

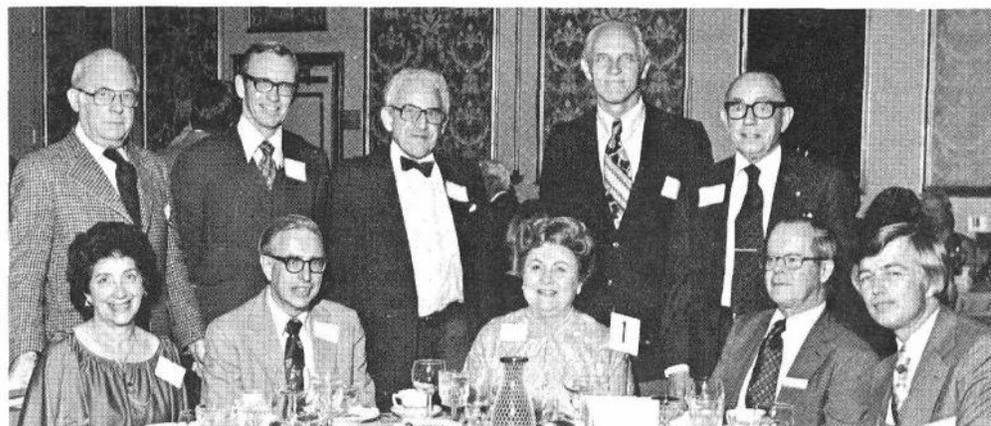
The NIH Record

U.S. Department
of Health,
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National
Institutes
of
Health

NIAID Marks 30th Anniversary



Eleven professional societies sponsored the 30th anniversary dinner for NIAID. Participants included (l to r) standing: Dr. Harry Feldman, National Foundation for Infectious Diseases; Dr. Mitchell Sams, Society for Investigative Dermatology; Dr. Leon Jacobs, American Society for Parasitology and FIC Director; Dr. David Talmadge, American Association of Immunologists; and Dr. Edwin Lennette, American Society for Microbiology. Seated are: Mrs. Leon Jacobs; Dr. Philip Norman, representing the American Academy of Allergy, American College of Allergists, American Association for Clinical Immunology and Allergy, and American Association of Certified Allergists; Mrs. Georgia Tatum, NIAID Advisory Council member; Dr. Thomas Weller, American Society of Tropical Medicine and Hygiene; and Dr. Richard Duma, National Foundation for Infectious Diseases.

2 of 3 Nobel Prize Winners Receive Support From 3 Institutes

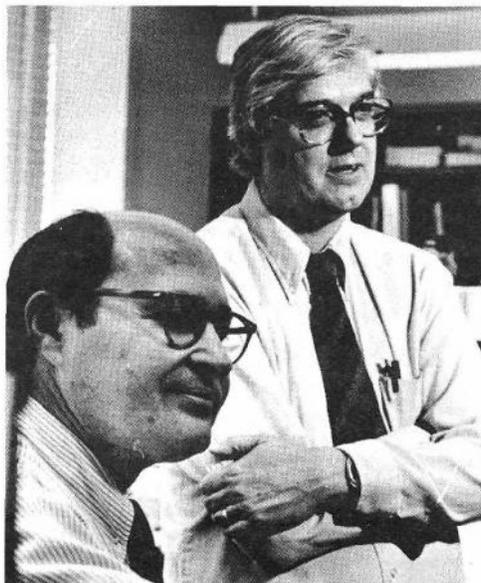
Two of three recipients of this year's Nobel Prize for Physiology or Medicine have received, during their research careers, financial support from three NIH institutes, including their initial specialized postdoctoral training.

Drs. Hamilton O. Smith and Daniel Nathans, both professors of microbiology at Johns Hopkins University Medical School, have received support from the National Institute of General Medical Sciences, National Institute of Allergy and Infectious Diseases, and the National Cancer Institute.

