

The NIH Record

U.S. Department
of Health
and
Human Services

May 28
1980
Vol. XXXII
No. 11

National
Institutes
of
Health

First Federally Funded Dental Research Center Opens

The first federally funded dental general clinical research center in the country devoted to investigating dental and oral diseases was dedicated on May 14 at the University of Pennsylvania School of Dental Medicine.

"Despite an obvious need, no such facility exists elsewhere in the country. Dental and oral diseases affect almost every citizen, almost every age, all races, and both sexes," says Dr. D. Walter Cohen, dental school dean.

The 3-year \$600,000 grant from the Division of Research Resources will enable the university to provide a controlled environment with carefully selected and maintained population groups for cross-disciplinary human studies in order to translate basic research findings into improved oral health care, and enhance current knowledge of the biology of the oral cavity.

DRR Director Dr. Thomas Bowery and GCRC Program Director Dr. William De Cesare participated in the dedication.

"Our goal," says Dr. Irwin I. Ship, center director, "is to learn more about both normal and abnormal functions and conditions of the human mouth. We want to determine the cause of oral disease, and how it progresses.

(See DENTAL CENTER, Page 10)

Study on Eyes of Dogs With Blinding Disorder May Give Clues to Retinitis Pigmentosa Therapy

Studies of enzyme activity in the eyes of certain dogs with a hereditary blinding disorder may provide clues to the development of a treatment for early-onset retinitis pigmentosa, a disease that affects 100,000 Americans.

These investigations by three NIH scientists and a University of Pennsylvania veterinarian led to their receiving the Fight for Sight award for outstanding achievement in basic research.

Fight for Sight, Inc., is a national philanthropic organization that supports vision research.

The award cites Drs. Gerald J. Chader and Leo Liu of the Laboratory of Vision Research, National Eye Institute; Dr. Gopal Krishna of the Laboratory of Chemical Pharmacology, National Heart, Lung, and Blood Institute; and

Carter, Former HEW Secretaries, Join Harris To Mark Name Change



Secretary Harris greets distinguished guests. L to r are: Under Secretary Stark, Secretary Harris, former HEW Secretaries Califano and Mathews, and President Carter.—Photos by Nilo Olin.

By Pat Miller, DCRT

The Department of Health, Education, and Welfare is no more. NIH is now part of the Department of Health and Human Services.

President Carter and four former HEW Secretaries—John W. Gardner, Wilbur J.

Cohen, David Mathews, and Joseph A. Califano, Jr.—joined HHS Secretary Patricia Roberts Harris at the ceremony to mark the name change, and the separation of its education function, at the Hubert H. Humphrey Building on May 14.

Department seal

The new Department includes the Public Health Service, Health Care Finance Administration, Office of Human Development Services, and the Social Security Administration.

Nathan J. Stark, HHS Under Secretary, opened the ceremony by reflecting, "the first Marine Hospital in 1798 grew to what eventually became the NIH," and by commenting upon the development of the other agencies within the Department.

"HEW was created in 1953 during the Eisenhower administration. Its 27-year history comes to an end today. We've grown to a

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The NIH Record

Published biweekly at Bethesda, Md., by the Editorial Operations Branch, Division of Public Information, for the information of employees of the National Institutes of Health, Department of Health and Human Services, and circulated by request to writers and to researchers in biomedical and related fields. The content is reprintable without permission. Pictures may be available on request.

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SCINT Computer System Offers Easier Method For Analyzing Data

A computer system for NIH laboratory workers and scientists offers easier methods for analyzing large quantities of collected data.

Developed by the Data Management Branch, Division of Computer Research and Technology, the system is called SCINT. It is easily learned and used by workers with no previous experience in computing and programming.

SCINT automates analysis of data from scintillation counting after common biochemical procedures such as chromatography, electrophoresis, sedimentation, and gel filtration. SCINT will store, recall, compare, and analyze data among multiple experiments.

Using proven analytical and statistical methods too cumbersome to perform without a high-speed computer, SCINT helps to obtain maximum information from the data. It produces high quality plots suitable for publication.

Laboratory workers using SCINT have more time to spend on experiment planning, preparation, and evaluation. For a user's manual (instructions and examples) and additional information, contact: Brian Cole, Data Management Branch, Bldg. 12A, Rm. 4027, (301) 496-5693. □

Some Summer Employees at NIH Need Volunteer Tutors

The Training Assistance Branch is looking for people who are interested in donating their time and knowledge to tutor NIH summer employees who need assistance in science and mathematics.

The pupils are high school and college students who most often request assistance in chemistry, physics, calculus, geometry, trigonometry, and algebra.

If you would like to tutor, call 496-2146. □

Employees Should Designate Beneficiary If Automatic Line Not Adequate

There is an automatic line of beneficiary on the regular and optional Federal Employees Group Life Insurance, Civil Service Retirement, and Unpaid Compensation.

Employees do not need to name a beneficiary if satisfied to have the death benefit paid in the order of precedence shown:

- Widow or widower. In life insurance claims, the courts have ruled that "widow" means lawful wife.
- Child or children in equal shares, with the share of any deceased child distributed among the descendants of that child.
- Parents in equal shares or the entire amount to the surviving parent.
- The appointed executor or administrator of employee's estate.
- Next of kin under the laws of employee's domicile at the time of his or her death.

If the employee wants to deviate from this order of precedence, he or she needs to complete and file a Designation of Beneficiary.

A Designation of Beneficiary for Retirement affects lump-sum benefits only, and has no effect on the spouse's or children's right to survivor's annuity.

An employee has the right to cancel or change a designation of beneficiary at any

time without the knowledge or consent of any previously designated beneficiary. This right cannot be waived or restricted.

Changes in family status or life situation without a corresponding change in designation or cancellation of beneficiary may result in a settlement other than that desired.

If one has married, divorced, or become a widow or widower since last completing a designation of beneficiary, it may no longer reflect current preference for payment.

For life insurance and unpaid compensation (salary, unused annual leave, unnegotiated checks, travel, etc.) benefits, a designation is cancelled automatically when an employee transfers from one agency to another. (A transfer within HHS is considered the same agency.)

Designation of beneficiary for retirement lump-sum benefits is filed with the Office of Personnel Management and remains in force unless or until cancelled in writing by the employee.

Employees may obtain additional information on beneficiaries and/or obtain appropriate forms from their B/I/D personnel office. □

NIH Softball Team Wins LFRA Tournament



Team captain Doren Vest, a contract specialist in DCRT, proudly displays the trophy won May 11 by the NIH Rowdies men's softball team.

The Rowdies, representing NIH, competed and won against 15 other Federal agencies in the 2-day League of Federal Recreation Associations, Inc. Earlybird Softball Tournament held at Rip's Memorial Field, Mitchellville, Md.

They reached the winner's slot the hard way—an early loss to the Census Bureau team required them to win every subsequent game and to conquer the undefeated Marine Barracks finalists twice, 10-1 and 12-2. □

TRAINING TIPS

The following courses are available to NIH summer employees through the Summer Training Program:

Office Skills	Course Starts	Deadline
Advanced Typing	July 9	July 1
Beginning Typing	July 8	July 1
Effective Writing	July 9	July 1
Medical Terminology	July 9	July 1
Scientific Research at NIH	July 9	July 1
Stepping Out Into Today's Job Market	July 10	July 1

Individual Learning Center—a variety of self-paced instructional programs—individually arranged.

A booklet containing more information on the specific courses in the Summer Training Program has been distributed to B/I/D summer training coordinators.

For further information, contact Dawn Golden, Training Assistance Branch, 496-2146. □

NIH Singers To Offer Choral Music Concert On June 2

The NIH Singers will present a free concert of choral music on Monday, June 2, at noon in the Masur Auditorium.

