Dr. Geo. Galasso Cited for Distinguished Services
By University of North Carolina Medical School

Dr. George J. Galasso, Associate Director for Extramural Affairs, was recently presented a Distinguished Service Award by the faculty and alumni of the University of North Carolina (UNC) School of Medicine at Chapel Hill in recognition of his outstanding achievement and service to the School of Medicine and the people of North Carolina.

Dr. Galasso, a native of New York City, is an alumnus of the school of medicine, having received his Ph.D. in microbiology there in 1960, his area of specialization being virology. He remained at UNC as a post-doctoral fellow and research assistant professor before accepting an associate professorship in microbiology at the University of Virginia School of Medicine in 1964.

He joined NIH in 1968 through the Grants Associates Program. He subsequently initiated the Antiviral Substances Program in the National Institute of Allergy and Infectious Diseases and became chief of the NIAID Development and Applications Branch with responsibility for research on the control of infectious diseases, including both vaccine and antiviral agent development and clinical efficacy testing.

Considerable information was obtained during the late 1960s and most of the 1970s on the basic biology, clinical pharmacology and clinical potential of interferon in infectious diseases. In the late 1970s, the potential role of interferon in cancer was realized; clinical studies with antiviral agent development and clinical efficacy testing.

The NIAID Antiviral Substances Program was, and continues to be, responsible for establishing some of the international interferon research reference materials. Through this program, Dr. Galasso was also responsible for clinical studies evaluating vidarabine against herpes, as well as current studies comparing vidarabine and acyclovir.

He left the NIAID in November 1983 to assume his present position. Among his new responsibilities, he is assisting Dr. Wyngaarden, NIH Director, in coordinating some AIDS research and has also been instrumental in developing the new Academic and Research Enhancement Award.

Dr. Galasso has received several awards including the PHS Superior Service Award (1978), PHS Special Achievement Award (1981), and the Assistant Secretary for Health's Award for Exceptional Achievement (1981). He is the director of the World Health Organization's collaborative center on Interferon Reference and Research and is on the WHO Expert Panel on Viral Diseases (Interferon and Antivirals). He also serves on the Viral and Rickettsial Diseases Subcommittee of the Walter Reed Army Institute of Research, and is on the editorial boards of the Journal of Medical Virology and Antiviral Research.

Congressman Michael Barnes Visits NIH Campus, Apr. 22

The Foundation for Advanced Education in the Sciences, Inc. is sponsoring “An Open Forum with Congressman Michael Barnes” on Monday, Apr. 22, at noon, in the ACRF Amphitheater, Bldg. 10.

Congressman Barnes, representative from Maryland’s 8th Congressional District, is the assistant majority whip of the House of Representatives and serves on the Committee on Foreign Affairs.

All NIH employees are welcome to participate.

Dr. Galasso was honored Mar. 15 by UNC for his research, the services rendered in coordinating research at NIH and the WHO, and the skills he has brought to his administrative positions. Dr. Stuart Bondurant (l), dean, UNC School of Medicine, presents Dr. Galasso with his Distinguished Service Award while Mrs. Galasso (far r) looks on.

NIIDR Begins Nat’l Survey Of Adults’ Dental Health

The first large-scale survey to look at the oral health of American adults has been launched by the National Institute of Dental Research. During the coming year, a team of dentists will examine almost 20,000 people ages 16 to 75 for evidence of tooth decay and periodontal (gum) disorders.

“This study will serve as a benchmark,” said NIDR Director Dr. Harald Loe. “It will tell us how prevalent periodontal diseases, dental caries (tooth decay), and tooth loss are among adults of different ages.”

Very little is now known about the prevalence of tooth decay among adults, he noted. There is some evidence that root caries—decay of exposed tooth root surfaces—is becoming more of a problem in older people now that fewer teeth are being lost earlier in life.

The new survey will provide detailed information about the incidence of root caries and coronal caries, decay of tooth surfaces that normally project above the gum line.

The study is the first to assess the extent of periodontal disorders in the population, added Dr. Loe. These diseases, which damage the structures supporting the teeth, are the primary cause of tooth loss in adults.

During the course of the survey, nine dentists will conduct oral examinations at 600 business establishments and 200 senior citizen centers around the country.

Both the sites and the participants were selected to represent the majority of adults in the United States. Exams will take place either in the health units of the participating facilities or in NIDR’s mobile exam units.

Each oral exam will last about 15 minutes. While the volunteer sits in a portable dental chair, the dentist will use basic instruments and a mirror to check for decay and gum disease. No x-rays will be taken, and no treatment given.

Specially trained personnel accompanying the dentists will record the results.

The oral exams are being scheduled and conducted by Westat, Inc., a private research organization, under a $3.2 million contract with the NIDR. When the survey is completed in about a year, NIDR epidemiologists will analyze the results and report findings. Five years ago, NIDR conducted a similar survey that looked at the prevalence of dental caries among American school children. The survey showed that tooth decay had declined significantly over the previous decade.

The new study will reveal the extent to which tooth decay, periodontal destruction and tooth loss afflict people as they get older.
Golf League Begins Season

The R&W Golf Association will begin its 1985 medal-play season on Apr. 23 at the Montgomery Country Club.

The eight-match season will also include: Montgomery Village Country Club, May 6; Washingtonian Country Club, May 20; Algonkian, June 12; Crofton Country Club, June 25; Newbridge Country Club, July 10; Breton Woods Country Club, July 29; and Holly Hills Country Club, Aug. 13.

In September and October the league plays a second season in a double-elimination match-play format. The league has eight teams of up to 25 members each and there are approximately 30 openings for new members. It is not necessary to play every match to belong to a team.

For more information or to join a team, call Ralph Stork, 496-1985.

Sons of Italy to Hold Art Auction

An art auction will be held Friday, May 10, at St. Andrews Episcopal School, 8935 Braddock Drive off Green Tree Road in Bethesda, sponsored by NIH Lodge No. 2547 of the Order Sons of Italy in America.

Two hundred pieces of original artwork from the Fine Arts Gallery in Airdmore, Pa., will be sold with opening bids beginning at 20 to 50 percent under gallery prices. Prices will range from $25 upward, and the art will represent a variety of media and styles.

The auction begins at 7:30 p.m. and the bidding at 8:30 p.m.

A large portion of the proceeds from this event will be donated to the March of Dimes, the Cooley's Anemia Foundation, and Camp Fantastic, an NIH-sponsored charity for children with cancer.

Tickets, priced at $3 each, are available from Isabel Phillips, 496-5366, or may be purchased at the door.

Two NHLBI Publications Named Winners in Contest

Two publications from the National Heart, Lung, and Blood Institute were inadvertently omitted from a story in the NIH Record, Mar. 26, 1985, p. 2, titled, “NIH Winners in Technical Publications Contents Announced.” The NHLBI publications were: the Award of Distinction: 9th Report of the Director; and Award of Excellence: 10th Report of the Director.

