The NIH Record

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National Institutes of Health

NCI Sponsors Two Consensus Conferences

Role of Drugs in Treatment Of Breast Cancer Is Topic

A 3-day consensus development conference on the Adjuvant Chemotherapy of Breast Cancer will be held Monday through Wednesday, July 14-16, in the Masur Auditorium. The meeting is sponsored by the National Cancer Institute, assisted by the Office for Medical Applications of Research.

Dr. Daniel G. Haller, head of the medicine section, Clinical Investigations Branch of NCI's Division of Cancer Treatment is coordinating the program.

Adjuvant chemotherapy is the use of drugs in addition (or adjuvant) to other forms of treatment. In the case of breast cancer, the primary treatment is most often surgery. Adjuvant treatment aims to prevent recurrence of the cancer by attacking microscopic areas of the tumor that may have spread to other parts of the body.

The role of adjuvant therapies for breast cancer has been studied for more than 20

(See BREAST CANCER, Page 12)

Cervical Cancer Screening: Pap Smear To Be Assessed

A consensus development conference on Cervical Cancer Screening: The Pap Smear will start Wednesday, July 23, at 9 a.m., in the Masur Auditorium, and end Friday, July 25, at 1 p.m. The meeting is open to the public.

Fundamental questions of the medical community concerning cervical cancer screening and the efficacy of the Pap smear will be discussed, and answers will be formulated based on an assessment of current knowledge of cancer of the uterine cervix and screening experience in the United States and other countries.

The Pap test (named for its inventor, Dr. George Papanicolaou) is a simple and painless procedure. A specimen of cells shed by the cervix (the narrow lower portion of the uterus) is collected and placed on a slide for laboratory study under a microscope.

Whether this test should be used as a

(See SCREENING, Page 5)

Laetrile Study Begins At 4 Cancer Centers Under NCI Direction

The first clinical trial of the possible effectiveness of Laetrile (amygdalin) in the treatment of cancer began July 1.

The National Cancer Institute clinical trial is being carried out simultaneously at four cancer research centers, under the direction of the NCI Investigational Drug Branch of the Cancer Therapy Evaluation Program.

About 200 cancer patients for whom no other treatment has been effective will be given Laetrile together with a special diet and supplemental vitamins. The study could take up to 2 years to complete.

Laetrile, as the chemical amygdalin has come to be known, is a naturally occurring plant product containing glucose, a common sugar.

The amygdalin molecule can release hydrogen cyanide, a common poison, when the molecule breaks down in the body. Laetrile is found in the kernels of bitter almonds,

(See LAETRILE, Page 6)

Parkinson's Disease Study Unites Keys Sisters

"We're celebrating. It's a delayed birthday party and family reunion," said Roberta, eldest (by minutes) of the three surviving all-girl Keys quadruplets, as she and her sisters settled in recently for a week at the Clinical Center.

It was also serious work involving a lengthy set of medical tests. The Keys sisters—Roberta, Mona, and Mary—are participating in a study on the role of heredity in Parkinson's disease.

Mona has suffered from Parkinson's disease for 10 years. One percent of all people over the age of 50 and 2½ to 3 percent over the age of 80 have this disorder.

In the National Institute of Neurological and Communicative Disorders and Stroke study, scientists are examining Parkinson's disease in identical and fraternal twins.

The Keys sisters fit both categories. Roberta Keys Torn and Mona Keys Fowler are identical twins. Mary Keys Anderson is their fraternal twin, as was the fourth sister, Leota Keys Hall, who died 10 years ago.

Identical twins are prized by scientific

(See KEYS SISTERS, Page 9)

The Keys sisters (c) get together with their physician Dr. Eldridge (l) and geneticist Susan Ince (r) on a grassy knoll outside the CC.

The NIH Record

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Dr. Benjamin Hooks, NAACP, To Speak Here July 21

Dr. Benjamin L. Hooks, Executive Director of the National Association for the Advancement of Colored People, will speak outdoors at the rear of Stone House, on Monday, July 21, at noon.

His appearance marks the start of the Black Heritage Summer Program, which is sponsored by the NIH Black Cultural Committee. If there is rain, the program will be held in the Masur Auditorium. □

NCI Seeks Male Volunteers For Spermatozoa Study

The National Cancer Institute Dermatology Branch is seeking normal healthy male volunteers between the ages of 20-45 to participate in a research program to study the antigen recognition immunology mechanism of human spermatozoa.

Each participant will be required to donate two semen samples a week and small amounts of blood twice a month.

Donors will be paid in accordance with the Normal Volunteer Program.

Interested donors should contact Dr. K. Halim or Mary Jane Talley, 496-1741, Bldg. 10, Rm. 12N-260. □

Final R&W Election Results

The ballot boxes are now empty and the votes counted in this year's R&W Association election of officers concluded on June 26.

The closest count came in the race for treasurer with Steve Thornton winning with 268 votes to Linnie Sloan's 230.

Incumbent 1st vice president Agnes Richardson was overwhelmingly reelected with 246 votes to Leo Buscher's 127, Ralph Stork's 70, and Phoebe Pfaehler's 51 votes.

The office of recording secretary was won by Mary Hodges with 374 votes to Adrian Webber's 129. □

Ten Management Intern Positions Available; All Applications Must Be in by July 28

Applications are being accepted now through July 28, for 10 positions—at the GS-5, GS-7, and GS-9 levels—in the NIH Management Intern Program.

The program consists of four different on-the-job training assignments over the course of a year. Interns enroll in formal course work and attend seminars and meetings to enhance their knowledge of administrative management.

Participants for the program may be selected from within and without the Federal service. NIH is making a concerted effort to increase participation of women and minorities in this program.

The requirements for candidacy are:

- a career or career-conditional appointment, having worked at NIH for at least 1 year immediately prior to July 28, 1980;
- work full-time or be willing to be reassigned to full-time. Grade level is determined as follows:

At the GS-5 level:

- 3 years of progressively responsible, nonclerical experience; or
- 4 years of college or university coursework leading to a bachelor's degree; or
- a combination of experience and education.

At the GS-7/9 levels:

- requirements for GS-5; and
- additional education or experience appropriate for GS-7 or GS-9. If an applicant needs a downgrade to enter the program, he or she may be entitled to salary retention.

The Career Development Branch, DPM, Bldg. 31, Rm. B2C-36, 496-2496, will supply application forms and information. All completed forms must be returned to the Career Development Branch by July 28.

For more information about the NIH Management Intern Program, two information sessions will be held on:

Thursday, July 17, from 10 a.m. to noon, Bldg. 1, Wilson Hall; and

Thursday, July 24, from 4 to 6 p.m., Bldg. 31, Conf. Rm. 7. □

Twins Needed for Medication Study at CC

The Psychogenetics Unit of the National Institute of Mental Health is seeking healthy identical or fraternal twins, between the ages of 18 and 45, to participate in a variety of studies involving inheritance responses to different medications.

Through these studies of psychiatrically well persons, researchers will investigate chemical factors that may make people vulnerable to mania and depression.

In a typical study, the volunteer would have one initial screening which includes a medical history, psychiatric interview, and physical examination. The physical examination would involve an X-ray, electrocardiogram, blood tests, and urine collections.

Some studies involving observations of brain wave patterns and hormone changes require that volunteers stay overnight at the Clinical Center. The volunteer should also be available for a short time during working hours.

Volunteers will be paid through the CC Office of Normal Volunteers.

All drugs involved in the various studies are approved by the NIMH human studies committee and the CC. A complete explanation of each specific study will be provided, and the volunteer must give his fully informed consent to the study in order for it to proceed.

For further information, call Dr. John Nurnberger, 496-3465. □

TRAINING TIPS

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

Office Skills	*Course Starts*	*Deadline*
Seminar for Executive Secretaries	Sept. 22	Sept. 9
Communication Skills		
Interpersonal Problem Solving	Aug. 11	July 23
Supervisory and Management Courses		
Writing and Classifying Position Descriptions in the F.E.S. Format	July 22	July 15
Communicating for Results (Session III) Cliffside Conf. Center Harper's Ferry, W. Va.	July 29	July 15
Communication Issues (Session II) Cliffside Conf. Center Harper's Ferry, W. Va.	Sept. 9	Aug. 26

To learn more about courses in Office Skills and Communication courses, contact the Training Assistance Branch, 496-2146.