The Singers, directed by Dr. Lewis M. Norton, will perform selections by Mozart, Beethoven, and other 18th century composers.

Also featured on the program will be the NIH Madrigal Singers.

NIH employees, patients, and their guests are invited to attend.

For further information, call 496-6037. □

Cheat River Rapids Challenge NIH Rafters

At 9:30 on a Saturday morning, a warm gentle spring sun dried the earth after almost a week of rain. Large, tranquil, beautifully formed cumulous clouds gave off a pink hue as they hung almost motionless in a clear blue sky.

The gentle day contrasted sharply with the swiftly moving and churning brown water of the Cheat River, in Albright, W. Va., where 50 NIH'ers, their families, and friends readied themselves on a bank to enter any of five 10-man rubber rafts for a trip down river.

Not for Faint of Heart

Within minutes, the rafts were shooting through and down 20 rapids along a 12-mile white-water-rafting course naturally designed for those not faint of heart.

For the next 5 hours, paddlers and guides—for the most part strangers to each other—attempted to paddle as one, so that they would have the momentum to get around safely any of the rocks that crowded each rapid.

The river had already crested at 4½ feet, the maximum height legally permitted for rafting. Some rafters had been down the Cheat before and wore wet suits to ward off the icy water that filled their crafts and thoroughly soaked the paddlers.



Rapid "Ole Nasty" gave NIH'ers the biggest thrill and chill of the day.

Most NIH'ers had spent the previous night camping out at Chestnut Ridge Park, 12 miles from the river.

The R&W Association had arranged grounds for them to set up their tents, cook dinner outdoors, and sleep under the stars.

Some campers who came together were William Parker, an NINCDS grants program analyst, and Dr. Hiroyuki Hasegawa, and his wife, Toshei.

Dr. Hasegawa, an NIMH visiting scientist who has been working at NIH for the past 2 years, is soon returning to Japan and wanted to go camping and try white watering.

On Saturday, both Mr. Parker and Dr. Hasegawa were flipped out and under their boat at the "Maze" rapid. After being picked out of the water, Mr. Parker said his only regret was that he had not worn wool clothing, "otherwise it was the biggest thrill."

Our party was in the second wave of rafts to enter the river with our guide Bruce Darrow, a professional skier in the off-season, who claimed to be a direct descendant of the

famous attorney Clarence Darrow. His soft-spoken instructions about safety and his commentary on the river's history added to the experience.

"Decision" is the first rapid rafters encounter. As the name implies, it is the place a paddler can decide whether to leave the raft and walk back or to continue. Everyone decided to continue after experiencing the first taste of white water.



Several raft party members make last minute adjustments to eyeglasses while others carry their raft to the bank.



Paddlers stroke to build momentum before getting to "Decision" rapid.

Going through several rapids, each one gaining in swiftness and difficulty, paddlers found themselves wet and fatigued from strenuous paddling and almost nonstop bailing of their rafts with plastic milk containers that had been cut in half.

Rest came only when the rubber boats found refuge in a quiet eddy after running a rapid. Darrow told us that the river was "dead at this end," that no fish live in the water because the sulphuric acid used in coal strip mining pours into the Cheat River from local mines.

Perhaps the best rapid of the day was "Ole Nasty," an obstacle that lives up to its name. Paddlers are sucked down into a churning

(See WHITE WATER, Page 8)



Appalachian Wildwaters Guide "Steady" Steve Strokn briefs rafters on safety prior to entering the water.

NIA Leads Interagency Effort in Followup Study On Important Health and Nutrition Questions

Have you ever had anemia, sometimes called "low blood"? Do you wear glasses? Do you use iodized salt? Have you smoked over 100 cigarettes in your life? . . . 50 cigars? Do you have chest pain? Have you had to stay in a hospital overnight?

These questions and hundreds of others were asked during the first Health and Nutrition Examination Survey (HANES), conducted between 1971 and 1974 by the National Center for Health Statistics.

HANES II began in 1976 and continues into 1980. Now the Epidemiology, Demography, and Biometry Program of the National Institute on Aging, under the leadership of Dr. Jacob Brody, NIA associate director, is collaborating with the National Center for Health Statistics in planning and completing a followup of the landmark HANES studies.

In an extensive interagency effort headed by NIA epidemiologist Dr. Joan Cornoni-Huntley, NIA has involved the Environmental Epidemiology Branch of the National Cancer Institute; the Epidemiology and Biometry Program of the National Heart, Lung, and Blood Institute; the National Institute of Mental Health; the National Institute of Arthritis, Metabolism, and Digestive Diseases; and the National Institute on Alcohol Abuse and Alcoholism to work collaboratively to complete a followup of the first HANES.

The two surveys and the followup will offer the largest and most searching archive of data on national health and nutrition.

Originally, NIA intended to search for only older subjects in the first study, but the need for followup information and the interest of other institutes has brought about a commitment for a full-scale repeat effort in contacting adult subjects of all ages.

The HANES I study provided much-needed basic information for many Federal programs and research efforts. The followup study should yield important information about links between nutrition, lifestyle, occupations,



NIA epidemiologist Dr. Cornoni-Huntley heads the new interagency nutrition study.

living conditions, health and health care, and illness and death.

Furthermore, such a followup will show the changes that have occurred in illnesses or disabilities with the passage of time. The data obtained from the followup study should greatly enhance the value of information obtained in the original HANES, according to Dr. Cornoni-Huntley.

Special concern about poor nutrition was sparked by hearings held by the Senate Select Committee on Nutrition and Human Needs in the late 1960's. Many studies grew out of this concern, including the Ten-State Nutrition Survey, 1968-70; HANES I; HANES II; and the Preschool Nutrition Survey, 1968-70.

competence," as it was in HEW.

He emphasized his appreciation for health services, reminding the audience that he was raised by a registered nurse, his mother, who devoted her life to caring for people.

"Because of your programs, many diseases—polio, diphtheria, smallpox, etc.—are now a dim memory for most people."

Praises Popular Programs

Speaking of all the HHS, the President indicated that "your programs are popular with the American taxpayers as well as with those who have not yet the income to pay taxes."

In the environment of the Hubert H. Humphrey Building, the President referred to the late former senator and vice president for whom the building was named. "You and I will redouble our efforts to meet the challenges expressed by Hubert Humphrey."

Secretary Harris reaffirmed that the HEW mission would be upheld under HHS, "a commitment of our energies toward compassion and competence." □

Originally, the central question was, "How many hungry people are there?" Since it turned out that simple questions about nutrition elicited complex answers, questions would be phrased differently today.

The first HANES surveyed 21,000 people of all ages, from all walks of American life. No subjects over 74 were interviewed. Approximately 5,500 HANES I subjects are now between 65 and 84 years of age. And HANES II, still in progress, includes 3,500 subjects from 65 to 74.

The followup study will cover as many of the original subjects as can be located. A feasibility study—conducted with the very people included in the pilot study for the first HANES—indicates that 85 to 90 percent can be found.

Many new questions are being devised and some old questions are being refined, but the general outline of the survey will remain constant. In the followup study each person will be interviewed for between 1 and 2 hours and have a minimal physical examination.

HANES I gathered information on environmental issues. The followup will cover some similar subjects, with one major change resulting from a keener awareness of smoking as a health hazard—smoking patterns will be probed.

The followup study will also provide valuable information about other areas, such as diet or exercise.

Although the study relies heavily on self-reports these are considered quite reliable by researchers. There are some problems though, such as the matter of caloric intake.

It is possible to devise an estimate of calories consumed via a person's report, but without a measure of physical activity it is hard to assess the adequacy of this caloric intake.

