

The NIH Record

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GOURMET GALA—Dr. James B. Wyngaarden, Director of NIH; Jack Valenti, president of the Motion Picture Producers Association; and Ann Landers, the famous columnist, get ready to whip up their favorite dishes as a part of the Celebrity Cooking Competition of the Capitol Area March of Dimes in Washington on the night of March 5.

NINCDS Scientists Clarify Movements Inside Nerve Cells; Breakdown in Axon Transport Might Cause Disease

Fast-commuting cellular components move along specialized filaments in nerve cells, and each filament contains multiple "lanes" upon which more than one component—or organelle—can travel, reports a team of investigators working in the NINCDS Laboratory of Neurobiology.

In three papers published in the February and March issues of *Cell*, the scientists describe their latest findings on axonal transport, the process responsible for moving critical components throughout the nerve cell.

Although the driving force behind axonal transport remains unclear, Dr. Thomas Reese, chief of the NINCDS Laboratory of Neurobiology, and his colleagues have a theory about how organelles move back and forth in the axon. He is collaborating with NINCDS staff scientist, Dr. Bruce Schnapp and guest workers, Drs. Ronald Vale and Michael Scheetz.

According to this theory, organelles may be powered by a new type of motility protein that

belongs to a class of enzymes known as ATPases. He calls this ATPase "translocator protein." The investigators next step is to purify this protein.

The scientists think that by understanding how axon transport works, they may one day be able to determine whether a breakdown in the delivery of cellular materials causes neurological disease.

Translocator Proteins

Translocator proteins, situated throughout the axon, are thought to bind like little feet to the organelles that travel up and down the axon. The little feet attach randomly to the surface of organelles, much like spines on a sea urchin. Using energy from the ATP, the organelles move along the microtubules, the axonal filaments along which the organelles move in both directions.

In the NINCDS laboratory, latex beads are used to stimulate organelles so the transport
(See *NERVE CELLS*, Page 10)

Huntington's Expert Will Deliver Guthrie Lecture

Dr. Joseph B. Martin, Julieanne Dorn professor of neurology at Harvard Medical School, will present the third annual Marjorie Guthrie Lecture in Genetics on Tuesday, Apr. 2 in the Masur Auditorium at the NIH Clinical Center, Bldg. 10.

The lecture, entitled "Recent Studies of Huntington's Disease," will be held at 8:15 p.m. The public is invited to attend.

The lecture series is sponsored jointly by the National Institute of General Medical Sciences and the National Institute of Neurological and Communicative Disorders and Stroke. It honors the late Marjorie Guthrie, widow of folksinger and songwriter Woody Guthrie, who devoted her energies to promoting research on genetic diseases, especially those of the brain and nervous system.

Woody Guthrie died of Huntington's disease in 1967. In the years that followed, Mrs. Guthrie founded what is now the Huntington's Disease Foundation of America (formerly the Committee to Combat Huntington's Disease).

Since 1980, Dr. Martin has headed the NINCDS-supported Huntington's Disease Research Center Without Walls at Boston's Massachusetts General Hospital. In 1983, under his leadership, scientists at the center were the first to identify a marker associated with a gene for Huntington's disease, a progressive and eventually fatal neurological disorder.

Dr. Martin also serves as chief of the hospital's neurology service and as a consulting neurologist at McLean Hospital in Belmont, Mass. He previously was professor of medicine and neurology at McGill University, Montreal, where he chaired the department of neurology and neurosurgery.

A native of Canada, he received his M.D. from the University of Alberta and a Ph.D. in anatomy from the University of Rochester School of Medicine and Dentistry.

Dr. Martin has served on the advisory councils of the National Huntington's Disease Association, the Committee to Combat Huntington's Disease and the Hereditary Disorders Foundation, among others. An editor of *Harrison's Principles of Internal Medicine*, he serves on the editorial boards of a number of scientific and medical journals.

Dr. Martin is a member of many American and Canadian professional societies and has been named a fellow of the American Academy of Arts and Sciences and the American Academy of Neurology. His special areas of interest in the neurological sciences are neuroendocrinology and brain peptides. □

The NIH Record

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TRAINING TIPS

The following courses are sponsored by the Division of Personnel Management, Development and Training Operations Branch.

	Course Starts	Deadline
Administrative Systems (Call 496-6211)		
Basic Time & Attendance	4/11	3/28
Delpro (for new users only)	4/7	3/25
Technical/Occupational Related Training (Call 496-6211)		
Advanced Lotus	3/26	3/15
Computer Literacy for Secretaries and Office Support Personnel	4/30	4/19
Programs (Call 496-6211)		
Adult Education Program		
Training and Development Services Program		
Executive, Management and Supervisory (Call 496-6371)		
Introduction to Supervision	4/1	3/15
Managing Advisory Committee	4/8	3/15
Manage Your Meetings	4/15	3/29
Executive Communications	4/16	3/29
White House Workshop	4/25	4/8
Effective Presentations Skills	4/22	4/5
	5/2	4/5
	5/6	4/5

Supervising in the Federal Wage System rescheduled for May 13-17.

Sailing Club Offers Training

The R&W Sailing Association invites would-be sailors to join the Sailing Association and register for the Spring Basic Training Session on the club-owned Flying Scots.

The training will be held for 6 weeks in April and May with practical sailing experience on the Rhode River as well as classroom presentation.

Applications for both club membership and basic training are available at the R&W Activities Desk, Bldg. 31, Rm. B1W30. For further information, call Sally Stevens, 496-4124. □

R&W Theatre Group Donates \$1,000 to Patient Emergency Fund



The R&W Theatre Group presented \$1,000 to the Patient Emergency Fund recently. Seated: (l to r) Anne Brigham, DRG, chairperson; Dr. Charlotte Berg, Social Work Department accepting for PEF; Sally Spangler, vice chairperson. Standing: (l to r) Gail Luce, membership chairperson; Millie Fenton, treasurer; Rose Lentz, secretary. Not shown: Kate Laird, publicity; Kathy Phillips, editor; Tom Knowles, and Antea Maton, members-at-large.

The executive committee of the R&W Theatre Group presented Dr. Charlotte Berg, deputy chief of the Clinical Center Social Work Department, with a \$1,000 check for the Patient Emergency Fund on Feb. 4.

Funds will be dispersed to needy patients and their families, many of whom come from other areas of the country to be close at hand when lengthy hospital stays are necessary.

At the presentation were: Sally Richardson Spangler, past chairperson and current vice chairperson; Millie Fenton, treasurer; Gale Gunther Luce, membership; and Rose Lentz,

secretary.

The R&W Theatre Group has been in operation since 1980 when an attempt was made to reestablish a group known as the "Hamsters."

Plans are under way for a production of *The Man Who Came To Dinner* by Kaufman and Hart. Auditions will be Mar. 10 and 11, from 7 to 10 p.m. in the CC Masur Auditorium, Bldg. 10.

Donations to the theatre group are tax deductible. New members are welcome. For further information, call Gale Gunther Luce, 496-3626 or Anne Brigham, 496-5251 or 530-7481. □

NIH Spring Conferences on Cystic Fibrosis Set

Spring colloquia on Cystic Fibrosis are being sponsored by the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases.

The series, which began Feb. 21 with a lecture on "Control of Airway Mucin Secretion" by Dr. Jay A. Nadel, director of the Cystic Fibrosis Research Center, University of California, San Francisco, will run through July 18.

Cystic fibrosis is an inherited disease of children, adolescents, and young people that affects the exocrine, or externally secreting, glands of the body. These glands discharge their secretions onto the skin (sweat glands), or into organs that connect to body openings—such as the lungs and intestines—either directly or through special ducts.

Approximately 1 in 2,000 newborns have CF, and these children have a 50-50 chance of living to the age of 21.

Other talks in this series will cover genetics, salt and water transport, properties and structure of human airway mucin, structure of normal

and CF lungs, the relationship of *Pseudomonas aeruginosa* to CF, gene structure analyses, ion permeability of respiratory epithelium, sweat gland function, inflammation and pulmonary disease, use of monoclonal antibodies to probe tracheal mucins, and autonomic nervous system dysfunction.

The colloquia are aimed at presenting investigations which may relate to the primary cause of many of the clinical manifestations of the disease. The colloquia will focus on the basic sciences concerned with CF research and will include speakers from a wide range of disciplines. They are designed to be of broad interest to scientists and physicians.

The colloquia will be held at the FAES Social-Academic Center, 9101 Old Georgetown Rd., Bethesda, Md. Dates and times for the series will be announced in the "NIH Calendar of Events." If there are any questions, call Dr. Ralph Frates on 496-3306. □

Preserve the Black Family, Magnify Education, Audience Told at NIH Black History Observance

Despite poverty and neglect which have fragmented the black family, blacks must continue to value that family's worth and struggle to preserve it, Patricia A. Russell, the keynote speaker, told the audience at the 13th annual Black History observance held recently at the National Institutes of Health.

Ms. Russell, a law graduate of Howard University and Kentucky State University, said the black family has been held together through the strong kinship instilled by foreparents.

