

The NIH Record

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Women Without Ovaries May Be Able to Conceive, and Bear Surrogate Babies Through Embryo Transfer Technique

A new infertility treatment may make it possible for women who lack ovarian function to carry and deliver a baby. Previously these women had no hope of becoming pregnant, because they cannot produce an egg or the hormones needed to sustain a pregnancy.

In a recent issue of the *Journal of the American Medical Association*, Dr. Gary D. Hodgen of the National Institute of Child Health and Human Development reported that a new therapy has been used successfully to achieve pregnancy in monkeys whose ovaries had been removed.

The treatment consists of transferring a donated (surrogate) embryo from a fertile to an infertile female and administering estrogen and progesterone—the ovarian hormones needed for pregnancy—to the new mother.

"Our purpose was to determine in a primate model the feasibility of mimicking the hormonal milieu of the fertile menstrual cycle to accommodate surrogate embryo transfer in females lacking ovarian function," says Dr. Hodgen.



Dr. Hodgen

Dr. Hodgen and his colleagues transferred 11 embryos to monkeys whose ovaries had been removed. They collected the embryos from donor females 3 to 4 days after fertilization, through a surgical procedure in which the embryo is flushed out of the uterus and fallopian tube.

They then transferred the embryos into the fallopian tubes of recipient females. Estrogen and progesterone were supplied to the new mothers through silicone implants under their skin. Four of the 11 recipient females became pregnant, and all delivered normal, term infants.

"The clinical implications of these monkey studies are far-reaching," says Dr. Hodgen, "because they indicate a potential for child-bearing in women whose ovaries are absent or nonfunctioning." If clinical trials are undertaken, he says, safeguards should be taken against ectopic (outside the womb) pregnancy, the principal risk of the procedure to both

(See EMBRYO TRANSFER, Page 5)

Dr. Frederic Richards To Deliver NIH Lecture

Dr. Frederic M. Richards, professor of molecular biophysics, Yale University, will deliver the NIH Lecture Wednesday evening, Jan. 25, on the subject "Charge Distribution, Electrostatic Fields, and Enzyme Function."

Sponsored by the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, the lecture will be given at 8:15 p.m. in Clinical Center's Masur Auditorium.

The NIH Lectures were established in 1953 to recognize outstanding scientific accomplishment and to contribute to the vital interchange of scientific information. The lectureship is awarded by the NIH Director on the advice of the scientific directors.

Dr. Richards is noted for work relating to the problems of protein structure and function. He discovered ribonuclease-S, an enzyme derived from pancreatic ribonuclease, and defined the structure and activity of this enzyme through chemical and crystallographic studies.

His recent theoretical studies have centered on protein folding, geometrical description of protein packing and surface topology, and on protein-water interfaces. He has also

(See NIH LECTURE, Page 7)

Outstanding Performance Awards Granted To 66 Senior NIH/NIMH Staff Members

Six Senior Executive and Senior Scientific Service (SES/SSS) staff members of the National Institutes of Health recently were awarded Presidential Rank Awards. An additional 60 SES/SSS staff members from NIH and the intramural staff of the National Institute of Mental Health received outstanding performance awards. Bonuses were delivered in December, along with congratulatory letters to the recipients.

Each year the President grants Distinguished and Meritorious Executive Rank awards to a select number of SES/SSS members in recognition of prolonged, high quality accomplishment. No more than 1 percent of the SES population government-wide may receive the Distinguished Rank, and no more than 5 percent the Meritorious Rank. Nominees are carefully screened by an Executive Resources Board and the HHS Secretary. After the Secretary's review, the final list was approved by the President.

The 1983 Rank awardees were:

Distinguished Executive Rank

Dr. Thomas E. Malone, OD

Meritorious Executive Rank

Dr. Roscoe O. Brady, NINCDS

Dr. Gary Felsenfeld, NIADDK

Dr. Clarence J. Gibbs Jr., NINCDS

Dr. Carl Kupfer, NEI

Dr. Maxine F. Singer, NCI

In addition, 60 SES/SSS staff members of NIH and NIMH received outstanding performance awards ranging from \$3,000 to \$12,000. Nominations and recommended award amounts were reviewed by six Performance Review Boards (PRBs) made up of top-level NIH management officials and then received a further review by the Director's Advisory PRB.

Final recommendations were then made by NIH Director Dr. James B. Wyngaarden. Dr. Wyngaarden's nominations were combined with other Public Health Service nominees before receiving departmental review and final approval by the Secretary.

The 1983 SES/SSS awardees were:

Dr. Richard H. Adamson, NCI; Philip D. Amoroso, NCI; Dr. Richard M. Asofsky, NIAID; Calvin B. Baldwin, Jr., OD; Dr. Fred H. Bergmann, NIGMS

Dr. Kevin J. Catt, NICHD; Dr. Philip S. Chen, Jr., OD; Dr. Sheldon G. Cohen, NIAID; Dr. Martin M. Cummings, NLM; Dr. Igor B. Dawid, NICHD; Dr. John L. Decker, CC

(See STAFF AWARDS, Page 7)

The NIH Record

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TRAINING TIPS

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

Technical	Course Dates	Deadline
Scientific Terminology	2/7	1/17
Effective Oral Communication	2/27	1/23
Contract Freedom of Information Workshop	3/3	1/27
Effective Listening	3/15	2/22
Job Element Examining	3/26	2/22
Effective English Workshop	4/5	3/16
Medical Terminology II	4/3	3/13
Human Relations Workshop	4/23	3/23
Labor Relations for Personnel Specialists	4/10	3/23
Proofreading	4/30	4/19
Administrative Systems DELPRO*		
(Delegated Procurement)	2/27	2/13
Stock Requisition	2/10	1/22
Executive, Management and Supervisory		
Dynamic Listening	3/1	2/14
Understanding and Managing Stress	2/22	2/6

*For new DELPRO users only.

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

Assertiveness Training Being Offered

Rachelle Selzer, chief mental health counselor of the Occupational Medical Service, will start a 4-week Assertiveness Training presentation on Jan. 31, from 12:45 to 1:45 p.m.

The group, limited to 15, will meet in Bldg. 31, Rm. B2B57. Interested participants should call 496-3164 for a brief, pregroup interview. □



The DHHS' Outstanding Handicapped Employee for 1983, Frances B. Cannon of the National Institute of Dental Research was honored a second time Dec. 12 at the BID Director's meeting. Ms. Cannon was cited for her nomination as Outstanding Handicapped Federal Employee of the Year. Thomas McFee, assistant secretary for personnel administration for the Department, congratulated her for her many achievements and presented her with a certificate signed by President Reagan and the Director, OPM.

Parking Permits for C-D Names Must Be Renewed in February

Employees whose last name begins with C or D, and who have general employee parking permits are reminded that their parking permits will expire on the last day of February.

Employees may renew their parking permits any workday at the NIH Commuter Assistance Office, Bldg. 31, Rm. B1C19 between 8:30 a.m. and 3:30 p.m.

Affected employees will receive a memo reminding them of the upcoming renewal and providing specific instruction on obtaining the replacement permits.

New general employee parking permits must be displayed beginning Thursday, Mar. 1.

For additional information, contact Cheryl Amatucci, Bldg. 31, Rm. 4B30, 496-7644. □



Montana Senator Max Baucus (r) recently toured NIAID's Rocky Mountain Laboratories (RML) in Hamilton, Mont. He visited each unit to discuss the Laboratories' current research programs. Here, Sen. Baucus inspects the new primate facility to be used for research on Acquired Immune Deficiency Syndrome (AIDS). Shown with the Senator (l to r), are Carlene Nimlos, aide to the Senator, and RML's Randy Williamson and Pete Miller.

"Operation Cleanup" Now Under Way

The annual "Operation Cleanup" will be conducted during the month of January at NIH. The campaign's objective is to effect economies in the government by using idle equipment and supplies.

Last year the campaign resulted in the identification of 1,167 line items of equipment valued at \$763,896 which were subsequently transferred to Property Utilization and reissued to other NIH or government activities.

Willie Bowles Jr., assistant director of materiel management, Division of Administrative Services, states that in order to fulfill the objectives of the campaign, each NIH component should initiate a "house cleaning."

This year, as in the past, NIH organizational segments are requested to organize internal "walk-thru" teams, which will be accompanied by a representative of the Personal Property Branch.

The objective is 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.

All personnel are asked to cooperate and make this a most successful year for "Operation Cleanup." □

Exercise Program to Relieve Back Pain Offered at Center

The Y's Way to a Healthy Back is a special exercise program for people who suffer back pain and discomfort. The program was developed by Dr. Hans Kraus and Alexander Melleby and is taught by a certified instructor. It is specifically designed for relaxing, stretching and strengthening the back.

Classes are limited to 15 participants. The Y's Way to a Healthy Back involves 2 classes per week for a 6-week session. Participants will receive a manual and a tape cassette for home use.

Classes will meet on Tuesday and Friday beginning Jan. 24, from 1:15 to 2 p.m., in T-39, NIH Fitness Center.

The fee is \$50 for Fitness Center members and \$60 for nonmembers.