Overall health and adequate nutrition are assessed by many measures. Past experience has shown that a group may be well nourished by one measure at risk regarding another.

With the information from the followup study, researchers may be able to answer some questions about exercise and health; obesity, underweight and longevity, and how food intake tends to change with age. □

NAME CHANGE

(Continued from Page 1)

Department with 140,000 full-time employees and 300 programs."

President Jimmy Carter assisted Secretary Harris in unveiling the new Department seal, four facial profiles within a stylized version of an American eagle.

To President Carter, the seal epitomized "an eagle whose wings are proud, sheltering the sick, the disadvantaged, the poor and the elderly."

Noting that the Department's \$200 billion budget is the third largest budget in the world, after the budgets of the U.S. and USSR, respectively, the President remarked that "foreign leaders are impressed with the amount of resources that the U.S. commits to human services—and by our struggle against disease, poverty, and inequality."

Carter felt that the mission of HHS will remain "a commitment to compassion and

NIMH-IRP Employees Eligible For Nursing Career Program

NIMH-IRP employees as well as NIH employees are eligible to apply for positions in the Nursing Career Development Program, as noted on the Vacancy Announcement of May 19. The May 12 Vacancy Announcement failed to include this information.

Check Eligibility Requirements

NIH and NIMH-IRP employees are eligible to apply if they have been employed in a career or career-conditional position at NIH or NIMH-IRP for at least 1 year immediately prior to June 2, 1980.

For other eligibility requirements, see the May 13, 1980, issue of *The NIH Record* or the May 19 Vacancy Announcement.

Applications will be accepted through June 2. Contact the Career Development Branch, 496-6211, for additional information. □

EYE STUDY

(Continued from Page 1)

At present, no known treatment can halt or delay the visual loss that occurs in retinitis pigmentosa.

But the work of Drs. Chader, Liu, Krishna, and Aguirre suggests that such a treatment may eventually prove feasible.

They have shown that a naturally occurring protein called calmodulin plays a role in preventing the sequence of events which leads to breakdown of the photoreceptor cells and subsequent visual impairment in the dogs. The destruction of photoreceptors occurs when too much cyclic GMP accumulates in retinal tissue.

Cyclic GMP is controlled in turn by another enzyme known as phosphodiesterase (PDE). At birth, canine retinal tissue contains an immature form of phosphodiesterase that is calmodulin-dependent. Within 2 months, however, there is a shift from this form of PDE to an adult form that is not dependent on calmodulin for its activity. This shift may be essential because calmodulin levels decrease with age.

In Irish setters with rod-cone dysplasia, the shift from one form of PDE to another fails to occur. Consequently, as the calmodulin levels decline, there is too little PDE available to prevent excessively high levels of cyclic GMP from accumulating and destroying the photoreceptors.

Drs. Chader, Liu, Krishna, and Aguirre have

shown that adding calmodulin to incubations of retinal tissue taken from dogs with rod-cone dysplasia boosts the activity of PDE and prevents cyclic GMP from rising to high levels. Their findings were published in *Nature* magazine, July 5, 1979.

Soon the investigators will begin a series of experiments to determine whether calmodulin can exert this protective effect in the animals themselves. Calmodulin will be injected into the eyes of young Irish setters with rod-cone dysplasia to determine if they can tolerate the injections and to measure their levels of cyclic GMP, phosphodiesterase activity, and photoreceptor function. These results will then be compared to results obtained in untreated control animals.

While the experiments with animals are in progress, the investigators will be attempting to obtain retinal tissue from the eyes of deceased individuals who had early-onset retinitis pigmentosa.

The objective is to determine through biochemical studies whether rod-cone dysplasia in Irish setters is in fact a good animal model for this type of retinitis pigmentosa. Only then will the investigators know whether calmodulin has any therapeutic potential in humans.

The four investigators received embossed scrolls and shared \$500 awarded by Fight for Sight, Inc., in cooperation with the Association for Research in Vision and Ophthalmology. The award was presented at ARVO's May 1980 meeting in Orlando, Fla. □

Aging Research Talks Mark 5th Anniversary Of Advisory Council

The National Institute on Aging is celebrating the fifth anniversary of the National Advisory Council on Aging with a 2-day meeting on May 29-30. Tomorrow's opening meeting will begin at 9 a.m. in the new Lister Hill Center Auditorium.

Friday's meeting will start at the same time until noon in Bldg. 31, Conf. Rm. 6. An afternoon session will be closed.

Seven prominent scientists will present research papers on aging and will discuss the future of aging research.

NIH Director Dr. Donald S. Fredrickson will discuss the topic, The National Institute on Aging, An Orphan Finds a Home.

Dr. Nathan Shock, former Director, Gerontology Research Center, NIA, will speak on the Emergence of Gerontology in the United States, with a special emphasis on aging research at NIH since 1940.

Our Future Selves—Contributions of the NIA to the Challenge of Our Nation's Changing Age Composition will be discussed by Dr. Robert N. Butler, NIA Director.

Dr. Reubin Andres, NIA clinical director, will speak on the Normal Aging in Man. Genetic Heterogeneity, Implications for the Differential, Selective Modulation of Rates of Aging in Man, will be presented by Dr. George Martin, University of Washington.

Aging in the Life Course in American Society—The Changing Social and Cultural Context will be addressed by Dr. Tamara K. Hareven, Clark University, Worcester, Mass.

Also discussed at the meeting will be Geriatric Medicine Needs: 1980-2030, Who Is Responsible? It will be presented by Dr. John C. Beck, U. of California, Los Angeles.

On Friday morning, a round table discussion by present and past members of the National Advisory Council on Aging on the next 5 years in aging research will be moderated by Dr. Carl Takamura.

The meeting is cosponsored by Josiah Macy, Jr. Foundation, recognized as an important catalyst of Federal research on aging as a result of a \$10,000 grant it made to NIH in 1940. Representing the foundation is Dr. John F. Bowers.

The meeting is open to the public but space is limited. Reservations can be made through Suzie Porter, 496-5345. □



Award-winning NIH scientists are (from left) Drs. Chader, NEI; Krishna, NHLBI; and Liu, NEI.

Preschool Spring 'Fest' To Be Held June 14

Parents of Preschoolers, Inc., will hold its first annual spring fest on Saturday, June 14, from 10 a.m. to 5 p.m. at St. Luke's Episcopal Church; Old Georgetown Road and Grosvenor Lane.

It will include an auction of donated gifts; a rummage, plant and bake sale; and a bookfair.

Proceeds will go to the scholarship fund of the NIH Preschool and Aylawn programs.

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

Reconditioned Furniture Available at Savings

The NIH Property Utilization Section is gearing up for an increased demand of reconditioned and renovated office furniture.

OMB has placed a "freeze" on buying certain common types of office furniture such as desks, chairs, tables, and file cabinets, according to Peter J. Stathis, in charge of the reconditioning program.

Mr. Stathis earmarks selected items of furniture for reconditioning by GSA contractors after he receives requests from the

Institutes.

The cost of renovation, very low compared to new items, is charged to the requesting Institute. There are a variety of colors in paint, laminates, and upholstery fabrics from which to choose. The refinished furniture is quite attractive and will complement any present office scheme.

It is a real savings for the Government. If you need furniture, contact Mr. Stathis, Bldg. 13, Rm. 2E-67, 496-4247. □

Dr. Scolnick Receives 1980 Eli Lilly Award



Dr. Scolnick's research has helped to identify regions of the viral genome that code for proteins important for cell transformation.

Dr. Edward M. Scolnick, chief of the Laboratory of Tumor Virus Genetics, National Cancer Institute, since 1975, received the 1980 Eli Lilly Award for sustained high-quality research in microbiology and immunology at the annual meeting of the American Society for Microbiology on May 11 in Miami.

