volunteers

The National Heart, Lung, and Blood Institute is currently recruiting black individuals between the ages of 20-35 to serve as **normal controls** in a study designed to establish some of the earliest manifestations of sickle cell eye disease.

Volunteers will receive a comprehensive medical and ophthalmological evaluation, including selective blood studies. For further information, contact Bonnie Collier at 496-5846. □

New Exercise Class Being Offered At NIH Fitness Center in January

Exercise classes are now open to all—no membership required, and you can enjoy the convenience of taking exercise classes on a drop-in, pay-as-you go basis.

The new winter session of exercise classes will begin Jan. 3 and run for 12 weeks. All classes will be held at the NIH Fitness Center (T-39). In addition to the regular classes in Aerobic Action (Aerobic dancing) and Alive! (slimnastics and calisthenics) a new coed exercise class, Quik Fit, is now being offered.

Quik Fit

Quik Fit is designed to give you a total work out in a minimal amount of time. This 45 minute class includes stretching, strengthening, muscle toning, stomach exercises, endurance exercises, and relaxation routines.

Class fees for a full membership, $2 per class when you sign up for the session; nonmembers, $2.50 per class; or drop-in to the class and time of your choice for $3 per class. Drop-in on a space available basis and adjust to class.

Although medical screening is not required, participants are urged to consult with their personal physician before beginning any Fitness Center activity.

Quik Fit—Monday, Wednesday, and Friday, noon to 12:45 p.m.; and 5:15-6 p.m.

Aerobic Action—Monday and Wednesday, 6-7 p.m.

Alive!—Tuesday and Thursday, 5-6 p.m. and 6-7 p.m.; Saturday, 9-10 a.m.

Sign up at the R&W Activities Desk in Bldg. 31 or the Fitness Center. Registrations will be accepted through Jan. 20. For more information call 496-TRIM. □

VET PRIZE

(Continued from Page 1)

tious Diseases as an investigator and administrator.

The McCallam Award, honoring the late Brig. Gen. James A. McCallam, a former chief of the U.S. Army Veterinary Corps, is awarded by the association to a Doctor of Veterinary Medicine in recognition of outstanding accomplishments in the field of medicine and health.

Infectious Diseases

Much of Dr. Wallace's research has been focused on eosinophilic meningitis, toxoplasmosis, swine flu and other infectious diseases important in the Pacific area.

He was named assistant scientific director of NIAID in 1978. In 1979 mousepox (a disease severely threatening inbred mouse colonies essential for biomedical research) was discovered at NIH.

Dr. Wallace became involved in studies of this disease and, in addition to administrative duties, managed the laboratory work in a mousepox project supported by several NIH institutes.

A serologic assay for detecting ectromelia (mousepox) antibody has been developed in the project, which has also included an evaluation of current immunization procedures for mouse colonies and a study of virus transmission in inbred mouse colonies. □

NLM Exhibits Paintings, Sketches by F. Armitage

Selected work by one of America's foremost medical illustrators, Frank Armitage, is now on display in the NLM main lobby where it will remain through January 1984.

Mr. Armitage, who worked with Walt Disney in the 1950s on a number of his animated motion pictures, has more recently been recognized as a versatile illustrator whose work goes beyond the literal representation of medical subject matter.

The NLM exhibit features six large paintings depicting the retina in progressive stages of modern abstraction, two works showing the artist's conception of the neuron jungles of the brain, and a number of sketches and paintings related to surgery and the blood and nerve cells in the hand.

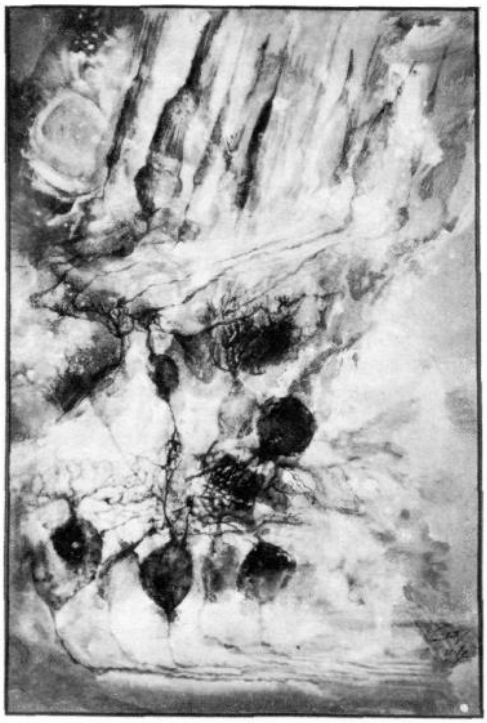
In a short videotape accompanying the exhibit, Mr. Armitage explains the process by which he conceives and executes his paintings. "Most of the time I use nonanatomical color and treat the whole (visual) statement as a painting. This, I feel, is important to me as I was trained as a painter first, and I acquired some medical knowledge later—and I put the two together. Underlying it all is a painting in an abstract form. This is the foundation I work on, and I overlay it with medical scientific information."

The exhibit was organized by Drs. Charles F. Bridgman and Biagio J. Melloni, both distinguished medical illustrators in NLM's Lister Hill Center.

A native of Victoria, Australia, Mr. Armitage studied painting immediately after World War II at Ontario College in Canada. Under a scholarship he then studied with muralists in Mexico City at the National Polytechnical Institute. There he served as an assistant to David A. Siqueiros, Mexican muralist, and developed his unusual skills for dramatizing visual information on a large scale.

He emigrated to the United States in 1952, settling in Los Angeles where he continued his studies at Chouinard's Art Institute and joined the staff of the Disney studios. With Disney he helped develop a number of animated films.

An association with staff at the UCLA Medical School led him into studying medical subject matter and preparing medical drawings and paintings for exhibits and publications. He is currently preparing three-dimensional anatomical representations to be displayed at the EPCOT center, Disney World, Fla. □



This is "Abstract Depiction of Rods and Cones of the Retina" (acrylic), by Frank Armitage displayed in the main lobby of the NLM.

EYE TEST

(Continued from Page 1)

might slow or halt the enzyme's destructive effects on cells in the eyes, nerves, and other tissues.

In diabetic animals, it has been shown that aldose reductase inhibitors do in fact prevent some of these complications from developing.

Because of the success of these studies, the NEI is collaborating with the developer of the drug, Pfizer Inc., on the new, multicenter clinical trial. It will compare sorbinil's effectiveness to that of a placebo in preventing or slowing the progression of diabetes-associated retinopathy and nerve damage.

Each of the 12 participating centers will enroll 70 patients. Half of the 70 patients will be randomly assigned to the treatment group and will take one sorbinil tablet each morning for 135 weeks. The other half will be the nontreatment group and will take a placebo tablet each morning for the same number of weeks. Both groups will be tested and examined by physicians 15 times during the 2½ year study. The data from all 12 centers will be evaluated to determine the usefulness and safety of sorbinil treatment.

The study is the latest in a series of NEI-fostered clinical trials to evaluate various means of preventing and treating the harmful effects of diabetes on the eye.