For further information on Supervisory and Management courses, contact the Executive and Management Development Branch, 496-6371. □

Volunteers Tutor Summer Employees, More Tutors Needed for Program

The Training Assistance Branch is sponsoring a free tutorial program in the areas of math and science for high school to graduate level summer employees.

Volunteers are also needed to tutor these students.

Interested persons should contact Dawn Golden, 496-2146. □

U.S.-China Agree to New Joint Research Areas During Visit of China's Minister of Health

Three new areas of scientific cooperation that involve NIH were added to last year's U.S.-China Protocol for Cooperation in Science and Technology of Medicine and Public Health during the recent U.S. visit of Dr. Qian Xinzhong, Minister of Health, PRC.

During Dr. Qian's discussions with HHS Secretary Patricia Roberts Harris, it was agreed that the areas of mental health, pharmacology, and reproductive physiology and family planning be included in the agreement.

The decision came during a 3½-week visit to this country by China's Minister of Health, during which he met with medical and scientific experts.

Minister Qian's and the PRC delegation's schedule included a 1½-day visit to NIH that began on June 17. He was met by NIH Director Dr. Donald S. Fredrickson, who accompanied him on a tour of the Clinical Center and hosted a luncheon for Dr. Qian at Stone House.

During their NIH visit, the PRC delegation spoke with key staff from NCI, NHLBI, NLM, and NIAID.

The protocol, signed last year in Beijing's Great Hall by former HEW Secretary Joseph A. Califano, Jr., and Dr. Qian, calls for initial cooperation in seven areas: infectious and parasitic diseases, cancer, cardiovascular disease, public health and health services research, medical information science, immunology, and medical genetics.

The Chinese delegation also reviewed with Drs. Carl Kupfer, Director, NEI, and Philip Corfman, director, Center for Population Research, NICHD, the possibilities of other cooperative interests.

A tour of the National Library of Medicine was conducted by its Director, Dr. Martin Cummings, on June 18.

The Chinese delegation also visited universities and other health facilities in Honolulu, San Francicso, Los Angeles, Albuquerque, Atlanta, Boston, and New York.

During Dr. Qian's discussions with U.S. officials, they agreed that the next joint committee meeting between the U.S.-PRC would be held in November in Beijing. □

Dr. Fredrickson (center l) points out areas of interest in the model of NIH to China's Minister of Health Dr. Qian (center r).

CC deputy director Dr. Griff Ross (l) introduces Dr. Qian (c) to Dr. Arthur S. Levy, chief, Pediatric Oncology Branch, NCI, during a tour of the Clinical Center.

Dr. Jean R. Herdt (l), chief, Diagnostic Radiology, CC, reads a greeting to Dr. Qian (c) in Chinese, while Dr. Fredrickson and Dr. Griff Ross, CC deputy director, look on.

Federally Employed Women Hold 11th Annual National Training Program

Over 140 workshops on career management, management skills, the Federal personnel system, equal employment opportunity, and job and personal effectiveness will be held at the Federally Employed Women's 11th Annual National Training Program, July 10-12, in Washington, D.C.

To supplement the workshops, Federal policymakers will lead town meetings on Social Security and Federal employees, equal pay for work of comparable value, sexual harassment, the Civil Service Reform Act, and pay reform.

On-site registration for all or part of the conference begins today (July 8) and continues throughout the conference.

The program opens July 10 with an address by Carmen Maymi, Internal EEO Director of Office of Personnel Management and a former director of the Women's Bureau in the Department of Labor.

A special program Friday morning will honor organizations supportive of FEW. Owahna Anderson, Advisor to the President for Indian Women, will speak. During lunch on Friday, a film festival is planned.

Pulitzer Prize Winner Speaks

Ellen Goodman, Pulitzer Prize-winning syndicated columnist, will be the featured speaker at the banquet Friday night. The theme of the banquet is Women in the Department and Advancement in Defense of Our Nation.

Elizabeth Duncan Koontz, superintendent of education for North Carolina and a past president of National Education Association, will address a luncheon on Saturday. Business meetings will be held Saturday and Sunday mornings.

For registration information, call the National Training Program hotline, 301/946-0418. Registration programs are also available from Betsy Singer, NIAMDD, 496-3583.

Both men and women are invited, whether federally employed or not. Registration fees of $200 may be paid by NIH under provisions of Title V, Ch. 41, U.S. Code. Child care services will be provided free throughout the training program. □

Between 1960 and 1975, the difference in infant mortality rates for nonwhites and whites was cut in half.

Dr. Mearl F. Stanton, NCI Pathologist, Dies; Expert on Testing Carcinogenicity of Fibers

Dr. Mearl F. Stanton, 57, National Cancer Institute pathologist and internationally recognized expert on the carcinogenicity of fibers, died May 18 after a long illness. For the past several years, Dr. Stanton had suffered from Shy-Drager syndrome, a rare progressive neurological disease.

Dr. Stanton began working at NCI in the Laboratory of Pathology in 1957. From 1967 to 1974, he was editor-in-chief of the *Journal of the National Cancer Institute*.

His research at NCI began with studying chemically induced lung cancer in rats. He showed that small aquarium fish are highly sensitive indicators for chemicals capable of causing liver cancers in rodents.

Working with Drs. Sarah Stewart and Bernice Eddy of NCI, Dr. Stanton established the distribution and cellular characteristics of tumor sites produced by the polyoma virus in mice, rats, and hamsters. His work helped to demonstrate that tumors induced by the virus were distinct from those induced by other agents, including chemicals.

Later, working on the Moloney sarcoma virus in mice, he described the cellular characteristics of the tumors it produced. He demonstrated that mesenchymal cells made abnormal by the virus usually completely regressed in immunologically competent mice, rarely leading to cancer.

In 1969, Dr. Stanton published a report describing a method for evaluating the cancer-causing potential of fibers such as asbestos implanted in rat lungs. Later, he was able to develop precise methods for sorting asbestos, fibrous glass, and other natural and synthetic fibers on the basis of length, diameter, and resistance to breakage.

Dr. Mearl F. Stanton

His research revealed that asbestos fibers of identical chemical composition, but differing in size and strength, had widely different cancer-inducing activities. Also, fibrous glass samples of proper dimensions and strength were shown to be just as carcinogenic as asbestos having comparable physical characteristics.

Dr. Stanton also aided in developing tests to determine the lung carcinogenicity of cigarette tars. At the time of his death, he was working on assays to identify cancer-causing substances in large air samples. □

1979 Survey Reveals More Americans Aware Of High Blood Pressure Complications

More and more Americans are aware of the deadly complications of high blood pressure, understand that high blood pressure may lead to strokes and heart attacks, and know that it can be controlled but not cured.

Those are the principal conclusions of a national survey conducted in 1979 for the National Heart, Lung, and Blood Institute by Urban Behavioral Research Associates in conjunction with Louis Harris and Associates.

This survey, conducted among 5,043 people, is similar to a 1973 survey sponsored by the Institute which was initiated after the National High Blood Pressure Education Program began.

A comparison of the surveys shows that Americans, particularly Blacks, gained understanding and knowledge in every major category during the 6-year span.

High blood pressure is a major cause of the 650,000 heart attack deaths and the 175,000 stroke deaths which occur each year in the United States. Since 1972 the stroke death rate has decreased by 37 percent.

According to NHLBI Director Dr. Robert I. Levy, "The efforts of many people in both the public and private sector who make up the National High Blood Pressure Education Program are largely responsible for these dramatic gains.

"At the same time, the national survey underscores our principal challenge at this time to get people to stay on treatment."

Even though there is strong medical evidence refuting the reliability of obvious symptoms for high blood pressure, a high percentage of hypertensives continued to believe they could detect their own symptoms. Of those who stopped medication in 1979, 69 percent believed they knew when their blood pressure was high.