He joined NCI in 1970 as a staff fellow in the Viral Leukemia and Lymphoma Branch, where he developed methods for purification and classification of reverse transcriptases, enzymes responsible for the ability of RNA tumor viruses to infect cells and integrate into DNA. RNA viruses that carry their own reverse transcriptase are called retroviruses.

In addition, Dr. Scolnick and his collaborators developed the first radioimmunoassay for identifying characteristic proteins produced by these viruses. The current scheme for classifying retroviruses is based partly on testing procedures developed in his laboratory.

In 1972, Dr. Scolnick became head of the Genetics Section in the Viral Leukemia and Lymphoma Branch. His laboratory identified the Kirsten and Harvey strains of rat sarcoma virus as recombinants between mouse leukemia viruses and native RNA type-C virus information in the genes of the rat.

Since 1975, Dr. Scolnick has continued to study viral genes and their protein products. His research has helped identify regions of the viral genome that code for proteins important for cell transformation.

Recently, he and his collaborators identified a phosphoprotein gene product of the Kirsten and Harvey sarcoma viruses that is highly associated with transformation.

Dr. Scolnick graduated from Harvard Medical School in 1965. From 1965 to 1967, he received training in internal medicine at the Massachusetts General Hospital as an intern and assistant resident.

He joined the National Heart Institute as a research associate in 1967, where for 3 years he worked on the mechanism of polypeptide chain termination in the Laboratory of Biochemical Genetics, headed by Dr. Marshall Nirenberg. □

5 New NICHD Advisory Council Members Have Backgrounds in Nursing, Pediatrics, Psychology

Five new members were recently named to the National Advisory Child Health and Human Development Council: Dyanne D. Affonso, Drs. Charles A. Alford, Richard F. Ando, E. Mavis Hetherington, and Nancy L. M. Robinson.

Ms. Affonso, an associate professor at the University of Arizona College of Nursing, is pursuing a Ph.D. degree in psychology.

Her research interests focus on the child-birth experience, including mother/infant interaction, role of the father, and most recently the impact of cesarean delivery on the family.

Dr. Alford is a Meyer professor of pediatrics, University of Alabama School of Medicine, and an associate professor of clinical pathology and professor of microbiology.

He has published numerous articles relating to pediatric virology and immunology in the

study of congenital infections.

Dr. Ando, a pediatrician in private practice in Honolulu, Hawaii, received his undergraduate training in Hawaii and his M.D. from the University of Michigan Medical School.

He is a pediatric consultant to Hawaii's Department of Health, Bureau of Crippled Children.

Dr. Hetherington is professor of psychology at the University of Virginia.

She has published numerous articles dealing with the social and psychological development of normal children as well as physically handicapped and learning disabled children.

Dr. Robinson is associate professor of psychiatry and behavioral sciences, University of Washington, and an associate editor of the *American Journal of Mental Deficiency*.

Her research interests are developmental psychology and early child care. □

NLM Exhibit Honors American Lung Association's 75th Anniversary

The National Library of Medicine, in cooperation with the American Lung Association, has developed an exhibit in recognition of the association's 75th anniversary meeting held on May 20. The exhibit—featuring publications, manuscripts, and pictorial materials from NLM's collections and from the archives of the Lung Association—will be on display in the NLM lobby until Aug. 29.

The American Lung Association, founded in 1904 as the Society for the Study of Tuberculosis, is the oldest voluntary health agency in the United States. The first annual meeting was held in May 1905.

Among the unique items on display are panels of Christmas Seal stamps from the beginning year of issue in 1907, pathological specimens, and portraits from the William H. Feldman collection.

The exhibit reviews man's understanding of tuberculosis from antiquity until Robert Koch's discovery of the tubercle bacillus in 1882. The beginnings of community action against tuberculosis are examined against the background of the Progressive Movement in the U.S., and the story of successful founding of a single national group to combat tuberculosis is told through the minutes of the organization.

The growth of the National Association for the Study and Prevention of Tuberculosis (whose name changed to the National Tuberculosis Association in 1918 and more recently became the American Lung Association) is followed to the present. Today, tuberculosis is no longer the major disease of public interest, but shares the limelight with a variety of pulmonary problems caused by smoking, air pollution, and other causes.

Also covered in the exhibit are tuberculin and the tuberculin test, the control of bovine tuberculosis, and the modern treatment of tuberculosis.

The Library's summer hours are 8:30 a.m. to 5 p.m., Monday through Saturday. □

R&W Sets Its Sights on 'Wolf Trap'

R&W has orchestra seats available for the following events at Wolf Trap:

The Preservation Hall Jazz Band will perform on Wednesday evening, June 18. R&W discount price is \$9 plus service charge.

Virgil Fox will give an organ recital on Monday evening, June 23. R&W discount price is \$7.20 plus service charge.

The National Symphony will perform on Saturday evening, July 19. R&W discount price is \$9.90 plus service charge.

The Joffrey Ballet will perform on Wednesday evening, July 30. R&W discount price is \$9 plus service charge.

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



Janie Lacy has been named personnel officer for the National Institute of Allergy and Infectious Diseases. For the past 4½ years she has been a personnel specialist in the National Cancer Institute. Prior to coming to NIH, she held various positions with NASA, PHS, and the Air Force.

GIFT Studies Intestinal Function To Understand Cancer's Causes

Environmental toxicity is being explored through renewed interest in how man's intestines function and how exposure through inhalation and skin contact affects the organ. Since February 1979 this interest in the intestines has been pursued by GIFT, an acronym for the Gastrointestinal Function and Toxicology Work Group within the Laboratory of Organ Function and Toxicity at the National Institute of Environmental Health Sciences.

Among the scientists determined to redirect some attention to the intestine is Dr. Carol Schiller, head of GIFT.

When the work group first started its intensive work in 1975 on the intestine as a target organ for toxicity, outside scientists suggested that attention be redirected at other organs because the intestine is not as easy to work with as the liver and other organ tissue and is difficult to prepare.

There are many different cell types in the intestine, and the presence of mucus and the cells' tendency to aggregate further complicates studies. But these problems challenged rather than daunted GIFT investigators.

"Our colleagues kept saying, 'Why don't you look at the liver?'" said Dr. Schiller, who received her doctorate in 1970 from the University of Texas, in Dallas. The intestine is a unique organ, very different from the liver, and I think our work is showing this more and more."

The oversimplified notion that the intestine is solely a barrier, absorptive in function, merely taking in nutrients and acting as a conduit for waste was dispelled by investigators. "The physical transport provided by the intestine and its absorptive functions are accompanied by important metabolic functions," noted Dr. Schiller. Her laboratory has looked at a number of intricate enzymatic interactions that take place in the intestine that differ markedly from those taking place in other organs.

"Metabolism in the intestine is to some degree anaerobic as opposed to the more general aerobic metabolism in most cells of the body. This anaerobic metabolism is similar to that in tumor cells, and may therefore have significance in considering the gut as a target organ for carcinogenicity," Dr. Schiller says.

An important finding of GIFT concerns the nutrient energy source used by the intestine for metabolic and absorptive functions. Previously, the major energy source was generally thought to be solely from the basic sugar nutrient glucose. But work with isotope-marked nutrients revealed that the muscle cell waste product glutamine, when it is available is used in the intestine in preference to glucose as a nutrient energy source.

GIFT research on normal intestine tissue is accompanied by investigations on the effects of various environmental agents.

One such study completed last year revealed that the chemical 1,2 dimethylhydrazine (DMH), structurally similar to a component of jet aircraft fuel, produced colon cancer in a single low oral dose in 80 percent of the exposed animals in the experiment.