Several years ago, a national collaborative study demonstrated that photocoagulation can substantially reduce the risk of blindness in people with advanced diabetic retinopathy.

Then NEI began supporting a clinical trial to test the effectiveness of laser photocoagulation in preventing advanced-stage retinopathy from developing in people who have early-stage diabetic retinopathy.

Now, with the sorbinil study, NEI is testing the preventive effects of a drug which may benefit those without any clinical signs or symptoms of diabetic retinopathy.

For additional information on enrolling in the sorbinil study, write or phone Dr. Monique S. Roy, National Eye Institute, Bldg. 10, Rm. 10N313, Bethesda, Md. 20205 or (301) 496-5846. □

One of the chief objects of medicine is to save us from the natural consequences of our vices and follies.—*H.L. Mencken* □

Platelet Donor Sets Record

On Oct. 28, Kenneth R. Carter set an NIH record—he completed his 500th platelet donation. Ken is a fire protection inspector and a regular NIH platelet donor.

Platelets are small cells which circulate in the blood stream. They are needed to stop bleeding when organs or blood vessels are damaged. Patients with aplastic anemia or leukemia do not have enough platelets and can easily bleed to death. Platelet transfusions save lives.

Many patients who receive "unmatched" or random platelet transfusions will become immune to platelets. This means that transfused platelets will be destroyed by the patient's own antibody system.

For this reason whenever possible, "matched" platelets from individuals who have a platelet type very similar to the patient are used for transfusions.

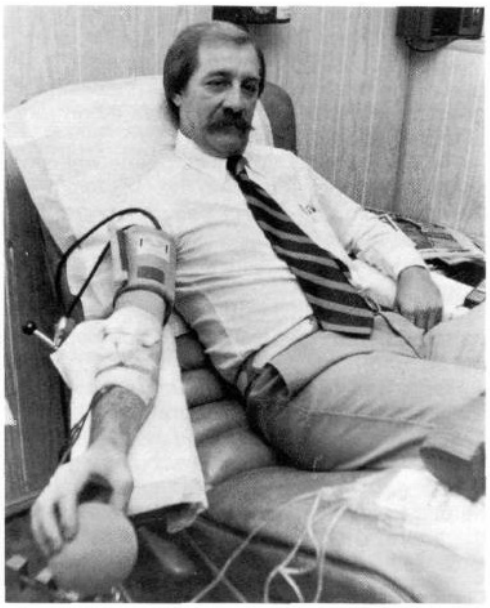
Typing Platelets

Precise typing of platelets is not yet possible. Compatible platelet transfusions can be achieved by matching the human leukocyte antigen (HL-A) type between the donor and the recipient.

Ken Carter has what is considered a "common" HL-A type which means he is a compatible donor for many patients. He has type O-negative blood which means his platelets are sometimes saved for patients requiring Rh-negative blood products.

Ken has participated in this program for over 10 years. He started giving platelets to help sick children simply because he was grateful to have healthy children of his own.

He emphasizes that the donation procedure is simple and painless. Withdrawal of 4 pints of blood, one at a time, is required. Following the collection of each pint of blood, the platelets are removed and the red blood cells and plasma are returned to the donor.



Kenneth Carter gives his 500th platelet donation.

The need for platelet transfusions is critical and you could be a donor. For information call the NIH Plateletpheresis Center on 496-4321 or 496-2022. □

Clinical Center Celebrates 30th Anniversary: Shines in Patient Care and Medical Research

The Clinical Center after the ACRF was completed in 1981.

Since the first patient was admitted to the Clinical Center in July 1953, NIH's research hospital has been dedicated to high quality patient care while remaining at the forefront of biomedical research.

Thirty years later, the Clinical Center now admits over 7,500 inpatients and treats more than 100,000 outpatients a year.

With the dedication of the Ambulatory Care Research Facility on Oct. 22, 1981, the Clinical Center began a new era in patient care and clinical research. Addition of the ACRF to the Clinical Center, which is dedicated primarily to outpatient care, will eventually increase outpatient visits to about 200,000 a year. Many more noninvasive procedures can now be performed on an ambulatory basis rather than hospitalizing patients as in the past.

The 13-story glass ACRF structure houses clinics, laboratories, operating rooms, an ampitheater, a Visitors Center, and large open waiting rooms. It is connected to the 14-story all-brick Clinical Center by walkways located on most floors.

ACRF construction began in June 1977 as part of the modernization and expansion program to strengthen the combined laboratory and patient-care activities.

The open-spaced lobby complete with skylights and plants serves as the NIH Visitors Center, exhibit area, and patient lounge. The first floor houses the admission section, Social Work, Patient Activities, Diagnostic Radiology, and Nuclear Medicine Department.

The Clinical Pathology and Surgery Departments and Administrative offices occupy the second floor.

Floors 3 to 13 are alike. Each has clinic rooms on the west side, laboratories on the east side and isolated animal areas located on the southeast corner of each floor.

Two years into operation, the ACRF has helped to open the way to clinical research of the future.

Some key services are outlined below:

Clinical Pathology

The Clinical Pathology Department's spacious and innovative laboratory was dedicated on Mar. 10, 1982 and has conducted about 2.8 million tests a year since then.

The department has three services: clinical chemistry, hematology, and microbiology. Besides performing laboratory tests, the hematology service also provides a consultation service in clinical hematology.

Designed by ACRF architects in conjunction with Earl Walls, a consultant architect specializing in laboratory design, the laboratory consists of a large open room divided into separate work areas. Each work area has a center rectangle with bench space on either side in the shape of the letter C. This gives the technologist a sense of privacy combined with a feeling of openness. The height of the benches is adjustable and the cabinets can be easily moved from one area to another. This feature will save the expense and effort of renovations over time.

In the center of the room is a transport system which automatically transports most specimens to the laboratory. After they are received and processed, specimens are delivered to the respective services for appropriate analysis.

The new laboratory has proven to be efficient in using space and technology to handle a large and critical workload.

Diagnostic Radiology

The Diagnostic Radiology Department moved to ACRF this past spring, providing a newer and more spacious environment to accommodate its space-age technology. It has already increased its diagnostic capabilities.

The new computerized tomography area houses a new "fourth generation" scanner that accompanies the department's first CT machine. CT scanners take static multiple images that are then reconstructed by computer to provide sophisticated images of the structure of the body.

In addition, the new biplane fluoroscope unit mixes X-rays in two planes of the body at once, eliminating the need to turn the patient.

The department has also received a Nuclear Magnetic Resonance (NMR) unit which will be operational early next year. At the forefront of diagnostic technology, the NMR uses magnetic fields and radio waves to provide 3-dimensional images of the internal structure of the body. These images will help CC scientists to better diagnose such conditions as brain disorders and cancer. CT scans reveal density; NMR shows the contents and surroundings of tissue.

The combination of updated machinery and space has enhanced the diagnostic capability of the department and increased the ease and speed with which tests are completed and recorded.

New systems for handling information generated by diagnostic scans have been built into the department's new facilities. As scans are completed, radiologists read films in viewing areas outside of each scanning room. They then dictate their interpretation of films directly into a central recording system.