"Afro-American Family" was the basic theme of the 1985 Black History observance.

Besides working to preserve the black family, Ms. Russell said blacks must also maintain high levels of achievement in their work and their religious convictions.

The youngest person ever to receive an honorary doctor of laws degree from Bethune-Cookman College in Daytona Beach, Fla., Ms. Russell is a former chief of the Complaints Branch of the Mass Media Bureau, Federal Communications Commission.

Noting that education is the key to the future, she said: "We must have a mandate to save our children. There are not enough scholarships and grants. The message to our children is to be qualified. We must prepare the generation following ours."

She urged blacks to read the literary works of great black writers and poets such as Leroi Jones, Paul Lawrence Dunbar and Dr. Martin Luther King Jr. And she praised the black colleges because these institutions have served as bridges over troubled waters for blacks.

Musical selections were presented by the

Morgan State University Choir directed by Nathan Carter.

Guests included the Friendship Council and the Hope and Happiness Senior Citizens from the Vermont Avenue Baptist Church.



Ms. Russell

Jessalyn Pendarvis, director of the Division of Equal Opportunity, represented the Office of the Director.

The program, sponsored by the NIH Cultural Committee, was held in the CC Masur Auditorium.—**Jasper Cummings** □

Students Invited to Submit Papers to SCAMC Symposium

Students are invited to submit papers to the 9th Annual Symposium on Computer Applications in Medical Care (SCAMC). All students enrolled in a degree granting program of an accredited college or university as well as physicians enrolled in an accredited residency specialty program are eligible.

Three awards will be presented: the Martin N. Epstein Award of \$1,000 and two cash prizes of \$600 and \$400 each. The winners also will be able to attend the symposium free of charge and will be reimbursed for actual transportation and lodging expenses up to \$1,000.

All finalists will receive a certificate of recognition and will be invited to the symposium.

The SCAMC Student Paper Competition deadline is May 15, 1985, for written notification of intent to submit a paper.

To receive a call for participation in the Student Paper Competition held in conjunction with the 9th Annual Symposium, Nov. 10-13, at the Baltimore Convention Center, write: Student Paper Competition Chair, SCAMC—Office of CME, George Washington University Medical Center, 2300 K Street, N.W., Washington, DC 20037, or phone (202) 676-8928.

SCAMC is sponsored in part by the NIH Division of Computer Research and Technology. The first prize is named in honor of the late Dr. Martin Epstein, who was with the Division for many years. □

NIGMS Presents PRAT Seminar

The Pharmacology Research Associate (PRAT) Program of the National Institute of General Medical Sciences—a 2-year post-doctoral training program in pharmacology—will sponsor a seminar on Wednesday, Mar. 27, 10 a.m., in the ACRF Amphitheater. The talk, entitled "G Proteins and Adenylate Cyclase," will be delivered by Dr. Alfred G. Gilman, professor and chairman, department of pharmacology, University of Texas Health Science Center, Dallas.

Dr. Gilman received his M.D. and Ph.D. degrees from Case Western Reserve University in Cleveland, Ohio, in 1969. From 1969 to 1971 he was a PRAT fellow under Dr. Marshall Nirenberg in the Laboratory of Biochemical Genetics, in the then National Heart and Lung Institute.

He is the recipient of two prestigious awards in pharmacology—the John J. Abel Award from the American Society for Pharmacology and Experimental Therapeutics in 1975, and the Poul Edvard Poulsson Award from the Norwegian Pharmacology Society in 1982. He has been a member of the NHLBI Board of Scientific Counselors since 1982.

Following the seminar, PRAT fellows will present informal poster sessions on the research they are conducting in the intramural laboratories of the NIH and the Alcohol, Drug Abuse, and Mental Health Administration. □

NIH Library Adds Touch Terminals

Touch terminals are now available in the NIH Library for searching the Library's new online catalog.

The Library also plans to add keyboard terminals in a few weeks, when all the library cardholders have been issued barcodes on the back of their NIH ID card.

These bar coded ID cards will replace NIH Library cards.

The touch terminals now available have a menu presentation similar to that of many current popular computer services available to homes and businesses. Printed instructions are posted by the terminals, and librarians will be available to assist Monday through Friday from 8:30 a.m. to 5 p.m.

The keyboard terminals to be added will enable the user to avoid stepping through the menu with each query, but they require knowledge of a few basic commands and prefix codes. They may be preferred by users with more computer experience.

Printed instructions and staff assistance will also be available for the keyboard terminals.

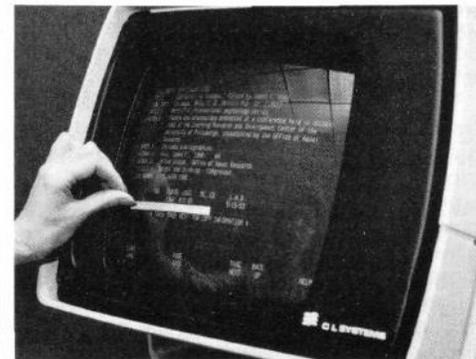
The online catalog not only tells you that the library owns a book; it lets you know if it has been charged out or is at the bindery. However, when the computer says an item is "on shelf," this means only that it is in the library; someone else may be using it.

The catalog can be searched for books by subject as well as author, and for journals by any important word in the title.

When the system has been fully implemented, the catalog will also speed up the process of checking out books and will give the library staff information useful for improving services: it will record how often a book is being borrowed and will alert staff that an overdue book has been requested by someone else or that a book being checked out has a reserve on it.

The system will also facilitate operation of the library's new policy on overdue items: a borrower with six overdue items or one overdue item recalled by another borrower will not be permitted to borrow until the overdue material has been returned.

Library staff members are now available at a table near the circulation desk Monday through Friday 8:30 a.m. to 5 p.m., ready to attach barcodes to NIH ID cards so that current library cardholders may continue their library privileges without interruption.



Terminals now installed for the NIH Library automated catalog are used by touching the screen at specific places. Keyboard terminals will be added in a few weeks.

NIGMS-Supported Scientists Explore Methods to Improve Wound Repair

How can wound healing be improved—especially for the elderly and people with underlying diseases which cause them to heal more slowly? What cellular and molecular factors promote or impede wound repair? How can skin be made to grow over large wounds and the development of scar tissue be prevented?

Grantees of the National Institute of General Medical Sciences trauma and burn program are seeking answers to these and other questions about various aspects of wound healing.

Traumatic injuries set in motion a series of complex processes by which the body repairs itself. The blood clots, the immune system musters defense against invading bacteria, and scavenger cells digest damaged tissue as well as foreign particles.

Eventually the blood vessels repair themselves and new cells migrate into the wound area, where they take hold and begin to grow. Each one of these natural processes involves complicated reactions at the cellular and molecular levels.

In an effort to speed up and improve wound healing, many researchers are studying the basic processes involved. Dr. Thomas Hunt of the University of California, San Francisco, heads an NIGMS/supported research center devoted to the study of different aspects of wound repair.

There are a number of agents that can either promote or inhibit the rate of wound healing. These include growth factors (which can specifically stimulate the increased production of such components as platelets, which are essential for blood clotting; epidermal or outer skin cells; and connective tissue), hormones, nutritional elements, and oxygen. One goal of the center is to purify

growth factors and study their effects on healing.

Dr. Hunt and his colleagues have recently isolated a substance called angiogenesis factor from the fluid in rabbit wounds. The angiogenesis factor is a powerful stimulant to growth of blood vessels and thus has an important role to play in wound repair.

Although this factor has not yet been isolated from human wounds, the researchers believe it is there because extracts of human wound fluid stimulate blood vessels to grow in rabbit tissue. If human angiogenesis factor could be purified or synthesized, it might be valuable in treatment, especially for wounds that are difficult to heal.

Angiogenesis factor also acts in tumors to increase the growth of the blood vessels that supply their nourishment. Thus, in addition to trying to isolate and purify the human angiogenesis factor, scientists in Dr. Hunt's laboratory are seeking an antibody which would destroy or neutralize the factor since this might someday contribute to cancer treatment.

Dr. Hunt is also studying the relationship of oxygen to the healing process. It is well known that wounds heal better and resist infection more effectively if their blood and oxygen supplies are good. However, in the past there has been no satisfactory way of measuring oxygen supply to tissues. Dr. Hunt and his colleagues have now patented a simple device for measuring oxygen tension in human tissue.

The device, which resembles an intravenous needle, has been used with several hundred patients and has proved extremely valuable in deciding when blood transfusions or fluids are necessary. Recent studies by these researchers utilizing the device have

shown that exposure of guinea pigs to high levels of oxygen, especially during the first 4 hours after infection, greatly increased the animals' ability to retard bacterial growth.

The body's efforts to heal itself can cause scarring and distortions of muscle tissue called contractures, which can result in major disfigurement and seriously limited movement. In order to learn how to minimize these consequences of severe injuries, NIGMS grantees are studying the cellular and molecular events behind them.

Dr. Paul H. Ehrlich at Massachusetts General Hospital in Boston is examining the role of the connective tissue matrix in the formation of scar tissue. This matrix is an intricate structure composed of proteins and other molecules which holds cells together in tissues and holds tissues together in organs.