OMS Corrects Listing On Weight Loss Program

The article, “Free Weight Loss Program Offered to NIH Employees” in the Mar. 26 issue (p. 6) of The Record submitted by the Occupational Medical Service, incorrectly listed two items. They should have read:

Bldg. 31 Rm. B12B57 Monday 1:30-3:30
Bldg. 38A Rm. B11H4A Wed. 1:30-3:30

PEF Sponsors Auction

Reminder: the Patient Emergency Fund is sponsoring an auction on Wednesday, Apr. 10, in the 14th Floor Auditorium, Bldg. 10, at noon.
BEIB Has Trade-and-Rental Program for Intramural Labs

Scientific equipment owned by an NIH intramural laboratory but no longer needed can now be exchanged at the BEIB Scientific Equipment Rental Program (SERP) for credit toward the cost of renting other equipment from SERP. This exchange program is intended to increase use of scientific equipment at NIH. Used equipment accepted for credit must be usable for rental to other intramural laboratories after BEIB refurbishes it.

The amount of the credit is based on original cost of the equipment, its age, its expected rentable life, cost of refurbishing it, and maintenance cost.

The credit can be applied in two ways: either for rental of other equipment currently in the SERP pool, or for rental of new equipment purchased by SERP specifically to meet the needs of the laboratory making the request.

In the second case, SERP will purchase only equipment of general utility that is likely to be re-rented after the original requestor has returned it to SERP. To find out whether a piece of equipment owned by your laboratory is a candidate for this exchange program, and what its credit value is, contact the Scientific Equipment Rental Program, 496-9748.

Annual NIH Photo Contest
At Wilson Hall on April 9th

The annual NIH Photo Competition, sponsored by the NIH Camera Club, will be held Tuesday, Apr. 9 in Wilson Hall, Bldg. 1.

Contestants may enter slides, color prints or black and white prints. As many as four photos may be submitted in each category for an entry fee of $2 per category. Entries must be brought to Wilson Hall the day of the contest between 11 a.m. and 1 p.m., or between 5 and 7:30 p.m. Judging will begin at 7:30 by three photographers.

The competition is open to all NIH employees, members of the NIH Camera Club and their immediate families.

Prints must be no smaller than 5 by 7 inches and no larger than 16 by 20. The title of the photograph must appear on the back. No prints should be submitted in frames.

First prize in each category is $25; second, $15; third, $10.

Further information may be obtained by calling LeRoy Kearney, 496-3407, or Lois Kochanski, 496-7976.

FAES Seeks Native Russians, Japanese Language Teachers

The FAES Graduate School now has openings for instructors to teach language classes in both Russian and Japanese, beginning in September 1985.

Each semester is 16 weeks long and language classes are usually taught one night per week for 2 hours.

All applicants must be native speakers of the language they will teach with adequate teaching experience. Interested persons should contact Lois Kochanski, 496-7976.

U.S. Savings Bonds With Variable Interest Rates Are a Good Investment, Secretary Heckler Says

By Margaret M. Heckler
Secretary of Health and Human Services
(Mrs. Heckler has been named chairperson of the Federal Interagency Savings Bonds Committee for 1985-86).

Americans who abandoned the idea of buying savings bonds will be surprised to learn that they might be overlooking a good investment opportunity.

Unlike the savings bonds of the past, which paid interest at a fixed rate, today's U.S. Savings Bonds (Series F-EE) have a variable interest rate. The variable rate changes every 6 months, in May and November, and is calculated at 85 percent of the average return on 5-year Treasury securities.

This rate structure has been in place since November 1982, and the average interest rate for the first 30 months is 10.01 percent—a very good return. The current 6 months rate (through Apr. 30, 1985) is 10.94 percent.

Tying U.S. Savings Bonds to Treasury security rates allows bond interest to go as high as the market dictates. At the same time, the government guarantees a rate of 7.5 percent even if the market should fall below that level.

Bonds Should be Held 5 Years

Bonds must be held at least 5 years from the date of purchase to earn the market-based rate. The assigned rate for periods held will be averaged and the average rate, compounded semiannually, determines the interest received. Bonds cashed after the 5-year holding period ends receive interest on a fixed, graduated scale beginning at 5.5 percent.

At the higher rates, which bonds now are enjoying, bonds will reach face value before their 10-year original maturity. For example, at an average rate of 10 percent they will reach face value in less than 8 years. Based on the guaranteed minimum of 7.5 percent, bonds reach face value in 10 years.

If you are surprised about these facts you are probably not alone.

Personal financial planning involves many considerations—ability to save, return on the investment, risk, tax position and the reason for the investment. Savings bonds are a favorable alternative when weighing many of these factors.

Bonds can be purchased through payroll savings with an investment as small as $25, half the price of a $50 bond. There is no risk on the principal investment and no brokers fees to complete the purchase.

In addition to the floating interest rate, the Federal tax liability on interest earned can be deferred on U.S. Savings Bonds.

Depending on one's circumstances, this feature also would work in favor of those planning for retirement, assuming that they cash the bonds after retirement when tax responsibility is less due to lower income.

NIH Institute Relay Set for May 15th

The NIH Health Angels Jogging Club is again sponsoring its Annual Institute Challenge Relay which is Wednesday, May 15, this year.

The relay will be held at noon in front of Bldg. 1. The relay covers 2.5 miles, run in ½ mile segments on a course around Bldg. 1 by teams of five runners. Each team member runs a ¼-mile leg.

As usual, there will be categories for men's teams, women's teams and mixed teams. Ribbons will be awarded to all participants. The NIH Director's Trophy will be inscribed with the names of the first place team and the first place women's team.

Entry forms and instruction sheets will be available at the R&W Activities Desk in Bldg. 31, Rm. B1W30 beginning Monday, Apr. 15. Completed forms must be returned to the Activities Desk by Friday, May 10. Entries will be limited to 80 teams.

A $5 entry fee will be required of each team to help defray the costs of the event. Make checks payable to the R&W Association.

The Institute Relay is intended to promote friendly competition among runners and joggers at NIH. Runners and joggers of all abilities are encouraged to participate.

Summer Day Camp Program Offered for Children 3-12

An all-day 2-week summer camp program at the Aylawn School in Bethesda for children ages 3-12 is being offered by the Parents of Preschoolers, Inc. The camp will operate from 7:30 a.m. to 6 p.m., Mondays through Fridays, June 24 to Aug. 30.

The cost is $138 per child for the 2-week session.

A $30 registration fee, due May 18, is required to hold the reservation for each child. The credit must be paid 1 week prior to attendance.

Weekly field trips, swimming, a newspaper club, daily organized sports, picnics, films and many other activities taught by experienced professionals will be offered. All children will be expected to bring lunch. Breakfast, beverages and afternoon snacks will be provided.

For more information, call Anne Schmitz, 530-5550.
Three New Members Named to NIAID Advisory Council

Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, has recently announced three new appointments to the Institute's Advisory Council. They are Drs. Charles C.J. Carpenter, Gertrude Cora Teixeira Hunter and Joseph Sinkovics. Each will serve a 4-year term.

Dr. Carpenter

An infectious diseases specialist, Dr. Carpenter is chairman of the department of medicine, Case Western Reserve University and physician-in-chief, University Hospital in Cleveland, Ohio. Prior to joining Case Western, he was assistant professor of the department of medicine at Johns Hopkins University School of Medicine in Baltimore, where he earned B.A. and M.D. degrees.