This information is immediately entered into the Medical Information System, allowing the results to reach requestors much sooner than before.

One of the largest such facilities in the area, the Clinical Center's Diagnostic Radiology Department carries out thousands of diagnostic tests a year (over 60,000 in 1982) and conducts research that has contributed to important innovations in radiological practice. □

Seven Scientists Served Clinical Center as Directors

Seven Directors—a group of outstanding scientific researchers, clinicians and administrators—have served the Clinical Center during the past 30 years. They are:

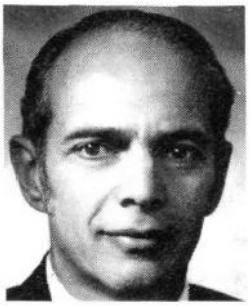
• **Dr. Jack Masur** served as NIH Associate Director for Clinical Care and Director of the Clinical Center during its planning and construction from 1948 to 1951.

Dr. Masur

Dr. Masur had earlier directed the medical care programs of the PHS by administering its hospitals and other facilities, including Freedman's Hospital in Washington, D.C.

• **Dr. John Trautman** was Clinical Director from July 1,1951 to June 24, 1954, after serving as director of the PHS Staten Island Facility's 985-bed hospital.

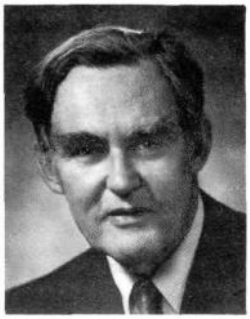
• **Dr. Donald W. Patrick** served as Clinical Center Director from June 23, 1954 through Oct. 30, 1956. He was medical officer in charge of PHS hospitals in Evansville, Ind., Detroit, and Baltimore before coming to NIH.



Dr. Lipsett

• **Dr. Thomas C. Chalmers** came to NIH in February 1970 as NIH Associate Director for Clinical Care and CC Director. Previously, he had been assistant chief to the Medical Director for Research and Education at the Veterans Administration in Washington, D.C.

• **Dr. Robert S. Gordon Jr.,** was named Director of the Clinical Center and NIH Associate Director for Clinical Care in 1974. He came to NIH in 1951 as a senior investigator in the Laboratory of Metabolism in the National Heart Institute.



Dr. Decker

• **Dr. Mortimer Lipsett** is currently the Director of the National Institute of Child Health and Human Development. He was Clinical Center Director from 1976 to 1983. Before his appointment as Clinical Center Director in 1976, he was director of Cancer Center, Inc. in Cleveland, a research training and patient care facility.

• **Dr. John L. Decker** is currently Clinical Center Director and NIH Associate Director for Clinical Care, a position he had held since August 1983. He is an internationally recognized expert in rheumatic disease and was formerly chief of the Arthritis and Rheumatism Branch, NIADDK. □

MARKER

(Continued from Page 1)

who directs the NINCDS Huntington's Disease Research Roster at Indiana University.

The Research Roster, two Huntington Disease Centers Without Walls, and the Venezuelan research project were funded by NINCDS on recommendation of the Congressionally-mandated Commission for the Control of Huntington's Disease and Its Consequences, which was convened during the late 1970s.

This pioneering venture not only dramatically alters the course for Huntington's disease research, Dr. Gusella said, it also offers hope that gene locations for other inherited illnesses such as cystic fibrosis and familial Alzheimer's disease may now be found.

"The technologies developed to find this marker are immediately transferable to other diseases," said Dr. Wexler, who served as executive director of the Huntington's Disease Commission and oversaw the NINCDS Huntington's Disease research portfolio until this past June.

Other candidate disorders for this scientific approach include neurofibromatosis and manic-depressive illness, both of which involve aberrations of the nervous system.

The discovery of a marker for a Huntington's disease gene was a major goal of Dr. Gusella's project for NINCDS's multi-institutional Centers Without Walls. The achievement, reported in *Nature, Vol.* 306, (Nov. 17, 1983), was gained with astonishing rapidity in only 3 years.

To find the marker, Dr. Gusella combined classic principles of genetics with the most advanced recombinant DNA techniques.

Classical genetic studies indicate that if two genes lie close together, they are inherited together. Beginning from this essential premise, Dr. Gusella added new techniques that allowed him to isolate specific sequences of DNA, some of which he hoped would lie close enough to the Huntington's disease gene to be inherited with it and "mark" its presence.

But he had no idea which of 46 chromosomes carried the defective gene. Further, the only way to test if a marker was near the Huntington's disease gene was to determine if the marker and the gene "traveled" together through a large family afflicted with the disorder.

"The more people known in the family tree and the more living offspring you have, the greater the power of such a test," Dr. Wexler said.

The needed scientific information came from a U.S. family identified through the Huntington's Disease Research Roster and from a family living in a stilt village built over Lake Maracaibo in Venezuela. The Venezuelan community has one of the highest rates of Huntington's disease in the world.

An international team of investigators from different institutions in the United States and Venezuela, led by Dr. Wexler, constructed a family tree of more than 3,000 descendants of one Venezuelan woman villager who died of Huntington's disease more than a century ago. Dr. Conneally logged the data into a computer which used 100 feet of paper to print out the family tree.

The scientists made several month-long expeditions to the village to perform neurological examinations and collect skin and blood samples from 570 descendants of the Venezuelan woman.

Meanwhile, back in the lab, Dr. Gusella was testing his DNA sequences in the American family. He saw a glimmer of hope when his findings suggested that a sequence of chromosome 4 might lie close to the Huntington's disease gene. But the data were not strong enough.

He then used the same DNA segment to test the Venezuelan samples, which are currently stored at the NIGMS-supported Human Genetic Mutant Cell Repository in Camden, N.J.

Finally, Drs. Gusella and Conneally analyzed the computerized DNA data from the United States and Venezuelan families. The answer was unequivocal. The marker had been found, lying on chromosome 4—extremely close to the Huntington's disease gene.

The diagnostic potential of the Huntington's disease marker is particularly valuable because the disease begins insidiously—with minor clumsiness or forgetfulness. The illness is easily misdiagnosed, which can cause misunderstanding and family problems.

Example: For years Woody Guthrie was thought to be alcoholic until doctors finally determined that he had the disease.

As the disorder progresses, brain cells die. All parts of the body are in constant uncontrollable movement; speech becomes unintelligible, and choking is a hazard. Although intellect deteriorates, insight and orientation often remain. Depression is common and the suicide rate high. Death comes after 10 to 20 years of decline. There are no remissions.

Unfortunately, treatment is only marginally effective. Often the illness affects several in a family at the same time. Because the burden of this disease is felt by relatives and friends of the afflicted person, the disorder actually affects hundreds of thousands of lives.

Since each at-risk individual has a 50-50 chance of developing the disorder, an early diagnostic test will tell many of those who choose to be screened that the dread for themselves and their children is over.

Others, however, probably brothers and sisters of those who escape, will learn that at some time in their future, the disease is certain to begin. This makes the need even more urgent to find adequate treatments.

"Identifying the gene is still a problem," Dr. Wexler said. "We can walk up and down the chromosome and pass right by the Huntington's disease gene without knowing it."