Dr. Ehrlich is studying freeze injuries as well as burn injuries, since although both kill cells, those caused by freezing do not leave contractures when they heal. This may be because after freeze—but not burn—injury the connective tissue matrix is still in place.

Dr. Ehrlich believes that even though its cells are dead, this matrix serves an important function in guiding orderly cell regrowth. Understanding the specific factors involved may help scientists design ways to control cell growth after other types of injury.

A mutant "tight skin" mouse model being developed by Dr. Ehrlich and his colleagues may help answer related questions about wound repair. These mice heal more slowly than normal mice do and develop serious scars which, for some reason, do not lead to contractures. The scientists are studying the possible reasons for this phenomenon with the hope of learning ways to prevent excessive scar tissue formation in humans. □

Intn't'l Conf. to Examine Plasminogen Activator Genes

An international conference on "Plasminogen Activator Genes: Structure and Regulation," will be held in the Stone House, Bldg. 16 on the NIH campus, Mar. 27–28.

Plasminogen activator genes are now under intense investigation by several groups for two different reasons: First, both the urinary activator (urokinase) and the tissular activator are very promising drugs for fibrinolytic therapy. They are able to specifically dissolve blood clots and are therefore hot targets for all genetic engineering companies.

The second reason lies in the long debated involvement of plasminogen activator functions in conditioning some aspects of the malignant cancer phenotype. Malignant cells would exploit the fibrinolytic (clot dissolving) and more generally proteolytic (protein dissolving) activity of the plasminogen activators to migrate.

Cancer cells cross barriers that surround the initial malignant growth, reach the circulating blood and find a different target tissue where they start a secondary growth process (metastasis). The major danger of death for a cancer patient comes from such metastases.

Sponsored by the Fogarty International Cen-

ter, the conference will bring together molecular geneticists from both areas of research, those interested in finding out the mechanism of regulation of these genes in normal malignant cells, and those interested in obtaining the highest possible expression of the genes for practical purposes. Scientists from eight different countries—U.S., United Kingdom, Switzerland, Italy, Israel, Denmark, France and People's Republic of China—will attend the conference at Stone House.

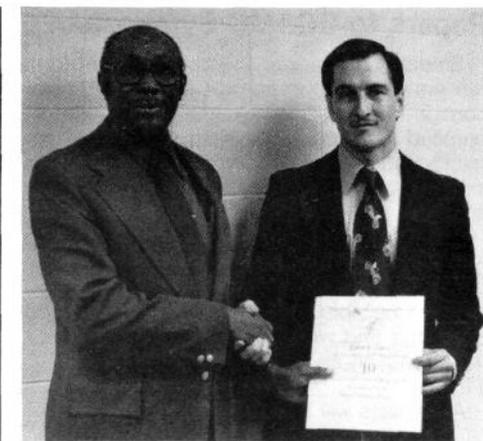
The NIH community is welcome to attend the conference. Preregistration is requested. Contact: Ruth Rappaport, HCR, (202) 955-6073. □

R&W Has Tickets for Circus

R&W has tickets available for the Ringling Brothers & Barnum and Bailey Circus, for Sunday, Mar. 24, and Saturday, Mar. 30, noon, at the Baltimore Civic Center.

Regular ticket price is \$9. R&W discount price is \$7 (including service charge).

Tickets may be obtained at the R&W Activities Desk, Bldg. 31, and the Westwood R&W Gift Shop, Rm. 10. □



Robert E. Oakley (r), a member of the National Institute of Environmental Health Sciences Material Storage and Distribution Section, was recently presented a 10-year length-of-service certificate by Louis E. Cozart, section supervisor. Mr. Cozart said, "As a hearing impaired worker, Mr. Oakley has become one of the section's most valuable employees, proving that the handicapped should indeed be hired for their abilities, not their disabilities." Mr. Oakley began as a warehouse helper, assisting in locating stock and filling requisitions. Later he worked with the delivery team in distributing material to all areas of the Institute. Presently Mr. Oakley works in receiving where he records, processes, documents and files all orders coming into the receiving area of the warehouse.

High Rates of Breast Cancer Plague Women

Breast cancer is the most common form of cancer (after skin cancer) among American women and accounts for more deaths among them than any other type.

The high rates of breast cancer that prevail in the United States—85.6 per 100,000 for white women in 1973-77, and 72.0 for black women—are also seen in other western and industrialized countries, including Canada, western Europe, Australia, New Zealand, and South Africa.

Rates in Asia, Latin America, and Africa are low, while rates are intermediate in eastern and southern Europe.

Breast cancer rates in the United States are higher among women who live in cities than among those who live in rural areas.

Though genetic factors may play some part in the variations seen in different locales, environmental factors also appear to be important.

Migrant studies have shown that the incidence among women born in countries with low cancer rates increases when they move to the United States, where incidence is high.

This has been seen among Japanese women who have moved to Hawaii and to the mainland United States, and among the daughters of European immigrants to the United States.

Epidemiologic studies have helped to identify a number of factors that carry varying degrees of risk for breast cancer. To date, no one factor or combination of factors has been found that can be used to predict the occurrence of breast cancer in any one individual. Meanwhile, these are among the major risk factors that have so far been identified:

- **Age:** In countries where the incidence of breast cancer is high, the rate increases sharply after age 30 and continues to rise. Among population groups with low or moderate incidence, there is often a leveling off at the ages of menopause and after. For women in the United States, age is a major risk factor for breast cancer.

- **Family history:** Risk of breast cancer is increased when close relatives have had breast cancer. A woman's risk is increased twofold if her mother or sister have had it and sixfold if both have had it.

- **Previous breast cancer:** Women who have had cancer in one breast have a four- to fivefold risk of developing a second cancer.

- **Reproductive experience:** The risk for women who have children later in life in-

creases with their age at first birth. Women who have never had children and women who have a first child after age 30 have a risk about three times greater than women who have a first child before age 18. Breast feeding does not seem to affect breast cancer risk.

- **Menstrual history:** Early onset of menstruation and late menopause both appear to increase breast cancer risk. Menopause induced by removal of the ovaries (usually in conjunction with hysterectomy) before age 40 reduces breast cancer risk considerably.

- **Benign breast disease:** Women with benign fibrocystic breast disease confirmed by biopsy appear to have a three- to five times greater risk of breast cancer.

- **Radiation:** Large doses of radiation have been linked with the development of breast cancer both in studies of women exposed in Hiroshima and Nagasaki, and of women who were X-rayed many years ago for diagnosis of pulmonary tuberculosis. The much lower doses now used for chest X-rays and for mammograms, or breast X-rays, appear to carry little or no risk.

- **Socioeconomic status:** Women with high socioeconomic status appear to be at greater risk of breast cancer but why this is so is not clear.

- **Estrogens and oral contraceptives:** There is some evidence for an increased risk of breast cancer associated with the use of replacement estrogens, particularly in long-term users, although the data are not all consistent. Generally, the use of oral contraceptives has not been linked to increased risk of breast cancer.

- **Nutrition:** There is some evidence that obesity is associated with increased breast cancer risk, leading to speculation that high dietary fat intake contributes to increased risk. To date, most of these associations have been derived from studies of geographical groups, and evidence on an individual basis is lacking.

Overall, the evidence suggests that hormonal factors may play a part in breast cancer in addition to genetic predisposition. This hypothesis would account for the higher risk seen in women with a long menstrual history, because of the long exposure of breast tissue to hormone stimulus. Large-scale studies that would take combinations or risk factors into account have not yet been done.

For more information, call 1-800-4CANCER. □

FAES Accepting Applications For Supplemental Stipends

FAES is administering special funds known as Predoctoral Wellcome Stipends to support graduate and undergraduate students from foreign countries who participate in research at NIH. A maximum of \$250 per month may be granted to a maximum total stipend of \$750 per summer. The selection committee will consider the scientific merit of the research to be conducted as well as the applicant's professional qualifications. Applications for the summer of 1985 must be received in the FAES office by Apr. 1. Awards will be made by Apr. 30. Application forms are available in the FAES office (Bldg. 10, Rm. 2C207A) or call 496-7976. □

Women Volunteers Needed For Studies on PMS

The Unit on Peptide Studies, Biological Psychiatry Branch, NIMH, is looking for subjects who would like to participate as patients or normal volunteers in a series of studies of premenstrual syndrome. Participants should be women between the ages of 20 and 45 who are in good health and taking no medications including oral contraceptives.

Evaluation of mood in relation to menstruation will be performed; the effects of menstrual cycle phase on glucose and salt/water regulation, as well as on stress response may be examined. For information, please contact Chris Hoban 496-9675. □

Soviet Medical Officials Tour Instrumentation Branch

Three high-ranking officials of the USSR Ministry of Medical Industry visited NIH on Feb. 20 to learn about diagnostic and therapeutic instrumentation advances in the Biomedical Engineering and Instrumentation Branch, Division of Research Services.