Dr. Carpenter has been a member of the U.S. delegation to the U.S.-Japan Cooperative Medical Science Program since 1965 and was chairman of the Cholera Panel from 1966 to 1973. He is currently a member of the expert advisory panel on bacterial diseases of the World Health Organization, and recently completed a 3-year term as a trustee of the International Center for Infectious Diseases Research in Bangladesh. His research interests include cholera and other dehydrating diseases, on which he has published extensively.

Dr. Hunter

Educator and community health advocate, Dr. Hunter is professor in the department of community health and family practice as well as clinical professor in the department of pediatrics and child health, Howard University College of Medicine, Washington, D.C.

She also directs the university's environmental and occupational health program. Dr. Hunter earned B.S. and M.D. degrees from Howard University and has been a faculty member for many years.

She currently serves as a senior advisor to the executive advisory council of the Center for Health Systems Management at Case Western Reserve University and is on the board of directors of the National Youth Foundation in Washington, D.C.

In addition to her work with civic and professional organizations, Dr. Hunter has been active in public affairs and communications. Earlier in her career she was producer and hostess of a radio series on Health for WILD and coproducer and hostess of a pilot TV series on health on Channel 56, both in Boston.

Dr. Sinkovics

Dr. Sinkovics, a specialist in virology and internal medicine, is medical director of St. Joseph's Community Cancer Center and clinical professor of medicine, University of South Florida Medical School, Tampa. He is also a visiting professor of virology at Baylor College of Medicine's department of virology and epidemiology, and consultant in oncology at the University of Texas M.D. Anderson Hospital, Houston.

Dr. Sinkovics earned the M.D. degree, summa cum laude, from Petrus Pazmay University (now Semmelweis University) in Budapest, Hungary, in 1948. He was senior research associate in virology, department of virology at the State Institute of Public Health, Budapest, prior to accepting a postdoctoral Rockefeller fellowship in virology at the Institute of Microbiology, Rutgers University, New Brunswick, N.J. in 1957.

He is author of a textbook on virology as well as author of more than 300 scientific publications on his research interests, including L-forms of bacteria, myxoviruses, LCM virus, immunology of mouse and human leukemia, infectious complications of malignant diseases; and chemotherapy, immunology and immunotherapy of human sarcomas and other human neoplasms.

Dr. E.S. Pollack, Biostatistician Retires From Cancer Institute

Dr. Earl S. Pollack, chief of the Biometry Branch, Division of Cancer Prevention and Control, NCI, has retired after 30 years of service in government.

Dr. Pollack

As chief of NCI's Biometry Branch, Dr. Pollack was responsible for the Surveillance, Epidemiology, and End Results (SEER) Program. Initiated in 1973, this continuing project of NCI's Biometry Branch, obtains data from population-based tumor registries throughout the United States that represent about 12 percent of the U.S. population. "We analyze and interpret trends in cancer incidence, death rates and cancer patient survival based on the data," says Dr. Pollack.

He began his career in 1954 as a section chief in the National Institute of Mental Health. Later he became chief, deputy director and director in the Division of Biometry and Epidemiology, NIMH, before transferring to the NCI Biometry Branch in 1977.

While at NIMH, Dr. Pollack developed methods to quantify the extent of mental disorders in populations and analyzed the risk of mental disorders based on family characteristics. He summarized this work in several journal articles and in the book, Mental Disorders/Suicide, published by the Harvard University Press in 1972.

A native of Duluth, Minn., he earned his B.S. and M.S. in statistics from the University of Minnesota. In 1965, he received an Sc.D. in biostatistics from Harvard University. Before coming to NIMH he was a statistician for both the New York State and Connecticut State health departments.

During his career, he received two DHEW awards: the High Quality Performance Award in 1966 and the Superior Service Award in 1970.

Dr. Pollack held offices in the American Public Health Association from 1968 to 1977, became a fellow in 1962 and received the APHA Statistics Section Award in 1983.

He is also a fellow in the American Statistical Association and the American College of Epidemiology, and is currently serving on the board of directors of the American College of Epidemiology.

After an extended vacation that will include "a few golf games," Dr. Pollack plans to continue his professional affiliations and use his expertise as a consultant in biostatistics and epidemiology.

Newly named NIAID Advisory Council members shown with Dr. Anthony Fauci, NIAID Director, are: Front row (l to r): Dr. Hunter and Dr. Fauci; back row (l to r): Dr. Carpenter and Dr. Sinkovics.
Dr. Terry Reisine Receives Yoshio Sato Intern’t’l Award

Dr. Terry Reisine received the Yoshio Sato International Award on Apr. 2, at the Recognition Ceremony preceding the annual meeting of the Pharmaceutical Society of Japan.

Dr. Reisine is currently a senior staff fellow in the Pharmacology Section, Laboratory of Cell Biology, NIMH. He received his Ph.D. in pharmacology from the University of Arizona and his postdoctoral training in neuropharmacology and neuroscience at the College de France, Paris.

The Yoshio Sato Memorial Fund, administered by the Foundation for Advanced Education in the Sciences, was established in 1978 in memory of Dr. Yoshio Sato to encourage the development of pharmacology, therapeutics and pharmaceutical sciences through the exchange of scientists between Japan and the United States.

MAPB Will Explain Services For Intramural Programs

NIH intramural programs are invited to have staff of the Medical Arts and Photography Branch, DRS, attend laboratory, branch, or section meetings to discuss MAPB services and products.

At such meetings, the MAPB branch chief and staff members explain the range of services available from the branch's sections (Design, Graphics, Medical Illustration, and Photography) and from the Motion Picture and Special Events Unit.

They also answer questions, suggest ways of keeping costs down, and solicit suggestions on improving MAPB's services to intramural investigators.

For information contact Ron Winterrowd, chief, Medical Arts and Photography Branch, 496-2868.

Volunteers Needed for Study Of Short Children Ages 9-15

Researchers at the Developmental Endocrinology Branch of the National Institute of Child Health and Human Development are seeking volunteers to study the effect of growth hormone on adult stature.

The researchers are seeking short children between the ages of 9 and 15 years to participate in a 4-year study in which they will receive either growth hormone or placebo.

Participants must be below the 1 percentile for height and have no endocrine abnormalities, and they should be referred to the NIH by their physician.

Those who wish to participate must be willing to travel monthly to NIH for the first 6 months of the study, and then every 3 months until they reach adult height. For more information, phone Dr. Susan Rose at (301) 496-4686.

Truth is not always the best basis for happiness.

There are people who perish when their eyes are opened.—Wilhelm Stekel

When in doubt, tell the truth.—Mark Twain

Former NIGMS Trainees Receive Pfizer Scholars Award

Two of the three researchers recently named as Pfizer scholars—Dr. Donald A. Kennerly, who received his M.D.-Ph.D. degree in 1980 from Washington University, and Dr. Ira A. Tabas, a 1981 M.D.-Ph.D. also from Washington University—are graduates of the NIGMS Medical Scientist Training Program (MSTP).

MSTP grants, which support training leading to a combined M.D.-Ph.D. degree, were established by NIGMS to help meet the shortage of well-trained clinical investigators.