The recombinant DNA methods used by these investigators should also help scientists who are studying other disorders.

"The discovery of the marker is extraordinarily encouraging for anyone concerned with hereditary disese," Dr. Wexler said. "The techniques developed to find the marker have advanced the field so much that other people studying other inherited disorders won't have to start where we started. They'll be ahead of the game."

"With these new techniques," Dr. Gusella added, "we can aim directly for the gene itself, the ultimate first cause, and try to correct the problem at its root." —**Lynn Cave** □

Visiting Scientist Program Participants

Sponsored by Fogarty International Center

8/31—**Dr. Paul West,** Canada. Sponsor: Dr. Ronald Mason, Laboratory of Environmental Biophysics, NIEHS, RTP, NC.

10/7—**Dr. Vincenzo Sorrentino,** Italy. Sponsor: Dr. Mariano Barbacid, Laboratory of Cellular and Molecular Biology, NCI, Bg. 37, Rm. 1A07.

11/1 **Dr. Long Fong Cheng,** Taiwan. Sponsor: Dr. Maija I. Mednieks, Laboratory of Oral Biology and Physiology, NIDR, Bg. 30, Rm. 211.

11/1 **Dr. Chu Kun-Hsiao,** China. Sponsor: Dr. Richard Asofsky, Laboratory of Microbial Immunity, NIAID, Bg. 5, Rm. 235.

11/1 **Dr. Martine Coue,** France. Sponsor: Dr. Stephen Brenner, DCRT, Bg. 3, Rm. 302.

11/1 **Dr. Ettore D'Ambrosio,** Italy. Sponsor: Dr. Anthony Furano, Laboratory of Biochemical Pharmacology, NIADDK, Bg. 4, Rm. 104.

11/1 **Dr. Chou-Zen Giam,** Taiwan. Sponsor: Dr. George Khoury, Laboratory of Molecular Virology, NCI, Bg. 41, Rm. 200.

11/1 **Dr. Derek LeRoith,** South Africa. Sponsor: Dr. Phillip Gorden, Diabetes Branch, NIADDK, Bg. 10, Rm. 9N222.

11/1 **Dr. Shuzo Matsushita,** Japan. Sponsor: Dr. Samuel Broder, Laboratory of Clinical Oncology, NCI, Bg. 10, Rm. 6B15.

11/1 **Dr. John Gerard Morgan,** Ireland. Sponsor: Dr. Gerald R. Crabtree, Hematopathology Section, NCI, Bg. 10, Rm. 2N113.

11/1 **Dr. Kenzo Ono,** Japan. Sponsor: Dr. Monique Dubois-Dalcq, Section on Neural and Molecular Ultrastructure, NINCDS, Bg. 36, Rm. 5C10.

11/1 **Dr. Edward J. Pearce,** United Kingdom: Sponsor: Dr. Alan Sher, Laboratory of Parasitic Diseases, NIAID, Bg. 5, Rm. 212.

11/1 **Dr. Stefania Pittaluga,** Italy. Sponsor: Dr. Jeffrey Cossman, Laboratory of Pathology, NCI, Bg. 10, Rm. 2N108.

11/1 **Dr. Shingo Tsuyama,** Japan. Sponsor: Dr. Martin Flavin, Section on Organelle Biochemistry, NHLBI, Bg. 3, Rm. 125.

11/1 **Dr. Pierre Voisin,** France. Sponsor: Dr. David C. Klein, Section on Neuroendocrinology, NICHD, Bg. 6, Rm. 1A15.

11/1 **Dr. Kentaro Yamaguchi,** Japan. Sponsor: Dr. Ronald Hass, Laboratory of Molecular Biology, NIEHS, Research Triangle Park, N.C.

11/4 **Dr. Jaap Goudsmit,** Netherlands. Sponsor: Dr. D. C. Gajdusek, NINCDS, Bg. 36, Rm. 5B25.

11/4—**Dr. Andras Liptak,** Hungary. Sponsor: Dr. Josef Pitha, Laboratory of Cellular and Molecular Biology, NIA, GRC, Rm. 4B17.

11/7—**Dr.Hans Westerhoff,** Netherlands. Sponsor: Dr. Terrel Hill, Laboratory of Molecular Biology, NIADDK, Bg. 2, Rm. 317.

11/13 **Dr. Shoichi Koizumi,** Japan. Sponsor: Dr. Bruce Chabner, Clinical Pharmacology Branch, NCI, Bg. 10, Rm. 12C214.

11/13—**Dr. Nicholaos C. Tassopoulos,** Greece. Sponsor: Dr. Robert T. Purcell, Laboratory of Infectious Diseases, NIAID, Bg. 7, Rm. 202.

11/13—**Dr. Luca Steardo,** Italy, Sponsor: Dr. Thomas N. Chase, Experimental Therapeutics Branch, NINCDS, Bg. 10, Rm. 5C103.

11/14—**Dr. Paturu Kondaiah,** India. Sponsor: Dr. Mario A. Anzano, Laboratory of Chemoprevention, NCI, Bg. 41, Rm. D228.

11/15—**Dr. Feng Pei,** China. Sponsor: Dr.Kevin J. Catt, Endocrinology and Reproduction Research Branch, NICHD, Bg. 10, Rm. 8C404.

11/18—**Dr. Ester Zylber-Katz,** Israel. Sponsor: Dr. Phillip Gorden, Diabetes Branch, NIADDK, Bg. 10, Rm. 9N222.

11/21—**Dr. Igal Kedar,** Israel. Sponsor: Dr.Phillip Gordon, Diabetes Branch, NIADDK, Bg. 10, Rm. 9N222.

NCI Signs Agreement With Romanian Institute

The National Cancer Institute signed a Memorandum of Agreement on Oct. 31 with the Victor Babes Institute of Bucharest, Romania.

This is the 10th such bilateral agreement in which the NCI is presently engaged. Other countries include the U.S.S.R., Hungary, China (Mainland), France, the Federal Republic of Germany, Japan, Italy, Poland, and Egypt.

The Memorandum of Agreement entered into last month would not have been possible were it not for the Dec. 13, 1974, agreement, signed in Bucharest, between the Governments of the United States and Romania on Cooperation and Exchanges in the Cultural, Educational, Scientific and Technological Fields. This agreement has been extended every 2 years since 1974.

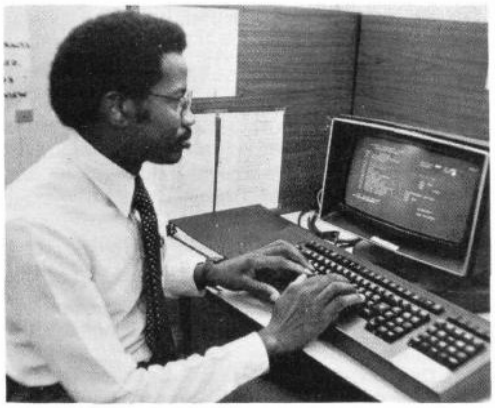
His Excellency Mirchea Malitza, Ambassador to the United States from the Socialist Republic of Romania, and Dumitro Neagu, third Secretary of the Embassy, attended the signing ceremony and reception for the delegation of Romanian scientists at Stone House.