The visitors were Dr. Vladimir A. Viktorov, director of the All-Union Medical Engineering Research Institute, Moscow; Dr. Victor P. Gundarov, deputy director of the Institute; and Dr. Victor H. Sabitov, director of the All-Union Scientific Research Medical Instrument Institute, Kazan.

They were in the United States participating in the second Joint American-Soviet Seminar on Medical Engineering, held at the Massachusetts Institute of Technology. Their visit to BEIB was requested by the US-USSR Trade and Economic Council.

The visit began with overviews of DRS and BEIB presented by Dr. Robert A. Whitney Jr., Acting Director, DRS, and Dr. Murray Eden, chief, BEIB.

BEIB scientists and engineers discussed samples of instrumentation advances developed collaboratively with investigators in NIH intramural programs: optical fiber probes (Dr. John Peterson), noninvasive measurement of arterial pressure (Eli C. Walker), laser doppler velocimetry applications, and coronary angioplasty (Dr. Robert F. Bonner).

Dr. Charles L. Coulter, Biomedical Research Technology Program, DRR, discussed DRS's extramural support of medical instrumentation research.

The Soviet officials also visited the magnetic resonance imaging (MRI) and positron emission tomography (PET) scanning facilities in the Clinical Center. □

DRR-Funded Instruments Dedicated at UCSF Seminar

A scientific seminar on cell analysis techniques was held Jan. 15 by the Laboratory for Cell Analysis at the University of California-San Francisco (UCSF) and NIH's Division of Research Resources, as part of a joint dedication of new instruments.

DRR provided funds for the equipment through the Shared Instrumentation Grant Program, which was begun to help researchers cope with rapid technology advances in instrumentation and the rapid rate of obsolescence of existing equipment. NIH provides instruments on a shared basis to groups of NIH-funded investigators.

Cell analysis uses high-technology research tools to quickly analyze or sort large numbers of cells according to their physical characteristics, DNA content, etc. They have become useful tools in medicine to screen potential kidney transplant recipients.

UC-San Francisco chancellor Dr. Julius R. Krevans, and Dr. Marjorie Tingle, chief of the shared instrumentation grant activity, DRR, conducted the formal dedication. This was followed by four scientists discussing some of the ways in which the laboratory's instruments are used in research at UCSF, and how similar instruments are involved in research elsewhere in the country. □

Seven Medical Students Study Intricacies of Genetics In Two-Month Course Under Skilled Preceptors

For the seven medical students spending the winter studying under its auspices, there is a much shorter and more descriptive name for the Interinstitute Medical Genetics Program that sprang up at the Clinical Center 8 years ago.

Boot camp.

That's not the name you'll find the program under in the phone book. But look at what is expected of these students during a 2-month elective period.

It begins with a week-and-a-half core course: this includes lectures outlining clinical and laboratory aspects of diagnosis, methods of treatment, approaches to counseling and principles of molecular and population genetics. Once the students have their dysmorphology (abnormal development of tissue form) and dermatoglyphics (ridge formation on skin; for example, fingerprints) down, they go on to seminars and research projects with Institute investigators.

David Viskochil, a fourth-year student at the University of North Carolina-Chapel Hill School of Medicine, is one of several genetics students studying under the preceptorship of Dr. Michael A. Zasloff, chief of NICHD's Human Genetics Branch.

"The crux of this course is to work in someone's lab on a project," Viskochil said. "I am working directly with Dr. Joe Muenzer, who is looking for ways of treating children with mucopolysaccharidoses, enzyme deficiencies that result in the buildup of substances in cells that need to be broken down for the child to develop normally."

Dr. Viskochil, who already has a Ph.D. in biochemistry from UNC, is assaying cell lines in Dr. Zasloff's lab, trying to determine if a new therapy—amion transplants—will be effective.

"I've been very pleased with the elective," he said. "I would never see clinical cases like these in North Carolina."

In medical school, obscure diseases go by the name "zebras," he explained. "As the expression goes: when you hear hoofbeats, think zebras, not ordinary horses. At the Clinical Center, you see nothing but zebras. Here you get the zebras of all zebras."

Viskochil, who hopes to be a pediatrician and clinical researcher, has two more electives to go before graduation from medical school. "This elective is an intellectually demanding and inspiring part of my medical education," he said. "It's kind of like boot camp. We're all from different places and have to lean on each other a lot. You make a lot of good friends in boot camp."

Choosing Research Study

One of the biggest challenges of the course is choosing from among a variety of tempting research alternatives. "It is hard, at this point, to find out what you really want to study and then pursue it," Dr. Viskochil said. "We're getting bombarded with information."

Alongside Dr. Viskochil is Timothy Meade, a third-year medical student from the University of Minnesota who is also working in Dr. Zasloff's lab.

"The elective is really too short a period to get anything done in terms of major research," he said, "but it's a good amount of time to see the type of patients we want to see. The patients that come here you don't find anywhere



Taking the 2-month clinical elective offered by the NIH Interinstitute Medical Genetics Program are medical students (seated, from l) David Viskochil, Catherine Chapman, Christine Julian. At rear are (from l) Vickie Williams, Richard Mararia, Timothy Meade, and Thomas Stekiel.

else in the world."

A Minneapolis native and fan of the rock star Prince, Mr. Meade is studying the molecular biology of collagen and bone disorders with Dr. Joan Marini. He is enjoying his lab work so much that he will stay through the middle of next month. Most students remain for only 2 months.

Another fellow in Dr. Zasloff's lab, Richard Mararia of Cornell University, also will prolong the elective since courses and research opportunities here go beyond what is available to him back in New York.

"I may take a genetics fellowship after I complete my residency," Mr. Meade said. "I'd love to return here. It's at the top of my list right now."

Dr. Meade credited Sandy Schlesinger and Dr. Dilys Parry with creating a positive atmosphere for the genetics students.

"The steering committee really takes care of us," he said. "None of the other medical students here feel as warm a welcome on their rotations as we do. Getting into this program is a real honor." □

Synthetic Growth Hormone Improves Height in 2 Children

Two children with deficiencies of growth hormone have had their height improved and their own growth-hormone production increased by administration of a synthetic growth hormone-releasing factor, two University of Virginia grantees of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases have reported.

Drs. Michael Thorner and Wylie Vale of UVA with colleagues from Children's Hospital in Philadelphia and the Salk Institute in San Diego used a synthetic growth hormone-releasing factor synthesized by Dr. Jean Rivier of the Salk Institute.

They used the synthetic substance to stimulate the children's own growth hormone production, and thereby achieved a significant increase in their height.

The synthetic substance used is known to be identical with human growth hormone-releasing factor which is produced by action of the hypothalamus in normal persons.

Because growing children show pulses in growth hormone secretion approximately every

Lack of Estrogen, Not Aging, May Cause Osteoporosis

Estrogen deficiency rather than aging may be the major cause of osteoporosis in postmenopausal women, a disease that leads to more than 700,000 fractures in this group each year.

Dr. B. Lawrence Riggs and associates at the Mayo Clinic in Rochester, Minn., recently studied three groups of women: normal women in their early fifties at or before menopause; normal postmenopausal women in their early seventies; and women of average age 54 who had undergone surgical removal of both ovaries (bilateral oophorectomy) 15 to 25 years earlier.

Three Groups Studied

Using these three groups of women, researchers could compare the effects of menopause (estrogen deficiency) to the effects of aging on bone loss.

Bone mineral density was measured in each group of women. Researchers found the same amount of decreased bone mass (bone loss) in the oophorectomized women in their fifties and the postmenopausal women in their seventies.

Both these groups had significant bone loss compared to the bone loss in the perimenopausal women in their fifties. Therefore, according to Dr. Riggs, "It is clear that estrogen deficiency, not aging, is the predominating cause of osteoporosis during the first two decades after natural menopause."

Recent studies have shown that low-dose estrogen is highly effective for the prevention of osteoporosis or bone loss in postmenopausal women. Though estrogen is associated with increased risk of endometrial cancer, the researchers said, that adding progestin to estrogen-replacement therapy may eliminate this increased risk of endometrial cancer.

They suggested that giving the estrogen by skin patch rather than by mouth is better tolerated and may reduce side effects of the drug.

This research, supported by NIADDK, was reported in the Nov. 15, 1984, *New England Journal of Medicine*.—**Barbara Weldon** □

Two Fogarty Scholars Take Up Residence

Dr. Thomas Jovin began his Fogarty Scholarship-in-Residence Jan. 3. He is a scientific member of the Max Planck Society and chairman of molecular biology in the Max Planck Institute of Biophysical Chemistry, Goettingen, Federal Republic of Germany.

Dr. Jovin was born in Buenos Aires, where he spent his early years. He received his college education at the California Institute of Technology after which he attended Johns Hopkins University School of Medicine. He was granted his M.D. degree in 1964.

After a postdoctoral fellowship with Professor Arthur Kornberg at Stanford Medical School, he moved to Goettingen, where he worked with Dr. Manfred Eigen at the Max Planck Institute of Biophysical Chemistry. In 1969 he assumed his present position.