The Pfizer awards are the first in the new Pfizer scholars program, which was created by the Pfizer Pharmaceutical Company to encourage physicians to pursue research careers in academic medicine.

Awards are made to physicians with faculty rank below associate professor to give them an opportunity to develop their research potential immediately following their formal training. Each award includes a $50,000-a-year grant for 2 years to the sponsoring medical school.

Dr. Kennerly, an assistant professor of internal medicine at the University of Texas Southwestern Medical School at Dallas, is studying mechanisms underlying allergy and inflammation.

He is developing a model to clarify the mechanism of immunologic activation of mast cells (which cause allergy symptoms) by studying the nature of subcellular sites of the biochemical reactions involved.

Dr. Tabas, an assistant professor of medicine at the Columbia University College of Physicians and Surgeons, is studying atherosclerosis and low density lipoprotein (LDL)-macrophage (scavenger cell) interaction.

He has found a line of macrophage cells that accumulate large amounts of cholesteryl ester when incubated with human LDL and has characterized the specific properties that enable the cells to do this. A prominent feature of atherosclerotic lesions is a cholesteryl ester-laden cell which is thought to be derived from macrophages.

Bibliography on Lab Animal Welfare Free From NLM

A new annotated bibliography on laboratory animal welfare is available without charge from the National Library of Medicine. To receive a copy, send a self-addressed, gummed label to: Literature Search Program, Reference Section, National Library of Medicine, Bethesda, MD 20893. Include the full title—Laboratory Animal Welfare (SBS No. 1985-1)—with the request.

The bibliography was compiled by Fritz P. Gluckstein, D.V.M., M.L.S., NLM's coordinator for veterinary affairs. It contains 31 citations, most of them published between October 1983 and October 1984. An earlier bibliography with 85 citations is also available: SBS No. 1984-1.

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Dr. Field

"The Cancer Prevention Test with Frank Field" will be shown on Thursday, Apr. 18, at the following times and locations:

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<tr>
<td>Bldg. 1 Wilson Hall</td>
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<td>Landow Bldg.</td>
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<td>Bldg. 10 Masur Auditorium</td>
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Men Have 0.3% Chance of Developing Testicular Cancer

U.S. men have only a 0.3 percent chance of developing testicular cancer in their lifetime. But among young white men aged 20 to 34, testicular cancer is the most common form of cancer, accounting for 22 percent of all cancers in this age group.

It is the second most common cancer among men aged 35 to 39, and the third most common among young men aged 15 to 19. Almost all testicular cancers are germ cell cancers; the most common of these is a particular type called seminomas. The germ cells are the sperm-forming cells of the testes.

Rural Vaud, Switzerland, has the highest incidence of testicular cancer in the world with 10.5 cases per 100,000 (standardized to world population) a year; Cubans have the lowest incidence, near zero.

Among U.S. white men, the incidence is 3.6 cases per 100,000 a year. This is over four times the rate (0.8) for U.S. blacks. The incidence of testicular cancer among Hispanics, native Americans and Asians lies between those of white and black men.

The death rate from testicular cancer among U.S. white men, aged 20 to 29, declined about 40 percent between 1973 and 1978 even though the incidence for this high-risk group increased slightly during this time period.

The reasons for the upward trend are not clear, but the decline in deaths is due mainly to the increased survival brought about by advances in testicular cancer treatment. The outlook for men with seminomas found early is very good.

Ages 20-34 At Greatest Risk

Little is understood about the causes of testicular cancer, but men aged 20 to 34 years are at the greatest risk. Possible risk factors are congenital abnormalities, hormonal drugs, and trauma.

Testicular and genital abnormalities have both been associated with testicular cancer. Cryptorchidism—failure of the testes to descend into the scrotal sac—is thought to account for one in 10 cases of testicular cancer. Studies have also linked inguinal hernia in children with adult onset of testicular cancer.

There is some evidence that these hernias are due to incomplete descent of the testes, so they should not be considered separately from cryptorchidism. Other conditions associated with testicular cancer include some rare genetic abnormalities (like Klipfelter's syndrome, hermaphroditism and Turner's syndrome); gonadal aplasia, or failure of the gonads to develop; hypospadias, a condition in which the urethra opens on the underside of the penis; and mixed gonadal dysgenesis, a condition in which there is one developed testis plus a nonfunctional female genitalia.

Both the hormone estrogen and the synthetic estrogen diethylstilbestrol (DES) injected into pregnant mice can cause testicular abnormalities in male offspring.

DES exposure before birth has been linked to vaginal cancer in daughters, and to testicular abnormalities in sons, of women who took it to prevent miscarriages. Whether DES or estrogens increase the risk for testicular cancer in men is not yet clear.

Other factors that may be related to increased risk of testicular cancer are maternal bleeding during pregnancy and history of stillbirths. A recent study has suggested that teenage participation in sports like bicycling and horseback riding is perhaps associated with testicular cancer. A more detailed study is needed, though, before it can be concluded that the risk is a real one.

Traumas May Increase Risk

The study did not yield evidence that might explain the possible association. Scientists have speculated from time to time that trauma might somehow increase a man's risk of testicular cancer, but studies to date have not shown a definite association.

There is some contradictory evidence concerning testicular cancer and socio-economic status. Some studies have found that those with high income and high education are two-and-a-half times more likely to develop testicular cancer than those with less income and education. There is also some evidence that men from rural areas have higher rates of testicular cancer than city dwellers.

An association between exposure to viral disease like mumps orchitis and adult onset of testicular cancer has not been proved although an early case report in the 1940s suggested such a risk.

For more information, call 1-800-4CANCER.
Epilepsy, a neurological disorder that causes seizures, affects nearly 2.5 million Americans, or one percent of the population, most of whom depend on anticonvulsant drugs to prevent their seizures. Sometimes, though, the drugs do not work; either they do not control the sei-

zures or they cause nausea, dizziness, staggering, double vision, or even more serious problems.

What can patients with epilepsy look forward to when all the drugs on the market have failed to help them? In some cases, surgical interven

tion may be the answer, but for most patients hope lies in the development of more effective and less toxic antiepileptic drugs.

The challenge to find these drugs has been taken up by the Epilepsy Branch of the National Institute of Neurological and Communicative Disorders and Stroke in its Antiepileptic Drug Development (ADD) Program. Using a three-pronged, sequential approach, the program screens various compounds to see if they have any anticonvulsant activity, determines their possible adverse effects on animals, and finally tries to learn just how safe and effective they are when given to human beings.

**Anticonvulsant Screening Project**

In the Anticonvulsant Screening Project, compounds from academic chemistry laboratories and the pharmaceutical industry around the world are sent to the Epilepsy Branch. The screening process is divided into seven phases designed to reveal anticonvulsant activity, neurotoxicity, and, possibly, mechanisms of action. The testing is done at no cost to the suppliers, who retain the patent rights to the compounds.