Professor Constantin Arseni, president of the Romanian Academy of Medical Sciences, his wife Professor Niculina Arseni, and Dr. Ioan Moraru, director of the Victor Babes Institute in Bucharest and chairman of the delegation, participated.

Other members of the Romanian delegation were Dr. Eugen Carasevici, lecturer, Institute for Medicine and Pharmacy, Bucharest; Dr. Liliana-Livia Georgian, senior research fellow, Victor Babes Institute, Bucharest; and Dr. Andrei Sulica, head, department of immunology, Victor Babes Institute, Bucharest.

Subject to the availability of funds and personnel, NCI and the Victor Babes Institute agree that priority will be given to research in cancer pathology, experimental pathology, molecular genetics, and clinical studies of diagnostic procedures. □

Over 900 Employees Have Received DELPRO Training



Reginald Russell, Printing and Reproduction Branch, is learning the DELPRO system.

In less than 2 years over 900 employees have been trained to operate DELPRO, the NIH delegated procurement system. The training is a new endeavor for the Office of the Assistant Director for Development and Training, Division of Personnel Management. The training office was asked to prepare employees for the installation of DELPRO throughout NIH.

Through DELPRO, a subsystem of the Administrative Data Base, personnel enter and manage their own delegated procurements. Ordering, receiving, and paying are now automated.

DELPRO, designed by the Division of Computer Research and Technology along with the Divisions of Administrative Services and Financial Management, has produced numerous benefits for NIH, most notably quicker payment of bills and reduced paperwork.

Designing the training for DELPRO posed a challenge since there are no established procedures for teaching computerized work systems. The training, conducted for the past 2 years, was designed in one month.

The course designers, Jenean McKay and Milt Tipperman, learned to operate the system through DCRT's user guide. Learning objectives were then established and an instructional strategy and sequence of learning developed.

Over 100 pages of text were written, including lessons, desk references, and a troubleshooting guide. After a pilot course was conducted with the NCI Division of Cancer Treatment, BIDs were scheduled for training as their terminals were installed. By May 1983 over 900 people were trained on DELPRO.

Ninety percent of the course is conducted at the terminal. Students work at their own pace, following a series of lessons. An instructor is available for assistance. After completing the first several lessons, students start using desk aids.

The desk aids are written protocols which can be used after training. Employees use the desk aids to perform operational sequences, select options actions, and answer their own questions. This instructional approach minimizes reliance on memory while at the same time promotes independent learning.

Now that DELPRO is used throughout NIH, training is scheduled periodically for new employees and nominations can be made through administrative officers. □

Computer Club To Hold Book Fair

The R&W Personal Computer Club will sponsor a book fair Tuesday, Dec. 13 in Wilson Hall, Bldg. 1, complete with door prizes.

Books for beginners-to-experts in computing, programming, and applications will be on display from 10:30 a.m. to 3 p.m. Exhibitors attending will include B. Dalton, Walden Books, Students, Reston, and Computer Science Press. You may browse and place orders for yourself and holiday gifts.

In addition, from 12 to 1 p.m., publisher Philip Menzies and author Diane Martin will speak and answer questions from the audience on how to get published in the computer field. □

Dr. Yung-Pin Liu Joins Grants Associate Program

Dr. Yung-Pin Liu recently became the 156th scientist selected to participate in the NIH Grants Associates Program, a 1-year program initiated in 1962 to train scientists as health science administrators.

Dr. Liu

Most recently, Dr. Liu transferred from the Department of Hematology at the Walter Reed Army Institute of Research. Before that, he was associated with the National Eye Institute and the National Cancer Institute, an assistant professor at the University of Tennessee, research associate with St. Judes Children's Research Hospital and Yale University.

His undergraduate work was done in Taiwan, where he received his B.S. degree in chemical engineering. He received his M.S. degree in physical chemistry from Lowell Technological Institute, Lowell, Mass. and his Ph.D. in biochemistry from Baylor University, Dallas.

Dr. Liu is the author of more than 50 articles and abstracts and has received many honors and other special recognitions. Among these are:

Recipient of the 1979 Fight for Sight Citation of the Fight for Sight, Inc. for Outstanding Achievement in basic research; awardee, Wadley Institute of Molecular Medicine Fellowship; awardee, Lowell Technological Institute Fellowship; and NIH Outstanding Supervisor of Summer Employees.

His societies include the American Society of Biological Chemists, the Association for Research in Vision and Ophthalmology and the Chinese Biochemical Society. □

Dr. Jacob Robbins, chief, Clinical Endocrinology Branch, NIADDK, has received the Distinguished Service Award of the American Thyroid Association at their annual meeting in New Orleans. This award, the highest presented by the association, is for leadership and contributions to the field.

Dr. Irwin Kopin Awarded Anna Monika Prize

Dr. Irwin J. Kopin, director of the Intramural Research Program, National Institute of Neurological and Communicative Disorders and Stroke, recently received the 1983 Anna Monika Foundation prize for studies investigating the biological bases of manic-depressive disorders.

Dr. Kopin

Formerly at the National Institute of Mental Health, Dr. Kopin's prize-winning work was accomplished during his years with that institution. His team's research effort clarified sources of a key neurotransmitter metabolite, MHPG, in cerebrospinal fluid, plasma, and urine.

MHPG (3-methoxy-4-hydrophenylglycol) is a byproduct of the metabolic breakdown of the neurotransmitter norepinephrine. Scientists had previously believed that MHPG found in spinal fluid reflected mostly brain norepinephrine activity.

Drs. Kopin and colleagues David Jimerson, Sanford Markey, Michael Ebert and Ronald Polinsky have now shown that, in fact, cerebrospinal fluid MHPG includes a large contribution from blood. They have derived a new formula for determining MHPG derived from the central nervous system MHPG.

Norepinephrine Secretions

Much MHPG in blood comes from norepinephrine released by the peripheral nerves. These secretions are indirectly stimulated by the brain in response to stress. Clinical investigators have used changes in MHPG levels in body fluids to help distinguish different types of depression.

Dr. Kopin's team determined that blood MHPG accounts for most of the body's norepinephrine production and that only about 20 percent of MHPG in urine is derived from the brain.

Blood MHPG levels are thus substantially dependent on psychiatric state and are related to heritable traits.

Also blood MHPG levels are correlated with abnormal neurohormone responses commonly found in depressed patients. The findings open up new lines of investigation for relating MHPG to stress, anxiety, diet and other factors in psychiatric illness.

The Anna Monika Prize is awarded for research advancing knowledge about biological bases of mental illness. This year's awards were presented at a ceremony in St. Moritz, Switzerland. □

Photography Section Moving

The Photography Section of the Medical Arts and Photography Branch is in the process of moving to Rm. B2L321, Bldg. 10. The phone number for general photography will remain the same, 4496-5595; photomicrography, 496-2193; and photomacrography, 496-2329. □

Dr. Joseph F. Saunders Retires From NCI After 31 Years of Federal Service

"Fantastic, fascinating, exciting, challenging, rewarding."