Among Blacks who stopped medication, the percentage who thought they could detect symptoms was even higher at 83 percent. Among all 1979 hypertensives questioned as to how they knew their blood pressure was high, 59 percent volunteered "dizziness" and more than half said "headaches."

The survey indicated that a high percentage responded that they were able to sense their own blood pressure levels, but it was encouraging that in 1979, 89 percent of the total population said it was likely that a person could have high blood pressure without obvious symptoms. □

Dr. Jacob Brody Elected President of American Epidemiological Society

Dr. Jacob Brody, associate director for Epidemiology, Biometry and Demography, National Institute on Aging, has been elected to serve as president of the American Epidemiological Society during 1980-81.

Dr. Manning Feinleib, National Heart, Lung, and Blood Institute, is vice president of the society.

Established in 1927, the AES has an honorary membership of 150 outstanding scientists elected by their peers.

The society's trophy: a cross-section of the famous Broad Street pump, figured in the history of epidemiology during the 1849 cholera epidemic in London.

Dr. John Snow charted spot maps to follow the pattern of deaths. He noted that many deaths clustered around the Broad Street pump, yet workers at a nearby brewery were spared.

He approached city officials with his theory that cholera was carried by the water, and when they refused to act, he removed the handle from the pump one night.

Later epidemics were charted showing that cholera was spread by contaminated water, and eventually the City of London pumps were rerouted to take in water from the Thames before the city poured its sewage into the river.

Dr. Brody holds the American Epidemiological Society's trophy, a cross-section of the famous Broad Street pump.

Bradley School Offering Day-Care

Day-care for kindergarten through sixth-grade students is being offered at the Bradley Elementary School year round.

The school is located within 3 blocks of the NIH campus.

For further information, call Deborah Davis, director, 897-5755. □

SCREENING

(Continued from Page 1)

routine screening procedure, and if so, how frequently at various ages, will be among the major topics of the conference.

More than 30 biomedical scientists, physicians, and health professionals from the U.S., Canada, and Europe will participate in the 3-day meeting.

Reports will be made by obstetrician-gynecologists, pathologists, epidemiologists, biostatisticians, economists, and representatives from the World Health Organization in Switzerland and the International Agency for Research on Cancer in Lyon, France.

In addition, professional societies, voluntary agencies, and women's health organizations have been invited to present statements on cervical cancer screening practices.

Dr. Maureen Henderson, associate vice president for health services, University of Washington Health Sciences Center, will head a 13-member conference panel of practicing physicians and pathologists, research scientists including epidemiologists, public health professionals, an attorney, an economist, and a professor of social work.

This panel will develop a consensus as the meeting progresses, interacting with the conference participants and the audience.

The incidence of cervical cancer has shown a gradual decline since the 1940's. National Cancer Institute epidemiologists reported in the May 1980 *Journal of the National Cancer Institute* that for the period 1969-76 both the incidence of, and mortality from, cervical cancer have decreased sharply by 6 and 5 percent per year, respectively.

The American Cancer Society estimates that in 1980 there will be 16,000 new cases of invasive cancer of the cervix and 7,400 deaths. Mortality was estimated at 9,700 in 1969.

This conference is sponsored by NCI, the National Institute on Aging, and the National Institute of Child Health and Human Development in conjunction with the National Center for Health Care Technology.

Dr. Diane J. Fink, NCI's associate director for medical applications of research, is the conference coordinator. □

Studies on Biomedical Research In Latin America Published In FIC Book

A book, entitled *Biomedical Research in Latin America: Background Studies*, is the latest of the Fogarty International Center studies of health systems, medical education, public health, and biomedical research in other countries.

Latin American experts, with the cooperation and advice of the Pan American Health Organization, were invited to prepare surveys on significant aspects.

In addition, Dr. Charles V. Kidd, the editor, who is research professor of public affairs at George Washington University, visited eight Latin American countries and interviewed a number of persons concerned with biomedical research before preparing his background chapter. Those individuals interviewed ranged from government officials to medical students.

Single copies of the book are available to interested professionals at the Fogarty Publications Office, Bldg. 16A, Rm. 205. Multiple copies may be purchased through the Government Printing Office. □

Panel Limits Drug Therapy For Childhood Febrile Seizures

Children who have had one febrile (or fever-related) seizure, should not be routinely placed on anticonvulsant drug therapy to prevent future seizures.

This is the conclusion that was reached by a consensus development panel at a recently held meeting sponsored by the National Institute of Neurological and Communicative Disorders and Stroke and the National Institute of Child Health and Human Development, assisted by the Office for Medical Applications of Research.

The panel's recommendation questions those physicians who believe that all children with fever-related seizures should be maintained on anticonvulsant drugs for several years.

A febrile seizure, as defined by the panel, occurs in children aged 3 months to 5 years, and is associated with fever but without evidence of meningitis, other brain infection, or other defined cause.

Febrile seizures are the most common type of childhood convulsion, affecting an estimated 1 out of 28 children in the U.S.

The risks facing these children and the long-term medical care that may be required were debated by experts in the fields of neurology, pediatrics, pediatric neurology, family practice, and the social sciences.

Febrile seizures are "generally benign and self-limited," the nine-member panel said, and rarely warn of the more serious medical problems which may be indicated. Complex partial seizures or other forms of epilepsy, characterized by recurrent seizures not related to fever, could be involved.

Dr. J. Gordon Millichap, professor of neurology and pediatrics, Northwestern University Medical School, speaks to those attending the febrile seizure consensus development conference.

The panel pointed out that youngsters "generally enjoy normal health" after a febrile seizure. However, some 30 to 40 percent will experience a second febrile seizure if they do not receive anticonvulsant treatment.

The panel concluded that "the occurrence of a second or subsequent febrile seizure does not, in itself, greatly change the risk of epilepsy."

Evidence that prolonged therapy with anticonvulsants would prevent children from developing epilepsy or significant neurological deficits has not been demonstrated.

Epilepsy is most likely to develop after a febrile seizure, panel members agreed, when at least two of the following risk factors are present:

- a family history of nonfebrile seizures;
- abnormal neurological or developmental status before the febrile seizure; or,
- an atypical febrile seizure, such as one that is prolonged or affects only one part of the body.

Neurological problems present after a febrile seizure probably existed before the seizure, the panel said. Evidence that these problems reflect neurological injury occurring at the time of the seizure is not apparent.

The panelists noted that side effects and toxic reactions have occurred in up to 40 percent of children receiving long-term drug treatment for febrile seizures. Phenobarbitol, the drug most commonly used to treat convulsions was particularly noted.

Behavioral changes and disturbed sleep patterns are the most common adverse reactions, causing therapy to be stopped in 25 percent of the patients. More serious side effects have been found in other studies, especially those involving drugs other than phenobarbitol.

The panel recommended that a rational approach to management of children with febrile seizures should take into account the excellent long-term prognosis for these children, the effectiveness of anticonvulsant drugs in reducing future febrile seizures, and the lack of evidence that prophylaxis reduces the risk of subsequent seizures not related to fever.

The panel called for greater efforts to teach parents how to prevent febrile seizures and how to provide proper care should seizures occur.

Mass media and other means should be used to disseminate this information to nurses, health educators, social workers, the staff of day-care centers, and others involved in child care. □

Latin Am. Center Against Sexually Transmitted Diseases Opens in Puerto Rico

The recent dedication of the Latin American Center Against Sexually Transmitted Diseases in San Juan, Puerto Rico, marked the first such research center for this area.

Dr. Karl A. Western, NIAID assistant director for International Research, represented NIH at the dedication ceremonies.

The center was organized according to the general recommendations of the NIAID Study Group on STD held in January in Washington, D.C. At that time, the study group urged the establishment of comprehensive research training as well as clinical services to improve understanding of these diseases.

Dr. Yamil H. Kouri, who participated in the Washington meeting, will head the new center. He also serves as Puerto Rico's director of the Program for Control of STD and is vice president of the Latin American Union Against V.D.

After spending almost 15 years in a Cuban prison, Dr. Kouri was released 3 years ago in an amnesty program. He joined his wife and children in Puerto Rico, and recently became a U.S. citizen.