"There was one important difference in our work from previous experiments. We waited 1½ years to observe the carcinogenic effect of the single dose. This mimics the human population where colon cancer tends to be an older person's disease. In terms of life span, a laboratory animal 1½ years old would be comparable to a person of retirement age."

A separate experiment showed that administering a single dose of DMH to pregnant animals changed the enzymatic activity in the intestines of offspring. It has been shown by other researchers that prenatal exposure to this compound induces tumors in the offspring in the brain and jejunum.

Another environmental agent investigated for its effect on the intestine is 2,3,7,8-tetrachloro-p-dibenzodioxin (TCDD), a by-product component of the herbicide included in Agent Orange and a toxin that was held responsible for human health effects in the widely publicized Seveso, Italy, chemical factory catastrophe.

When the GIFT laboratory looked at TCDD effects on intestinal cells, it was observed that the less differentiated crypt cells were more susceptible to enzyme induction than were the highly differentiated absorptive cells (tip cells).

This preferential enzyme induction occurred in the crypt cells event though experiments with isotope marked TCDD indicated that the tip cells retained more of the TCDD administered. This preferential induction may be an example of a more generalized susceptibility to toxins of the more undifferentiated cells.

Work with another environmental agent, acrylamide, a known neurotoxin, has suggested an approach to looking at a broad range of toxins that might act on the intestine as a target organ.

Work by the NIEHS behavior group demonstrated that acrylamide has a diet dependent effect on performance on certain behavior tests, and has led GIFT to develop baseline studies on absorption in normal intestinal tissue to better understand the impact of other toxins and suspected toxins which may alter absorption of nutrients.

"Not only does the intestine come in con-



Dr. Schiller serves on an ad hoc committee of the Tissue Culture Association, Inc., a group of scientists, lawyers, and philosophers who consider the relationship between in vitro research and human values.

tact with all of the food and water that we ingest, but 20 percent of what we inhale, we actually swallow. So environmental agents in the air also cause direct intestinal exposures," observed Dr. Schiller.

To provide a forum for scientific work in this area, she organized an international conference, Target Organ Toxicity: Intestines (Intestinal Function), which was jointly sponsored last spring by the Society of Toxicology and NIEHS.

Dr. Schiller Invited to Italy

Dr. Schiller was among an international group of scientists invited to Italy to provide expertise on toluene contamination found in drinking water around Venice. Her previous *in vitro* research had shown that one of the halogenated nitrotoxic substances found in the water inhibited mitochondrial respiration and could possibly be harmful to humans.

Interest in the intestine has come from physicians more than from research scientists. When it comes to illnesses of the intestinal tract—many of which may be of environmental origin—medical doctors must begin to look further than "nonspecific intestinal disease of unknown etiology" in describing these diseases, says Dr. Schiller. □

TSH Secretion To Be Topic of Clinical Conference

A Combined Clinical Staff Conference on Inappropriate Secretion of Thyrotropin will be held in the Masur Auditorium, on Thursday, June 5, at 3 p.m.

The conference will be hosted by NIAMDD's Dr. Bruce Weintraub, senior investigator in the Clinical Endocrinology Branch.

Also participating in the conference will be Drs. Marvin Gershengorn, assistant professor of medicine at New York University Medical Center, Irene A. Kourides, assistant professor of medicine at Cornell, and Henry Fein, a clinical associate in the Clinical Endocrinology Branch, NIAMDD.

Dr. Gershengorn will discuss Pituitary

Tumors and Nonneoplastic Syndromes Associated with Inappropriate Secretion of TSH.

Dr. Kourides will talk on TSH Subunit and Thyroid-Stimulating Immunoglobulin Production in Various Forms of Hyperthyroidism; and Dr. Fein will discuss Thyroid Hormone Metabolism and Receptor Interactions in These Syndromes.

Dr. Weintraub will open the program with a talk on Biosynthesis and Normal Regulation of TSH Secretion.

All Combined Clinical Staff Conferences are open to the public and have been approved for category 1 credit. The proceedings will be published in the *Annals of Internal Medicine*. □

WHITE WATER

(Continued from Page 3)

mass of brownish water with exploding waves breaking all around.

The lead paddling position in the bow of our boat was taken by Dr. Bruce Maurer, an NIH health science administrator, who greeted each icy wave.

The rapid was considered so spectacular that the white water company assigned a photographer to capture each raft's plunge on film.

Cold Feet and Sandwiches

A welcome lunchtime rest revitalized paddlers and those "swimmers" unlucky enough to fall from their rafts. Shirts, socks, and sweaters were wrung out in a feeble attempt to dry them in the sun. The circulation in cold feet was restored as paddlers munched on ham and cheese or peanut butter sandwiches.

Back in the boats after a half hour, once again rafters were ready to meet the challenges of the next rapids—"Even Nastier," the "Coliseum," the "Zoo," and the "Maze."

At the "Maze" our boat got hung up on a rock, filling it with water and almost forcing us out of control towards the rapid's spillway. The command "highside" was given, and like veterans, everyone in the front ran to the stern allowing the front to lift. Spinning off the rock, the raft slammed into another rubber boat sending it over a waterfall, an obstacle over which the guides were not supposed to take rafters.



Rafters pause for a moment after shoving off from the bank.

As the trip drew to a close, the guides told those who cared to that they could jump into the river and "be a raft," using their life vest. Several laid down their paddles and plunged into the water. Bobbing, they were later pulled out of the water in time to assist with the landing.

The large boats were hoisted out of the river, carried over head, and put on trucks that had been driven down river.

Wet, tired, but exhilarated, rafters trudged

their way up a steep mountain path, crossed an iron bridge, and went on to waiting buses for the 20-mile trip back.

NIH'ers and guides huddled together comparing notes on the day, while the bus nimbly snaked its way up a narrow road that overlooked the whitewater rapids below.

Some NIH'ers drove back to Washington that night, others stayed another night out under the stars to complete the experience of white water rafting. □

Occupational Med., Employee Health Directors Meet

Program directors in occupational medicine and employee health from the major medical centers in the Washington-Baltimore area met recently at NIH to establish an informal working group to discuss professional concerns of mutual interest.

Future meetings will be hosted by the other participating institutions, which include Johns Hopkins University, Georgetown University, George Washington University, Howard University, the Uniformed Services University of the Health Sciences, and the Baltimore Public Health Services Hospital.

Attending the first informal session were: Dr. John M. Lynch, Occupational Health Office, NIH; Dr. Diane Fogleman and Colleen Roach, Johns Hopkins School of Hygiene and Public Health; and Dr. Julio C. Rivera, OMS, NIH.

Also, Dr. Sidney D. Kreidor, medical advisor, Johns Hopkins Medical Institute; Dr. Robert J. Brandt, PHS Hospital in Baltimore; Dr. John Esswein, director of public health, Georgetown University; William T. James, University of Maryland; and Dr. Rudolph G. Wanner, Office of Research Services, NIH. □



Program directors taking part (seated l to r) are: Dr. Lynch, Dr. Fogleman, Ms. Roach, and Dr. Rivera. Standing (from l) are: Dr. Kreidor, Dr. Brandt, Dr. Esswein, Mr. James, and Dr. Wanner.

'Post' Columnist Raspberry To Address Honors Convocation

Noted *Washington Post* columnist William Raspberry will deliver the keynote address at the Sixth Annual Honors Convocation of the NIH Career Education Center that will be held on Friday, June 6, from 11 a.m. to 2 p.m., in the Masur Auditorium.

Mr. Raspberry writes on issues relating to education, housing, welfare, political personalities and general community endeavors.

He recently cited the need for a corps of volunteers to assist in public education programs and projects.

