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)

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.

By 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

(See NAME CHANGE, Page 4)
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.
- Estate of employee.
- Next of kin under the laws of the employee's domiciliary state.

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 canceled 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/1/D personnel office.

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. 4007, (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.

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.

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.

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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 water rafting.

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.

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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 non-stop 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

Appalachian Wildwaters Guide "Steady" Steve Strokn briefs rafters on safety prior to entering the water.
The NIA epidemiologist Dr. Cornoni-Huntley heads the new interagency nutrition study.

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 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’s, 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.”

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.
Dr. Scolnick Receives 1980 Eli Lilly Award

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, Charles A. Alford, Richard F. Ando, E. Max M. 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 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.

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. 1, Rm. 1A-16.

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 dimethyldiazine (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 1 ½ 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 1 ½ 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 contact 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 nitrotoluenes 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.
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.

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 water in time to assist with the landing.

**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
- Dr. Julio C. Rivera, OMS, NIH
- Dr. Sidney D. Kreider, 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
- Dr. Rudolph G. Wanner, Office of Research Services, NIH

**‘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.
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 April 17 by Egypt's Minister of Health Mamedouh 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 Bilharzias 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 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.

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.'"

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

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 Biologicals, the FDA, and Case Western Reserve, California, Michigan, and Lowell.

At 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 communiqué 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.
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 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.

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.

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.
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 Sufness, 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 folk healers 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. Sufness. “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 semisynthetic 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 ailments 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 child’s cancer of the kidneys).

Testing Procedures Slow

It can take 3 to 15 years from the time the 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 NIH Record

May 28, 1980
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 tissue culture cells. While at NIH, Dr. Malling showed that nonmutagenic chemicals could be activated in tissue culture to compounds which were mutagenic in mammalian cells.

Dr. Malling joined NIH in 1972. There, he constructed the first biochemical system based on loci of neo haploid cells 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 NIH-supported information center contains 30,000 papers which report testing results on approximately 10,000 different chemicals, most of which are key 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—now 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 1966, 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.