Register at the R&W Activities Desk, Bldg. 31, B1W30, or at the Fitness Center. For further information call R&W on 496-6061 or the Fitness Center, 496-TRIM. □

NIH Honors Martin Luther King Jr. January 26 in Masur Auditorium

The Black Cultural Committee of NIH will hold its 12th Annual Martin Luther King Jr. Commemorative Program, Thursday, Jan. 26, at noon in the Masur Auditorium, Bldg. 10. The featured speaker is former U.S. Congresswoman Shirley Chisholm. Also on the program is Maryland Congressman Michael D. Barnes.

For further information, contact Shiril Brinson, 496-6121. □

Prehistoric Campsite Found on NIH Campus; Some Relics Date From 8,000 to 1,000 B.C.

Remnants of a prehistoric campsite at least 3,000 years old have been discovered by archaeologists on the NIH campus. The discovery, made during an inspection of a planned roadway route (Woodmont Ave. extension) last summer, includes several arrowhead-like "points," portions of stone tools and numerous pottery fragments.

Officials have asked that the exact location of the site not be revealed, fearing that scavengers and history buffs might disturb it.

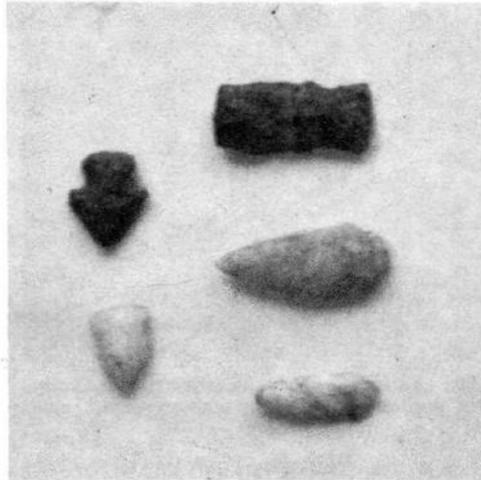
Of 179 test holes dug at the site during "phase I" of the project, 51 produced prehistoric artifacts with 46 of these concentrated in one area, according to archaeologists. They say the discovery is significant because it is one of a few prehistoric sites to survive intense development through the years and little is known of prehistoric life in this area.

Small bands or individuals engaged in hunting and foraging probably used the NIH site for short periods of time. The area was apparently used as a campsite on a number of occasions in the Archaic Period (8000 to 1000 B.C.) and the Woodland Period (1000 B.C. to 1600 A.D.), according to a preliminary report written by Daniel Koski-Karell, the chief archaeologist involved in this study.

Most of the items found were in a small plot of land that was unmarred by years of farming in the area, the construction of the Town and Country Golf Club in the 1920s, construction of government buildings in the 1960s, and periodic construction of pipelines, roads and parking lots.

Among items found were some projectiles made of rhyolite—a stone indigenous to the Hagerstown valley but not ordinarily found here, which may be helpful in tracing trade and migration routes of these early humans.

Even before the Montgomery County department of transportation hired Karell Archaeological Services of Alexandria to investigate the land for the roadway, as part of required environmental impact studies for development of Federal land, "Five," an NIH gardener, introduced Mr. Koski-Karell to Vernon Taylor, an NIH tree maintenance worker, who has discovered several Indian "projectile points" over the



The projectile points collected by Mr. Taylor from different locations on the NIH grounds are as follows: top and bottom left are Brewerton (quartzite and quartz), respectively; top right, Claggett (rhyolite), middle r, Bare Island (quartz); bottom r, Piscataway (quartz, dated early to middle Woodland Period, 500 B.C. to 500 A.D.).

last 6 years around the NIH campus.

Commonly called "arrowheads," the stones usually were used as spearheads or for cutting.

Mr. Taylor, an avid outdoorsman who collects prehistoric projectile points and produces his own replicas using a deer antler, found a few of the NIH arrowheads while scouting the surface of a worn path near the project site during his lunch hour. He has collected over 500 arrowheads from upper Montgomery County.

One of Mr. Taylor's discoveries resembles points made during the Late Archaic Period, from about 1500 B.C. to 700 B.C., while another resembles those made about 2000 B.C., according to the report.

In the "phase I" search made last June—visually inspecting the land and digging 1 cubic-foot test pits at 25-foot intervals—items of recent vintage were unearthed in 87 of the 179 test holes, including two shoe heels, the neck of a 1910-era bottle, two plastic cigarette filters and fragments of a Dr. Pepper bottle.

In the "phase II" digging, which will begin this spring, holes will be dug at intervals of 5 and 10 feet, and larger ditches will be excavated in the most sensitive areas.

According to a history published by the state, prehistoric men made their way across North America by way of Alaska at least 12,000 years ago, arriving in Maryland in the Paleoindian Period between 11,000 and 8,000 B.C.

The NIH artifacts are thought to have been made during the Archaic and Woodland periods. In the Archaic Period (8000 to 1000 B.C.) according to the history, glaciers began to retreat and the Chesapeake Bay formed. As food sources became more available, the population increased.

They manufactured a variety of notched and stemmed spear points, stone knives, scrapers and other tools. Their social systems centered around bands and they made temporary campsites.

During the Woodland Period (1000 B.C. to 1600 A.D.), the bands became increasingly

settled, and dramatic cultural and technological changes occurred, according to a geological survey.

Pottery was developed, clay vessels replaced bulky soapstone bowls, baskets and skin containers. During the early Woodland Period, wide-ranging trade networks were established. During the Late Woodland Period, humans established large, often fortified villages and formed alliances among groups.

The complex settlement and social systems of the Late Woodland Period led to formation of various tribes, such as the Piscataway and Nanticoke, encountered by the first Europeans in Maryland, according to state history.

The "phase II" archaeological survey and report should be completed some time next summer. The find is not expected to halt construction of the Woodmont Ave. extension county officials and archaeologists said. The NIH land will probably be excavated to recover artifacts and construction will continue.—Adapted from the *Montgomery Journal*. □

Karate Classes Begin January 30

A new 12-session beginners course in Tae Kwon Do (karate) is being organized by the NIH Karate Club, under the auspices of the NIH Judo Club and R&W.

Classes will meet on Mondays from 6 to 7 p.m. in the old gymnasium at the Stone Ridge School, corner of Cedar Lane and Wisconsin Ave., beginning Jan. 30.

Students will learn traditional Tae Kwon Do under Dr. Daniel Eskinazi and William Miller, both black belts.

The 12-week beginners' class leads to a gold belt and includes: front and back stances, rising and side blocks, hand techniques (reverse punch, chop), front and side kicks, combinations, the first Tae Kwon Do Kata, one-step sparring (formalized attack and counterattack moves with a partner) and various awareness.

For students with previous training, advanced classes are available. Instruction in advanced classes includes more advanced stances, blocks, punches, and kicks, sparring drills, advanced kata, board breaking (optional), and controlled free sparring.

The fee for the beginners' course is \$35. The fee for advanced students is \$20. Applicants should register by calling Dr. W. French Anderson, 496-5844.



William C. Miller III, (l), senior program analyst with NIA, spars during his Black Belt examination with Dr. W. French Anderson, NHLBI, chief instructor of the NIH Karate Club. Mr. Miller is the first student in the club to be awarded his First Degree Black Belt in the martial art of Tae Kwon Do (Korean Karate).



It appears from the material found by Mr. Taylor that there is a substantial amount of prehistoric cultural material at several locations on the NIH campus.

NLM's New Learning Resource Center Opens in Renovated Library Quarters

June 3, 1983 marked the opening of the National Library of Medicine's new Learning Resource Center (LRC) in renovated quarters in the main library building (38).

The LRC, which is managed by NLM's Audiovisual Resources Section, provides a focal point at NLM for the use of health sciences audiovisual resources in a variety of subjects geared to the health professional.

There are over 12,000 audiovisual titles available for viewing in the LRC. All are cataloged through AVLINE, NLM's computerized file for audiovisuals.

Special arrangements have been made with the cooperation of the NIH Library in Bldg. 10 for NIH staff to borrow, at no charge, any of the 12,000 audiovisuals in the LRC collection for continuing education, teaching support, or other individual use. The following procedure will expedite the process:

- Identify audiovisual titles of interest through AVLINE or its printed catalog, the *National Library of Medicine Audiovisuals Catalog*. This can be done at the NIH Library with the assistance of the reference staff. (Bldg. 10, Rm. 1L25, 496-2184; Rm. 1L19 for an AVLINE search, 496-1156).
- Request an audiovisual interlibrary loan from NLM through the NIH Library Interlibrary Loan Unit, Rm. 1L21; 496-4651.

The audiovisual loan period is for 3 weeks unless otherwise specified. Pick up and re-



NLM's Learning Resource Center houses some 1,200 audiovisual titles as well as recent journals on audiovisual topics.

turn is at the Interlibrary Loan Unit of the NIH Library, Bldg. 10. Loans from the LRC to NIH staff can only be made through the NIH Library. Library and NIH Identification cards are required for all NIH Library services.

The LRC is open during regular hours of the National Library of Medicine and is staffed Monday through Friday from 8:30 a.m. to 5 p.m. All NIH staff are encouraged to visit the LRC and take advantage of the services available. Questions or comments may be directed to the Audiovisual Resources Section, National Library of Medicine, Bethesda, MD 20209; 301/496-4244. □

Three Belgian Scientists, Formerly at NINCDS, Honored For Multiple Sclerosis Research Mostly Done at NIH

Three Belgian scientists formerly on the staff of the National Institute of Neurological and Communicative Disorders and Stroke are the first recipients of the Prix Ketelaer of the Belgian National Multiple Sclerosis Society. The award was presented last month at the Academy Palace in Brussels.