Dr. Thomas P. Murphy, recently appointed HHS Deputy Assistant Secretary for Personnel and Dr. Robert Goldberger, NIH Deputy Director for Science, will also address the convocation.

The program will honor students receiving associate and baccalaureate degrees from the University of the District of Columbia as part of their career education training.

In addition, over 100 honor students will be recognized, as well as students who have achieved other distinctions during the current academic year. □

Dental Care Offered for PHS C.O.'s

Complete dental care for PHS Commissioned Officers is being offered by the Commissioned Officers Dental Clinic in Bldg. 31, Rm. B2B-34. For an appointment, call 496-2484. □

U.S.-Egypt Meet To Advance Research Cooperation; Dr. Krause Receives Medal for Contributions

Dr. Richard M. Krause, Director of the National Institute of Allergy and Infectious Diseases, was one of three U.S. officials recently honored with one of Egypt's highest awards—the Al-Gumhuria Award—given to those who have made significant contributions to the development of health institutions there.

Medals and citations were presented on Apr. 17 by Egypt's Minister of Health Mamdouh Gabr at the conclusion of the Seventh Meeting of the U.S.-Egypt Joint Working Group on Health Cooperation in Cairo. Out of this 5-year-old cooperative agreement over 100 health research and related activities have been established.

The working group is one of four U.S.-Egypt joint working groups established under the Principles of Cooperation signed in 1974 by President Gerald Ford and Egyptian President Anwar Sadat.

Prior to the signing, NIH had supported a total of 14 active research projects in Egypt since cooperation was established in 1961.

Dr. Krause received his award for his "personal contributions to the establishment and development of three research centers." The centers, all located in Cairo, were established in the Ain Shams University, the Egyptian Organization for Biological and Vaccine Production Materials, and the Center for Biomedical Research Center for Infectious Disease.

Also honored were A. Edward Najjar of the Center for Disease Control, Atlanta, for his efforts in the construction and development of the Imbaba Bilharziasis Research Center, and Dr. Arthur Emory of the Office of Naval Research, U.S. Department of the Navy, for his work in support of biomedical research.

Dr. Krause's contact with Egyptian science began in 1970 when he was invited by the director of a Cairo laboratory to assist in research and training for Egyptian scientists.

His trip was the first official visit of an

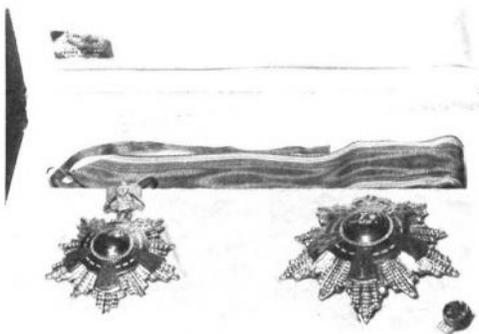


HHS Assistant Secretary Dr. Richmond and Egypt's Minister of Health Dr. Gabr sign a joint communique on health cooperation at the conclusion of last month's Cairo meeting.

American scientist since the 1967 Six Day War. He established new research programs on streptococcal diseases and rheumatic fever.

Unlike the United States, rheumatic fever in Egypt remains a cause of crippling heart disease. Dr. Krause's efforts abroad have been directed to the application of U.S. methods of rheumatic fever prevention in the developing countries.

Later Dr. Krause proposed the expansion of research opportunities for Egyptians in meningococcal meningitis and schistosomiasis.



Al Gumhuria means "the Republic" and is a decoration comprised of two ornately designed medals.

After several visits, Dr. Krause saw a need to improve Egyptian research training centers. The Center for Biomedical Research for Disease Control was originally staffed by technicians without doctoral degrees.

This situation was changed through Egypt's upward mobility programs when four technicians received doctoral degrees, and two came to the U.S. for postdoctoral training.

Currently, support for Egyptian health strategies is being aided by the U.S. Agency for International Development, P.L. 480 funds (special foreign currency fund programs administered by the Fogarty International Cen-

ter), and also from the Clark and Rockefeller Foundations.

This support has made it possible for a variety of U.S. investigators to develop collaborative programs in Egypt. Scientists conducting research today in Egypt include: Bureau of Biologics, the FDA, and Case Western Reserve, California, Michigan, and Lowell.

At a February Cairo meeting between Egyptian government leaders Dr. David P. Rall, Director, National Institute of Environmental Health Sciences, and others, the biomedical impact of technology transfer was considered.

At the conclusion of this year's Seventh Joint Working Group—to evaluate existing programs and establish funding priorities for the next 2 years—a joint communique was released by Egypt's Dr. Gabr and Dr. Julius B. Richmond, HHS Assistant Secretary for Health, who headed the U.S. delegation at the meeting.

The group approved projects by AID and HHS in rural health care and emergency medical services, and established an ad hoc committee to review Egyptian population programs.

Under biomedical research and infectious diseases the group decided to go ahead with plans to study viral hepatitis, epidemiology and immunology of schistosomiasis, genetic and congenital anomalies, clinical immunological studies on schistosomiasis patients, and the establishment of an ultrasonic center.

A half-million-dollar pharmaceutical standards laboratory has been agreed upon as well as money to study poisonous plants that contaminate food and to have a workshop on mycotoxins.

Besides representatives of the Egyptian Ministry of Health and HHS, the April meeting included representatives from the Egyptian Academy of Science, Egyptian and American universities, AID, U.S. Navy, and Project Hope.

The Eighth Annual Meeting of the Joint Working Group on Health Cooperation will be held in Washington in spring 1981. □



Dr. Krause's citation from Egyptian President Anwar Sadat reads in part "... for your reputable and your great service we present to you a decoration 'Al Gumhuria.'"

DENTAL CENTER

(Continued from Page 1)

"We want to find ways to control such disease, and ultimately, learn how to prevent it."

The new facility will allow researchers to share sophisticated equipment, laboratory space, research personnel, and, perhaps more importantly, patients.

Several investigators can share a sample from the same patient for specific projects, explained Dr. Ship, and in turn research



Dr. Cohen took part in the dedication of the new dental facility.

money will be saved and the amount and quality of research improved.

Studies already started at the new center include trying to determine the relationship of the rate and level of oral disease with a factor that aggregates bacteria in saliva, and looking at the role white blood cells appear to play in the inflammatory process leading to oral disease.

Three Blood Bank Drives Scheduled for This Summer

The Clinical Center Blood Bank and the Metropolitan Washington Blood Bank are planning three joint blood drives at NIH's main campus during the 1980 summer vacation season.

The drives are being held to support patient care in the Clinical Center, our employees, and their families through the NIH Blood Assurance Program.

Drive is June 20

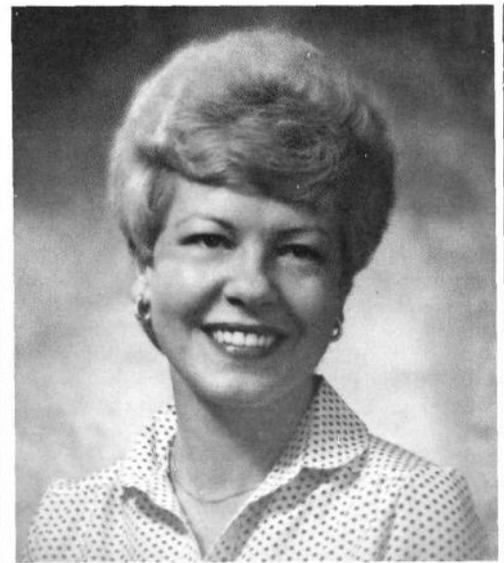
The first blood drive is scheduled on June 20, at the National Library of Medicine, Bldg. 38, in the Billings Auditorium; the second, July 18 at the Bureau of Biologics, Bldg. 29, Conf. Rm. 115; and the third, Aug. 22, Bldg. 31, Conf. Rm. 4A.