**Toxicology Project**

Selected compounds showing favorable results in all phases of screening are scheduled for further testing in the Toxicology Project. Before new drugs can be given to humans, their safety must be thoroughly tested in animals, according to the regulations of the U.S. Food and Drug Administration (FDA). The toxicity of potential new antiepileptic drugs is therefore evaluated in two studies, one in rodents and another in dogs. Since the ADD program is a cost-sharing venture between the federal government and the pharmaceutical industry, the ADD program assumes only part of the cost of the toxicity evaluation by supporting one of the studies, while the sponsor supports the other.

**Controlled Clinical Trials**

Once a compound has progressed through the toxicity tests with no serious doubts about its safety, it is ready to be used in humans. Laboratory animals and human beings, however, have important biological differences, and the drug may not have the same effect clinically as it did in the laboratory. For this reason, the FDA requires that clinical investigations of new drugs be conducted in three phases: determination of the drug's safety in humans, usually healthy volunteers (phase I); tests to see whether the drug treats or prevents the disease for which it is intended, as well as estimation of its clinical safety and efficacy (phase II); and evaluation of the drug's long-term efficacy and safety in extensive clinical trials (phase III). The ADD program sponsors mainly phase II trials, although it may support phase I trials to accelerate clinical testing of a highly promising compound. The pharmacological sponsor, however, generally is responsible for phase I trials, and is always responsible for phase III trials.

The ADD program, the pharmaceutical sponsor, and clinical centers in which the drugs are actually tested work closely together on two well-controlled phase II clinical trials of each promising new antiepileptic drug. These trials obtain the evidence needed by the FDA so that the drug can be approved for marketing in the United States.

**Hope for the Future**

The ADD Program has stimulated renewed interest in drug therapy of epilepsy and has reversed the decline in antiepileptic drug development that lasted from 1961 to 1973. To date, the program has screened more than 9,200 compounds and is now clinically testing six of them. This rigorous search for new and better antiepileptic drugs focuses especially on those who are unhelped by the antiepileptic drugs now on the market, but ultimately, all patients with epilepsy will benefit from the advances in knowledge gained through the pursuit of this work.—B.J. Hessle
Dr. Byron Clark, Ex-NIGMS Pharmacology Director, Dies

Dr. Byron B. Clark, 76, former director of the Pharmacology-Toxicology (P/T) Program (now the Pharmacological Sciences Program) of the National Institute of General Medical Sciences, died recently.

Dr. Clark retired from NIGMS and moved to Cincinnati after serving from 1968 to 1979 as the program's director.

During his tenure, he devoted special attention to encouraging the use of stable isotopes in studies of drug metabolism and in clinical pharmacology. Under his leadership, the program also increased its emphasis on research in basic biorelated chemistry and molecular pharmacology.

Born in Texas, Dr. Clark received an A.B. degree from Baylor University. He began his professional career as a research associate at the University of Iowa, where he received both M.S. and Ph.D. degrees.

From 1936 to 1947, Dr. Clark was a faculty member at Albany (N.Y.) Medical College; he then became professor of pharmacology and chairman of the department of pharmacology at Tufts University School of Medicine.

Dr. Byrom B. Clark

In 1957, Dr. Clark joined Mead Johnson Pharmaceutical Co. as director of pharmacology and chemotherapy. He became vice president of the Mead Johnson Research Center in 1962.

During his career, Dr. Clark published more than 100 research papers in the field of pharmacology and contributed chapters to pharmacology textbooks. He also served as a consultant to several universities, drug companies, and the government.

Dr. Clark held membership in many professional societies, including the American Society for Pharmacology and Experimental Therapeutics, the Society for Experimental Biology and Medicine, and the Society of Toxicology. He was also a fellow of the American Association for the Advancement of Science.

Dr. Clark is survived by his wife, Gladys; two sons, Kenneth of Cincinnati and Jack of Des Moines; and eight grandchildren.

Ms. Arenales

Duane W. Arenales has been appointed chief of the Technical Services Division, and Eve-Marie Lacroix has been named chief of the Reference Services Division of the National Library of Medicine.

Ms. Arenales, deputy chief of TSD since 1981, came to the library in 1971 after receiving her B.A. from the University of Colorado and her M.L.S. from the University of Maryland. In 1978 she was named head of the loan and stack section of the Reference Services Division.

In 1981 she was appointed deputy chief of the Technical Services Division with special responsibility for serials holdings projects, a number of national cooperative programs, publications and staff training. From June 1982 to January 1984 she was detailed to the position of acting regional medical library program coordinator.

Ms. Lacroix, former head of information services, Canada Institute for Scientific and Technical Information (CISTI), succeeds Albert Berkowitz, who retired in August 1984, as chief of the Reference Services Division.

RSD is the division within Library Operations responsible for providing reference facilities and services, administering the interlibrary loan program, and for maintaining and preserving the general collection.

Ms. Lacroix received her B.A. in chemistry from Rivier College in Nashua, N.H., and her M.S. in science information from the Illinois Institute of Technology in Chicago.

In her former position with CISTI (a division of the National Research Council of Canada) she rose from program analyst to head of information services, where she was responsible for developing and maintaining CISTI's national information systems and services.

NIH Peer Review Appeals Forum Set for April 29 in Wilson Hall

A forum on the NIH Peer Review Appeals Process for Grants and Cooperative Agreements will be held Apr. 29 from 1:30 to 4 p.m., in Wilson Hall, Bldg. 1.

The forum will enable NIH BID staff concerned with extramural programs to learn more about the appeals process through a panel discussion and questions and answer format.

The appeals process allows the outside community to express concern about errors in the NIH Peer Review process through informal communication and ultimately formal appeals.

Panelists will include: Drs. William F. Raub, NIH Deputy Director for Extramural Research and Training; S. Stephen Schiaffino, deputy director, DFG; Jerome G. Green, director, Division of Extramural Affairs, NHLBI; Zora J. Griffo, NIH appeals officer and coordinator of the forum, and Michele W. Applegate, associate administrator for extramural affairs, ADAMHA.

The forum is open to all NIH employees. No advance registration is required. For more information, call the NIH Appeals Office, 496-5358. □

NIH Peer Review Appeals Forum

Everything comes to the man who does not need it.—French Proverb

Positron Emission Tomography Explained in NINCDS Booklet

Positron Emission Tomography: Emerging Research Opportunities in the Neurosciences was written for scientists, administrators, and others interested in exploring the research potential of this noninvasive method for depicting brain function.

The 16-page publication from the National Institute of Neurological and Communicative Disorders and Stroke describes PET research in stroke, epilepsy, and Alzheimer's disease. Also described are PET studies of healthy brains revealing the normal metabolic processes associated with speech, hearing, and mental functions. Valuable information is also being gathered from PET studies of brain tumors.

Single copies of Positron Emission Tomography may be obtained from the Office of Scientific and Health Reports, NINCDS, Bldg. 31, Rm. 8A06, Bethesda, MD 20205; telephone: (301) 496-5751. □

All art is a revolt against man's fate.—André Malraux

April 9, 1985

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CC Information Officer Doreen Mead Retires

Doreen Mead, chief of the Clinical Center’s Office of Clinical Reports and Inquiries (OCR&I) for the last 4 years and a past employee of three NIH Institutes, retired on Apr. 1. Mrs. Mead began her NIH career in 1963 as a temporary employee.