The award carries a prize of 1 million Belgian francs (\$20,000) and recognizes groups of Belgian scientists who have performed original fundamental or clinical research contributing to the understanding of multiple sclerosis.

Sharing the award are Dr. Elizabeth Hooghe-Peters of the Flemish Free University of Brussels, Dr. Bernard Rentier of the University of Liege, and Anne Baron-Van Evercooren, a Ph.D. candidate at the University of Liege.

The scientists were honored for basic research carried out mostly at NINCDS, under the direction of Dr. Monique Dubois-Dalcq, chief of the Neural and Molecular Ultrastructure Section, Laboratory of Molecular Genetics, NINCDS.

The studies focused on the characterization of nerve cells *in vitro*, including myelin-forming cells, and on persistent viral infections of these nerve cells.

Dr. Hooghe-Peters, a neurobiologist, was a visiting Fogarty fellow at NINCDS in the Electron Microscopy Section of the Infectious Diseases Branch from 1976 to 1978.

An expert in nerve cell culture, she discovered a new antigen on the surface of differ-

entiated cultured neurons and studied the effects of antiviral antibodies on measles-infected cells. Modulation of viral infection by antibodies, some scientists believe, may lead to persistent infection of nerve cells.

Dr. Rentier is an accomplished virologist, viral immunologist and cell biologist, with a strong research interest in persistent infections of nerve cells.

As a visiting fellow and associate at NINCDS in the Electron Microscopy Section of the Infectious Diseases Branch from 1976 to 1981, he examined the biological, immunological, and ultrastructural properties of measles virus, an agent suspected of causing multiple sclerosis in various types of cells. Dr. Rentier is now using this model to study the effects of measles virus on the functions of differentiated nerve cells.

Ms. Baron-Van Evercooren was at NINCDS from 1978 to 1983, first with the Infectious Diseases Branch and later with the Laboratory of Molecular Genetics, Neural and Molecular Ultrastructure Section. Her work focused on a new field of interest in neurobiology: the role played by large extracellular matrix glycoproteins in the differentiation and function of some nerve cells.

Ms. Baron-Van Evercooren discovered that these proteins promote the adhesion, mitosis, and migration of cultured rat Schwann cells. She collaborated in this research with Dr. Hynda Kleinman and coworkers at the National Institute of Dental Research. □

New Literature Searches Available From NLM

A new bibliography on AIDS, with over 344 references from the recent medical literature on Acquired Immune Deficiency Syndrome, is available without charge from the National Library of Medicine's Reference Section.

The new bibliography (LS83-25), updates and supplements two earlier searches in the series (LS83-1 and LS83-5). It was produced through NLM's computerbased system MEDLARS; an addendum includes references drawn from other sources.

A list of recent Literature Search titles, including the new AIDS bibliography, appears below. A complete list of available searches is contained in each issue of *Index Medicus* and *Abridged Index Medicus*.

When requesting Literature Searches, please include title and number, enclose a self-addressed gummed label, and mail to: Literature Search Program, Reference Section, National Library of Medicine, Bethesda, MD 20209.

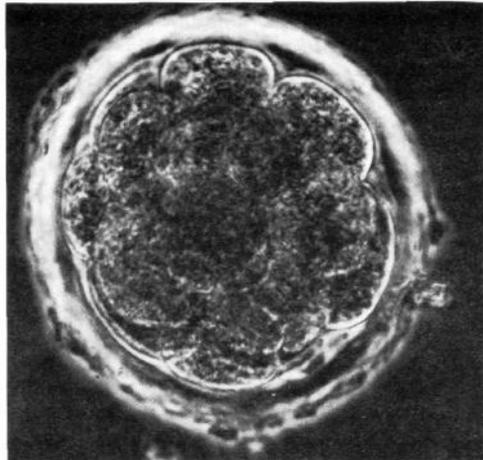
- LS83-10 *Lyme disease*. January 1977 through August 1983, 70 citations.
- LS83-11 *Intrauterine Growth Retardation (IUGR)*. January 1978 through August 1983, 417 citations in English.
- LS83-12 *Sleep apnea*. January 1980 through August 1983, 323 citations.
- LS83-13 *Hypertriglyceridemia*. January 1980 through September 1983, 144 citations in English.
- LS83-14 *Low birth weight infant—outcome, mortality, intensive care*. January 1977 through September 1983, 374 citations.
- LS83-15 *Anorexia nervosa and bulimia*. January 1980 through August 1983, 326 citations in English, including appendix.
- LS83-16 *Portable infusion pumps*. January 1980 through August 1983, 148 citations.
- LS83-17 *Hospital information systems*. January 1975 through September 1983, 319 citations in English from the Health Planning and Administration database.
- LS83-18 *Precursors to malignant melanoma—dysplastic or congenital nevi*. January 1977 through October 1983, 101 citations.
- LS83-19 *Dioxin toxicology (including agent orange)*. January 1981 through September 1983, 128 citations.
- LS83-20 *Mental disorders and violent crimes: psychiatric and legal aspects*. January 1980 through August 1983, 124 citations including appendix.
- LS83-21 *Insomnia: correlates and treatment considerations*. January 1977 through November 1983, 424 citations in English.
- LS83-22 *Maternal alcohol consumption and fetal and newborn effects, including the fetal alcohol syndrome (FAS)*. May 1978 through October 1983, 304 citations in English.
- LS83-23 *Health care cost containment*. January 1975 through October 1983, 304 citations in English.
- LS83-24 *Dental sealants*. January 1977 through November 1983, 199 citations in English.
- LS83-25 *Acquired Immune Deficiency Syndrome (AIDS)*. Second quarterly update and supplement. September 1983 through December 1983, 344 citations, including addendum.
- LS83-26 *Cyclosporin*. January 1980 through December 1983, 301 citations in English.
- LS83-27 *Hepatitis B vaccine*. January 1980 through December 1983, 246 citations. □

EMBRYO TRANSFER

(Continued from Page 1)

donors and recipients. Also needed is "careful deliberation of the many ethical concerns and legal issues inherent in this novel approach to infertility treatment," he says.

Commenting on the findings in a *JAMA* editorial, *in vitro* fertilization pioneer Dr. Howard



An embryo collected from donor monkey before it is transferred to recipient female.

W. Jones Jr. of the Eastern Virginia Medical School in Norfolk wrote that for the first time "the women without ovarian function can realistically consider a transfer of a donor egg."

He pointed out practical considerations associated with surrogate embryo transfer—such as where to get the donor eggs—but said these problems are "theoretically solvable." "The ethical issues will surely be debated," said Dr. Jones, "but also seem resolvable, at least for a large segment of society."

Also commenting on Dr. Hodgen's studies, medical ethicist Dr. LeRoy Walters of Georgetown University compared surrogate embryo transfer to both adoption and artificial insemination by a donor. In this case, he wrote, the couple is adopting prenatally rather than after the child is born, and the child would be genetically related to the husband.

"The impact of SET (surrogate embryo transfer) on the adopting family will probably be comparable with that of artificial insemination by donor or postnatal adoption," he said. "It may in fact be less because SET allows both members of the adopting couple to be biologically involved" in the pregnancy.—

Susan Johnson □

R&W Returns to Atlantic City

R&W is once again sponsoring a trip to Atlantic City—to Caesar's—on Friday, Jan. 27. The price per person is \$16.75 and includes round-trip transportation, \$10 rebate, \$5 deferred coupon and \$2.50 food and beverage coupon.

Buses will leave NIH, Bldg. 31C at 9:15 a.m. sharp, and leave for the return trip at approximately 6:15 p.m.

Payment in full is due at time of booking. No refunds! Sign up at the R&W Activities Desk, Bldg. 31, Rm. B1W30. □

NCI Scientists Develop Gene Marker to Detect, Identify and Diagnose Several Human Lymphomas

NCI scientists have developed a gene-level marker to detect, identify, and diagnose several types of human lymphomas.

By examining the DNA sequences in B-cell genes that encode for immunoglobulin (Ig) production, the group discovered an accurate, sensitive marker that can identify clonal cells even in tumors without characteristic cell surface markers. The gene marker can also detect the renegade clonal cells, even if they constitute only 5 percent of the cell mixture. The scientists also used the marker to distinguish a lymphoma from a carcinoma, something crucial in disease management.

Results of the study were published in the Dec. 29, 1983, *New England Journal of Medicine*: "Immunoglobulin Gene Rearrangements as Unique Clonal Markers in Human Lymphoid Neoplasms." The authors, from the Metabolism Branch and Laboratory of Pathology, Division of Cancer Biology and Diagnosis, are: Drs. Andrew Arnold, Jeffrey Cossman, Ajay Bakhshi, Elaine S. Jaffe, Thomas A. Waldmann, Stanley J. Korsmeyer.

Dr. Arnold, who led the investigation, said, "The study adds to the fast-growing list of medical applications for recombinant DNA technology, one that zeroes in on the specific properties of the Ig genes. Unlike most genes, the Ig genes shuffle and rearrange their DNA on the chromosome. As a result, the clonal offspring of a particular cell with these shuffled genes must be identical to its parent, yet different from all other body cells in this respect.

"Knowing this," Dr. Arnold continued, "we searched for and found these unique antibody genes in human lymphomas (immune cell cancers). We then used the genes to diagnose and classify these cancers in cases where standard techniques had failed."