Dr. Jovin is best known for his discovery—with Dr. F. M. Pohl—of a left-handed helical form of DNA now known as z-DNA. Earlier, in Dr. Kornberg's laboratory, he carried out important studies of polymerase 1 from *E. coli*. His recent work has been concerned with the biological role of z-DNA.

During his scholarship he will be associated with the Laboratory of Molecular Biology, NIADDK.

Dr. Franz von Lichtenberg returned to FIC Jan. 1, to resume his Fogarty Scholarship-in-Residence. Dr. von Lichtenberg is professor of pathology at Harvard Medical School.

Born in the Federal Republic of Germany, he moved to Mexico in the late 1930s, where he studied medicine and graduated from the National University in 1945. He joined the department of pathology at Harvard in 1958 after holding appointments at the National University and the National Institute of Cardiology in Mexico City.

Dr. von Lichtenberg's research has been principally devoted to the biology and pathology of schistosomiasis. His numerous publications include a classic description of hepatic schistosomiasis in Brazil, experimental studies of immunopathological mechanisms underlying granuloma formations around schistosome eggs, immunofluorescent studies of human granulomas, and model studies in mice. He has been particularly concerned with study of the mechanisms regulating destruction of invading schistosomes in the immune host.

During his second term, he will continue his association with the Laboratory of Parasitic Diseases, NIAID.

Both these Fogarty Scholars have offices in the Stone House. They can be reached on 496-1213. □

Bicycle Club Plans Open House

The 3rd annual R&W Bicycle Commuter Club Open House will be held on Mar. 20, from 5 to 8 p.m. at the FAES house on Cedar La. and Old Georgetown Rd., Bethesda, Md.

Films on touring, racing and commuting will be shown along with equipment demonstrations.

Club members and family admission is \$1; nonmembers, \$2. Memberships will be available at the door for \$2.

For further information call George Russell, 496-1873, or Carl Frasch, 496-1920. □

Dr. Wm. Windle, Eminent Neuroanatomist, Dies; Pioneered Research on Spinal Cord Regeneration



Dr. William F. Windle

Dr. William F. Windle, 86, an outstanding neuroanatomist formerly with the National Institute of Neurological Diseases and Blindness, died Feb. 20 at his home in Granville, Ohio. He had Parkinson's disease.

A pioneer in research on regeneration of the spinal cord, Dr. Windle was the director of the Laboratory of Neuroanatomical Sciences, NINDB (now the National Institute of Neurological and Communicative Disorders and Stroke), from 1954 to 1960. In 1960 he was appointed assistant director of the Institute, and a year later he started NINDB's Laboratory for Perinatal Physiology in San Juan, Puerto Rico.

Dr. Windle left NIH in 1963 to become research director of the Institute of Rehabilitation Medicine at New York University Medical Center. Since 1971 he had been a research professor at Denison University in Granville.

"Dr. Windle was a world class scientist," said Dr. Carmine Clemente, director of the Brain Research Institute at the University of California, Los Angeles School of Medicine and Dr. Windle's last graduate student.

"His regeneration work changed the course of research on spinal cord injury," Dr. Clemente said. "He was also one of the leading developmental neuroanatomists of the 1930s and 40s."

Dr. Windle's research on cats and monkeys with spinal cord injuries showed that nerve fibers of the cord can regenerate—a feat once thought impossible. He injected the animals with piromen, a drug that inhibits the formation of scar tissue which normally grows between

two ends of a severed cord. Although the animals did not regain neurological function, there was evidence of nerve growth in areas where the scar tissue was less dense.

Dr. Windle's interest in neurobiology and neuroanatomy led to studies of the relationship between the maturation of the central nervous system and the development of behavior and reflexes.

His research in Puerto Rico focused on the effects of oxygen deprivation on animal fetuses and newborns. In 1968, he was given the Albert Lasker Award for Basic Medical Research for producing experimental cerebral palsy in newborn animals deprived of oxygen.

"Dr. Windle had a broad influence on American neuroscience," said Dr. Clemente. "He was also stridently loyal to his students and research colleagues—sometimes contradicting superiors in favor of his colleagues. He was deeply liked."

At a 75th birthday party for Dr. Windle held at the Harvard Club in New York City, 140 of his previous students and colleagues paid tribute to the man and his research.

Among his many accomplishments, he was the founder and editor of the *Journal of Experimental Neurology*. He was also a recipient of many honors and awards. In 1957, he was given the United Cerebral Palsy Association's Max Weinstein Award. He was a double honoree in 1972—receiving both the National Paraplegia Foundation's William Thomson Wakeman Award and the Paralyzed Veterans of America's Speedy Award.

Dr. Windle was the first vice president of the American Association of Anatomists and a member of many other societies including the American Association for the Advancement of Science, the American Neurological Association, and the American Academy of Neurology.

Born in Huntington, Ind., Dr. Windle received his Ph.D. degree in anatomy from Northwestern University Medical School in 1926. From 1935 to 1942, he was a professor of microscopic anatomy at Northwestern.

He also served as chairman of the departments of anatomy at both the University of Washington in Seattle and the University of Pennsylvania. From 1951 to 1954 he was scientific director of Baxter Laboratories in Morton Grove, Ill.

Dr. Windle's survivors include his wife, Ella, a brother, and three grandchildren.

Conference on Polyribonucleotides for Cancer Therapy Set Apr. 4

A 1-day conference on "Polyribonucleotides for Cancer Therapy" will be held on Thursday, Apr. 4, at the Lister Hill Center Auditorium, NIH campus. The workshop, sponsored by the Biological Response Modifiers Program, DCT, NCI, will include presentations on preclinical evidence of antitumor and of immunomodulatory and other biological response modifying activities; clinical results in terms of activity and of toxicity, therapeutic efficacy, and biological

response modification.

There will also be a panel discussion with emphasis on the relative activities and toxicities of the various polyribonucleotides.

To register for the conference, call FTS 8-935-1418 or (301) 695-1418. Seating is limited. □

Historian: an unsuccessful novelist—H.L. Mencken

W. J. Cade, GMLB, Retires After 26 Years of Service



Mr. Cade

Willie J. Cade, engineering equipment operator in the Grounds Maintenance and Landscaping Branch (GMLB), Division of Engineering Services, retired last December after 26 years of service in the branch.

Mr. Cade was born in 1917 in the small town of Washington, Ga., where he lived with his grandfather and other relatives. While growing

up, he worked on neighboring farms picking cotton, corn, and other crops. In 1937, at age 20, Mr. Cade bought a "used" car and came to Washington, D.C., saying that the car used 5 gallons of oil during the trip.

Before settling at NIH, he worked in local restaurants, he assisted in building an airport in Camp Springs, Md., built roadways during the Civilian Corps Camp days in 1939 near Flintstone, Md., worked for the Army Map Service and at a power plant in Indian Head, Md. He also spent 3 years in New York City working on the docks and at Radio City.

Mr. Cade married in 1945 and says he has "several" children and over 25 grandchildren.

In 1950, he came to GMLB and over the years has performed work in "most all areas" of grounds maintenance from planting and mowing to operating large loaders. According to his coworkers, he was exceptionally dependable and a steady, hard-working employee. He continued to work several years after becoming eligible for retirement.

A luncheon attended by his wife, friends, and coworkers was held in January to celebrate Mr. Cade's retirement. He was presented numerous gifts, including a miniature tractor, a gold snow shovel, and money to spend during his "travels." Mr. Cade's immediate plans for retirement are to "relax, travel, and visit." □

Chance Research Find May Lead to New Malaria Treatment

Studies on DNA replication (duplication of the genetic material) by National Institute of General Medical Sciences grantee Dr. David H. Dressler of Harvard University in Cambridge, Mass. have unexpectedly led to the discovery of a potential new treatment for malaria. This disease, long a major world health threat, currently affects more than 300 million people and causes over a million deaths annually.

Malaria is the result of infection by a microbe-parasite. In its natural habitat, the parasite requires two hosts: a mosquito and vertebrate animal. The disease spreads when a mosquito picks up parasites from a blood meal on an infected animal. When the mosquito bites its next victim, it transmits the parasite through its saliva. The parasite invades the host's red blood cells where it multiplies very rapidly, forming "daughter" parasites and eventually bursting the cell. The host's red blood cells thus serve as a tiny cell culture for the parasite to grow in and also shelter it from the host's immune system.

DNA Replication Studied

Dr. Dressler realized that the small size and simplicity of the malaria parasite as well as its interaction with red blood cells make it an excellent system in which to study DNA replication. He began his studies with a traditional approach by testing the response of the most lethal of the malaria parasites to various drugs known to affect specific enzymes involved in DNA replication. One of these enzymes is DNA gyrase, which folds and twists DNA into very tight coils, a step that appears to be necessary to prepare DNA for replication.

Although his goal had been to study replication, Dr. Dressler soon realized that disrupt-

tion of the parasite's DNA replication enzymes "could be the Achilles heel of the parasite. If the key enzymes are altered the parasites can't make more DNA and multiply, so they will eventually die."