All drives are scheduled to begin at 9:30 a.m. and end at 3:30 p.m.

Be sure to mark your calendar for these special on-campus blood drives. For further information or to schedule an appointment, call 496-1048/1049. □

Another study is the development of a diagnostic method that could distinguish the susceptibility of individual patients to oral disease. Also being investigated are ways to recognize the earliest signs of onset of oral and dental diseases, and mercury accumulation in dentists and dental assistants to determine the health risk.

The center is named for Dr. W. D. Miller, a 19th century University of Pennsylvania dental alumnus, who pioneered clinical dental research. □



Marianne Wagner has been named NCI personnel officer and chief of the Institute's Personnel Management Branch. She comes to NCI from NIAID where she was personnel officer for the past 6 years. Mrs. Wagner, who spent most of her career at NIH, received her bachelor's degree at the University of Maryland. After 2 years with DPM, she joined NIAID, and has also worked for DRG and NCI's Division of Cancer Treatment.

'CLUB MED' Travel Seminar Offered by R&W

R&W is sponsoring a travel seminar and film presented by CLUB MED on Wednesday, June 4, at 11:30 a.m. in Wilson Hall, Bldg. 1. Anyone interested may attend. □

Five-Year Study Shows Two Drugs Useful For Treatment of Crohn's Disease

Results of a 5-year study show that two drugs have proven useful in treating Crohn's disease, a severe chronic digestive disorder of the small and large intestine. The disease affects more than 10,000 Americans and its cause is unknown.

The National Cooperative Crohn's Disease Study, funded by the National Institute of Arthritis, Metabolism, and Digestive Diseases, involved 14 university centers and more than 700 patients.

The researchers examined the usefulness of the three most commonly used drugs in the treatment of Crohn's disease: sulfasalazine, a sulfa drug derivative; prednisone, an adrenal hormone-like drug; and azathioprine, an immunosuppressive agent.

Dr. John Singleton, coordinator at the University of Colorado Health Sciences Center, Denver, which monitored the study, said, "These results now offer physicians a firm scientific rationale for choosing a treatment for Crohn's disease."

Crohn's disease (regional enteritis) causes severe abdominal pain, diarrhea, malnutrition, and sometimes death. Many patients have prolonged periods of hospitalization, and sometimes abdominal surgery, involving the

removal of portions of the small intestine, is necessary.

The study demonstrated that sulfasalazine is a useful and relatively less toxic drug for initial treatment of Crohn's disease. Prednisone is clearly the most effective treatment for disease of moderate and greater severity.

The results of the long-term study show that both prednisone and sulfasalazine are significantly better than a placebo (dummy tablet) in causing a remission of active Crohn's disease.

Azathioprine was somewhat better than a placebo, but not enough to be statistically significant. None of the three drugs was better than a placebo in preventing flareups or reoccurrence of the disease for more than a period of 1 or 2 years.

A second phase of the study questioned whether prednisone and sulfasalazine together might be better than prednisone alone. The combination of both drugs was compared to using prednisone alone in 89 patients. The study showed that the combination, if anything, was less effective than prednisone alone for inducing remission.

In the course of screening more than 1,400 patients and studying over 700 of them for

periods of up to 2 years, the investigators were able to make other determinations about Crohn's disease. For example, the X-ray characteristics of the disease were carefully and exhaustively defined to aid radiologists in recognizing and following its course.

In addition, the value of rectal biopsy in diagnosis was examined and found to be minimal. The response of Crohn's disease to surgery was also documented to aid surgeons in deciding when to operate on patients with the disease.

Other centers involved in the cooperative study in addition to the University of Colorado were the University of Vermont, University of Missouri, Ohio State University, University of Iowa, University of North Carolina, and the Cleveland Clinic Foundation.

Also, the University of California at San Francisco and at Los Angeles, Dartmouth Medical School, University of New Mexico, University of Oregon, University of Pennsylvania, and the Medical College of Virginia.

The complete results of the NIAMDD cooperative study were reported in the journal *Gastroenterology*, Vol. 77, No. 4, part 2. □

Variety of Plants Tested To Find New Cancer Drugs

By Esther Solomon, NCI

First of a two-part series

Collecting herbal medicines in primitive African villages may seem an unlikely way to discover new drugs to use against cancer. For years National Cancer Institute scientists have coordinated a program to test over 5,000 extracts a year from about 2,000 plant samples for anticancer activity. A wide variety of plants are collected, including those used in folk medicines.

U.S. Department of Agriculture botanists and suppliers from over 60 countries in Asia, South America, and Africa, who work under contract to NCI, have collected 30,000 plant species since the program began in 1957. At any time 500 to 1,000 plant samples are shipped from various parts of the world to the USDA.

"We are not likely to develop a wonder drug to cure all types of cancer," says Dr. Matthew Suffness, chief of the Plant and Animal Products Section at NCI.

"Cancer is over 100 diseases, each with its own growth and metabolism characteristics and its own responses to drugs," he explains. "We are looking for new drugs that will be very effective against certain kinds of cancer."

Plants have been used to treat cancer and other diseases since prehistoric times. Some of these early folk medicines led to the development of many useful drugs.

The root of the rauwolfia tree, used for centuries by folkhealers in India and Africa to treat insanity, resulted in the discovery of reserpine, used for high blood pressure.

Feverish children in Ecuador are often given a beverage made from the bark of the cinchona tree. Quinine, a soluble salt extracted from the "fever bark tree" was the first drug found effective to treat malaria.

"We follow up folk medicine leads where we can, but it's a difficult thing on which to

base a program," says Dr. Suffness. "Drawings or accurate descriptions are rarely available.

"The remedy may be an extremely complex mixture of 30 to 60 plants and often the ingredients are secret. Without modern diagnostic methods, there is no way to know which diseases the substance actually was used for."

Dr. Jonathan Hartwell, who headed NCI's plant program from 1956 to 1976, reviewed over 3,000 plant species used in folk medicine to treat cancer. One of these was the root of the mayapple, used by the Penobscot Indians in Maine to treat what was believed to be some forms of cancer.

The mayapple root was also recommended for cancerous tumors in an American medical book published in 1849. Today, two semi-synthetic derivatives of the mayapple, VM-16 and VP-16 (Etoposide), are showing positive results in leukemia and brain tumors.

Two major cancer drugs come from the white and rose-flowered Madagascar periwinkle, used in folk medicine for many maladies including dysentery and toothache.

Vinblastine is used to treat Hodgkin's disease and testicular cancer, and vincristine is an effective treatment for childhood leukemia and Wilms' tumor (a children's cancer of the kidneys).

Testing Procedures Slow

It can take 3 to 10 years from the time chemists receive a bunch of leaves, stems, and other plant parts to the time an active compound is isolated and tested in animals.

Crude plant extracts are prepared which contain thousands of chemical components. A slow, painstaking series of complex chemical procedures separate, purify, and concentrate the active materials.

When a step in the process destroys the anticancer activity, the compound is retested at an earlier stage to recover the active



The source of bruceantin is a small tree with stems up to 2 inches in diameter. It is widely distributed among the highlands of tropical Africa, but apparently abundant only in Ethiopia.

components of the mixture.

The pure materials are tested against different mouse tumor systems and those which look promising are tested in larger animals for toxicity before they are approved for limited trials in humans.

Plants which appear negative are often retested since chemical components in plants vary from season to season and from area to area due to different soil conditions and different climates. The plant may contain active materials only during one season or only if it grows in a specific area.