Because other types of cancers also have DNA rearrangements (for example, inter-chromosomal translocations), the scientists believe it is only a matter of time until similarly detailed knowledge of genes involved in other cancers is available. "At that point," Dr. Arnold said, "the methods we have used will be applicable to more common tumors, like some lung and breast cancers."

The scientists had studied the repeated shuffling of DNA during the development of B cells, the white blood cells that produce antibodies. To create antibody diversity, the Ig

gene assembly process must be flexible in combining and rearranging the gene components. This flexibility, however, also makes the process prone to error. Any failure in the multistep process will produce a gene incapable of encoding an Ig molecule. If these cells become malignant, they can escape detection by surface marker analysis because they lack the identifiable Ig or other lymphoid surface antigens.

Once the order of the genetic shuffling was known, the scientists realized that they had another type of marker to identify those cells that start out as B cells, but—through some recombinational error—do not produce a mature Ig gene. According to Dr. Korsmeyer, "We knew the clonal offspring of these incomplete cells would be different from all other cells, even other normal B cells, but the problem was to develop a method to distinguish these aberrant clonal cells from the normal cells."

After extracting the DNA from tumor cells, the group fragmented the strands into specific lengths, separated the fragments by size, and used radio-tagged DNA fragments as probes to seek out their counterparts in the cellular DNA.

By examining the Ig gene configurations revealed by the probes, the group could determine the cellular type of leukemias and lymphomas that had eluded clear classification by other means.

In earlier work, Dr. Korsmeyer's group found that cells in the so-called "non-T/non-B cell" leukemia had begun to rearrange stem cell DNA, indicating that the cells were actually pre-B cells locked in some precursor stage of B-cell differentiation. The gene-level markers have revealed similar findings for cells in the lymphoid blast crisis phases of chronic myelogenous leukemia and in hairy cell leukemia.

DNA rearrangements as a tumor-specific marker could also be used to detect an early recurrence of disease. For example, in follow-up of a disease apparently in remission, cells aspirated from the bone marrow can be examined for DNA rearrangements. If they show any rearrangements unique to the original malignancy, the recurrence could be treated before the cells have time to proliferate further.—Joyce Doherty □

FAES Grad School Announces Spring Schedule

The FAES Graduate School at NIH has announced its schedule of courses for the Spring semester. Evening classes, sponsored by the Foundation for Advanced Education in the Sciences, will be given on the NIH and the USUHS campuses.

Registration will be held from Jan. 25 through Jan. 31 and classes will begin Feb. 6. Spring schedules are available in the graduate school office in the Clinical Center, Rm. 2C207A and in the Foundation Bookstore, Rm. B1L101. To obtain a schedule, call 496-7977.

Tuition is \$40 per credit hour, and courses may be taken for credit or audit. Courses that

qualify for Institute support as training should be cleared with supervisors and administrative officers as soon as possible.

Courses offered include biochemistry, biology, genetics, chemistry, physics, mathematics, medicine, pharmacology, toxicology, physiology, immunology, microbiology, nursing, psychology, psychiatry, statistics, languages, administration and courses of general interest.

Often credits earned can be transferred to other institutions for degree work, and many courses are approved for AMA Category 1 credit. □

Abnormal Moles Can Turn Into Melanoma; But Melanoma's Curable if Detected Early

Early identification and appropriate management of skin abnormalities known as dysplastic and congenital nevi could significantly reduce the prevalence and death from the skin cancer melanoma, an NIH Consensus Development Panel has concluded.

Dysplastic nevi, acquired after birth, are unusual moles composed of pigment-forming cells that appear to be unusually susceptible to becoming melanoma.

Congenital nevi, present at birth, are non-cancerous pigmented tumors composed of abnormal embryonic nerve tissue.

According to the panel, both dysplastic and congenital nevi may be precursors (forerunners) of melanoma; but, melanoma can also develop from normal pigment-forming cells.

Both the rate and number of deaths from melanoma are increasing in many areas of the world. Early detection and surgical removal of melanoma, however, make it a highly curable cancer.

The Oct. 24-26 conference was sponsored by the National Cancer Institute and the NIH Office for Medical Applications of Research. The conference and panel were chaired by Dr. Ruth K. Freinkel, professor of dermatology, Northwestern University Medical School, Chicago, Ill.

Panel members were specialists in dermatology, internal medicine, epidemiology, biostatistics, genetics, pathology, family practice, oncology, and two representatives of the public.

The conference highlighted dysplastic nevus syndrome, a hereditary condition in which a person with many abnormal moles has a higher risk of developing melanoma. Dysplastic nevi are both signals and precursors for most familial and some nonfamilial melanomas.

The panel decided that patients with dysplastic nevi as well as a family history of melanoma should be examined frequently, and records should be kept of the size, color, and shape of their moles.

Any moles that undergo changes should be surgically removed. In view of the tendency for dysplastic nevi and melanoma to run in families, relatives of patients with melanoma should also be examined for both conditions.

The panel emphasized the need to educate patients, relatives, and health professionals on examination of moles and concluded that while clinical and histological definitions of dysplastic nevi are still evolving, these abnormal moles do represent a distinctive syndrome.

Dysplastic nevi differ clinically from acquired, normal pigmented moles in several respects, and some cannot be distinguished from melanoma.

Dysplastic nevi usually measure 5 to 12 mm in diameter and tend to be larger than common moles, and have components that are flat as well as some that are raised above the skin. Their borders are usually irregular and often ill-defined.

They range in color from tan to dark brown on a pink background. Dysplastic nevi may appear anywhere on the body, but especially on the trunk. Their frequent occurrence on the buttocks, the breasts, and the scalp differs from the distribution of common moles.

Young adults may average 25 normal moles,

but an individual with dysplastic nevi may have more than 100 lesions. Although common moles make their appearance by young adult life, dysplastic nevi usually begin to appear in adolescence and continue to appear even after age 35.

Accurate diagnosis of dysplastic nevi requires microscopic examination. The features of these nevi are microscopically distinct from those of malignant melanoma in an early, localized stage.

Among whites in the U.S. the lifetime risk of developing melanoma is about 0.6 percent, or 1 in 150; the risk among black Americans is about one-tenth as much.

Patients with dysplastic nevi—familial and nonfamilial types grouped together—have an estimated 10 percent lifetime risk. Persons with dysplastic nevi who are from melanoma-prone families have a much higher lifetime risk.

Patients with dysplastic nevi should be taught self-examination to detect new nevi and changes in existing nevi. As with other people at risk for melanoma, they should avoid excessive sun exposure and use sun screens to protect their skin from the potential cancer-causing effects of sunlight.

Congenital nevi have been divided into three groups according to size in infants: small (less than 1.5 cm in diameter); medium (1.5 to 20 cm in diameter), and large (greater than 20 cm in diameter). Large and medium-sized congenital nevi have irregular surfaces, increased pigmentation, and excessive hair growth. Although usually apparent at birth, they may not appear until later infancy.

Approximately 1 percent of all newborns have congenital nevi. For patients with large congenital nevi, the lifetime risk of melanoma has been estimated at 5 to 20 percent. It is unclear to what extent melanoma develops in smaller congenital nevi.

Small congenital nevi may not be recognized as such if they are not apparent at birth. Because these lesions may have a smooth surface, more uniform pigmentation, and lack of hair, they may look like acquired, normal pigmented moles.

Microscopically, congenital nevi have a characteristic appearance with nevus cells found in the lower layers of the skin, sometimes along with hair follicles, nerves and blood vessels. Large congenital nevi have such features in at least some areas of the mole, while smaller congenital nevi may or may not show such a pattern.

Data are insufficient at present to recommend preventive surgical removal of all congenital nevi. If, however, the nevus changes, it should be evaluated by a physician and biopsied, if appropriate.

For the future, the panel recommended epidemiologic, clinical, and laboratory studies of populations at increased risk for melanoma, as well as of the general population.

The panel also urged pilot studies to evaluate the feasibility of large-scale prospective studies and proposed interventions.

Copies of the statement are available from the NIH Office for Medical Applications of Research, 496-1143 and from the NCI Office of Cancer Communications, 496-5583. □

Drs. Harald Loe, Joyce Reese Elected to Dental Commission

Dr. Harald Loe, NIDR Director, and Dr. Joyce Reese, health science administrator, Extramural Programs, NIDR, were recently elected to serve on two of the four commissions of the Federation Dentaire Internationale (FDI).

The elections were announced during the 71st Annual World Dental Congress of the federation held recently in Tokyo, Japan. The FDI's general assembly elected Dr. Loe a member of the Commission on Oral Health, Research, and Epidemiology, and Dr. Reese a member of the Commission on Dental Products.



Dr. Reese



Dr. Loe

The federation, which is voluntary and nongovernmental, is the second oldest international organization in the health field and the only dental one recognized by the World Health Organization.

It is composed of dentists, national dental associations, and individual supporting members working together to advance the science and art of dentistry, increase the status of the dental profession, and improve dental and general health for all peoples.

By working through the FDI's four commissions, practitioners and scientists from many countries are able to play an active role in furthering the objectives of the federation. □

Chief of Budget Branch Gets 1983 NIH Merit Award

Margaret Gordon, chief of the Budget Formulation and Presentation Branch, received the 1983 NIH Merit Award "for her overall dependability, skill, dedication, keen judgment, and leadership in meeting extraordinary demands in budget formulation and presentation."