Located in the medical center complex of the University of Puerto Rico, and operated under the auspices of Puerto Rico's Department of Health, the center will provide comprehensive medical and social services for sexually transmitted diseases in Latin America.

After the dedication, Dr. Western participated in a 3-day symposium. He spoke on New Frontiers in Sexually Transmitted Diseases.

At the center's dedication are (l to r): Dr. Mario Ambrona, Institute of Venereal Disease, Argentina, and president, Latin American Union Against V.D.; Dr. Western, Dr. Kouri, Dr. Jaime Rivera Dueño, Secretary of Health, P.R.; Dr. Charles L. Williams, former deputy director, Pan American Health Organization, WHO; Lic. (attorney) Pedro Vasquez, Secretary of State, P.R.; and Norman J. Scherzer, Regional Consultant, Disease Control, HHS Region II, New York.

Cadmium Increase Results in Greater Risk Of Kidney Disease

Increased cadmium in the environment could result in an increase in the human populations risk of cadmium-induced kidney disease in the future because the very low excretion rate of cadmium causes it to accumulate in the body.

The chain of events which occurs in the body and lead to liver damage in individuals exposed to chronic cadmium was reported recently by researchers from the National Institute of Environmental Health Sciences at the annual meeting of the Federation of American Societies for Experimental Biology in Anaheim, Calif.

Investigators from the NIEHS Laboratory of Organ Function and Toxicology and the NIEHS-supported C.V. Whitney Marine Laboratory, St. Augustine, Fla., presented results of study concerning uptake of cadmium metallothionein (CdMT) in laboratory animals for its pathway of toxicity and for its effectiveness as a model system to study cadmium toxicity in a specific kidney cell population.

Cadmium is naturally present in trace amounts in the environment. Tobacco smoking is the most common source of human-generated cadmium exposure as a result of superphosphate fertilizers which are contaminated with cadmium and are widely used on tobacco crops.

Cadmium also accumulates in the soil, air, and water as a result of smelting and mining operations, electroplating, manufacturing, and waste disposal.

The poisoning becomes apparent in humans and laboratory animals by nonreversible kidney damage which can be detected by an excess of low molecular weight proteins in the urine.

Metallothionein (MT), a low molecular weight protein which binds cadmium in mammalian cells to intracellular MT, synthesized by cells *de novo* is unable to react chemically with other cellular constituents. Therefore, at low concentrations, cellular cadmium is stored as CdMT in a "detoxified" state. If cadmium continues to accumulate, however, this detoxification system is overloaded and free cadmium becomes available leading to signs of cadmium poisoning.

The NIEHS work showed that normal tubular reabsorption processes in the kidney are the earliest alterations to occur following exposure to circulating CdMT which is a "pharmacological bullet."

LAETRILE

(Continued from Page 1)

apricots, peaches, and plums.

The clinical trial with Laetrile will follow the same testing approach used with other compounds being tested by NCI for effectiveness in treating cancer. Criteria for selecting patients for the Laetrile study are similar to those used for all initial studies of effectiveness of other compounds in the treatment of cancer.

The clinical trial will include patients for whom no established treatment has been demonstrated to be effective. This includes patients who no longer respond to effective drugs, as well as those for whom no proven treatment exists.

All patients must have a measurable cancer —a tumor mass that can be followed through X-ray or other examination for growth or shrinkage.

Toxic Effects Tested

Before permitting the efficacy testing of the drug, the U.S. Food and Drug Administration last spring required a test of Laetrile for possible toxic effects in a small number of cancer patients.

This test was conducted with six patients at the Mayo Clinic to determine whether administration of the drug together with a special diet and supplemental vitamins might be associated with adverse effects.

Special care was taken to monitor the patients, particularly with regard to cyanide toxicity.

Five of the six patients experienced no toxic effects that could be directly or indirectly ascribed to Laetrile therapy. The sixth patient showed clinical evidence of toxicity only after eating large quantities of raw almonds, part of the special diet. Raw almonds appear to stimulate the amount and rate of cyanide released if eaten during Laetrile treatment.

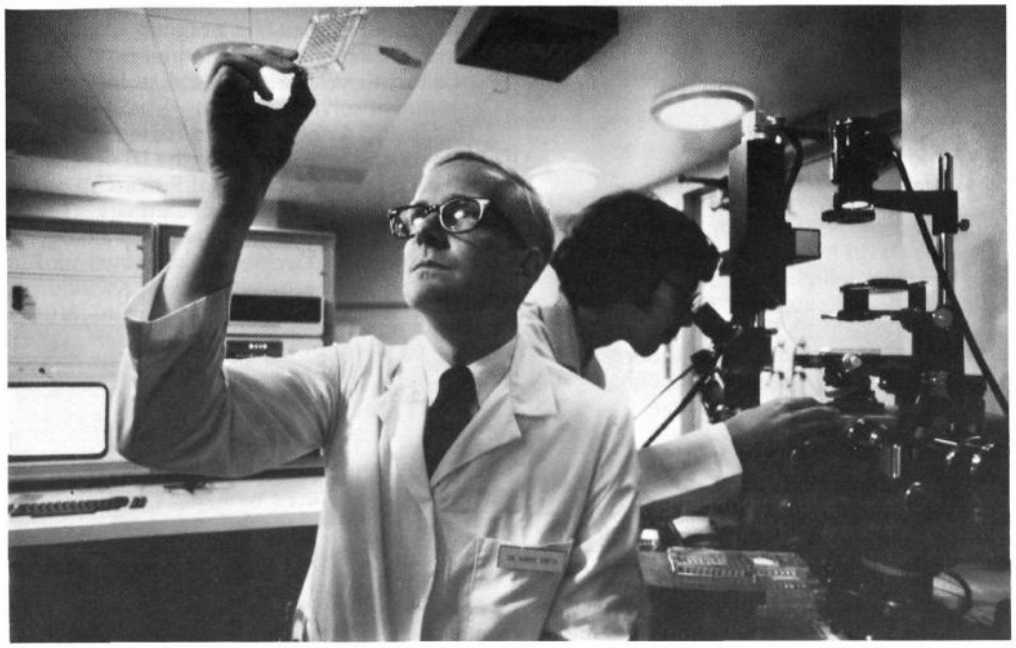
Mayo Will Coordinate Data

The trial will be conducted at the Mayo Clinic in Rochester, Minn., by Dr. Charles Moertel; at Memorial Sloan-Kettering Cancer Center in New York City by Dr. Charles Young; at the University of California at Los Angeles Jonsson Cancer Center by Dr. Gregory Sarna; and at the University of Arizona Health Sciences Center in Tucson by Dr. Stephen Jones.

The Mayo Clinic will coordinate the data from all four institutions.

A third clinical study to assess Laetrile's ability to provide relief of symptoms will begin in the near future. This study will measure such clinical effects as pain relief and an increase in the patient's capability to carry out normal daily living functions. □

New Brain Tumor Treatment Uses Natural Immune System



Dr. Barry Smith, NINCDS Surgical Neurology Branch, examines a microtest plate in which cultured brain tumor cells are assayed for their response to anticancer drugs and immune factors in serum.

By Ellen Casselberry

A new treatment for patients with malignant astrocytoma, a highly invasive tumor arising within the brain, is currently being investigated by scientists at the National Institute of Neurological and Communicative Disorders and Stroke.

The new treatment approach, known as immunotherapy, is "an attempt to help patients' natural body defenses—their immune systems—cope with their own tumors," says Dr. Paul Kornblith, who heads NINCDS's Surgical Neurology Branch and the brain tumor research program.

Because malignant astrocytomas infiltrate deeply into normal brain tissue, they are very difficult to treat. Even with the best standard therapy—surgery, followed by radiation and powerful antitumor drugs—patients with these malignancies now survive, on the average, less than a year.

The attractiveness of immunotherapy lies in its potential for deploying body defenses that can seek out and destroy tumor cells without damaging normal tissue. And immunotherapy, unlike radiation and antitumor drugs, can be continued for prolonged periods without causing serious side effects.

Nevertheless, because the body's immune system is extraordinarily complex, it remains to be seen whether what ought to work, in theory, will do so in fact.