Novobiocin Tested

The antibiotic novobiocin was among the compounds Dr. Dressler tested. Although it is not used clinically now, novobiocin was used in the late 1950s to treat staphylococcus (a type of disease-causing bacteria) infections, so a great deal is known about the drug.

Novobiocin worked against staphylococcus by inhibiting the bacteria's DNA gyrase. At dosages safe for humans, novobiocin reduced parasite growth to nearly zero within 72 hours. When combined with quinine, a common antimalarial drug, it was even more effective.

The possibility of a new treatment for malaria is especially welcome now because efforts to control the disease are deteriorating. First steps toward a malaria vaccine have been made, but experts predict that production and use of the vaccine could be 5 to 10 years away. The mosquitoes that carry the disease are becoming resistant to pesticides, while the parasites are becoming resistant to quinine and another antimalarial drug, chloroquin.

The next step in developing this treatment for malaria may be tests in animal models and then patients.

This clinical advance grew out of a study of a fundamental cell process—DNA replication—and the search for the best possible research model. The chance discovery of a potential treatment for malaria is an important event arising from untargeted basic research.—**Sandy Hecker** □

NIAID's Charles Criswell Retires After 40 Years

After a 40-year government career, the last 20 of which were spent at the National Institute of Allergy and Infectious Diseases, Charles (Cris) Criswell recently retired as administrative officer of the Institute's Intramural Research Program. While with NIAID, he received several awards for superior performance.

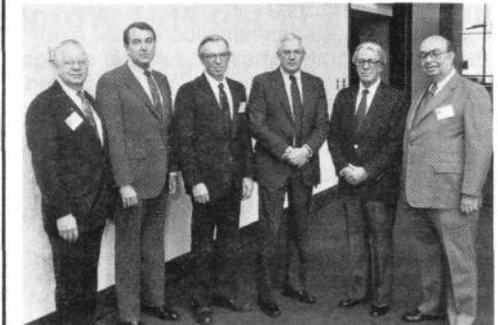


In addition to spectator sports, Mr. Criswell is looking forward to fishing, crabbing, and catching up with the gardening.

Mr. Criswell began his career in the U.S. Navy and then served with the Veterans Administration Hospitals in Altoona, Pa., and Washington, D.C.

Received Lounge Chair

Prior to his retirement, his many friends and coworkers honored him at a reception held at the Institute. He was presented his special "reserved" lounge chair in which he plans to spend many happy hours watching major sports events on television. Although he said he is "interested in all sports," Mr. Criswell is "particularly partial to the Washington Redskins." □



More than 160 academic deans and other top officials from almost every U.S. dental school met on Feb. 5-7 at NIH for a special conference sponsored by the National Institute of Dental Research. Purpose of the meeting was to strengthen the Institutes' ties with universities. Among officials attending were: standing, l to r: Drs. John A. Gray, executive director, American Association for Dental Research; John M. Coady, executive director, American Dental Association; William E. Brown, executive director, American Association of Dental Research; Dr. Harald Løe, Director, NIDR, and John L. Bomba, president, American Dental Association.

GA Program Offers Expanded Training Opportunities for Scientist Administrators

Expanded training opportunities for those who are functioning in the capacity of scientist administrators is being offered through the Grants Associates Program.

These new training opportunities have been endorsed by the Extramural Program management committee, subcommittee on training and the BID Directors and approved by Dr. George Galasso, associate director for intramural affairs and the Grants Associates Board.

This expansion is to serve the stated needs of the BIDs and the needs of health scientist administrators. It also reflects the philosophy that the NIH will benefit from having scientist administrators who are uniformly trained in science administration who gain more familiarity with the agency and its various extramural activities.

These new programs are being made available on a trial basis in addition to the regular Grants Associates Program, and the GA seminar series.

The first of these new programs is the Newly Hired HSA Training Program to accommodate those who recently have been hired into an HSA position and who, with the approval of their supervisors, desire orientation to NIH/PHS and to the policies and procedures of the NIH extramural programs. This training should be completed during the first year in the job and would consume about 20 percent of that year. Although this program is only 4 months old, there are already five such trainees: Dr. Leslye Johnson, NIAID; Dr. Michael Galvin, NIEHS; Dr. Janos Varga, NCI; Dr. Marion Zatz, NIGMS; and Dr. Christine Parker, NHLBI. The second program, Professional Development Assignment Training Program, is designed for those who have functioned as health-scientist administrators for 3 or more years and who wish to broaden their experiences beyond their current position.

This specialized training may take 1 to 3 months and should be completed within 2 years. At present, there is one professional development assignment trainee, Dr. Barbara Williams, NIGMS.

The third, the HSA Trainee Program, provides BIDs the opportunity to hire someone from the previously inaccessible grants associates register. These individuals could be hired by the BID from the GA register for specific HSA positions. They would be offered a total of 6 months training which must be completed during their first 2 years on the job. Upon completion of that training and after at least 1 year on the job, they would be classified as HSAs by the Special Examiner's Office.

This is the only training program in which this applies; it is also the only training program in which the hiring of such an individual is contingent on training. The other two training programs are voluntary and do not carry with them any promotion or classification benefits. Dr. James Kiley, NHLBI, is the first such trainee.

All three new programs involve training for individuals chosen and hired by BIDs. Each trainee is assigned a preceptor from the GA board. The role of the GA board with all trainees will be confined to developing a training plan, jointly with the trainee and supervisor, and evaluation of the training performance.

These programs are available at the request of the individual and the approval of the supervisor of the potential trainee and subject to the final approval of the associate director for extramural affairs.

Announcements of these training programs with definitions, objectives and application procedures have been distributed. If you wish further information or clarification, please call A. Robert Polcari, director, or Roberta Light, Grants Associates Program, at 496-1736. □

Three NICHD Employees Receive EEO Awards

Three National Institute of Child Health and Human Development employees recently received Equal Employment Opportunity Special Achievement Awards during the meeting of the Institute's National Advisory Council.

Dr. Duane F. Alexander, NICHD's Acting Director, presented the awards to:

- Dr. James F. Kavanagh, associate director of the Center for Research for Mothers and Children, for "informally counseling handicapped, minority and women support staff on how to upgrade their resumes and for effectively coaching them on approaching job interviews. He has encouraged and advised minority employees in their pursuit of a college education. As administrator of the Institute's components of the Minority Biomedical Research Support and the Minority Access to Research Careers programs, he discusses NICHD and opportunities with minority science students, encouraging them to enter the research field."

- Harvey Shifrin, supervisory contract specialist, for his "efforts in recruiting minority women at less than the journeyman level in the contract management series, providing on the job training and scheduling of specialized procurement courses so that each was able to reach the journeyman GS-12 level."

- Dr. James B. Sidbury, chief of the Section on Disorders of Carbohydrate Metabolism in the Human Genetics Branch of the Intramural Program, because "he has demonstrated a special concern that extends to all people who work with him. Dr. Sidbury achieves effective use of employees' skills, particularly minorities and women, by providing opportunities where their skills and abilities could be used optimally. He shows a special interest in their research by guiding, listening and encouraging them in the development of their ideas."

Orientation on Employee Courses Through Montgomery College Set

Orientation sessions for the Training and Development Services Program will be held on Mar. 13 and Mar. 20, from noon to 1 p.m., in Bldg. 31, Rm. B2C02A.

The program provides courses to NIH employees through Montgomery College. It is also designed to provide increased job performance skills in areas such as career planning, English, math, time management, communication and computers.

Eligibility Requirements

To be eligible you must be: a GS-8 or below (WG equivalent); in a nonprofessional job series (1 graded promotional series), a permanent employee and work at least 32 hours per week; a high school graduate or have a GED certificate; employed at NIH for 1 year.

To learn more about the program, call 496-9228 to reserve space in one of these sessions. □

If you don't say anything, you won't be called on to repeat it.—Calvin Coolidge.



Three NICHD employees recently received Equal Employment Opportunity Special Achievement Awards for their commitment to the principals of EEO. L to r, recipients are: (standing) Dr. James F. Kavanagh, Dr. James B. Sidbury and Harvey Shifrin (sitting) with the Institute's EEO officer Rayna J. Blake and Acting Director Duane F. Alexander.

International Cancer Session Scheduled Mar. 18-20 at NIH

An international symposium on "Biochemistry and Molecular Genetics of Cancer Metastasis" will be held on Mar. 18-20 in the Masur Auditorium at the Clinical Center, Bldg. 10.

During the 2½-day symposium, cosponsored by the Fogarty International Center and the National Cancer Institute, various aspects of the multistep process of metastasis formation will be discussed to integrate the accumulated data and current views on how and why cancers spread to new sites. There will be 32 oral presentations, given by invited speakers from eight different countries grouped around the following topics:

- Molecular Genetics of Metastasis
- Biochemical Mechanisms of Metastatic Cells
- Tumor Cell Movement and the Cytoskeleton
- Immunologic and Therapeutic Aspects of Metastases.

A joint poster session will give opportunities for those involved in the field to present data and results of ongoing research. Posters can be viewed on the 2nd floor mezzanine, ACRF dining area during the symposium.

All researchers are invited to attend the symposium. Preregistration is requested.