Ms. Gordon

This organizational unit is charged with the mission of reviewing, analyzing, coordinating, and consolidating all NIH budget presentations and related documents.

Ms. Gordon came to NIH and the Division of Financial Management in 1970. □

NIH LECTURE

(Continued from Page 1)

led studies on the geometry of membrane proteins.

Dr. Richards joined the faculty of Yale University in 1959 as an assistant professor of biochemistry. In 1963 he attained the rank of professor, and also became chairman of the department of molecular biology and biophysics.

Today he is also director of the Jane Coffin Childs Memorial Fund for Medical Research, a position he assumed in 1976.

Dr. Richards is the recipient of the Pfizer-Paul Lewis Award in enzyme chemistry and the Kai Linderstrom-Lang Prize in protein chemistry. He was a Guggenheim Fellow and received an honorary doctorate from the University of New Haven in Connecticut.

He holds several advisory positions, has served on editorial boards for three professional journals, and is a member of many professional associations. He was elected to the National Academy of Sciences in 1971 and in that same year became a fellow of the American Academy of Arts and Sciences.

Born in New York City, Dr. Richards received his B.S. degree in chemistry from the Massachusetts Institute of Technology in 1948 and his Ph.D. degree in biochemistry from Harvard University in 1952.

A reception will be held on the second floor of the ACRF following Dr. Richards' lecture. □

STAFF AWARDS

(Continued from Page 1)

Dr. Giovanni DiChiro, NINCDS; Dr. Harold Edelhoch, NIADDK; Dr. Harry V. Gelboin, NCI; Dr. Ronald G. Geller, NEI

Dr. Martin F. Gellert, NIADDK; Dr. Victor Ginsburg, NIADDK; Dr. Eli J. Glatstein, NCI; Dr. Frederick K. Goodwin, NIMH; Dr. Richard C. Greulich, NIA

Dr. Terrell L. Hill, NIADDK; Dr. David G. Hoel, NIEHS; Dr. Suzanne S. Hurd, NHLBI; Dr. David G. Johns, NCI; Dr. Elke Jordan, NIGMS; Dr. Thomas J. Kindt, NIAID

Dr. Jin H. Kinoshita, NEI; Dr. Ruth L. Kirschstein, NIGMS; Dr. Henry M. Kissman, NLM; Dr. Edward D. Korn, NHLBI; Dr. Paul L. Kornblith, NINCDS; Dr. Robert A. Lazzarini, NINCDS

Dr. Claude J. Lenfant, NHLBI; Dr. Mortimer B. Lipsett, NICHD; Dr. George R. Martin, NIDR; Edward H. McManus, NEI; Dr. Stephan E. Mergenhagen, NIDR; Dr. Robert W. Miller, NCI

Dr. Jay Moskowitz, NHLBI; Dr. Dennis L. Murphy, NIMH; Dr. Elizabeth F. Neufeld, NIADDK; Dr. Franklin A. Neva, NIAID; Edward Nicholas Jr., OD

Dr. Marshall W. Nirenberg, NHLBI; Dr. Marie U. Nylen, NIDR; Dr. Betty H. Pickett, DRR; Dr. Richard J. Podolsky, NIADDK; Dr. Arnold W. Pratt, DCRT; Dr. Joseph E. Rall, OD

Dr. Wilfrid Rall, NIADDK; Dr. William F. Raub, OD; Dr. Lester B. Salans, NIADDK; Dr. Norman P. Salzman, NIAID; Dr. S. Stephen Schiaffino, DRG; Dr. Kenneth W. Sell, NIAID

Dr. Earl R. Stadtman, NHLBI; Susanne A. Stoiber, CC; Dr. Eugene Streicher, NINCDS; Dr. John L. Swanson, NIAID; Dr. Richard J. Wyatt, NIMH □

A visionary is a person with a new idea. A realist is the person who doesn't like the idea.—H. I. Phillips. □

I do not like work even when another person does it.—Mark Twain □

Surgeon General Played Santa at Pediatric Clinic



Children in NCI's Pediatric Branch enjoyed the visit and toys received when Surgeon General C. Everett Koop visited the Clinical Center before Christmas. Dr. Koop also visited the children in the cardiac unit.

Five days before Christmas Eve, a kindly gentleman with a gray beard arrived at the Clinical Center with three sacks of toys. He gave the toys out as he visited with children of the NCI Pediatric Branch and their hospitalized friends on other units.

Surgeon General C. Everett Koop was helped during his Christmas visit by Mrs. Koop; Dr. Faye G. Abdullah, Deputy Surgeon General and chief of the Public Health Nursing Corps, Sandy Roberts of the PHS Officers Wives Club, and Austin Hayes of the D.C. Branch of the Commissioned Officers Association.

Dr. Koop met the young patients and their

families, as well as NCI and NIH staff, in the Pediatric Clinic of the Ambulatory Care Research Facility.

Dr. Philip A. Pizzo, chief, and Linda Moore, head nurse, for the NCI Pediatric Branch, also escorted Dr. Koop to the inpatient area on 6-West and introduced him to young cancer patients staying in the hospital while they receive their treatments. Dr. Koop then visited three young patients on the cardiac unit.

The toys were donated by the organizations cited above at the annual reception for the Surgeon General and the Assistant Secretary for Health Dr. Edward N. Brandt Jr.



Dr. Koop received a gift of a teddy bear and a large Pediatric Branch T. Bear poster, signed with the names and addresses of all his young friends at the NIH. Shown with Dr. Koop are Austin Hayes (l) of the D.C. Branch of the Commissioned Officers Association, and Sandy Roberts (r) of the PHS Officers Wives Club.

1983 NIGMS Cell Repository Catalog Now Available

The National Institute of General Medical Sciences has recently published the 1983 catalog listing cell lines stored in its Human Genetic Mutant Cell Repository.

The 10th edition of this catalog contains 735 new listings, bringing the total to 2,992 cell lines representing over 300 genetic disorders. Three large multigeneration pedigrees have been added to the collection this year:

An Old Order Amish pedigree which contains a high incidence of primary affective disorders; a Venezuelan pedigree which has a high incidence of Huntington's disease, and a Venezuelan reference pedigree.

Collection Contains

The repository, supported by a contract from NIGMS to the Institute for Medical Research in Camden, N.J., establishes and stores cultured cell lines from patients with well-characterized genetic disorders as well as from members of their families.

These lines are provided to requesting investigators at minimal charge, enabling them to study the cellular aspects of many genetic disorders without first having to locate a cell donor.

The collection includes fibroblast and lymphoblast lines from a range of inherited metabolic diseases and from disorders characterized by chromosomal abnormalities.

The repository also contains a number of

special collections of cell lines representing diseases for which the defect cannot, as yet, be demonstrated in culture.

These include cells from patients with psychiatric disorders, neurodegenerative disorders such as Huntington's disease, diabetes, cystic fibrosis, and ophthalmologic diseases.

Each special collection varies in size from a limited number of cell lines from unrelated individuals to sets of cells from large family groups with numerous affected individuals.

Since its inception in 1972, the cell repository has processed more than 5,000 submitted cell cultures, tissue biopsies, and peripheral blood specimens and provided more than 23,000 cell cultures to investigators. The catalog also contains a section listing the cell lines stored in the National Institute on Aging's Cell Culture Repository.

Among the many categories of cultures available for cellular aging studies is the IMR-90 strain, a human (female) fetal lung fibroblast developed and characterized specifically for use in cytogerontology. A companion strain of male fetal lung fibroblasts, IMR-91, is also available.

Copies Available

Single copies of the catalog are available from the NIGMS Office of Research Reports, Bldg. 31, Rm. 4A52, Bethesda, MD 20205; (301) 496-7301. □

NIEHS Committee Member Gets Highest N. Carolina Award

Dr. Frank E. Guthrie, a professor of entomology and toxicology at North Carolina State University in Raleigh, N.C., and a charter member of the NIEHS Environmental Health Sciences Review Committee, has received The North Carolina Award, the highest individual honor bestowed by the State of North Carolina.

North Carolina Governor James B. Hunt Jr., in making the award, recognized Dr. Guthrie's 30 years of toxicological research and teaching which focuses on the health effects of agricultural chemicals, how their benefits can be properly balanced against their health risks, and how they can be used

safely.

Dr. Guthrie's relationship with NIEHS dates to the beginning of the Institute when it was still the Division of Environmental Health Sciences within the National Institutes of Health.

As a member of the Environmental Health Sciences Review Committee, Dr. Guthrie assists the Institute by reviewing—with other committee members—the research grant applications for Environmental Health Sciences Centers and for training grants funded by NIEHS. Before the committee was chartered, Dr. Guthrie served the Institute as consultant in the review of research grant applications.



Dr. Frank Guthrie received the North Carolina Award in Science from Governors Jim Hunt and Sara H. Hodgkins, Secretary of Cultural Resources.

Rev. William Jones Retires; Ends 40-Year Gov't. Career

William E. Jones, known by friends and coworkers as "Reverend Jones," a library technician in the National Library of Medicine's Serial Records Section, retired after 40 years of Government service Dec. 30.