“I came in on a crash project that was only supposed to last 6 weeks,” she said. “Two of us were hired to do the job were asked to stay permanently. I had been looking only for part-time work, but the opportunity presented itself and I took it.”

Her first full-time job was purchasing equipment for an NCI laboratory headed by Dr. Frank Rauscher, who later became director of NCI. Three years later, she worked as a secretary in NCI’s Viral Biology Branch.

Prior to getting married, Mrs. Mead had attended Indiana University for 2 years, majoring in medical technology. Once her own children—three daughters—were well on their way to earning their various degrees, Doreen went back to finish college at American University.

“There was an intern program at NIH for those who wanted to complete their degrees,” she recalls. “American University accepted all my credits from Indiana and I enrolled as a junior. I worked 20 hours a week at NIH in various places (including the Division of Nursing and NIAID Information Office) and went to school full-time. It was a wonderful experience, but it was difficult.”

Her children thought it was great to be going to college at the same time as their mother. “In the spring of 1975, Doreen graduated with a degree in journalism and sociology from AU. Two of her daughters graduated at the same time, one from college, the other from graduate school.

Armed with a diploma, Mrs. Mead returned to full-time work in the NICHD Information Office. After a little more than a year there, she came to the Clinical Center as a public affairs specialist for OCR&I, rising to chief of the office in 1981.

“I was delighted to become chief,” she said. “What fascinated me was being able to make my own decisions. There was a tremendous sense of freedom. The Clinical Center had just started the Medicine for the Layman series when I first came. That was an exciting project to be involved with from the beginning.

“Over the last 8 years, the Clinical Center has produced about 75 lectures and I was privileged to work on all aspects of the project. It was an excellent training ground. I’ve coordinated about 15 talks, published nine of the booklets, developed a public service announcement, planned publicity strategy and, finally, coordinated the whole series.

“I was fortunate to be working for two CC Directors who strongly supported the project,” she added. “I also had an exceptionally strong staff who worked together with speakers and artists in a creative and highly professional manner.”

As a student journalist at AU, Doreen developed her skill as a feature writer, getting stories published in a variety of local newspapers. She would like to write feature articles again, perhaps about the travels to Scotland or Greece currently planned with her husband Marshall in the fall.

Doreen also enjoys making pottery, drawing and sailing on the boat she and Marshall, keep at Solomon’s Island.

“I’ve never had a life plan or goal,” she explained. “I just took opportunities. NIH is full of them. You just have to keep your eyes open.”

As for retirement, “Right now I’m looking forward to being totally free,” Doreen says. []

Four New Members Named to NICHD Advisory Council

Four new members have been named to serve on the National Advisory Child Health and Human Development Council.

The new members are Dr. Joseph H. Bellina, an expert in gynecologic laser surgery, from New Orleans, La.; Dr. Vivian F. Lewis, a retired educator, from Wilberforce, Ohio; Dr. Howard A. Schneiderman, senior vice president for research and development for Monsanto Company in St. Louis, Mo.; and Dudley H. Willis, an attorney with Simonds, Winslow, Willis & Abbott in Boston, Mass.

The council is the principal advisory body of the National Institute of Child Health and Human Development. Composed of physicians, scientists and representatives of the general public, the council meets three times a year at the National Institutes of Health to consider applications for research and research training support in the fields of reproductive sciences, child health and human development. Its members also make recommendations to the secretary and to the directors of the NIH and NICHD on the Institute’s general program.

Medical Corp. President

Dr. Bellina is president of Bellina and Voros Medical Corp. in New Orleans. He trains medical and postdoctoral students in laser surgery at Tulane University and several other research hospitals, and is the clinical director and consultant at the University of Nevada’s Southern Nevada Memorial Hospital in Las Vegas.

The author of numerous scientific journal articles and several books on fertility and gynecologic laser surgery, Dr. Bellina earned his medical degree from Louisiana State University in New Orleans and his doctorate in engineering from Century University in California.

Since her retirement in 1973 as chair of the department of health, physical education and recreation at Central State University in Wilberforce, Dr. Lewis has served as a consultant to many schools and universities around the country. She currently is a fitness and sports consultant for the U.S. Air Force.

Active in Public Service

Dr. Lewis is also active in public service as a volunteer teacher for dropouts, the educationally disadvantaged and the handicapped. She holds a master’s degree in education from Case Western Reserve University in Cleveland, Ohio, and a doctorate in education from Ohio State University in Columbus.

An authority on developmental genetics, insect physiology and endocrinology, Dr. Schneiderman has published more than 200 scientific articles. He is an adjunct professor of biochemistry at Washington University’s School of Medicine in St. Louis, Mo., and a professor (on leave) in the School of Biological Sciences at the University of California at Irvine, where he was dean from 1969 to 1979. He received his master’s degree in zoology and Ph.D. in physiology from Harvard University.

In addition to being a practicing attorney, Mr. Willis is vice president and director of the George D. Hall Co., a publisher of industrial service and trade directories. He serves on several charitable boards in the Boston area, including the Boys Club, the Massachusetts 4-H Foundation, and the Perkins School for the Blind. Mr. Willis has a law degree from Boston University and completed his postgraduate legal education at Georgetown University.

The belief in a supernatural source is not necessary; men alone are quite capable of every wickedness.—Joseph Conrad
A computer system that can identify patterns of disease in data derived from analysis of patient urine samples will soon be available to physicians and hospitals throughout the country.

The system, which was developed by researchers at Michigan State University during the past 10 years, can identify more than 40 genetic disorders. In the future, the system may have diagnostic applications for various endocrine diseases, Alzheimer’s disease, and certain kinds of cancers.

An integral part of the computer system, which is located at the Michigan State University Mass Spectrometry Facility, is an extensive library of mass spectral data for more than 400 organic acids and steroids.

The library specifies the normal amounts and types of these compounds in urine for various age groups, as well as abnormal patterns that “fingerprint” the identity of certain diseases.

“Almost any disease will disturb cellular metabolism in some way that disrupts the normal pattern of metabolites in urine,” explained Dr. Charles C. Sweeley, professor and chairman of the biochemistry department of Michigan State University in East Lansing.

“The computer can recognize some of these abnormal patterns and identify exactly what is wrong with a patient.”

Using software created by Dr. Sweeley and Dr. Jack Holland, who is also a professor of biochemistry at Michigan State University, the library interacts with organic acid data from urine analyzed on a gas chromatograph-mass spectrometer (GC-MS). This device can accurately identify compounds in quantities as small as a billionth of a gram.

The computer compares the urinalysis data generated by the GC-MS to the library data and prints out a metabolic profile that, once interpreted, can indicate if a patient is normal or has a disorder.

“Essentially the computer is examining tiny gas chromatographic peaks,” Dr. Sweeley said, “that indicate the presence of minor components in the urine. Although these compounds may differ by small amounts from the norm, they can have critical importance for diseases such as those caused by inborn errors of metabolism.”

Dr. Sweeley and his colleagues have been using the metabolic profiling system to analyze one or two samples of urine a week sent by hospitals in the Lansing area. Now that they have adequately tested the system, the investigators intend to put it to clinical use.

Currently there are only about 25 hospitals in the world that can do metabolic profiling, according to Dr. Sweeley.