For further information, contact Ruth Rappaport, (202) 955-6073. □

Frances H. Howard Elected Trustee of Historical Society

Frances Humphrey Howard, special assistant to the associate director for extramural programs, National Library of Medicine, has recently been elected a trustee of the U.S. Capitol Historical Society.

As a new trustee, Mrs. Howard will bring to the society her broad knowledge of national political affairs and interest in American history.

The society was founded in 1962 to research and record the history of the U.S. Capitol building and the Congress of the United States. It strives through various educational tools to stimulate a greater interest in American history and encourages patriotism across the land.

During World War II, Mrs. Howard was on the staff of Eleanor Roosevelt in the National Office of Civilian Defense. She served later as consultant to the National Conference, the U.S. National Commission of UNESCO in 1955. She has been active in the field of world health and nutrition.

In 1979 she was honorary commissioner on the National Commission of the International Year of the Child. She is a member of numerous cultural and educational groups of national and international stature.

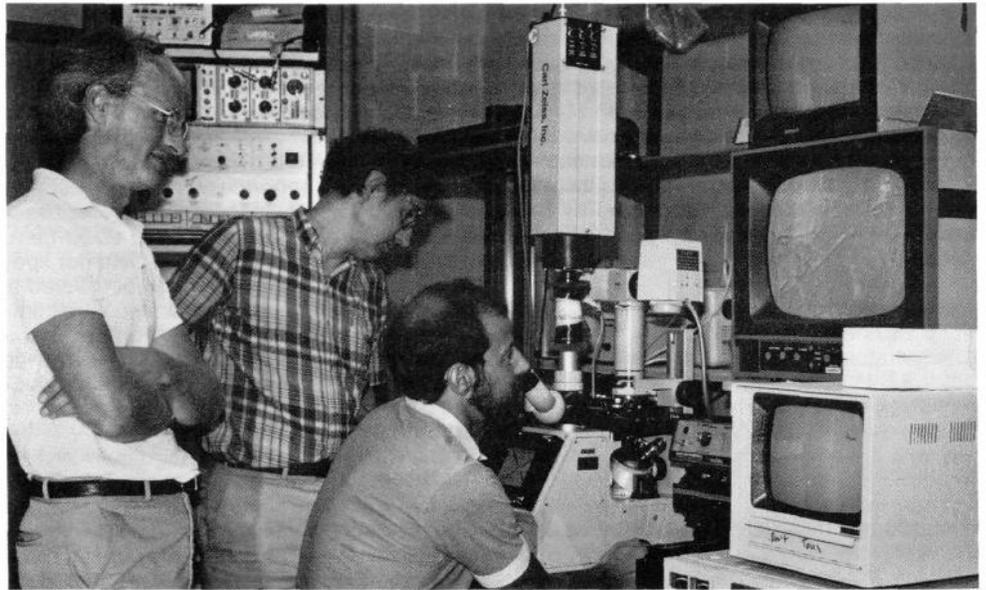
Mrs. Howard is the sister of the late Hubert H. Humphrey, Vice President of the U.S. and a longtime distinguished U.S. Senator.

The U.S. Capital Historical Society is sponsoring its eighth symposium entitled "Women In The Age of The American Revolution", to be held on Mar. 27-28, in the Senate Caucus Room of the Russell Senate Office Building, Washington, D.C. For further information call 543-8919. □

He who lives by his wits will die with his wits.—Bertrand Russell "

NERVE CELLS

(Continued from Page 1)



At the NINCDS Laboratory of Neurobiology, Woods Hole, Mass., Drs. Michael Sheetz, Thomas Reese, and Bruce Schnapp (l to r) watch axonal transport in progress. The microscopic images—enhanced by a special computer program—are projected onto a television screen from which they can be videotaped.

process can be studied in detail. The beads, when coated with translocator protein, travel along isolated microtubules just like organelles.

Explains Dr. Reese: "The only problem is that so far the beads, unlike real organelles, move in only one direction. We suspect that when organelles reach the end of the axon the translocator proteins, or feet, are somehow modified to produce movement in the opposite direction.

"Since we now know which proteins are involved in the transport process, we will be able to develop antibody probes to detect the translocator proteins," he says. These probes may show if the transport molecules are lacking in disease states.

During axonal transport, organelles journey from the main body of the cell, where they are made, to an outlying extension of the nerve called the axon, where they are used.

The axon, a long, tubelike structure that protrudes from the cell body, is the dominant feature of many neurons (nerve cells).

Transport also occurs in the opposite direction, as organelles and other substances recycle from the axon to the cell body.

Transport Process

To picture this transport process, the axon can be compared to New York's Lincoln Tunnel. Like the famous tunnel, the axon is used by commuters. Regarded as some of the most important commuters are tiny, fast-moving organelles containing chemicals called neurotransmitters.

These chemicals, which allow messages to be passed from one nerve cell to another, are made in the main body of the cell but are released from the tip of the axon.

Organelles containing neurotransmitters travel down the axon at speeds up to 400 milli-

meters per day, through a process known as fast axonal transport. (Some earlier components move only a few millimeters each day in so-called "slow" axonal transport.)

"Without fast axonal transport, the neuron would shut down," says Dr. Reese. "Nerve messages would stop being transmitted as neurotransmitters logjammed in the cell body. Conceivably the halting of transport could lead to disease," he says.

For now, however, axonal transport is examined at a basic level in this NINCDS laboratory, which has investigators stationed year-round in Woods Hole, Mass.

Studying Squid Axons

The scientists here are studying the transport process in a marine animal abundant in the Gulf Stream current off Cape Cod; the Woods Hole squid. The squid is noted for its giant axon, which at a diameter of one-half millimeter makes it the largest known axon in the world.

"We separated sections of the squid's axon that still had organelles travelling on them to study how transport occurs," Dr. Reese says.

Although much still needs to be learned about the crucial process of axonal transport, the story is beginning to become clear. The knowledge gained from this scientist pursuit should lead to a better understanding of nerve cell function and perhaps provide insight about the functioning of cells in general.

"All cells, not just neurons, have organelles moving around in them," Dr. Reese explains. "I think we've made a big conceptual breakthrough in thinking as to how this important cellular phenomenon works."—Lynn Cave □

A learned fool is one who has read everything and remembered it.—Josh Billings

Joint Watchdogs: HHS' Inspector General Office, NIH's Management Survey and Review Division

HHS' Office of the Inspector General and NIH's Division of Management Survey and Review join in performing similar but not identical functions.

The Inspector General's office deals with all criminal investigations involving HHS programs or personnel and refers potentially prosecutable offenses to the U.S. Department of Justice for action.

DMSR's jurisdiction is confined to NIH programs and personnel and any potentially criminal actions it discovers are referred to the departmental IG.

The following two stories outline the various functions of the two offices.

DMSR

NIH's Division of Management Survey and Review provides advice and assistance to top NIH and BID officials on a wide range of management problems.

Some examples:

The division reviews specific problems both within NIH and with grantees and contractors.

In the past these have included alleged irregularities or abuses within NIH programs and real or potential conflicts of interest. The division's staff have also looked into alleged misuse of government funds, both internally and by grantees and contractors.

DMSR has also been involved in several reviews of alleged scientific fraud.

In such fraud cases, the division may make an in-depth analysis of a contractor or grantee's organization or it may designate a DMSR representative to serve as advisor to a committee of scientists who themselves perform the actual review.

As noted earlier, potentially prosecutable offenses which are found by DMSR are referred to HHS' Inspector General's Office.

Headed by Howard Hyatt, the NIH Division of Management Survey and Review has a staff of 14 persons: 9, including the director, have audit backgrounds; 3 are management analysts. An administrative officer and secretary complete the staff.

Overall, 33 reviews—including 9 Hotline reviews and 3 internal reviews—were completed in 1984. Two cases for possible prosecution were referred to the IG.

These reviews resulted in cash refunds of \$225,544 to NIH and another \$565,138 in recommended refunds which are being negotiated.

DMSR also performs certain other specialized tasks on a continuing basis: Among them, the division:

- Investigates any Hotline complaints about waste within NIH programs or wrongdoing by NIH employees referred to it by the department's IG office. The IG's office determines which NIH complaints it will investigate itself and which it will refer to NIH.

- Manages the ALERT system which keeps appropriate NIH officials informed, on a need-to-know basis, of findings of investigations or determinations of misconduct by individuals and organizations. This makes possible informed decisions on new contracts or grants and awards or continuation of old ones.

- Plays a key role in Internal Control Reviews conducted within NIH as required by Office of Management and Budget directives.

- Acts as liaison on audits performed by the General Accounting Office and internal audits by the IG.

While DMSR initiates some reviews, its primary function is to act on review requests from outside sources. □

HHS Office of Inspector General

Health and Human Services' Office of Inspector General, created in 1976 as the first Federal statutory position of its kind, seeks to make administration of programs and procurement of services more efficient and economical.

Under the direction of Richard P. Kusserow, the OIG uses sophisticated investigative and audit techniques, including statistical sampling and computer applications, to ferret out fraud, waste and abuse.