Rev. Jones

Rev. Jones attended Virginia Union University from 1938 to 1941, majoring in theology. Shortly after becoming a minister in 1942 he began his government career at the Bureau of Internal Revenue, Treasury Department, as a messenger. Later he was employed by the Patent Office as a clerk and copy puller, and by the Department of Agriculture as a library assistant.

In 1952 he joined the staff of the then Army Medical Library. He has been at NLM since 1956, when the Armed Forces Medical Library became the National Library of Medicine.

In his 27 years at NLM, he has worked in the Loan and Stack Section, in the Binding Section, and most recently, in the Serial Records Section where he was involved in the online check in of biomedical serials.

Rev. Jones completed the Upward Mobility college program in 1979. There are numerous letters of commendation in his personnel file thanking him for a job well done.

Friends and coworkers honored Rev. Jones at a reception on Wednesday, Dec. 14, at the Library. After a few weeks rest, Rev. Jones plans to devote more time to his church, and looks forward to traveling with his wife. □

Contract Compliance Program To Be Held January 19

The NIH Division of Contracts and Grants, OA, is sponsoring a program entitled, "Contract Compliance Program for Civil Rights—Six Years of Progress," on Jan. 19. The program will be held in Bldg. 1, Wilson Hall, from 9:30 to 11 a.m. For more information contact Maureen B. E. Miles, NIH Contracts and Grants compliance officer, Bldg. 31, Rm. 1B50; 496-2973. □

Visits always give pleasure—if not the arrival, the departure.—Portuguese Proverb □

Marianne Cecil, Grants Assistant, Dies From Cancer, December 3

Marianne A. Cecil (Ann), 58, grants technical assistant in the Office of Review Activities, National Institute of General Medical Sciences, died Dec. 3 of cancer at George Washington University Hospital.

She joined the NIGMS staff in 1976 as a clerk-typist in the Cellular and Molecular Basis of Disease Program. The following year, Ms. Cecil was promoted to grants clerk and, in 1980, she became a grants technical assistant, the position she worked in until 2 weeks before her death.

During her more than 7 years with NIGMS, Ms. Cecil made many significant contributions. While in the Office of Review Activities, she developed a tracking system to provide a more efficient method for keeping grants records, which enabled individuals to handle larger numbers of grants.

The system was so effective that it was soon adopted by all NIGMS grants technical assistants. Her outstanding work and dedication was recognized by two cash awards—a group award in 1979 and an NIH special achievement award in 1983.

Born in Washington, Ms. Cecil graduated from Roosevelt High School and received a bachelor's degree from Purdue University in 1946. She also took courses at the University of Michigan, George Washington University, Montgomery College, and the I.T.T. Business Institute.

From 1946 to 1950, she worked first as an artist and model and later as an assistant buyer at Lansburgh's department store. Between 1950 and 1954, she was an intelligence officer with the Central Intelligence Agency.

Prior to joining NIGMS, Ms. Cecil sold real estate and was a receptionist at the law firm of Baker, Hostetler, Frost, and Towers.

She is survived by a son, Eugene Lyndon Cecil III of Bethesda, and three sisters, Sally Kovner and Susan Albertson, both of Bethesda; and Judith Jones of Canberra, Australia.

Mathematical Modeling Meeting Scheduled for January 23-25

A conference, "Mathematical Modeling in Biomedical Research" will be held at Wilson Hall, Bldg. 1., Jan. 23-25.

Sponsored by the Fogarty International Center and organized by Dr. John A. Jacquez, a Fogarty Scholar-in-Residence, the conference honors the late Dr. Mones Berman who was chief of the Laboratory for Mathematical Biology, National Cancer Institute, and contributed greatly to the art and science of mathematical modeling.

The first day will be devoted to a series of presentations on basic ideas and methodology on mathematical modeling, and other sessions to the contributions of mathematical modeling in three major areas: the metabolism of minerals and elements, of glucose and ketone bodies and lipid and lipoproteins.

For further information and preregistration, contact International Studies Branch, FIC, Nancy Shapiro, 496-2517. □

NIA Director Urges Research to Distinguish Aging From Disease, and Curb Dementias

Dr. T. Franklin Williams, Director of the National Institute on Aging, told the Gerontological Society of America recently that research is needed to distinguish between aging and disease.

Speaking before the 36th Annual Scientific Meeting of the GSA in San Francisco—his first such appearance since being named NIA Director—Dr. Williams said one of the main goals of the country should be "... a good society that has respect for all people in it and in which older people are an integral part."

To differentiate between aging and disease, the NIA Director called for more longitudinal studies of older populations.

In addition, he told the 250 attendees that more attention must be given to the urgent problem of the dementias and what can be done to understand, prevent and treat them.

He also stressed the need to emphasize training in gerontology and geriatrics. The Congress has made this a high priority by calling for NIH and other agencies to develop a training plan by early 1984.

Finally, he told the assembled experts on aging, "There must be an emphasis on studies of care systems which offer older people, options, including the option to continue living where they want to live."

Dr. Reubin Andres, NIA clinical director, critiqued the new adult height and weight tables issued by the Metropolitan Life Insurance Company and called for further adjustments to the tables as people age. Dr. Andres reported that the new weight tables were recommended for adults over the wide age spectrum of 25-59 years with no adjustments for age. Dr. Andres said the weight ranges recommended in the tables are too high for young adults and too low for older

individuals.

In a poster session, GRC scientists—Drs. S. Mitchell Harman, R. E. Wehmann, and M. R. Blackman—discussed pituitary thyroid hormone economy in healthy aging men. Studying three groups of men, aged 39-89 years in the Baltimore Longitudinal Study of Aging, the investigators found that aging produces some decrease in serum levels of free thyroid hormones that is not attributable to illness or malnutrition. Also, the expected compensatory thyrotropic response to this decrease is diminished in the older subjects. This suggests there may be subtle defects of thyroid stimulating hormone as well as thyroid hormone secretion in healthy aged men.

Drs. Mary E. Farmer, L. R. White and J. A. Brody, NIA researchers from the Epidemiology, Demography and Biometry Program, reported on hip fracture incidence, by race and sex, in the U.S. during the years 1974-79. They found that age-specific hip fracture risk for both women and men doubled every 5 years after age 50.

Dr. Farmer reported no significant differences in incidence rates for black females, black males or white males. However rates for white females were 1.5 to 4 times those for black females after age 40. The study concluded that white women were at twice the risk for hip fracture (controlled for age) as were black women, and at twice the risk for hip fractures as were white men. Black women and black men showed no significant risk differences at any age.

The 1984 annual scientific meeting of the society will be held next November in San Antonio. At that meeting, Dr. Jordan D. Tobin, chief of the Human Performance Section at NIA's Gerontology Research Center, will take office as society president. □

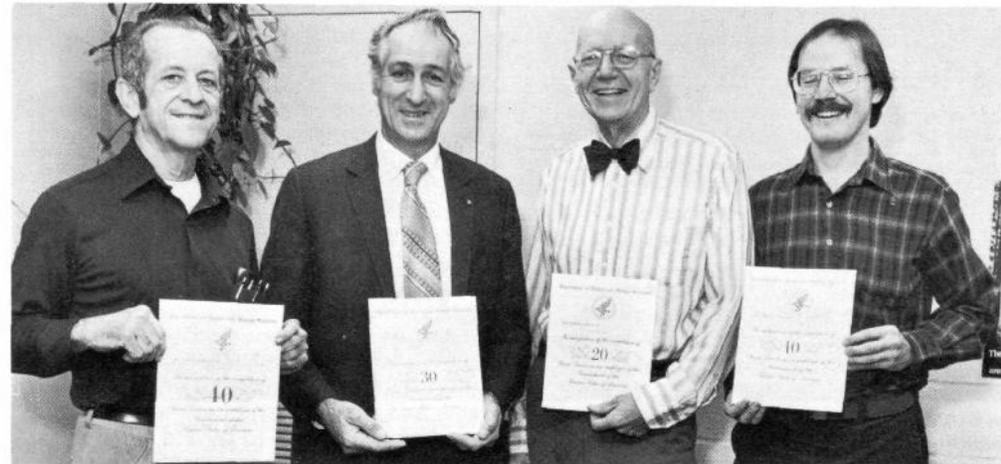
Product Workshop Scheduled

The Quality Assurance Section has scheduled a product/exhibit workshop to be conducted by Lab Products Inc. in Bldg. 10, 14th floor auditorium, from 9 a.m. to 4 p.m., Jan. 25. New innovative products in the field of laboratory animal housing will be on display. □

Tickets Available for Flutist Concert

R&W has tickets for Jean-Pierre Rampal and Friends, on Saturday, Feb. 11, at 6 p.m., at the Kennedy Center Concert Hall.

The cost is \$17 for orchestra seats. Tickets may be purchased at the R&W Activities Desk, Bldg. 31, Rm. B1W30. □



Four staffers at the Occupational Safety and Health Branch have 100 years of Federal service among them. They are (l to r): Frederick Kraft Jr., 40 years; Manual Barbelto, 30 years; Thomas Wilkinson, 20 years and David Prevar, 10 years.

Dr. Calvin H. Plimpton Appointed NLM Special Assistant for Internat'l Programs

Dr. Calvin H. Plimpton has recently been appointed special assistant for International Programs at the National Library of Medicine. In this position, he will oversee NLM's involvement in international affairs.



Dr. Plimpton

Dr. Plimpton, former president of Amherst College (1960 to 1971) and SUNY Downstate Medical College (1971 to 1979), succeeds Dr. Mary E. Corning who retired from NLM last August.