Dr. Kornblith and his team base their approach on studies demonstrating that the majority of astrocytoma patients have a natural systemic immune defense against their own tumors.

When blood serum from these patients is mingled with their own tumor cells, removed at surgery and grown on culture plates in the laboratory, antibodies in the serum attack the malignant cells and destroy them.

The researchers' goal is to enhance this natural immune response and bring it to bear against the tumor in the brain. Dr. Kornblith and his colleagues will try to do just that in 20 patients who will be selected for study each year for the next several years.

The first step in the process is surgical removal of as much of the individual patient's malignancy as possible. Following surgery, performed at the Clinical Center, the patient receives a 6-week course of radiation to the tumor site.

Meanwhile, material obtained at surgery is used to start cultures of the patient's tumor cells in the laboratory. The cells are grown in quantity, "harvested," and irradiated so that they cannot reproduce. Then, 8 to 12 weeks after surgery, these deactivated cells are injected under the patient's skin, with booster injections following monthly for 6 months.

By thus exposing the patient's systemic immune defenses to cells from his tumor in the brain, the investigators hope to mobilize a response that will destroy the remaining malignancy—or at least significantly retard its growth.

If the immunotherapy trial gives early strong indications of success, other medical centers might be using similar techniques within the next year or two, Dr. Kornblith estimates. If the results are only so-so, application of refined techniques might be another 5 years away.

Even if the effort doesn't work, the researchers believe they will have gained invaluable knowledge about the complexities of brain tumor behavior. Moreover, the studies underlying immunotherapy's development have led to other promising advances.

The same tests that furnish information on patients' immune response to their own tumors can be used as a preoperative clue to presence of a brain malignancy.

Dr. Kornblith and his colleagues have found that 80 percent of patients who harbor malignant brain tumors show a positive antibody response when their serum is tested against a common tumor cell line (cells from a patient with malignant astrocytoma that have been cultured over a number of years for use in laboratory studies).

Positive responses are even higher (90 percent) in patients with tumors of low-grade malignancy: the very patients in whom early diagnosis by current techniques is most difficult, and who stand to gain most from early treatment.

On another front, the tissue culture technique at the heart of immunotherapy also holds an important key to rational and effective antitumor drug treatment, tailored to the response of the individual malignancy.

"Each patient's tumor is different—they are different pathologically, they behave differently, and they grow differently," Dr. Kornblith explains. "This requires that you culture every tumor: you can't generalize about what will work."

He and his colleagues have already found that the way patients respond to antitumor drugs corresponds with the way their tumor cells react to those drugs in the laboratory.

Therefore, Dr. Kornblith expects that testing drugs on cultured cells, before beginning therapy, will enable investigators to predict which drugs may or may not be effective against the individual tumor.

For future patients, these new avenues for managing brain malignancies may brighten what has been a grim outlook.

"I don't want to raise false hopes," says Dr. Kornblith, "but the prospects for control of these tumors are improving." □

Anna R. Parker retired recently after serving at the National Cancer Institute for 31½ years. A newcomer to NCI in 1948, Mrs. Parker trained as a technician in the Laboratory of Biochemistry. She later moved on to the Carcinogen Screening Section, now the Laboratory of Carcinogen Metabolism. She has worked with Dr. Elizabeth K. Weisburger for the past 28 years. In her honor, co-workers and friends held a luncheon in April and presented her with a set of luggage and other gifts.

VISITING SCIENTIST PROGRAM PARTICIPANTS

Reported by Fogarty International Center

6/1—**Dr. Ken-ichi Amano,** Japan. Sponsor: Dr. Edgar Ribi, Rocky Mountain Lab, NIAID, Hamilton, Mont.

6/1—**Dr. Jo Chiba,** Japan, Laboratory of Immunology. Sponsor: Dr. Ethan Shevach, NIAID, Bg. 10, Rm. 11N312.

6/1—**Dr. Gokul Das,** India, Laboratory of Biology of Viruses. Sponsor: Dr. Norman Salzman, NIAID, Bg. 5, Rm. 326.

6/1—**Dr. C. Goran Ekborg,** Sweden, Laboratory of Chemistry. Sponsor: Dr. C. P. J. Glaudemans, NIAMDD, Bg. 4, Rm. 205.

6/1—**Dr. L. Roland Grafstrom,** Sweden, Laboratory of Experimental Pathology. Sponsor: Dr. Curtis Harris, NCI, Bg. 37, Rm. 3A07.

6/1—**Dr. Patricia Graves,** United Kingdom, Laboratory of Parasitic Diseases. Sponsor: Dr. Louis Miller, NIAID, Bg. 8, Rm. 326.

6/1—**Dr. Narimichi Kimura,** Japan, Laboratory of Molecular Biology. Sponsor: Dr. George Johnson, NCI, Bg. 37, Rm. 2E26.

6/1—**Dr. Hirofumi Shii,** Japan, Laboratory of Neuropathology and Neuroanatomical Sciences. Sponsor: Dr. Henry deF. Webster, NINCDS, Bg. 36, Rm. 4B22.

6/1—**Dr. Hiroshi Wakimoto,** Japan, Laboratory of Biochemistry and Metabolism. Sponsor: Dr. Takami Oka, NIAMDD, Bg. 10, Rm. 9B17.

6/4—**Dr. Meryl Wastney,** New Zealand, Laboratory of Theoretical Biology. Sponsor: Dr. Mones Berman, NCI, Bg. 10, Rm. 4B58.

6/5—**Dr. Ravi Kaul,** India, Laboratory of Developmental Biology and Anomalies. Sponsor: Dr. George Martin, NIDR, Bg. 30, Rm. 416.

6/10—**Dr. Raimondo Russo,** Italy, Laboratory of Pathophysiology. Sponsor: Dr. Lance Liotta, NCI, Bg. 10, Rm. 8B19.

6/9—**Dr. Per N. Ask,** Sweden, Laboratory of Neurosciences. Sponsor: Dr. Stanley Rapoport, NIA Gerontology Research Center, Baltimore.

6/11—**Dr. Irina L. Karniouchina,** USSR, Laboratory of Neuropathology and Neuroanatomical Sciences. Sponsor: Dr. Maria Spatz, NINCDS, Bg. 36, Rm. 4B22.

6/15—**Dr. Julieta Correa,** Brazil, Laboratory of Biochemistry and Metabolism. Sponsor: Dr. William Jakoby, NIAMDD, Bg. 10, Rm. 9N109.

6/15—**Dr. David R. Critchley,** United Kingdom, Developmental and Metabolic Neurology Branch. Sponsor: Dr. Peter Fishman, NINCDS, Bg. 10, Rm. 3D55.

6/15—**Dr. Zvi Grossman,** Israel, Laboratory of Theoretical Biology. Sponsor: Dr. Ronald Herberman, NCI, Bg. 10, Rm. 8B04.

Visitor From Denmark

6/15—**Dr. Henning Laursen,** Denmark, Laboratory of Neuropathology and Neuroanatomical Sciences. Sponsor: Dr. Igor Klatzo, NINCDS, Bg. 36, Rm. 4D04.

6/15—**Dr. Nili Peylan-Ramu,** Israel, Clinical Oncology Branch. Sponsor: Dr. Daniel Glaubiger, NCI, Bg. 10, Rm. 3B04.

6/16—**Dr. Sheam-Pey Hwang Chen,** Taiwan, Clinical Hematology Branch. Sponsor: Dr. Arthur W. Nienhuis, NHLBI, Bg. 10, Rm. 7D19.

6/16—**Dr. Kerstin U. Grondahl,** Sweden, Clinical Investigations Branch. Sponsor: Dr. Richard L. Webber, NIDR, Bg. 10, Rm. 5N256.

6/16—**Dr. Makoto Iwata,** Japan, Laboratory of Immunology. Sponsor: Dr. Myron Waxdal, NIAID, Bg. 10, Rm. 11N260.

6/18—**Dr. Pao-chen Wu,** China, Laboratory of Viral Carcinogenesis. Sponsor: Dr. Charles Boone, NCI, Bg. 37, Rm. 1C09.