The two Americans and a Swiss, Dr. Werner Arber, of Basel, were selected for the prestigious international prize for their pioneering work on restriction enzymes.

These two grantees bring the number of NIH-supported scientists who have won the Nobel Prize to 67, of whom 4 were intramural scientists at NIH at the time they received the prize.

(See NOBEL, Page 12)



See Special 30th Anniversary Feature, pages 5-8.

This year marks the 30th anniversary of the National Institute of Allergy and Infectious Diseases. The occasion was recognized at NIH by two events, a dinner on Sept. 27 and an observance in the Masur Auditorium on Oct. 27.

Societies Sponsor Dinner

The dinner, marking NIAID's anniversary, held in Bethesda last month, was sponsored by professional societies representing allergists, microbiologists, parasitologists, and specialists in infectious diseases, honoring the Institute's 30 years of support in these fields.

The Oct. 27 celebration was for all NIAID employees. Dr. Sheldon Wolff, former NIAID clinical director and present physician-in-chief



Dr. Benacerraf

Dr. Wolff

of New England Medical Center Hospital and chairman of the department of medicine, Tufts University School of Medicine, was one of the main speakers. He reminded the employees of the role NIAID has played in advancing investigations in infectious diseases.

Cites Achievements

Similarly, Dr. Baruj Benacerraf, former chief of NIAID's Laboratory of Immunology, addressed the audience on the importance of study in the fields of immunology and allergic diseases and the Institute's achievements in these areas. Dr. Benacerraf is now Fabyan professor of comparative pathology and head of the department of pathology at the Harvard Medical School.

Following the session in Masur Auditorium, there was a reception with refreshments for NIAID employees in the Bldg. 10 cafeteria.

(See NIAID, Page 4)

Drs. Nathan (l) and Smith discuss the news of their award shortly after being notified that they— together with Dr. Arber—have received the 1978 Nobel Prize for Physiology or Medicine.

The NIH Record

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Daniel Baquero Jiminez Noted 12-Year-Old Guitarist To Perform at CC Nov. 9

A rare guitar presentation—sponsored by the NIH Minority Cultural Committee with the assistance of the NIH Hispanic-American Advisory Committee—is being offered on Thursday, Nov. 9, at noon in the Masur Auditorium.

Soloist At Age 9

Daniel Baquero, the noted 12-year-old Colombian guitarist, began at an early age to study guitar. He made his first public appearance at the age of 7. At 8, he won the first prize at the National Competition of Guitarists, and at 9 was a soloist with the Colombian National Symphony.



Dr. Charles R. McCarthy has been appointed director of the Office for Protection from Research Risks, OD. Dr. McCarthy, formerly chief of the Legislative Development Branch, OD, joined NIH in 1971. He received the NIH Director's Award in 1976 "for significant contributions to the resolution of difficult policy problems, particularly in the areas of Freedom of Information, the Privacy Act, and Biomedical Ethics."

Employees May Enroll, Change Health Benefits Enrollment From Nov. 13 Through Dec. 8

During the Federal Employees Health Benefits Program's "Open Season," Nov. 13 through Dec. 8, eligible employees may enroll in 1 of 14 different plans, change option, type of enrollment, or any combination of these.

A booklet, entitled *Open Season Instruction*, BRI 41-117, will be distributed in a packet to all employees. Brochures on the major plans and premium rates for all plans will be included.

The general plans are: Indemnity Benefit Plan (Aetna Life and Casualty Company); Service Benefit Plan (Blue Cross-Blue Shield); Group Health Association of Washington, D.C. Plan; Georgetown University Community Health Plan; and the George Washington University Health Plan.

Other plans available to NIH staff are: American Federation of Government Employees Plan; Alliance Health Plan; American Postal Workers Union Plan; Government Employees Hospital Association Plan; Mail Handlers Benefit Plan; National Association

of Letter Carriers Health Plan; and Postmasters Benefit Plan.