A graduate of Amherst College, Dr. Plimpton received his M.D. from Harvard Medical School, an M.A. in biochemistry from Harvard University, and a Med. Sc.D. from Columbia University.

His professional activities include both medicine (he is certified by the American Board of Internal Medicine and is a fellow of the American College of Physicians, among others) and international affairs (the World

Peace Foundation of which he is a trustee, and the Council of Foreign Relations).

Dr. Plimpton has served as chairman of the department of medicine at the American University of Beirut, chief of staff of the American University Hospital in Lebanon, and visiting professor of medicine at the University of Aleppo, Syria.

The Library's international programs cover a wide spectrum, including formal MEDLARS arrangements with 14 countries (and through them on-line services to more than 100 countries), direct interlibrary loan services to foreign libraries, a program of international gift and exchange for literature, scores of high-level international visitors to NLM, representation on international committees, financial support for international publications, training in information-handling for foreign scientists and physicians, and dealing with a variety of government and nongovernment organizations with which NLM has mutual international interests. □

Judo Club Accepting Beginners

The NIH R&W Judo Club is accepting applications for the winter beginners' class. This series of 12 classes in basic Judo will meet Tuesday evenings from 6 to 7:30 p.m., beginning Jan. 31. Classes will be held in the old gymnasium of Stone Ridge School at the corner of Cedar Lane and Wisconsin Ave.

Dr. Thomas E. Malone, NIH Deputy Director, will serve as chief instructor, or sensei, for the classes.

Fee for the 12 sessions will be \$35. Forms can be obtained from Kathleen Thomas or Dr. Malone, Bldg. 1, Rm. 132, or call 496-2121. For further information, call Dr. Paterson, 496-9086. □

Secretary Heckler Praises Elderly Health Exhibit Jointly Produced by NIA and Pfizer Pharmaceuticals

Health and Human Services Secretary Margaret M. Heckler has highly praised collaboration between the Federal Government and private industry which will bring a touring exhibition of good health ideas, suggestions and tips to senior citizens throughout the country.

The National Institute on Aging and Pfizer Pharmaceuticals have joined forces to produce and distribute self-help information for the elderly at 40 regional shopping malls across the country.

In a special message which will be distributed at the exhibits, Secretary Heckler said:

"I am deeply concerned about the well-being of the more than 25 million Americans over age 65. For some, the prospect of growing old is filled with confusion and fear about declining health. Educational programs such as this exhibit are needed to assure that everyone has the opportunity for health and dignity in their later years."

The project, entitled "Help Yourself to Good Health," is part of a nationwide exhibition tour sponsored by the American Association of Retired Persons.

Pfizer is funding the publication of *Help Yourself to Good Health*—a compilation of more than 25 of the NIA's popular *Age Pages*. The *Age Pages* are two-page fact sheets that contain information and advice on topics of interest to the elderly such as nutrition and exercise, accident and crime prevention, and good medical care.

Some 40 shopping malls in demographically selected markets will take turns hosting the weekend exhibitions, which opened in Ft. Lauderdale, Fla., this past fall and will continue throughout 1984. The schedule includes stops in 39 cities around the country including several locations in Sun Belt states which have a high percentage of older residents.

It is estimated that over 3.5 million people will visit the exhibits during the year long tour. In addition to the NIA booth, each exhibition will include information on AARP's programs and services, and commercial displays from more than 15 private companies.

The exhibit is being coordinated by the Shopping Center Network, a Miami-based firm that specializes in shopping mall promotions. □

Five NINCDS Scientists Elected To Amer. Neurological Assoc.

Five scientists at the National Institute of Neurological and Communicative Disorders and Stroke have been elected active members in the American Neurological Association.

The new members are Drs. Katherine L. Bick, NINCDS deputy director; James J. Cereghino, a member of the Institute's Epilepsy Branch, who has been involved in the clinical development of antiepileptic drugs; Karin B. Nelson, a member of the Developmental Neurology Branch whose interests lie in children's seizure disorders; Susumu Sato, also of the Epilepsy Branch, who has performed electroencephalographic studies on epileptic patients; and Michael Walker, director of NINCDS's Stroke and Trauma Program, who has had a longstanding interest in the diagnosis and treatment of malignant brain tumors.

Election into the 109-year-old association is based upon a candidate's contribution to the advancement of the neurological sciences. Candidates must be nominated by one of the 750 members of the association, and the nomination must be seconded by at least two other association members. □

NCI Publications Win Awards

Scientific Information Branch publications have recently received three awards in a technical publication contest sponsored by the Washington chapter of the Society for Technical Communications.

An award of excellence was presented to the entire staff of the *Journal of the National Cancer Institute* in the category of complete periodicals.

Florence Gregoric received an award of excellence for the *JNCI Monograph* entitled, *Biologic Response Modifiers: A Subcommittee Report*, in the book category. Anne McCarthy of Cancer Treatment Reports received an award of merit for "*Cancer Treatment Symposia: Proceedings of the United States-Japan Meeting on Drug Development and Cancer*" in the book category.

The awards were presented at a banquet held at the Hyatt Arlington Hotel on Dec. 8. □

New NIA Publications Available

The National Institute on Aging has published eight new editions of their health-promotion series, the *Age Page*. The topics covered are: hearing, vision, alcohol abuse, osteoporosis, use of safety belts, prostate problems, dietary supplements, and cancer.

The *Age Page*, which has been published since 1980, gives practical advice on physical and mental health issues and often lists sources of additional information. It is used by outreach organizations such as health clinics, hospitals, and senior citizens' centers, as well as by gerontology centers, nursing schools, and other training sites, to educate public and health professionals about health maintenance for the older person.

Free, single copies are available by calling 496-1752. □

Visiting Scientists Program Participants

Sponsored by Fogarty International Center

12/05—**Dr. Antal Rot**, Hungary. Sponsor: Dr. Edward Leonard, Laboratory of Immunobiology, NCI, FCRF, Bg. 560, Rm. 1271, Frederick, Md.

12/06—**Dr. Enzo Cocuzzi**, Canada. Sponsor: Dr. S.I. Chung, Laboratory of Oral Biology and Physiology, NIDR, Bg. 30, Rm. 114.

12/07—**Dr. Junji Sagara**, Japan. Sponsor: Dr. Takeo Kakunaga, Laboratory of Molecular Carcinogenesis, NCI: DCCP, Bg. 37, Rm. 3E08.

12/08—**Dr. Ratna Biswas**, India. Sponsor: Dr. Barbara Vonderhaar, Laboratory of Tumor Immunology and Biology, NCI:DCBD, Bg. 10, Rm. 5B56.

12/09—**Dr. Monique Aumalley**, France. Sponsor: Dr. George Martin, Laboratory of Developmental Biology and Anomalies, NIDR, Bg. 30, Rm. 416.

12/11—**Dr. Madeleine Graitson**, Belgium. Sponsor: Jules Aronson, Computer Science Branch, NLM, Bg. 38A, Rm. 8S804.

12/11—**Dr. Danuta M. Kowalska**, Poland. Sponsor: Dr. Mortimer Mishkin, Laboratory of Neuropsychology, NIMH, Bg. 9, Rm. 1N107.

12/12—**Dr. Tatsuyoshi Salga**, Japan. Sponsor: Dr. John C. Petricciani, Office of Biologics, Westwood Bg., Rm. 3A11.

12/13—**Dr. Susumu Wakai**, Japan. Sponsor: Dr. Milton Brightman, Section on Neurocytology, NINCDS, Bg. 39, Rm. 3B28.

12/15—**Dr. Maria Agelli**, Italy. Sponsor: Dr. Sharon M. Wahl, Laboratory of Microbiology and Immunology, NIDR, Bg. 30, Rm. 304.

12/15—**Dr. Bernard De Massy**, France. Sponsor: Dr. Robert Weisberg, Laboratory of Molecular Genetics, NICHD, Bg. 6, Rm. 320.

12/15—**Dr. Dietmar Juergen Tietz**, Germany. Sponsor: Dr. John B. Robbins, Laboratory of Developmental and Molecular Immunity, NICHD, Bg. 6, Rm. 416.

12/18—**Dr. Kiyoshi Takahashi**, Japan. Sponsor: Dr. Ursula I. Heine, Laboratory of Comparative Carcinogenesis, NCI, FCRF, Bg. 538, Rm. 205-I, Frederick, Md.

12/27—**Dr. Serena M. Bagnasco**, Italy. Sponsor: Dr. Maurice Burg, Laboratory of Kidney and Electrolyte Metabolism, NHLBI, Bg. 10, Rm. 6N307.

12/27—**Dr. John S. Fawcett**, United Kingdom. Sponsor: Dr. Andreas Chrambach, Laboratory of Theoretical and Physical Biology, NICHD, Bg. 10, Rm. 8C307.

12/28—**Dr. Wael Jarjour**, Syria. Sponsor: Dr. Sanford H. Stone, Laboratory of Microbial Immunity, NIAID, Bg. 5, Rm. 224.

12/28—**Mr. Jean-Francois Soucaille**, France. Sponsor: Dr. Andre LeRoy, Biomedical Engineering and Instrumentation Branch, DRS, Bg. 13, Rm. 3E66.