These hospitals use a more labor intensive approach,” he said, which is slower, more costly, and probably less certain than our system.

Their urine profiles only detect abnormal substances, whereas our profiles quantify all substances. Our metabolic profiling could have critical importance in preventing mental retardation caused by certain types of genetic disorders.

“These rare diseases probably go undiagnosed in a substantial proportion of infants,” Dr. Sweeley said, “because the disorders cannot be detected easily without a metabolic profile that can define them biochemically. Early diagnosis and treatment of patients with these diseases, however, may prevent the retardation from developing.”

Any one genetic disorder may occur very rarely, but their impact as a group of disorders can be substantial, according to Dr. Sweeley. Published research indicates that one of every 20 sick newborns has a genetic disease, he said, and a significant percentage of these diseases can be detected with the profiling system.

A metabolic profile can also track the effectiveness of treatment. Patients with the adrenal cancer neuroblastoma, for example, produce high levels of two metabolites called HVA and VMA that can be easily detected in the urine with the Michigan State metabolic profiling system.

“We were able to show that x-ray treatments were somewhat effective in countering a patient’s neuroblastoma,” Dr. Sweeley said, “because the x-ray treatments caused the levels of these two metabolites to drop in the child’s urine.”

Surgical removal of the tumor then resulted in normal levels of these markers.

Dr. Sweeley and his colleagues have also discovered in urine two markers for diabetes that he expects will detect poor control of the disorder. These compounds, he believes, may be metabolites of protein breakdown in skeletal muscle cells deprived of glucose.

The scientists most recently added to the computer library a data base on steroids present in urine to allow identification of various endocrine disorders including... endocrine tumors.

Dr. Sweeley is currently testing whether the system can be used to detect Alzheimer’s disease. “We will be analyzing urine from patients with Alzheimer’s disease and comparing the metabolic profiles to those of geriatric control subjects,” he says. “From such comparisons we might be able to detect a marker for this type of senility.”

The more metabolic profiling is used the more applications it will have, according to Dr. Sweeley. Because new markers of disease will probably be discovered in the urine, “Theoretically, metabolic profiling could have a wide range of applications,” he says. “I’m convinced this type of urinalysis will make a big impact on the diagnosing of diseases within the next decade.”

Experiments Have Shown

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(Received for publication 25 June 1985.)

Computer System Diagnoses Rare Disorders

By Analyzing Substances in Patients’ Urine

Walking/Hiking Club Schedule

The R&W Walking/Hiking Club schedule for April is as follows:

Sunday, Apr. 14—Tidewater Lock to Carderock Rec Area (10.5 M.). Meet at NIH at 8:30 a.m. For information call Ed El-Hoshy (w) 496-4666.

Sunday, Apr. 21—Carderock Rec Area to Violettes Lock (11.6 M.). Meet at NIH at 8:30 a.m. For information call Elizabeth Weisburger (w) 496-6272, (h) 530-4042.

Do the duty that liest nearest to thee.—Goethe

Dr. Daniel Nebert, NICHD, Distinguished Lecturer

Dr. Daniel Nebert, chief of NICHD’s Laboratory of Developmental Pharmacology, was selected to deliver the Distinguished Lecture on Mar. 6 in Knoxville, Tenn., in a prestigious series sponsored by the University of Tennessee and the Oak Ridge National Laboratory.

Dr. Nebert’s research focuses on the genetic regulation within cells of a group of enzymes called P-450. These enzymes break down, or metabolize, substances that occur naturally within the body, as well as foreign compounds from the environment.

While the enzymes protect the body by converting foreign chemicals into harmless excretable substances, P-450 enzymes may also convert foreign compounds into harmful metabolites that disrupt normal cell function. These disruptions within the cell may lead to cancer or birth defects.

Experiments Have Shown

Dr. Nebert’s experiments have shown that the genetic makeup of individual animals determines how well the P-450 enzymes perform their protective functions.

Thus, differences in the genes that encode the P-450 enzymes appear to affect the susceptibility of some animals—and probably people—to cancer or birth defects caused by drugs or environmental contaminants.

In his lecture, “Drug Metabolism: From DNA to Dinosaurs,” Dr. Nebert described how he and his coworkers dissect the P-450 genes from genetic material, and then use computers to analyze and compare the genes from different species, including man.

Based on differences in the sequence of the DNA subunit of these genes, the researchers can estimate when during evolution various species developed the ability to metabolize foreign chemicals.

DNA comparisons such as these for the P-450 genes may also permit scientists to determine when similar species, such as the rat and mouse, branched from a common ancestral rodent.

Dr. Nebert is among the 1,000 contemporary scientists (selected from a list of over 1 million researchers in all scientific fields) whose work is most cited by his colleagues.
NLM’s Dr. Bachrach Retires

Dr. Clifford A. Bachrach, chief of the National Library of Medicine’s Medical Subject Headings (MeSH) Section since 1974, retired Mar. 1 after 19 years with NLM.

Dr. Bachrach joined the staff in 1966 as chief of the bibliographic services division and was appointed in 1974 to head the Medical Subject Headings Section.

In this position he was responsible for the development of the vocabulary used in indexing and cataloging, and for overseeing the selection of journals cited in Index Medicus.

In 1979 he was also named editor of Index Medicus, assuming full responsibility for all aspects of the publication’s format and for instituting measures to ensure high quality in all steps of its production.

Before coming to NLM, Dr. Bachrach served as research epidemiologist and medical liaison officer for the coronary drug project at the National Heart Institute.

A farewell party was given in his honor on Mar. 1 at the Library. Attendees included several former heads of the MeSH Section.

Deputy director Kent Smith praised Dr. Bachrach as “one of the pillars of this organization. We all recognize the awesome responsibility he holds as editor of the world’s most comprehensive bibliography of the medical literature—the quality of his efforts underpins much of what NLM does and stands for.”

Dr. Bachrach was presented with a certificate of merit from Dr. James B. Wyrigaarden, NIH Director, a portrait by NLM artist Joseph Fitzgerald and a gift from his many friends and colleagues on the NLM staff.

On-Line CIS Demonstration

A presentation on the current status and future plans of an on-line interactive Chemical Information System (Fein-Marquart Assoc.), will be given on Apr. 16, at 10 a.m., Bldg. 10, ACRF, in the Little Theatre of the Visitors Information Center.

Hands-on terminals are available for use from 11:30 a.m. to 3:30 p.m., balcony, Visitors Information Center.

For further information call Dr. Cherie Fisk, 496-8869.

April 9, 1985

Many Adults Need Vaccinations To Protect Against Flu, Pneumonia, Hepatitis B, Etc.

Flu and pneumonia combined are the fifth leading cause of death in the United States, claiming tens of thousands of lives each year. Yet only 20 percent of people at high risk who should receive shots against flu and pneumonia do so.

The high-risk group includes people over 65 and those with chronic lung, heart, and metabolic diseases.

Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, has expressed strong support for the American College of Physicians’ new campaign to promote the immunization of adults against flu, pneumococcal pneumonia (the most common kind), and other infectious diseases.