To enroll in one of these, an employee must be or must become a regular or associate member of the sponsoring organization. Employees living in the area surrounding Columbia, Md., may enroll in the local comprehensive Columbia Medical Plan. Employees living in the service area of Baltimore and Calvert County, Md., may enroll in a new plan for 1979, the Blue Cross and Blue Shield Comprehensive Medical Plan Network.

During the "Open Season," registration assistants will be available to answer questions on the program and help employees complete forms. These assistants will be listed on official bulletin boards.

A panel of experts representing the various health plans will review their respective 1979 contracts on Wednesday, Nov. 29, from 2 to 4:30 p.m. in Wilson Hall, Bldg. 1. All employees are invited, but permission to attend should be cleared with supervisors.

New Rates for Employees

GROUP HEALTH ASSOCIATION OF WASHINGTON, D.C.

Self	1978	1979
High option	\$11.32	\$13.22
Low option	4.58	5.70
Family		
High option	29.69	34.66
Low option	13.52	16.65

INDEMNITY BENEFIT PLAN (Aetna)

Self	1978	1979
High option	7.49	7.63
Low option	2.31	2.43
Family		
High option	13.72	12.60
Low option	5.47	5.75

SERVICE BENEFIT PLAN (Blue Cross-Blue Shield)

Self	1978	1979
High option	11.17	10.76
Low option	1.45	1.73
Family		
High option	24.86	24.03
Low option	4.22	5.02

GEORGETOWN UNIVERSITY COMMUNITY HEALTH PLAN (*)

Self	1978	1979
High option	10.96	13.30
Family		
High option	28.65	34.84

GEORGE WASHINGTON UNIVERSITY HEALTH PLAN (*)

Self	1978	1979
High option	12.02	13.23
Family		
High option	28.71	31.84

(*) Plans offer only one option.

Influenza Virus Vaccine Available to Employees At Risk

The Occupational Medicine Service will be offering influenza virus vaccine to employees at increased risk from infections of the lower respiratory tract through November.

Conditions predisposing persons to such risk include: heart disease; chronic lung disease, such as bronchitis, emphysema, and severe asthma; chronic kidney disease; diabetes mellitus.

Vaccination is also recommended for persons 65 years and older because of increased mortality due to influenza in this age group.

If you have questions regarding the influenza virus vaccine, call on OMS Health Unit or your private physician.

The vaccine will be administered in Bldg. 31, Room B2B47, in accordance with the recommendations of the PHS Advisory Committee on Immunization Practices.

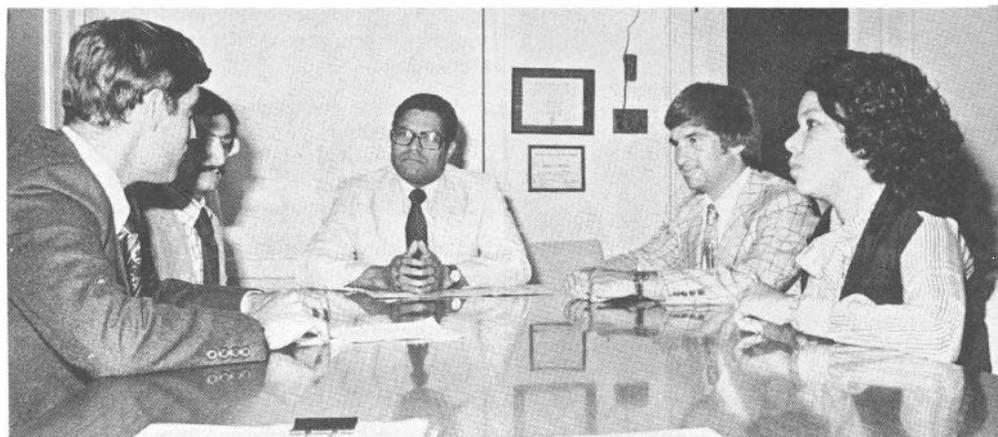
14 Countries Participating In Internat'l Symposium On Pertussis

An International Symposium on Pertussis will take place Nov. 1-3 in the Masur Auditorium.