6/20—**Dr. Li-Fu Hu,** China, Laboratory of Tumor Virus Genetics. Sponsor: Dr. Thomas Shih, NCI, Bg. 41, Rm. D251.

Hamsters To Make Comeback—Tryouts Scheduled for August

Hamster members reading over the script are (l to r): Dr. Donna Bareis, NIMH; Mr. Smith, NIAMDD; Pam O'Brien, DRS; Brian Cole, DCRT; Roz Archer, ODA; and Maurice Miles, NHLBI.

The "Hamsters," a theatrical group of approximately 70 NIH employees, is returning after 10 years.

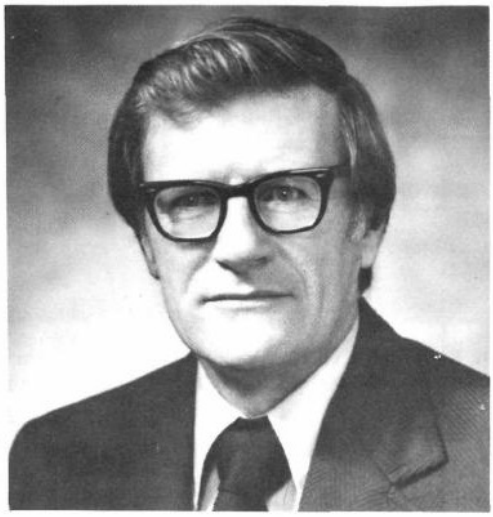
In the fall they plan to make a great comeback in the hit play, "Bell, Book, and Candle," to be presented in late October or early November.

Talented employees who are interested in trying out or helping backstage should contact Ignacio Smith, 496-9443. Tryout dates are scheduled for Aug. 24, from 2 to 5 p.m., and Aug. 25, from 7 to 9 p.m. □

Dr. McPherson, Director, Animal Resources Program, Retires After 24 Years' Service

Dr. Charles W. McPherson, former director of NIH's animal resources program, Division of Research Resources, has retired from the Public Health Service after 24 years in Government service.

He became associated with NIH in 1956 as a primate unit veterinarian in the laboratory aids branch of the Division of Research Services. Later, he became a veterinary microbiologist in the comparative pathology section and in 1960, chief of the animal production section.



Dr. McPherson has assumed the position of director of experimental animal resources in the school of veterinary medicine at North Carolina State University.

He was appointed as assistant chief of the laboratory aids branch in 1964. Two years later, he became chief of the laboratory animal sciences section of the animal resources branch of the Division of Research Facilities and Resources, and in 1970, director of the DRR animal resources program.

Received PHS Commendation

Dr. McPherson received a PHS Commendation Award in 1977.

A native of North Dakota, Dr. McPherson is a graduate of the University of Minnesota with a degree in veterinary medicine. He also has a master's degree in public health from the University of California, Berkeley.

He is a diplomate and past president of the American College of Laboratory Animal Medicines. □

KEYS SISTERS

(Continued from Page 1)

investigators because they may hold clues to why one person is vulnerable to disease while another person—in this case one genetically identical—remains healthy. Fraternal twins are valuable to medical research, too, since they are influenced by the same environment as they grow up but have only some genes in common.

The Keys sisters volunteered for the NINCDS study to "help medical science in general, and Mona in particular."

Roberta, Mona, and Mary are no strangers to publicity. News of the quads' birth on June 4, 1915, in Hollis, Okla., reached the papers before some of the Keys' relatives heard of their arrival.

The Keys grew up to graduate from Baylor University, married, and had children. Among them, they have 10 children and 15 grandchildren—but no twins, triplets, or quadruplets.

Their parents wanted the quads to grow up normally without becoming a sideshow attraction. Ladies from the local Bapist church made baby clothes, but otherwise the family managed on its own.

There were no large cash donations to ease the cost of raising quadruplets and their four older brothers and sisters.

As they grew older, the sisters were frequently asked to make personal appearances. Feeling they should do something on stage "besides just smile," they developed several different musical acts. One of their quartets—piano, violin, cello and saxophone—was abandoned after a year because "it didn't sound too good."

Keys sisters Roberta Torn (l), Mona Fowler (c), and Mary Anderson relax in their Clinical Center room between medical tests.

The sisters still joke about their collective lack of musical talent. Roberta, Mona, and Mary brought to NIH pictures and clippings from their early personal appearance tours.

The sisters majored in different subjects but each graduated with a teaching certificate and each taught school. "Mother wanted us to have something we could make a living at," said Mona, who taught preschool and kindergarten for 15 years. Now retired, the three remain active in their local Baptist churches and in volunteer work.

Roberta lives in Houston, Mona in Oklahoma City, and Mary in Dallas. They get together two or three times a year. Their stay at the Clinical Center was the longest period of time they've been together in 25 years.

The Parkinson's disease twin study is being conducted by Drs. Roswell Eldridge, head of the NINCDS clinical neurogenetic studies, Donald Calne, NINCDS clinical director and chief of experimental therapeutics, and Roger Duvoisin, chairman of the neurology department at Rutgers University.

Since work began in 1978, 12 pairs of identical twins have been studied. According to a preliminary report, in no instance were both twins of a set affected by Parkinson's disease.

Dr. Eldridge finds this intriguing because, "You'd expect the sample to be biased toward concordant pairs (both twins with Parkinson's disease), since such twins would be more interested in volunteering for research."

In the NINCDS study, scientists first verify the diagnosis of Parkinson's disease in one of the twins and then try to rule out known causes of the disorder: encephalitis, for example.

All twins will be followed over many years to see whether the healthy twin also develops Parkinson's disease.

If only a normal incidence occurs in identical twins, the investigators will concentrate their research on possible environmental causes.

Preliminary results suggest that Parkinson's disease is more common in the nonsmoking or lighter smoking twin and that the afflicted twin generally tends to be the less dominant person.

So far, 130 twin pairs have been identified for possible participation in the NINCDS study. More twins are needed.

Identical or fraternal twins, one or both of whom have Parkinson's disease and who would like to participate in the study, should ask their physicians to contact: Dr. Roswell Eldridge or Susan Ince, NINCDS Clinical Neurogenetic Studies, Federal Bldg., Rm. 904, Bethesda, Md. 20205, or call 301-496-1187. □

7 NIH Publications Win 'Blue Pencil' Awards

Holding their "Blue Pencil" awards (from left) are: Irving Shapiro, Patricia G. Sheridan, Doreen Mead, and Linda Brown.

Seven NIH publications were winners in the National Association of Government Communicators' annual "Blue Pencil" Publications Contest.

The awards were presented at a luncheon held June 19 in Arlington.

Seeds of Artificial Intelligence, edited by James Augustine, Division of Research Resources, won first place in the Technical Publications, 1 color category.

Two National Institute of Arthritis, Metabolism, and Digestive Diseases writers received awards in the Folder, Brochure, and Leaflet (16 or fewer pages) category. Patricia G. Sheridan won second place for *Human Growth Hormone*, and Irving Shapiro, honorable mention for *Peptic Ulcer*.

Computers at NIH: Tools for the Advancement of Medicine, issued by the Division of Computer Research and Technology, received honorable mention in the Popular Publication (exceeding 16 pages) 2 or 3 colors category.

In the same category in 4 colors, second place went to a book for children entitled *A Treasure Hunt*, published by the National Institute on Aging. Christopher Wilson was the author, and Dagmar Wilson, the illustrator.

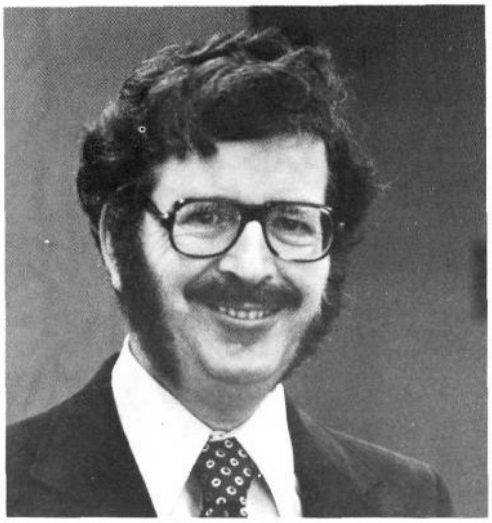
Also, two publications in this category—*Heart Attacks* and *High Blood Pressure*—that won honorable mention were edited by Doreen Mead, Clinical Center, and designed by Linda Brown of the Medical Arts and Photography Branch, Division of Research Services. □

NIH Preschool Accepting Applications For Immediate, Fall Openings

The NIH Preschool Developmental Program is now accepting applications for immediate and fall openings.