12/29—**Dr. Britt Mellstrom**, Sweden. Sponsor: Dr. Erminio Costa, Laboratory of Preclinical Pharmacology, NIMH, WAW Bg., Rm. 131.

01/03—**Dr. Andrew J. Dowd**, United States. Sponsor: Dr. Henry Metzger, Arthritis and Rheumatism Branch, NIADDK, Bg. 10, Rm. 9N206.

01/08—**Dr. Alla G. Berkovich**, Russia. Sponsor: Dr. Robert A. Lazzarini, Laboratory of Molecular Genetics, NINCDS, Bg. 36, Rm. 4A05.

Pop, Dunks, Basket Hoops

Munch and bunch with the Hoyas. Join R&W for any or all of the following games: Thursday, Feb. 9, Georgetown vs. Seton Hall, 8 p.m.; Saturday, Feb. 11, Georgetown vs. Brigham Young, 2 p.m.; and Saturday, Mar. 3, Georgetown vs. Syracuse, noon.

The \$7.50 price includes a hot dog, popcorn, a soft drink, and service charge. Sign up at the R&W Activities Desk, Bldg. 31, Rm. B1W30. □

Media and Glassware Chief Retires After 33 years

George D. Gardner, chief of the Media and Glassware Service Branch, is retiring after 33 years of Federal Service. While most of his work career has been spent in supervising the supply of media and glassware services to the NIH research community, his government career began in the area of laboratory safety, and ends in an organizational component of the Division of Safety, ORS.

Mr. Gardner began as a bacteriologist in the Laboratory Hazards Section of the Safety Division at Fort Detrick in 1953, where he conducted research to determine the existence and/or extent of hazards associated with laboratory techniques used in research on pathogenic microorganisms.

In 1955 he joined the staff of the former Division of Biologic Standards at NIH, now Bureau of Biologics, FDA, where he worked on the development and improvement of media and tissue culture methods for the testing of poliomyelitis and other virus vaccines.

In 1961 Mr. Gardner took over the Media and Glassware Section which was in the Laboratory Aids Branch, later to become Veterinary Resources Branch in DRS. After several organizational changes the section was upgraded to Branch status under the Division of Safety where it is presently located. Under his direction, the Media and Glassware Services Branch has become a vital link in the research support chain which enables NIH to carry out its important mission.

Mr. Gardner plans to pursue his hobbies of photography and collecting photographic after retirement. He and his wife, Nancy, also plan to travel a good deal in their newly acquired motorhome, but home base will remain in the nearby Catoctin Mountains of Frederick County, Md. □



Mr. Gardner

Two New Units Created In DMP Reorganization

Two new components—the Records Management Branch and the Workforce Effectiveness Staff—have been established in a recent DMP reorganization, George F. Russell Jr., director, Division of Management Policy, OA, has announced.

DMP will retain all of its current responsibilities but, through reallocation of resources and restructuring, will emphasize two important emerging management responsibilities—office technology and information resources management, and organization and workforce effectiveness studies.

Dr. Kenneth Thibodeau has been appointed chief, Records Management Branch. The branch was established to better support the growing demands for technical assistance in planning and procurement of office technology, including word processing and micrographic equipment. The branch is also responsible for forms management, records management, files and filing systems, and Privacy Act policy and operations.

The Workforce Effectiveness Staff, part of the immediate Office of the DMP director, will focus on organization and workforce activities to improve performance, productivity, human resource development and utilization and quality of work life. The staff conducts work improvement projects, organization research and analysis, and organization assessments. It also provides diagnostic services and technical assistance to NIH organizations on organization effectiveness issues.

Note the following changes in room and telephone numbers.

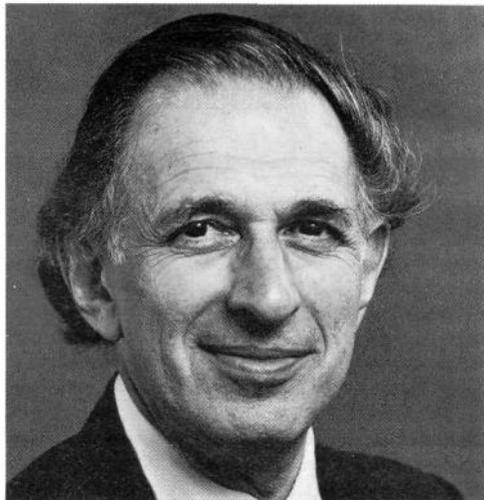
- Office of the Director, DMP, Bldg. 31, Rm. 3B-07, 496-1873
- Management Analysis Branch, Bldg. 31, Rm. 3B-19, 496-2461
- Management Operations Branch, Bldg. 31, Rm. 3B-03, 496-4606
- Records Management Branch, Bldg. 31, Rm. 3B-11, 496-2832
- Workforce Effectiveness Staff, Bldg. 31, Rm. 3B-03, 496-2826. □



Dr. Daniel J. Cowell, president of NIH Sons of Italy lodge (I), presents a \$500 check for NIH's Patient Emergency Fund to Stanley Kissel, director of the Social Work Department and administrator of the fund. Participating in the presentation were Nina Baccanari and George J. Mannina, officers in the lodge. The money was raised through the sale of Italian food delicacies, traditional for Americans of Italian heritage at Christmas time, and a special afternoon of music and merriment at the cafeteria in the Clinical Center.

NIGMS Grantee Eric Kandel Wins Lasker Award

The Albert Lasker Basic Medical Research Award, often considered a prelude to the Nobel Prize, was recently presented to Eric R. Kandel, a grantee of the National Institute of General Medical Sciences, the National Institute of Neurological and Communicative Disorders and Stroke, and the National Institute of Mental Health. Dr. Kandel, professor of physiology and psychiatry at Columbia



Dr. Kandel

University, shared the \$15,000 award with Dr. Vernon Mountcastle of the Johns Hopkins University School of Medicine.

Dr. Kandel's work involves basic research in neurobiology and behavior using the marine snail *Aplysia californica* as a model. The award cites him for "remarkably original and systematic investigations of the cellular mechanisms of learning, and for discovering the functional and molecular changes in nerve cells which occur when new information is acquired and stored in memory."

In the early 1960s, Dr. Kandel and his colleagues were the first to make intracellular recordings of the firing of individual nerve cells in the hippocampus, the portion of the brain believed to govern memory. The scientists used cats for this research, but sought a simpler animal in which to do studies on the cellular level. They turned to *Aplysia*, a shell-less snail native to the Pacific Ocean that is roughly the size of a small squirrel.

Because this animal has a relatively simple nervous system and can be conditioned to respond to stimuli in specific ways, it is an ideal creature in which to study physical changes that occur in response to learned behavior. In *Aplysia*, behavior is mediated by only a small number of comparatively large nerve cells and many of these can be identified individually.

Focusing on the snail's gill withdrawal reflex, Dr. Kandel and his associates mapped certain elementary behaviors in *Aplysia* down to the neural circuitry involved. In *Aplysia*, the gill normally lies flat on the animal's back and is bordered by a membrane called the mantle shelf. If this membrane is touched, the gill withdraws into a protective cavity.

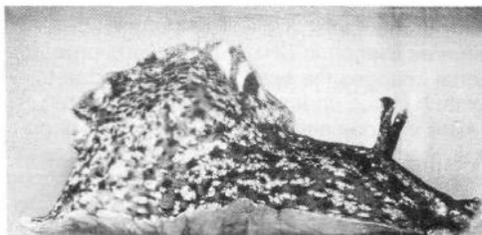
The researchers outlined the withdrawal action from the first nerve impulse in the sen-

sory neurons, through intermediary neurons to the motor neurons which activate the withdrawal muscles. Then they began to alter the snail's reflexes through fundamental forms of training and conditioning, and to study changes in cell structure after learning.

In these experiments, Dr. Kandel was able to show for the first time that clear structural changes accompany behavioral modification and that these changes can be detected at the level of identified synapses (junctions where impulses are relayed from one nerve cell to the next via chemical messengers called neurotransmitters) that are critically involved in learning. He showed that learning experiences actually alter the number and size of the sites where neurotransmitters are released to modulate the functional expression of neural connections.

The work with *Aplysia* is a very important beginning. However, although nerve cells in *Aplysia* appear to be very similar to human nerve cells, very little about cellular changes related to learning in higher animals is known and even less about higher mental functions. Eventually, scientists hope to be able to build on this and other fundamental research to gain insight into a range of psychiatric and neurological disorders—as well as those of memory and learning—such as Alzheimer's disease.

In his acceptance speech, Dr. Kandel



The shell-less snail, *Aplysia californica*, that Dr. Kandel has been using as a model for 20 years.

said, "It will be interesting and exciting to see in the years ahead to what degree higher-order forms of learning, including those that we recognize as unique to ourselves, can be explained in terms of combinations of the simpler components and mechanisms that have been identified in simple animals."

Among Dr. Kandel's other recent honors are the 1982 Dickson Prize in Biology and Medicine from the University of Pittsburgh and the 1981 Karl Spencer Lashley Prize in Neurobiology from the American Philosophical Society. In 1977, he won the Lester N. Hofheimer Research Prize from the American Psychiatric Association and the Lucy G. Moses Prize for Research in Basic Neurobiology from Columbia University. He is a member of the National Academy of Sciences. □

We believe as much as we can.—William James □

Every calling is great when greatly pursued.—Oliver Wendell Holmes, Jr. □

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