Participants from 14 countries will review the host-parasite relationship of *B. pertussis*, evaluate knowledge on current immunizing materials, and develop a scientific consensus on the research needed to improve pertussis immunizing procedures and materials.

The meeting was organized by Dr. Charles R. Manclark, BOB/FDA, and Dr. James C. Hill, NIAID, and is sponsored by NIAID, BOB/FDA, CDC, and FIC.

Conflict Study Group Holding Open Meetings With Employees



Dr. Malone met recently with the Conflict Study Group. L to r are: Dr. Stanley Cohen, Dr. Vito Stellato, Dr. Malone, Dr. John Turney, and Patricia Scandrett.

Employees who are concerned about conflict between individuals and groups within their work environment will soon have the opportunity to learn how NIH plans to study such problems. Members of the Conflict Study Group—created at the request of Dr. Thomas E. Malone, NIH Deputy Director—will hold open meetings with employees in Wilson Hall, Bldg. 1, on Wednesday, Nov. 1, from 1:30 to 2:30 p.m., and Tuesday, Nov. 7, from 1 to 2 p.m.

Discussion will cover the background, purposes and plans for conduct of the 1-year study.

Information may also be obtained by calling

study group members directly, 496-1811, or by contacting any member of the NIH Review Panel for the Study of Employee Conflict.

Review panel members are:

J. Harrison Ager	Bldg. 4, Room B2-39	496-3670
Ann Marie Doran	Bldg. 10, Room 4N218	496-3253
Sol del Ande Eaton	Bldg. 31, Room 10A35	496-6266
Anthony Gaetano	Bldg. 12A, Room 4018	496-6391
William O. Mitchell	Bldg. 7, Room 217	496-2787
Naomi Nichols	Bldg. 10, Room B2N237	496-4595
Dr. Marie Nylen	Bldg. 30, Room 132	496-1483
Adeline Obot	Bldg. 31, Room 1B41	496-5104
Virginia Ono	Bldg. 31, Room 4A52	496-5231
Dr. Bruce Schrier	Bldg. 36, Room 2A21	496-3298
Linnie Sloan	Westwood, Room 610	496-7467
Kent Smith	Bldg. 38, Room M109	496-6491
Charles Walker	NIEHS, N.C.	8-629-3315
Mary White	Bldg. 31, Room B1C23	496-5385

CC's Dr. Green Fulfills Dream Of Move to Israel

After 8 years of planning, CC chemist Dr. Maurice Green will finally see his dream come true—he and his family are moving to Israel. Most of his wife's family already have settled in that country.

Dr. Green and his wife will move to Beer-Sheva in the Negev region of Israel. There he will become Director of the Clinical Laboratories at the Soroka-Medical Center, part of Ben Gurion University Center for Health Sciences. The 675-bed hospital (soon to expand to 1,000 beds) provides health care for over 200,000 people from a 6,000 square mile radius, as well as laboratory services for 22 day-care clinics and two smaller hospitals.

The Green's two daughters left the U.S. last August to enroll in boarding school for 6 to 12 months where they can adjust to the new country, language, and traditions. Dr. Green and his wife will leave Bethesda shortly.

Dr. Green, who received his B.A. degree in chemistry in 1958 from Drew University, and his Ph.D. in biochemistry from the University of Arizona in 1967, moved to Washington in 1968. He was chief of Biomedical Engineering for the American National Red Cross until 1970, when he became Director of Applications Research with the American Instrument Company.



In 1973 Dr. Green was appointed assistant chief of the Clinical Chemistry Service in the Clinical Center's Pathology Department. Since last year he served as a senior staff chemist with the department.

Ethics of In Vitro Fertilization Subject of STEP Seminar

The next STEP Committee biomedical ethics seminar will be held Wednesday, Nov. 15, in Conference Room 10, C-Wing, Bldg. 31 from 3 to 5 p.m.