For further information and application forms, call Sherrie Rudick, 496-5144. □

Dr. Ralph F. Naunton Named Director Of Communicative Disorders Program



Dr. Naunton, who has served on the committees of several national organizations concerned with otolaryngology, is one of 20 U.S. members of the Collegium Otorhinolaryngologics Amicitiae Sacrum, an international organization of researchers in that field.

Dr. Ralph F. Naunton was recently appointed director of the Communicative Disorders Program, National Institute of Neurological and Communicative Disorders and Stroke.

He will direct a $28 million program of extramural grants and contracts to support research in speech, language and hearing disorders, including medical and surgical treatment of such disorders and various approaches to rehabilitation.

Dr. Naunton's own research interests have included inner ear diseases that cause hearing loss and electrical measurement of hearing.

Dr. Naunton comes to NINCDS from the University of Chicago, where he was a faculty member for 25 years, the last 12 as professor of surgery and chairman of the section of otolaryngology.

While at the university, he planned and managed nationally recognized clinical and research training programs in otolaryngology.

Education Noted

Dr. Naunton received M.B. and B.S. degrees (the equivalent of an American M.D. degree) in 1945 from the University of London. He interned at University College Hospital in London and Queen Mary's Hospital in Roehampton, England, and served a residency in ear, nose, and throat medicine and surgery at University College Hospital, London.

Dr. Naunton has served as a consultant to the NINCDS Communicative Sciences Committee, as a member of the Institute's Communicative Disorders Program Project Review Committee, and as a member of the Ad Hoc Advisory Committee for Communicative Disorders. □

Vi Brown, NIAMDD, Retires, Ends 33-Year Federal Service

"Vi" Brown, clerk stenographer in NIAMDD's Chronic Renal Disease Program, has retired after more than 33 years of Federal service. She has been with the Institute since 1969.

Mrs. Brown began her Government service in 1945 with the Department of Agriculture. While there, she recalls, she received a letter of congratulation from President Franklin D. Roosevelt on her 21st birthday.

In 1951, she started working at the Armed Forces Institute of Pathology of the Department of Defense. She came to NIH in 1956 as a unit clerk in the Clinical Center Nursing Department.

Later, she worked for the National Institute of Environmental Health Sciences, and then joined NIAMDD's Artificial Kidney-Chronic Uremia Program. She has received numerous awards for outstanding performance.

Co-workers gave Mrs. Brown a farewell luncheon. She will continue to live in Washington, D.C. and pursue her many interests.

Many friends and colleagues attended Mrs. Brown's farewell luncheon.

Four New Members Appointed to NHLBI's Advisory Council

Four new members have been appointed to the National Heart, Lung, and Blood Advisory Council: Dr. Maryl Rae Johnson, Dr. Howard E. Morgan, Dr. Douglas MacNevin Surgenor, and Doris F. Tulcin.

Presently, Dr. Johnson—who received numerous honors while at the University of Iowa Medical School—is working on a research project to examine the effects of dietary polyunsaturated fatty acids on membrane lipid composition and function at the university's departments of medicine and biochemistry.

Following completion of her program as chief resident in internal medicine at the University of Iowa Hospitals in 1980-81, Dr. Johnson plans to continue training to prepare for a position in academic cardiology.

Dr. Morgan is the Evan Pugh Professor of physiology, associate dean for research, and chairman of the department of physiology at the Milton S. Hershey Medical Center, Pennsylvania State University.

Currently, he is president of the American section of the International Society for Heart Research.

Dr. Morgan has served on the editorial boards of several scientific journals, and is a former editor of *Physiological Reviews*. Currently, he is associate editor of the *Journal of Molecular and Cellular Cardiology* and *The American Journal of Physiology: Endocrinology and Metabolism*.

Dr. Surgenor is president of the American Red Cross Blood Services, Northeast Region. Since 1972 he has also been president, trustee, and director of the Center for Blood Research in Boston.

In addition, he is chairman of the Commission on Plasma Fractionation and Related Processes, a senior member of the International Committee on Thrombosis and Haemostasis, chairman of the Research Advisory Committee, and trustee of the Children's Hospital Medical Center of Boston as well as visiting professor of pediatrics at Harvard Medical School.

Mrs. Tulcin, national president of the Cystic Fibrosis Foundation, helped to organize the foundation upon learning 26 years ago that her daughter had cystic fibrosis. She was also the founder of its Westchester chapter.

In addition, she has been involved in the organization and development of other agencies and institutions—most notably as a founder of the Albert Einstein College of Medicine in 1965—and also serves as secretary of the National Health Council, which represents 86 major organizations. □

R&W Has Joffrey Ballet Tickets

R&W has orchestra seats available for the performance of the Joffrey Ballet on Wednesday evening, July 30 at Wolf Trap Farm. The discount price is $9 plus service charge.

Order tickets now at the R&W Activities Desk, Bldg. 31, Rm. 1A-18. □

Dr. Chen Wins in Doubles at MC Table Tennis Tournament

Dr. Raymond Chen, NHLBI—who won the men's doubles, mixed doubles, and junior/senior doubles—is one of several members of the NIH Table Tennis Club who did well in the Montgomery County Table Tennis Tournament.

The NIH Table Tennis Club meets every Friday, from 7:30 to 10:30 p.m., in Bldg. 10, 14th floor gym. Play has been suspended pending remodeling, but the club now is meeting regularly. □

Toxic Effect of Chemicals on Endocrine System Discussed at Symposium

The endocrine system that affects nearly every body function is vulnerable to insult by a variety of environmental chemicals. The adverse effect of altered hormone production and action caused by environmental chemicals causes enough concern among research scientists to warrant special attention.

The Society of Toxicology, the National Institute of Environmental Health Sciences, and the West Virginia University Medical Center cosponsored a recent symposium on the endocrine system as a target organ of toxicity.

The symposium, which was held in Morgantown, was coordinated by Dr. John A. McLachlan and Dr. Kenneth S. Korach, both of the Laboratory of Reproductive and Developmental Toxicology at NIEHS, and Dr. John A. Thomas of the West Virginia University School of Medicine.

The endocrine system, which operates through feedback mechanisms to maintain intricate biological balances, making endocrine glands important and vulnerable sites for environmental agents, was discussed at the seminar.

The conference topics reflected the breadth of scientific concerns and focused on research on testes, ovary, adrenal cortex, thyroid, hypothalamus, and pituitary.

Speakers explained the important physiological and biochemical processes involved in the regulation of "releasing" hormones such as gonadotropins, ACTH, and TSH.

The conference also addressed molecular events surrounding end organ responses and the extent to which these responses can be affected by chemical agents and other environmental factors.

Organizers of the symposium on the endocrine system (from l), Drs. Korach, McLachlan, and Thomas, talk during a break in the May 20-21 sessions at the West Virginia University Medical Center.

The evaluation of hormonal responses in laboratory and clinical disease states and their value in predicting vulnerability to disease or in diagnosis were also highlighted.

A special evening session of the symposium examined several special topics including the role of the liver in endocrine toxicity, hormonal markers in cancer, long-term toxicity of estrogens and progestins and the chemical suppression of steroid formation.

The proceedings of the symposium on the endocrine system will appear in *Environmental Health Perspectives*, the scientific journal of the NIEHS. It will be the ninth EHP issue devoted to symposia on the liver, kidney, lung, development, gonads, nervous system, cardiovascular system, intestines, and blood as target organs of toxicity. □

Dr. Samuel Price Retires From NCI With 30 Years of Service

After 30 years' service with the Federal Government, Dr. Samuel Price, acting assistant director of the Division of Cancer Research Resources and Centers, retired from NCI last month. He has been named coordinator for sponsored research at the University of Maryland.