Approximately 1,400 employees work for the office—investigators, auditors, program analysts, health care specialists and support staff—or one employee per \$200 million of the Department's budget. For every dollar spent in operating the OIG, the Department gets back up to \$58, it is estimated.

The office initiates and directs all criminal investigations involving HHS programs and personnel, serving as the Department's liaison with the Department of Justice.

OIG must by law formally submit reports to Congress and the HHS Secretary detailing significant problems, abuses and deficiencies in HHS programs with recommended correction actions.

OIG works with organizations within and outside of HHS. Through the President's Council on Integrity and Efficiency, it maintains close liaison with Federal agencies and prosecuting attorneys, state auditors and Medicaid Fraud Central Units, among others.

For more information on the Office of Inspector General, call the OIG Office of Public Affairs at (202) 472-3142. □

Salute to PHS Women To Be Held Mar. 14

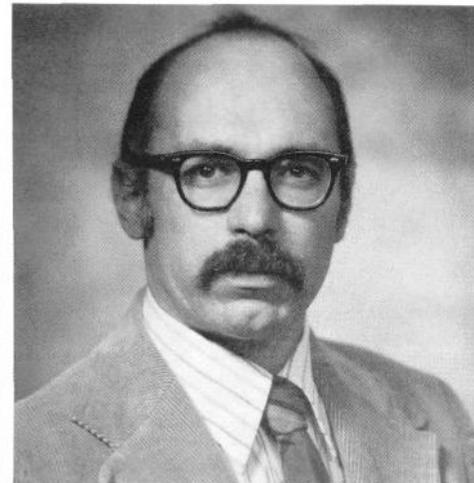
Federal Women's Programs in the Equal Opportunity Divisions of the Public Health Service and the Parklawn Chapter of Federally Employed Women, Inc., are sponsoring a Salute to PHS Women in observance of Women's History Week.

On Thursday, Mar. 14, from 11:15 a.m. to 1 p.m., in Conf. Rms. D and E of the Parklawn Building, Marjorie Shaevitz will discuss how women balance their multiple roles. Ms. Shaevitz, director of the Institute for Family and Work Relationships in La Jolla, Calif., is the author of *The Superwoman Syndrome*.

Sign language interpretation will be provided at this program. □

Many a man's profanity has saved him from a nervous breakdown.—Henry J. Haskins

Dr. Marvin Cassman Named Director, NIGMS Program



Dr. Cassman

Dr. Marvin Cassman has been appointed director of the new Biophysics and Physiological Sciences Program of the National Institute of General Medical Sciences. In this position, Dr. Cassman will take charge of a program established in 1984 through consolidation of the NIGMS Physiology and Biomedical Engineering Program with selected research areas previously supported within the Institute's Cellular and Molecular Basis of Disease (CMBD) and Genetics Programs.

The new program supports research aimed at the application of physical and engineering principles to the study of biomedical problems, especially those of biological structure, and encourages the development of instruments, devices, and methodologies for biomedical research.

The program will continue to support research which broadens and strengthens the scientific base in those areas of clinical and physiological research, including trauma and burn injury, for which NIGMS is responsible.

Dr. Cassman joined NIGMS as a health scientist administrator in 1975, and was appointed chief of the molecular basis of disease section of the CMBD program in 1978. During this time, he initiated and administered the NIGMS shared instrumentation grant program, which stimulated expanded efforts in this area at NIH.

Born in Chicago, Dr. Cassman received his B.A., B.Sc., and M.S. degrees from the University of Chicago. In 1965, he earned his Ph.D. in biochemistry from the Albert Einstein College of Medicine in New York City.

After graduation he worked as a postdoctoral fellow at the University of California, Berkeley. From 1967 until 1975, he taught biochemistry and biophysics as an assistant professor at the University of California, Santa Barbara.

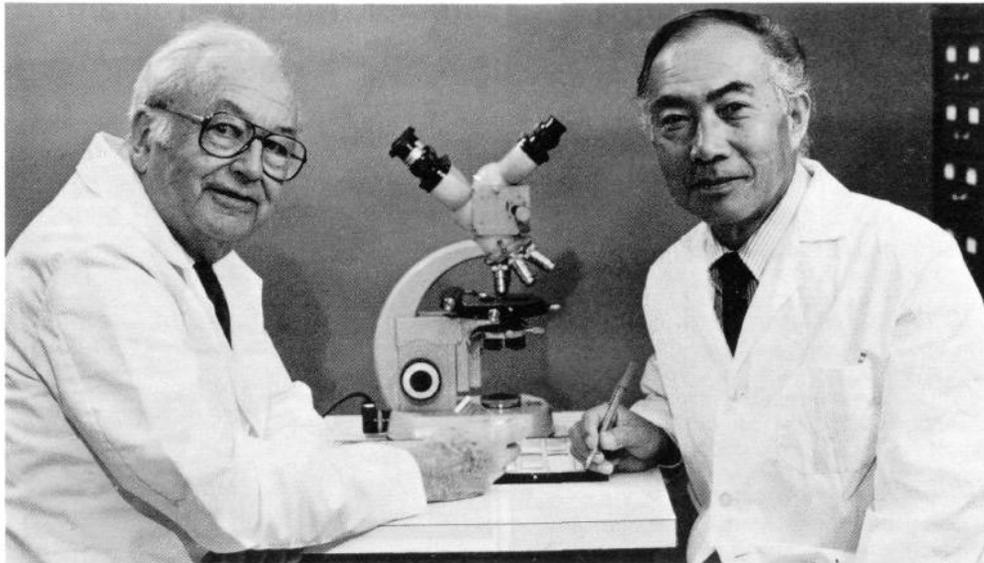
Dr. Cassman received the NIH Director's Award in 1983. □

Nominations for R&W Board

The NIH Recreation and Welfare Association is accepting nominations for president, 2nd vice president, assistant treasurer and corresponding secretary for its Board of Directors.

The closing date for nominations is Apr. 10. Nominees may pick up forms at the R&W Office in Bg. 31, Rm. B1W30. □

NEI Honors Drs. Cogan, Kuwabana at Symposium



Drs. Cogan (l) and Kuwabara were honored at NEI's symposium on experimental eye pathology.

An NEI symposium highlighting advances in experimental eye pathology was held at NIH on Feb. 14 and 15.

The symposium was dedicated to Drs. David G. Cogan and Toichiro Kuwabara, two NEI scientists who have achieved international renown for studies of disease processes in ocular tissues.

Dr. Cogan is head of the section on neuroophthalmology in the NEI clinical branch. Dr. Kuwabara is chief of NEI's Laboratory of Ophthalmic Pathology.

In his introductory remarks at the symposium, Dr. Carl Kupfer, NEI Director, described the two as "an extraordinarily productive team of ophthalmic pathologists who have worked together for almost four decades."

The speakers told of progress in understand-

ing the pathology of a number of eye diseases, including cataract and uveitis. Many of the findings they reported were obtained through the use of recently developed techniques such as monoclonal antibody labeling and recombinant DNA procedures.

At the conclusion of the symposium, the NEI's new reference library was dedicated. The facility, which is on the 10th floor of the ACRF, will be called the David G. Cogan Library.

During the ceremony, Dr. Kupfer praised Dr. Cogan for his "unique blend of scholarship and warmth" as well as his accomplishments in eye research. "At the NEI, he has stimulated further research advances and shared the wisdom acquired during his 50 years in medicine," Dr. Kupfer said. "Therefore, it is highly appropriate that we dedicate this library to him." □

Surgeon General Calls Conference on Violence

The Surgeon General of the United States will gather some of the Nation's leading medical, public health, and social service authorities to examine the modern American phenomenon on violence on Oct. 27-29, in Leesburg, Va. (just outside Washington, D.C.).

Dr. C. Everett Koop said the purpose of the Workshop on Violence and Public Health is "to convince the medical and public health professions that interpersonal violence is a serious issue affecting the health and well-being of millions of Americans, that they can play a vital role in violence prevention, and that they should develop an effective response strategy."

The workshop, he continued, will attempt to:

- improve communications across the medical, public health, and social services disciplines;
- stimulate graduate and continuing education programs on the identification and treatment of victims and on prevention, and
- encourage the general public to understand that violence threatens public health as well as public order and must be prevented.

Some 150 practitioners and researchers are

expected to attend the 2½ day meeting. Participation will be by invitation only.

They will hear Dr. Koop and other speakers explore various facets of interpersonal violence, especially within households and within families.

Work groups will then concentrate on components of the problem such as child abuse, spouse abuse, sexual assaults, elder abuse, and homicide.

Participants will present their recommendations to the Surgeon General at the closing plenary session of the workshop.

Cosponsoring the workshop with the Surgeon General are the Alcohol, Drug Abuse, and Mental Health Administrations; the Division of Maternal and Child Health of the Health Resources Administration and the Epidemiology of Violence Branch of the Centers for Disease Control.

The Administration on Children, Youth, and Families and the Administration on Developmental Disabilities, both in DHHS, and the Office of Juvenile Justice and Delinquency Prevention in the Justice Department are also cosponsors. □

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