Dr. Samuel Gorovitz, professor of philosophy, University of Maryland, will discuss Ethical Aspects of In Vitro Fertilization.

No advance registration is required. Attendance is open to all on a space available basis.

Retiree R. Donald Reed Dies; at NIH 40 Years

R. Donald Reed, formerly with the Extramural Programs of the National Institute of Allergy and Infectious Diseases until his retirement in 1973, was stricken with a fatal heart attack on Sept. 26, while vacationing at Nantucket, Mass.

With NIH for more than 40 years, Mr. Reed—while a visual information specialist—helped found the Medical Arts and Photography Branch of NIH. He also served with the Division of Research Grants in 1955-57 and again from 1958 to 1970 as executive secretary of the Biophysics and Biophysical Chemistry Fellowship Review Section.

Served With NIDR

From 1957 to 1958 he was with the National Institute of Dental Research as assistant chief of its Extramural Programs, and in 1970 joined NIAID.

Mr. Reed received a degree in biology from the University of Maryland and the master's degree in bacteriology from Georgetown University.

For the past 25 years, Mr. Reed played the Cello with the Montgomery County Symphony Orchestra.

Walter Wurfel Is Speaker At Information Seminar

The NIH Information Training Committee will present White House Deputy Press Secretary Walter Wurfel as the guest speaker at an information seminar on Tuesday, Nov. 14, at 9:30 a.m. in Bldg. 31, Conference Room 6, C-Wing.

Mr. Wurfel will discuss the Organization and Operation of the White House Press Office.

All interested NIH staff are welcome.

'Virtuosi di Roma' Featured In FAES Concert Nov. 4

The Virtuosi di Roma, who appeared in 1968 at its first concert, will return to play an all Vivaldi program, at the second concert of the 1978-79 Chamber Music Series sponsored by the Foundation for Advanced Education in the Sciences, Inc.

The concert will be held on Saturday, Nov. 4, at 4 p.m. in the Masur Auditorium. Admission is by ticket only.

Two Institutes Hold Cross-Disciplinary Meeting on Immune and Kidney Diseases

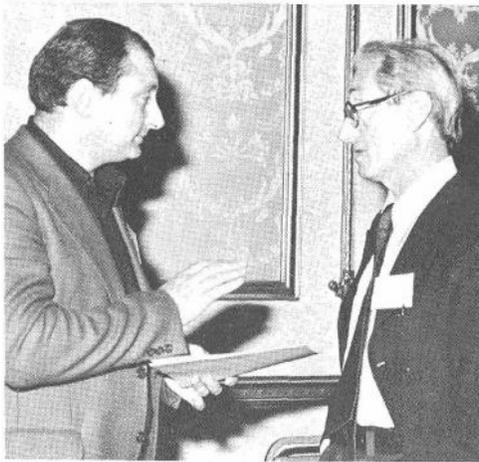
The first cross-disciplinary meeting on Immune Mechanisms and Renal Diseases was held recently in Bethesda. Cosponsored by NIAMDD and NIAID, the session attracted more than 120 scientists experienced in immunology, nephrology, pathology, endocrinology and other related fields.

Major topics discussed included structure-functional relationships; electrostatic forces and morphologic studies; glomerular mesangium and cells; immune mechanisms involving renal antigens, complexes, cryoglobulins and antigens; complement and noncomplement mediators; major histocompatibility locus and disease including complement deficiency states; and immune mechanisms in systemic lupus erythematosus.

Dr. Giuseppe A. Andres, professor of microbiology, pathology and medicine at the State University of New York at Buffalo, stated in his paper that the most important problem concerning the development of autoimmune diseases is identification of the antigen.

Dr. Andres reported research from his laboratory showing that mercury, a common environmental pollutant, can induce autoimmune disease involving the kidney and other organs. He described the studies showing that animals exposed to mercuric chloride develop a systemic autoimmune disease resulting in development of antigen-antibody complexes.