With these words, Dr. Joseph F. Saunders, acting director of the NCI Office of International Activities, described the projects he worked on during 31 years of Federal service.

Recently retired, Dr. Saunders has, since 1973, directed four activities of the Office of International Activities. He has been operations manager for the international cancer research data bank program; manager of the USA-Hungary cooperative cancer research program; manager of the USA-People's Republic of China cancer program; and manager of the USA-USSR cooperative cancer research program.

"I am gratified to have been a part of the international cancer research community," said Dr. Saunders. "One of the most exciting events in the U.S.-Soviet exchange was the recent discovery of human T-cell leukemia/lymphoma virus antigen in the sera of several baboons from a primate colony located on the Black Sea at Sukhumi.

"The USSR sent several of the baboons to NCI some 8 years ago, originally to examine them for viruses that might be directly or indirectly associated with cancer. We did not anticipate this finding."

The animals are now being studied in Dr. Robert Gallo's laboratory at NCI. Information on them has been transmitted to Dr. Boris Lapin, the Soviet scientist who first discovered the lymphomas in this primate colony.

Dr. Saunders was chief of biology programs at NASA's Office of Manned Spaceflight from 1971 to 1973, and manager of Apollo Program bioscience experiments from 1972 to 1973.

At a European space research meeting in Paris in 1971, he learned of a radiation experiment under way at the University of Frankfurt. Through his efforts, BIOSTACK, as it was named, became the first basic bioscience experiment to fly on the Apollo 16 and 17 spaceflights.

Dr. Saunders

While working at the Office of Naval Research at the Navy Department in Washington, D.C., from 1952 to 1964, Dr. Saunders received the Arthur S. Flemming Award for Outstanding Federal Service for management of a program for the long-term preservation of human whole blood.

The system was adapted and used by the British Army Medical Services and the Netherlands Red Cross. It was later modified for use in Vietnam.

During the early 1960s, Dr. Saunders collaborated with Dr. C. Gordon Zubrod, then with NCI, on a preservation process for leukocytes and platelets used in cancer treatment.

Dr. Saunders has received many awards during his career, including the DHHS Special Achievement Award in 1982, and the NIH Director's Award in 1979. After a 6-week vacation, he will begin a new career as deputy to the executive officer of the American Physiological Society in Rockville. □

Dr. Levine Delivers Karon Memorial Lecture

Dr. Arthur S. Levine, Scientific Director of the National Institute of Child Health and Human Development, delivered the Ninth Annual Myron Karon Memorial Lecture Nov. 18 at the Childrens Hospital of Los Angeles, University of Southern California School of Medicine.

Dr. Levine's lecture was entitled, "From Fruit Flies to Onc Genes: What Developmental Biology Offers to Cancer Research." In his lecture, Dr. Levine pointed out that we have no "theory" of developmental biology nor of oncognenesis in the same sense that we have theories of evolution and genetics, but that these two areas of research are presently running in parallel.

This parallelism has been given much impetus by the recent discovery of onc genes, which may have an important normal role in regulation of the cell cycle, cell growth and differentiation, as well as their more widely studied role in malignant transformation.

He also described recent work from his own laboratory, published in the October issue of the Proceedings of the National Academy of Sciences, that reflects this theme.

As NICHD Scientific Director, Dr. Levine heads a broad program of basic and clinically applied research in the area of developmental biology. Prior to assuming his present position in 1982, Dr. Levine had spent his earlier career in the NCI where he had been chief of the Pediatric Oncology Branch.

Dr. Levine has been widely honored for his achievements in basic and clinical research. In October, he delivered the Annual Max Seham Lectureship in Minneapolis.

The Karon Memorial Lecture was established to honor Dr. Myron Karon, who in the early 1960s had been a senior investigator in the NCI Medicine Branch. Dr. Karon, together with his colleagues, Drs. Emil Freireich and Emil Frei, made pioneering contributions to the treatment of childhood leukemia, as well as to our knowledge of the molecular biology of cancer cells. □

Eleven FIC Scholars Doing Research in Federal Labs

In FY 1983, the Fogarty International Center awarded fellowships to 99 foreign scientists to conduct collaborative research in U.S. institutions, including the NIH Intramural Program.

Eleven of these scientists will be conducting research in Federal laboratories. They are:

Dr. Sandro Betocchi, from the University of Naples in Italy, will work under Dr. Douglas R. Rosing at NHLBI on a research project entitled "Pathophysiology of Hypertrophic Cardiomyopathies." Fellowship period: Aug. 24, 1983 to Aug. 23, 1984.

Dr. Robet I. Craggs, from the Royal Free Hospital School of Medicine, London, will work under Dr. Henry deForest Webster at NINCDS on a research project entitled "Neuritogenic Factors in Experimental Allergic Neuritis." Fellowship period: Sept. 1, 1983 to Aug. 31, 1984.

Dr. Anne Marie Duchemin, from St. Anne's Hospital in Paris, will work under Dr. Richard J. Wyatt at NIMH on a research project entitled "Endogenous Neuroleptic-Like Substance in the Human Brain." Fellowship period: July 1, 1983 to June 30, 1984.

Dr. Klaus P. Hedman, from the University of Helsinki, Finland, will work under Dr. Ira Pastan at NCI on a research project entitled "Genesis of and Growth Stimulation by Pericellular Matrix." Fellowship period: Nov. 1, 1983 to Oct. 31, 1984.

Dr. Ja-Hyun Koo, from Han Yang University in Seoul, Korea, will work under Dr. Sue-Goo Rhee at NHLBI on a research project entitled "Studies on Adenylyltransferase in Escherichia Coli." Fellowship period: Aug. 10, 1983 to Aug. 9, 1984.

Dr. Le Thi Bich-Thuy from INSERM U 80, Paris, will work under Dr. Anthony S. Fauci at NIAID on a research project entitled "Regulations of Antigen-Specific Human B Cell Activation." Fellowship period: Nov. 1, 1983 to Oct. 31, 1984.

Dr. Jung Bock Lee from Yonsei University, Korea, will work under Dr. Stuart T. Brown at CDC on a research project entitled "Advanced Diagnostic Methods for Syphilis and Other STD." Fellowship period: Apr. 15, 1983 to Apr. 14, 1984.

Dr. Tore Lindmo, from Norsk Hydro's Institute in Oslo, Norway, will work under Paul A. Bunn, Jr., at NCI on a research project entitled "Variability in Expression of Tumor Associated Antigens." Fellowship period: July 23, 1983 to July 22, 1984.

Dr. Orjan Olsvik, from the Norwegian College of Veterinary Medicine in Oslo, will work under Dr. John C. Feeley at CDC on a research project entitled "Toxins from Staphylococci causing Toxic Shock Syndrome." Fellowship period: Sept. 28, 1983 to Sept. 27, 1984.

Dr. Gerhard Skofitsch, from the University of Graz, Austria, will work under Dr. David Jacobowitz at NIMH on a research project entitled "Neuropeptides." Fellowship period: Aug. 29, 1983 to Aug. 28, 1984.