"It's a trade-off," says Dr. Suffness. "We don't want to keep testing indefinitely plants that are negative; on the other hand, we don't want to miss something by not testing it at the right location or in the right season."

The difficulties in finding and testing plant products will be discussed in the next issue of The NIH Record (June 10, 1980). □

FAES Offers Tickets For 1980-81 Concerts

The FAES 1980-81 Chamber Music Series will present eight concerts during its upcoming season and is offering tickets for sale.

The concert dates and performers are: Oct. 5, Richard Stoltzman, clarinet, and Bill Douglas, piano and bassoon; Oct. 19, the Polish Chamber Orchestra; Nov. 9, Beethoven Quartet with piano; Jan. 25, the Smithsonian Jazz Repertory Ensemble; Feb. 8, Lydia Artimiw, piano; Mar. 7, Maurizio Pollini; and Mar. 29, Trio di Milano. A date has not been announced for the Piatigorsky Memorial Concert.

Concerts will be held in the Masur Auditorium on Sundays at 4 p.m. (except the Mar. 7 concert on Saturday).

Tickets are sold by subscription only and cost \$56 for the season. Last year's series was sold out so subscribe as soon as possible.

For further information, contact the Foundation for Advanced Education in the Sciences, Bldg. 10, Rm. B1L-101, 496-5272. □



Raymond Catlett, biological laboratory technician, retired May 3, after 26 years of service with the National Institute of Dental Research. Upon his retirement, Dr. David Scott, NIDR Director, presented a certificate and gold pin to Mr. Catlett for 30 years of Government service.

Fall Hay Fever Sufferers Asked To Aid Study

Volunteers who have fall hay fever are needed to participate in studies of the diagnostic effectiveness of allergy extracts.

Participants will undergo allergy skin testing, blood withdrawal (approximately 2-3 tablespoons), and will fill out daily symptom diaries during the hay fever months.

Extracts To Be Studied

Later, selected volunteers may participate in an allergy injection program to study the effectiveness of allergy extracts in the treatment of hay fever.

Dr. Paul Turkeltaub of the Allergenic Products Branch, Bureau of Biologics, is conducting these studies in cooperation with the Occupational Medical Service at NIH.

Interested employees should fill out a hay fever questionnaire that may be obtained from Occupational Medical Service, Bldg. 31, Rm. B2B-47.

Volunteers will receive a moderate remuneration for their participation. □

Dr. Malling and EMIC Staff Recognized By Environmental Mutagen Society

A researcher's work on *in vitro* microsomal enzyme activation of chemicals in the field of environmental mutagenesis, and the work of the staff of the Environmental Mutagen Information Center has led to awards being given this year by the Environmental Mutagen Society.

The awards were presented at the society's recent annual business meeting in Nashville, Tenn., to Dr. Heinrich V. Malling, chief, of the Laboratory of Biochemical Genetics, National Institute of Environmental Health Sciences, and to EMIC, the computer center that allows both the Federal Government and private institutions to use EMIC to evaluate chemicals for mutagenic action and to test for their use in detecting mutagenicity.

Starts in Copenhagen

Dr. Malling started his work on chemical mutagenesis in 1953 at the University of Copenhagen, where he showed that nitrous acid was mutagenic in eukaryotic organisms. He came to the U.S. in 1963 and joined the biology division at the Oak Ridge National Laboratory, working in the Fungal Genetics Group.

There he continued his studies on the mutation mechanisms in *Neurospora* and demonstrated that hydroxylamines are mutagenic in eukaryotic organisms. He and his colleagues later showed that certain carcinogens predominantly produce base-pair substitutions.

In 1966 Dr. Malling published the results of basic work to show that nonmutagenic chemicals (dimethylnitrosamine and diethylnitrosamine) could be converted to mutagens by certain chemical reaction mixtures.

Five years later, he published data showing that the activation of nonmutagenic compounds could also occur during *in vitro* metabolism with liver microsomes.

Using the intrasanguineous host-mediated assay, Dr. Malling showed that metabolic activation was organ-dependent.

He made an important finding that a mammal is able to induce a high level of mutation in injected *Neurospora conidia* without any other treatment to the animal.

He and his colleagues later developed the first quantitative mutation system with mammalian tissues culture cells. While at NIEHS, Dr. Malling showed that nonmutagenic chemicals could be activated in tissue culture to compounds which were mutagenic in mammalian cells.

Dr. Malling joined NIEHS in 1972. There, he constructed the first biochemical specific locus mutation system in mammals for the detection of electrophoretic variants, as well as inactive alleles in biochemical markers. His latest research is concerned with developing mutation monitoring systems for the human population using sperm and cells in blood.

While still at the Oak Ridge National Laboratory in 1968, Dr. Malling established the Environmental Mutagen Information Center, and very soon was joined in his efforts by John S. Wassom, who is now EMIC director.

This NIEHS-supported information center contains 30,000 papers which report testing results on approximately 10,000 different chemicals, most of which are keyworded in a highly sophisticated manner as to chemical, chemical substructure, organism, and test systems. □

Dr. John Cairns To Speak At Hood College in Frederick On Cancer Research Prospects

Dr. John Cairns will deliver the Goodloe E. Byron Lecture on Thursday, June 5, at 8 p.m. in the Rosenstock Auditorium of Hood College, Frederick, Md.

Dr. Cairns, director of the Imperial Cancer Research Fund's Mill Hill Laboratory in London, England, will speak on Prospects and Options for Cancer Research.

The author of *Cancer: Science and Society*, Dr. Cairns believes that cancer is largely due to controllable variables in the human environment and that it should, therefore, be a preventable disease.

He is a fellow of the American Academy of Arts and Sciences and of the Royal Society of London. He obtained his doctorate of medicine from Oxford University. From 1963 to 1968, he was the director of the Cold Spring Harbor Laboratory of Quantitative Biology in New York.

The Goodloe E. Byron Lecture Series—named for the late congressman in recognition of his commitment to the Frederick Cancer Research Center and his concern for health issues—was established to encourage community awareness of and dialogue in scientific issues.



Dr. Malling continues to oversee EMIC activities.

Ethics Comm. Hears McCarthy Speak on Compensation For Injured Research Subjects

At the May 16 meeting of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, Dr. Charles McCarthy outlined past proposals to provide compensation for injured research subjects.

Dr. McCarthy, director of the NIH Office for Protection from Research Risks, also described levels of review for research projects and the system for reporting any adverse effects.

He spoke during the second meeting of the President's commission, held May 16-17 at the New Executive Office Building in Washington.

At present, the Federal Government has no comprehensive scheme for compensation of injured research subjects, although the subjects may recover damages if they prove negligence.

Witnesses Define Death

Commission members also heard testimony on definitions of death. Witnesses described a hodgepodge of state laws.

One witness, Dr. Robert M. Veatch, Kennedy Institute of Ethics, said a patient in an ambulance might be considered alive in one state but, even with no change in condition, would be considered dead when the ambulance crossed the line into the next state.

In other action, members of the commission noted that they may discuss *in vitro* fertilization in the context of other issues, but they deferred any decision to make it the subject of a special study.

The HHS Ethics Advisory Board issued recommendations to the Department on this subject last year. The commission reported, in answer to a query from Senators Edward M. Kennedy and Orrin Hatch, that the EAB's study was thorough and its conclusions well-supported.

Morris Abram, former president of Brandeis University and now a New York attorney, chairs the commission. □



Dr. Kenneth Kirk (l), president of the Parents of Preschoolers, receives a \$5,000 check as a donation to the child care center scholarship fund from Lois W. Kochanski, executive secretary, and Dr. Robert S. Adelstein, president of the Foundation for Advanced Education in the Sciences.