Specifically, Dr. Fauci supports ACP recommendations that—depending on age and health status—adults be immunized against tetanus, diphtheria, measles, and rubella, and that certain high-risk groups be immunized against flu, pneumococcal pneumonia, and hepatitis B.

At a recent press conference held by the ACP in Washington, D.C., Dr. Fauci noted that about two-thirds of the tetanus cases in the United States occur in people over age 50, those persons least likely to have been immunized as children.

Tetanus is preventable, Dr. Fauci said, but it requires an initial series of three injections and booster doses every 10 years to maintain adequate immunity. Yet most adults do not know whether or when tetanus boosters are needed.

College-age and young adults may fall into the “immunization gap” regarding measles and rubella, Dr. Fauci said. Young adults born after 1957—who grew up when such vaccines were first licensed but before they were mandatory—may be unprotected and at risk for developing measles and rubella.

New Vaccine Revolution

In addition to improving existing vaccines to increase their use and effectiveness, NIAID and other scientists are using modern genetic engineering techniques to develop new vaccines.

One promising approach employs live vaccinia virus—first used 200 years ago to inoculate against smallpox—as the keystone in what might be called the “second vaccine revolution.”

By inserting bits of genetic material from other foreign viruses into vaccinia—much like adding railroad cars to a train—scientists are designing live-virus vaccines that may protect against several diseases. (In general, live-virus vaccines are more protective than inactivated, or killed, ones.) One possible combination vaccine would include hepatitis B, flu, herpes, rabies, and malaria viruses.

These new combination vaccines could be stored and administered as easily as smallpox vaccine, Dr. Fauci said, and they promise to be safe, effective, and low cost. Their use, he added, would revolutionize disease prevention, especially in developing countries that lack the money and facilities to provide multi-injection immunization programs.

Hybrid Vaccines

NIAID scientists have already used vaccinia to make two hybrid vaccines, one against hepatitis B and another against flu. Both have proven effective in small animals and are now being tested in chimpanzees.

The active ingredient in the vaccinia hepatitis B vaccine is not derived from human blood plasma, as with the present vaccine, but from the DNA of hepatitis B virus itself. Thus it overcomes the fear some people have of the chance transmission of acquired immune deficiency syndrome (AIDS), though this fear has been shown to be unfounded.

Presently available flu shots are only about 75 percent effective in preventing flu, and protection is not always long lasting. This is partly because existing flu vaccines contain killed virus rather than live virus, a problem the live-virus vaccinia flu vaccine overcomes.

Scientists are also experimenting with other types of hybrid flu vaccines, ones that make virulent flu strains with harmless, laboratory-derived mutants. One hybrid that proved 100 percent effective in an initial test on human volunteers last year is administered as nose drops, the respiratory tract being the point of entry for most flu virus germs.

In 1981 NIAID targeted 10 groups of diseases for prevention by new or improved vaccines within the next decade. The candidate vaccines include chickenpox, genital herpes, malaria, respiratory syncytial and parainfluenza viruses (which can be life-threatening in infants), infant meningitis, hepatitis A and B, flu, diarrheal diseases such as cholera and whooping cough.

When they become available, these vaccines promise to prevent many diseases that can be serious or deadly in both children and adults.

—Laurie Doepel

Dr. Pauline Smyrniriotsis, NHLB1 Biochemist, Dies

Dr. Pauline Z. Smyrniriotsis of NHLB1’s Laboratory of Biochemistry died of lung cancer Dec. 19 in her family’s hometown, Williamsport, Pa. She was 60.

Dr. Smyrniriotsis came to Washington during World War II and attended college at George Washington University where she received a degree in chemistry. She continued her studies while working for Dr. Bernard Horecker on the enzymes of the pentose monophosphate shunt, and obtained her master’s degree from George Washington University and her Ph.D. from Georgetown University.

Upon Dr. Horecker’s departure from NIH, Dr. Smyrniriotsis joined the Enzyme Section of the then Laboratory of Cellular Physiology where she remained until she became ill.

Much of her work in biochemistry was carried out with Dr. Earl Stadtman, and included research on degradation metabolism of riboflavin and, more recently, studies of glutamine synthetase.

Dr. Smyrniriots is survived by her sister who lives in Williamsport.
Dr. Martin Rodbell Named Scientific Director, NIEHS

Dr. Martin Rodbell has been appointed scientific director at the National Institute of Environmental Health Sciences in Research Triangle Park, N.C. Since 1972, Dr. Rodbell has been chief of the Laboratory of Nutrition and Endocrinology, National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases. He will be continuing a research career in agencies of the National Institutes of Health, Bethesda, Md., which he joined in 1956.

As NIEHS scientific director, Dr. Rodbell will head the Intramural Research Program which is made up of six laboratories specializing in biomedical research on the health effects of environmental agents in the areas of genetics, reproductive and development toxicology, behavioral and neurological toxicology, pharmacology, molecular biophysics, and pulmonary pathobiology.

The Baltimore, Md., native, who received his Ph.D. in biochemistry at the University of Washington, is an internationally recognized researcher on lipoprotein structure and metabolism; fat transport and mechanisms of blood triglyceride uptake by liver and adipose tissues and isolated fat cells; and the mode of action of hormones at the cellular and molecular level.

Dr. Rodbell began his research career as a research assistant at the University of Washington and did postdoctoral work at the University of Illinois before joining NIH as a chemist in what was then the National Heart Institute. In 1961 he joined the National Institute of Arthritis, Metabolism and Digestive Diseases at NIH, becoming chief of the Membrane Regulation Section of NIADDK in 1970.

Dr. Rodbell has maintained ties with the academic community and expanded his knowledge of research in an international context through an NIH training grant at the University of Brussels, Belgium, and Leiden University, Netherlands, and later as a visiting professor at the Institute de Biochimie Clinique, Geneva, Switzerland.

Use of Anesthesia and Sedation in Dentistry: Topic of Consensus Conference on April 22–24

The use of anesthesia and sedation in dentistry will be examined at an NIH consensus development conference to be held Apr. 22-24 in the Clinical Center's Masur Auditorium.

Anesthetic and sedative agents are widely used in modern dentistry. Though these agents have been a boon to both patients and dentists, questions have been raised about their safety and appropriate use.

A 14-member panel, drawn from the dental, medical, and lay communities will address these issues at the consensus conference.

The first 2 days of the meeting will be devoted to scientific presentations by dental and medical experts and to audience discussion. On the last day, the panel will present a consensus statement answering the following questions:

- What are the differences between general anesthesia, deep sedation, and conscious sedation?
- What are the indications and contraindications for the use of general anesthesia and sedation in children, adults, and the geriatric population?
- What are the appropriate agents and techniques for general anesthesia and sedation?
- What are the risks associated with the use of general anesthesia and sedation?
- What facilities, equipment, personnel, and training are needed for managing and monitoring patients?
- What are the directions for future research?

The conference on anesthesia and sedation is sponsored by the National Institute of Dental Research, the Food and Drug Administration, and the NIH Office of Medical Applications of Research. Sessions will run from 8:30 a.m. to 4:45 p.m. on Apr. 22, from 9 a.m. to noon on Apr. 23, and from 8:30 to 10:30 on Apr. 24. The meeting is open to the public.