Dr. Gertraud Wasner, from the Austrian Academy of Sciences, Vienna, will work under Dr. Brad E. Thompson at NCI on a research project entitled "Properties of Human Mutant Glucocorticoid Receptors." Fellowship period: Aug. 1, 1983 to June 30, 1984.

FIC's International Research Fellowship Program was established in 1958 and presently 50 countries throughout the world participate. Since 1958, 2,139 fellowships have been awarded. □

Help for Federal Employees In Choosing Health Plan

You may be able to save several hundred dollars on next year's insurance premiums and medical bills by choosing the best health insurance plan for your needs during Nov. 14 through Dec. 9, when government employees have their annual "Open Season" opportunity for switching plans.

Every Federal employee has more than 15 plans to choose from, but many employees are unaware of some of the plans where coverage is excellent and costs are very low. The tables in this book show total medical expenses including both premiums and out-of-pocket costs under each plan.

The tables show what each plan will cost in an "average" year and in years in which your costs are much better or worse than average. This book also provides data on customer service under many of the plans—for instance—which ones pay their bills promptly and without red tape.

Pick up a copy at any R&W Gift Shop or the Activities Center, Bldg. 31. Price per copy is $4.50 (regular price $4.95). □

People occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened. —*Winston Churchill* □

Department Now Accepting Payments For Post-1956 Military Service Deposits

NIH employees were notified in the June 7, 1983 issue of the *NIH Record* on how to pay 7 percent of the basic military pay they received for post-1956 military service to avoid cuts in their civil service annuities when they become eligible for Social Security at age 62 or later.

They were reminded to send their military discharge form DD-214 or equivalent to the military pay center of the branch they served in to request an estimate of basic military earnings, and that they would be notified when procedures for making this deposit were completed.

HHS will now accept lump sum payments or monthly payments of no less than $50. Retiring employees must complete deposits prior to retirement and survivors of employees who die in service must complete deposits when making application for survivor annuity.

Employees planning for retirement are advised to hold and retain the amount of the deposit until Oct. 1, 1985 (or retirement, if sooner) since deposits are interest free until that date. Those interested in making this deposit should contact their Personnel Office for necessary forms and for further details. □

It would be a very fine thing for the world if everyone were entitled, in some slight degree, to be lucky.—*E.B. White* □

Tetanus Shot to Mother Immunizes Unborn Baby

Researchers have shown for the first time that pregnant mothers who are vaccinated against tetanus pass their immunity on to their babies.

A research team led by Dr. Thomas J. Gill III of the University of Pittsburgh Medical School, supported with grants from the National Institute of Child Health and Human Development, found that the tetanus vaccine—given to women in the later months of pregnancy—crosses the placenta and enters the fetal blood stream. The protection in the child was found to last longer than 1 year.

According to Dr. Delbert H. Dayton, chief of the Genetics and Teratology Section of NICHD's Center for Research for Mothers and Children, the discovery will benefit families in rural areas of the United States and in developing countries where newborn care is not available or vaccination programs may be difficult to carry out.

Dr. Dayton believes that future prenatal immunization may also become possible against streptococcal infections and meningitis.

Immunity Passed On

"It has long been known that a mother's antibodies can cross the placenta into the baby," Dr. Gill said. "What we discovered in this study is that the tetanus toxoid can cross the barrier so that the child can make its own antibodies." Parenthetically, Dr. Gill pointed out that he and his colleagues had found in earlier animal studies that immunity in rats can be passed on even into the second generation because the pups' pups were found to have gained immunity from one single injection to the grandmother.

Three years ago following extensive experimentation with pregnant rats, Dr. Gill received permission to test the transplacental tetanus immunization on 42 pregnant women. After birth, the infants of these mothers were found to have protection against tetanus in their blood whereas the newborns of 25 unimmunized control mothers did not.

The immunized infants also responded more rapidly than the others to DPT immunization (Diphtheria, Pertussis, Tetanus) and they still had a high level of tetanus antibodies 13 months after birth.

Dr. Gill said he chose the tetanus vaccine for this research because it is one of the safest, having been used in humans for over 50 years. Women were vaccinated at 6 and 8 months into pregnancy because after 5 months the major development of the fetal organs has been completed so that any malformations would be improbable. Dr. Gill said that all infants of the immunized mothers were born healthy and generally remained so during the 3-year study.

Dr. Sumner J. Yaffe, director of the NICHD Center for Research for Mothers and Children which monitored Dr. Gill's research, called the successful transplacental immunization highly significant but warned that further long-term studies on the safety and effectiveness of the vaccination with tetanus and other toxoids were needed before large-scale adoption would be possible. □

Drs. Frank and Froehlich Selected for SES Program

Dr. Froehlich

Dr. Frank

Two NIH employees, Drs. Martin Frank, DRG, and Luz A. Froehlich, NIAID, have been notified by HHS Secretary Heckler that they are among 22 candidates selected to participate in the Departmental Senior Executive Service Candidate Development Program.

The SES Program is designed to provide outstanding women and men with a variety of developmental experiences to prepare them for senior management positions within 2 years.

The program offers participants a unique opportunity to broaden their career perspective and develop executive skills. Candidates remain in their current positions while completing temporary assignments and formal course work.

Since 1978, Dr. Frank has been executive secretary of the Physiology Study Section, one of approximately 75 study sections within the Division of Research Grants whose members evaluate the scientific and technical merit of investigator-initiated research applications in the first level of peer review at NIH.

Before coming to NIH, Dr. Frank was assistant professor of physiology at the George Washington University Medical School. He still serves as an associate professorial lecturer at GWU and is a member of the research committee of the American Heart Association, Nation's Capital Affiliate.

After receiving his Ph.D. in physiology from the University of Illinois in 1973, Dr. Frank became research associate at Michigan Cancer Foundation, Detroit, and Michigan State University, East Lansing.

Dr. Froehlich, who joined NIAID in 1971, was recently appointed deputy director of NIAID's Extramural Activities Program. In addition to her new role, she remains as chief of the Institute's Program and Project Review Branch.

A board-certified pathologist, Dr. Froehlich was born in the Philippines, graduating with high honors from the University of the Philippines' College of Liberal Arts. In 1953, she earned the M.D. degree from the University's College of Medicine.

Her diversified skills in science and administration earned her the 1976 NIH Director's Award for "Effective administration of specialized NIAID grants programs and for enthusiastic and productive participation in NIH efforts in Equal Employment Opportunities." □

Dr. Robert Gallo To Deliver Dyer Lecture on Viruses

The 1983 R. E. Dyer Lecture will be presented by Dr. Robert C. Gallo, chief of the National Cancer Institute's Laboratory of Tumor Cell Biology, on Wednesday, Dec. 14, at 8:15 p.m., in Masur Auditorium. The title of the lecture is "Human Tumor Viruses: The Search for Some is Over."

Dr. Gallo will discuss the search for the first human RNA tumor virus, or retrovirus, known as HTLV (human T-cell leukemia virus); its strong association with a rare form of T-cell leukemia-lymphoma in adults, and its similarity to a virus that appears to be causally linked with acquired immune deficiency syndrome, or AIDS.