A geneticist, Dr. Price joined the DCRRC in 1974, as chief of the National Organ Site Program at NCI. During a 3-year tenure, he helped plan and coordinate the four organ site programs (large bowel, bladder, pancreas, and prostate), all of which began between 1972 and 1975.

Dr. Price first joined NIH in 1967 as a Grants Associate in the Division of Research Grants. From there he went to the National Institute of Environmental Health Sciences in 1968, and then to the National Eye Institute, where he became chief of the Scientific Programs Branch, Extramural Programs.

Earlier, Dr. Price spent 14 years at the U.S. Department of Agriculture Plant Industry Station in Beltsville, Md., conducting cytogenic studies on sugar cane in an effort to develop higher quality interspecific crosses of sugar cane and grasses.

Dr. Price has worked at NCI, NEI, NIEHS, and DRG during his long career.

A 1949 graduate of Utah State Agricultural College, Dr. Price did his doctoral work at the University of California at Berkeley. From 1952 to 1953 he taught agriculture at the University of Hawaii in Honolulu. □

Dr. Bach Named Special Ass't For Program Development

Dr. Marilyn Bach has joined the staff of the National Institute of Allergy and Infectious Diseases as a special assistant to the Institute's director for Program Development.

In her new position, Dr. Bach will coordinate the development of NIAID's annual research plan and its evaluation plan. In addition, she will assist in establishing long-range program goals and strategies.

In 1979, she joined NIH under the auspices of the Intergovernmental Personnel Act from the University of Minnesota. Her first assignment was with the Office for Medical Applications of Research, where she implemented an evaluation study of the group decision-making processes used in the consensus development program and initiated an overall plan for consensus development activities.

Dr. Bach has served as a member of NIAID's National Advisory Council.

After receiving her doctorate in biochemistry from the New York University School of Medicine, Dr. Bach was associated with the University of Wisconsin, both as a research scientist and as a teacher.

The goal of much of her clinical research has been to improve the selection of human donor-recipient pairs for renal and bone marrow transplantation.

She also was active in designing protocols for human kidney transplantation studies while associated with the renal transplantation program at Wisconsin.

Dr. Bach became affiliated with the University of Minnesota in 1978 as an associate professor in the departments of the Laboratory of Medicine/Pathology and the Health Services Research Center. □

Planning a Trip to Williamsburg?

R&W has discount tickets for Williamsburg, at the Activities Desk, Bldg. 31, Rm. 1A-18.

The rates are: 1 day, adult, $7.75, child $4; 2 days, adult $10.25, child, $5.25; 3 days, adult $12.25, child $6.25. All prices include service charge. □

BREAST CANCER

(Continued from Page 1)

years. Recent findings from several large studies suggest that for some breast cancer patients anticancer drugs prevent or delay the recurrence of disease and prolong survival.

These studies also have shown that some breast cancers develop rapidly and others slowly. Other factors that affect the patient and the type of disease are age and menopausal status. Women respond differently to treatment involving changes in hormone levels.

During the conference a panel of basic and clinical scientists, health administrators, practicing physicians, other health practitioners and representatives of the public and of special interest fields will hear reports on the findings of ongoing adjuvant chemotherapy studies.

Panelists will be asked to answer these questions: Have clinical trials established the effectiveness of adjuvant therapy of breast cancer? Do the benefits of such treatments clearly outweigh the risks? What is the role of this therapy in treating early (stage 1) patients and postmenopausal patients? Should future studies include hormonal therapy?

The consensus panel will present its statement Wednesday morning, July 16. The meeting is free and open to the public. □

Dr. Ross Accepts Honorary Degree From GWU

Dr. Griff T. Ross, deputy director of the Clinical Center, received an honorary doctor of science degree from George Washington University.

He accepted the honor on May 23, the day he delivered the commencement address at the GWU School of Medicine and Health Sciences. □

Advanced Hodgkin's Disease Curable by Multidrug Therapy

Advanced Hodgkin's disease appears to be curable by a multidrug therapy called MOPP.

The success of this treatment for a disease that was once almost always fatal was reported by Dr. Vincent T. DeVita, Jr., National Cancer Institute, and eight co-authors in the May 1980 issue of *The Annals of Internal Medicine*.

Hodgkin's disease, a condition characterized by enlargement of the lymph nodes, spleen, and general lymphoid tissue, affects more males than females, and usually occurs between the ages of 15 and 34 or after 50. It strikes approximately 7,000 persons a year in the U.S.

Pilot Trial Held in 1964

In the years before MOPP therapy (a combination of four drugs) was available, most of the patients, such as those treated by Dr. DeVita and his colleagues, would have died within 2 years and all within 5 years. However, a majority of the treated patients reported in *The Annals* have lived 10 years or more without a relapse

After a pilot trial with 14 patients in 1964 demonstrated to the investigators that giving four powerful drugs simultaneously would not be too toxic, the scientists worked out a regimen of 2-week courses of treatment repeated monthly for 6 or more months.

Because of the variability in speed of response among patients, guidelines were established to adjust the total duration of treatment to the speed of the patient's response.

Cycles were given in a way to assure consistency and preserve the integrity of the combination. Cycles were given every 28 days, with the doses of the drugs adjusted based on each patient's individual tolerance.

The multidrug combination—MOPP—of mechlorethamine, vincristine (Oncovin), procarbazine, and prednisone induced a complete remission in 159 of 198 patients in the study carried out under the auspices of the Medicine Branch of the Division of Cancer Treatment, NCI.

After 10 years or more of followup, 107 patients have been continuously free of all evidence of disease without any further treatments. The researchers have thus concluded that even in advanced stages, Hodgkin's disease is curable.

Many other patients had lengthy disease-free periods although their disease recurred before 10 years. A number of these patients responded well either to retreatment with MOPP or other forms of therapy.

Extended followup of the large number of patients considered free of Hodgkin's disease gave researchers an opportunity to assess the status and change in the immune function of these patients, the influence of MOPP on reproductive capacity, and the risk of developing second malignancies. All of these have been the subject of separate reports.

"Although many patients with advanced Hodgkin's disease are now curable with MOPP chemotherapy, more work needs to be done," according to Dr. Robert C. Young, chief of the Medicine Branch.

He said, "New treatments for those patients not responsive to MOPP or those who fail initial treatment with MOPP are now under study at the Medicine Branch, DCT, NCI.

"In addition, collaborative studies between the Medicine Branch, Radiation Oncology Branch, and the Baltimore Cancer Research Program, NCI, are currently seeking to test MOPP chemotherapy in the management of early Hodgkin's disease to determine the relative merits of radiation therapy, combination chemotherapy, and combinations of both approaches.

"We hope that these new studies will further increase the cure rate in all stages of Hodgkin's disease," Dr. Young concluded.

Dr. DeVita is Acting Director of NCI, director of the NCI Division of Cancer Treatment, and NCI clinical director.

Dr. DeVita's eight co-authors were: Dr. Richard M. Simon, chief, Biometric Research Branch, Division of Cancer Treatment, NCI; Susan Molloy Hubbard, clinical nurse expert, CC; Dr. Young; and Dr. Costan W. Berard, chief, Section of Hematopathology, NCI.

Also, Dr. John H. Moxley, III, Assistant Secretary of Defense (Health Affairs); Dr. Emil Frei, director, Sidney Farber Cancer Institute, Boston, Mass.; Dr. Paul P. Carbone, director, Cancer Center, University of Wisconsin Medical Center, and Dr. George P. Canellos, chief, division of medical oncology, Sidney Farber Cancer Institute. □

Dr. Jesse Roth, chief of the Diabetes Branch, NIAMDD, displays the traditional tokens of a doctoral hat, gold ring, and diploma. He was presented with an honorary degree from the University of Upsala, Sweden, on June 6. At the ceremony, Dr. Roth was praised for outstanding research accomplishments in the field of hormone receptors, and for his participation in training the medical faculty of the university, the oldest institution of higher learning in Scandinavia.

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