The Dyer Lecture was established in 1950 to honor former NIH Director Rolla E. Dyer. The lectureship is awarded annually to scientists who have made an outstanding contribution to knowledge in a field of medical science. □

Alexander Capron Will Lecture On Genetic Engineering, Dec. 19

The Foundation for Advanced Education in the Sciences will sponsor a lecture on Genetic Engineering in Human Beings, presented by Alexander Capron on Monday, Dec. 19, at 4 p.m. in Wilson Hall, Shannon Bldg.

Mr. Capron, professor of law, ethics and public policy at Georgetown University Law Center, was executive director of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. Experienced in this field, he is particularly interested in problems presented by recent advances in molecular and medical genetics.

A reception will follow the lecture. For further information, contact Dr. Alan Schechter, chairman, FAES Lecture Series, 496-5408. □

Kidney Stones Prevention And Treatment Described

Each year, more than a million Americans—typically white, middle-aged men—are hospitalized for treatment of kidney (also known as "urinary") and bladder stones.

The stones are hard masses that gradually build up when various salt or mineral crystals deposit on the inner surfaces of the kidney. As the stones grow larger, bleeding may occur. Or stones may be passed during urination, causing severe pain in the back, side and groin.

In the past, little could be done for most patients with kidney stones. Now kidney stones—especially those that recur—are considered a preventable disease, according to research supported by the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases.

The results of this research have been summarized in a recently-issued brochure titled "Prevention and Treatment of Kidney Stones." The brochure notes that the causes of this ancient health problem (evidence of stones has been found in an Egyptian mummy dating from about 4,800 B.C.) may include age, genetic defects, occupation, climate, and drinking too little fluid, which can decrease the amount of urine and increase the concentration of elements, such as calcium, that form stones.

A variety of health problems can also cause kidney stones, including recurring urinary tract infections, misuse of certain medications, metabolic disorders (such as gout), overactive parathyroid gland, and chronic inflammation of the bowel. Stones also tend to form in people who have had an intestinal bypass operation or blockage of the urinary tract.

While diet may cause stones to form in susceptible people, scientists do not believe that eating any specific food causes them to form in healthy individuals.

The brochure describes the symptoms of kidney stones, and how physicians diagnose, treat, and prevent them. For example, a new nonsurgical treatment uses high-energy acoustic shock waves to shatter kidney stones. The patient is anesthetized and positioned in a water bath so that the highest energy of the shock wave is precisely aimed at the kidney stone and does not harm any other area of the body.

Treatment for kidney stones must be tailored to the individual and to the specific cause of the stone. Increasing the daily consumption of liquids, mainly water, is a good way to prevent kidney stones.

For copies of "Prevention and Treatment of Kidney Stones," write to "Kidney Stones," National Instiute of Arthritis, Diabetes, and Digestive and Kidney Diseases, Bldg. 31, Rm. 9A04, Bethesda, MD 20205; or call (301) 496-3583.—**Maureen Mylander** □

Nothing knits man to man like the frequent passage from hand to hand of cash.—*Walter Sickert* □

More Research Needed on Fragile X Syndrome

Ten recommendations to help guide research on a chromosomal defect called the fragile X syndrome were recently compiled by a panel of 22 experts from four continents meeting at NIH.

The 2-day workshop, sponsored by NICHD's Mental Retardation and Developmental Disabilities Branch, brought together scientists working on fragile X to discuss the state of the science, identify gaps in knowledge and determine potential research strategies.

Fragile X is an elusive genetic abnormality that scientists think may account for 25 percent of all sex-linked mental retardation in men. Its prevalence was not recognized until recently.

To help guide the developing body of fragile X knowledge, the panel's recommendations included:

- more research involving family members to help explain why fragile X tends to appear in certain families;
- guidelines to clearly define the physical and behavioral traits;
- establishment of DNA and cell banks for future research;
- application of recombinant DNA methods;
- more studies on culturing techniques;
- more research aimed at prenatal diagnosis of the condition.

Of the hundreds of causes of mental retardation, researchers consider fragile X second only to Down syndrome as a definable genetic reason for mental retardation in males.

Down syndrome occurs about once in every 1,000 births. While estimates vary about the prevalence of fragile X, even conservative figures place its frequency at about half the Down syndrome rate.

The name, fragile X, refers to the genetic problem that causes the disorder: a weakening, constriction or defect on the X chromosome. The X chromosome is one of the two sex-determining bundles of gentic material in human cells. Male cells contain one X and one Y, while female cells carry two Xs.

Although researchers still don't understand the fragile X syndrome, they do agree on its outward signs. They caution, however, that characteristics typical of the syndrome do not guarantee that the fragile X chromosome is present. They also note that generally there are no visible physical signs of fragile X at birth.

During the workshop, scientists described the general traits in males as mild to severe mental retardation, increased head circumference, long facial features with prominent jaw and foreheard and large ears, speech and hearing deficiencies, poor motor skills, abnormal behavior and hyperactivity. The most common sign is macroorchidism, that is, testicles three to four times larger than normal.

Some female carriers are slightly retarded and may have some of the general traits found in men.

Cochairing the meeting were Drs. Park S. Gerald, professor of pediatrics at Harvard Medical School and Herbert A. Lubs, director of the division of genetics at the University of Miami (Fla.) School of Medicine.

Dr. Lubs is credited with initiating interest in the fragile X syndrome when, as an NICHD grantee in 1969, he identified four men from the same family who had the defect. □

Dr. Andres Wins Kolker Award

The Irving M. Kolker Award, presented annually for contributions in the fields of aging and aging research, was presented to Dr. Reubin Andres, clinical director of the National Institute on Aging, on Oct. 25.

Last year's winner, Dr. Nathan W. Shock, NIH scientist emeritus, made the presentation.

The award, given by the Levindale Hebrew Geriatric Center and Hospital in Baltimore, emphasized Dr. Andres' "distinguished leadership, career achievements, and dedication to gerontology and geriatrics."

At a dinner in his honor, Dr. Andres gave a lecture entitled, "True Confessions of an Aging Gerontologist." The title, he explained, was chosen to emphasize that current detailed knowledge of biological aging processes in man has come from an accelerating research effort by many scientists in recent years.

Dr. Andres showed examples of several standard tests which must take age into account to avoid over-diagnosing common disease states in middle-aged and elderly people.

A professor with the department of medicine at the Johns Hopkins Institute, Dr. Andres assumed the role of NIA clinical director in 1976. He has been chief of the Institute's Clinical Physiology Branch at the Gerontology Research Center in Baltimore since 1969, and serves as assistant chief of the GRC.

Dr. Andres' scientific interests span several biomedical fields, but his special interests center on glucose homeostasis, obesity and its relation to longevity, and longitudinal studies of human aging.

A member of many professional societies and organizations, Dr. Andres has received numerous other awards. In 1974, he won the Kleemeier Award from the Gerontological Society and, in 1978, the NIH Director's Award. □

HAPPY HOLIDAYS

Happy Holidays from the staff of the *NIH Record*.

The next *NIH Record* will be published on Jan. 3, 1984. □

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