These complexes induced more severe lesions such as membranous glomerulone-



Dr. Philipp Mahieu of Belgium (l.) talks with Dr. Andres during a conference intermission.

phritis and nephrotic syndrome. Dr. Andres cited the need for more research aimed at understanding the mechanism by which exogenous, toxic agents may stimulate autoantibody production.

Principal NIH conference organizers were Dr. Nancy B. Cummings, associate director, Kidney, Urologic and Blood Diseases, and Dr. M. J. Scherbenke, director, Kidney Disease and Urology Extramural Program, from NIAMDD; and Dr. Sheldon G. Cohen, director of the Immunology, Allergic and Immunologic Disease Program, NIAID.

Environmental Safety Experts Meet at NIH

The Environmental Safety Branch, Division of Research Services, recently hosted the second seminar on laboratory safety of the World Health Organization Working Group on Laboratory Safety Elements. The meeting was attended by 19 biosafety specialists from the U.S. and 6 foreign countries.

During the 3-day conference, the participants discussed laboratory safety equipment and facilities, support services, hygiene, and medical surveillance and training programs. The proceedings will be used in development of the *Laboratory Safety Code of Practice* being prepared for publication by WHO.

WHO working group members are:

Next STEP Forum: New Nonpharmacological Approaches to the Control of Pain

The next STEP Forum continues its series with a discussion of New Nonpharmacological Approaches to the Control of Pain on Thursday, Nov. 16, from 2 to 4 p.m. in the CC 14th floor auditorium.

Dr. Ronald Dubner, NIDR, is moderator. Other discussants are Drs. Candace Pert, NIMH; Dr. David Mayer, Virginia Common-

Vinson R. Oviatt, NIH, chairman; Dr. T. A. Bektemirov, Research Institute for Viral Preparations, Moscow, USSR; William Bruce, Animal Virus Research Institute, Pirbright, United Kingdom; C. H. Collins, Public Health Laboratory Service, London, United Kingdom; Dr. T. Holme, Karolinska Institutet, Stockholm, Sweden.

Also, Dr. Meinrad A. Koch, Robert Koch-Institut, Berlin, Germany; Dr. Alastair P. MacLennan, Microbiological Research Establishment, Porton, United Kingdom; Warren V. Powell, NIH; and Dr. Konrad Bogel, WHO, Geneva, Switzerland.

wealth University; Dr. Glenn Davis, NIMH; and Dr. Donlin Long, Johns Hopkins University.

Bus transportation to the Clinical Center will be provided. The bus leaves the Westwood Bldg. at 1:15, Landow at 1:30, and the Federal Bldg. at 1:32 p.m.

TRAINING TIPS

The Executive and Management Development Branch is sponsoring the following supervisory courses at NIH in November and December:

Alternative Management Approaches for the 80's	Nov. 1-3
Intramural Orientation	Nov. 8
Introduction to Supervision	Dec. 4-8
Federal Budget Process	Dec. 12-14

For further information concerning these courses, call Sacelia Damuth, 496-6371.

OMS Offers Employees Stress and Coping Program

A program concerned with Stress and Coping will be presented by Rachele Mandelbaum, mental health counselor for the Occupational Medicine Service. She will explore the mental and physical causes and effects of stress and suggest some useful coping techniques.

Employees are invited to attend and participate.

All programs will be offered at 11:30 a.m. and 12:15 p.m. on the dates and at the places indicated:

Monday, Nov. 13, Bldg. 1, Wilson Hall
Tuesday, Nov. 14, Bldg. 10, Masur Auditorium
Wednesday, Nov. 15, Westwood Bldg., Conference Room D
Friday, Nov. 17, Federal Bldg., Room B119

NIAID

(Continued from Page 1)

In 1948, NIAID (first called the National Microbiological Institute) was established by law and became one of the earliest Institutes within NIH.

Asked about the contributions by intramural and Institute-sponsored scientists, Dr. Richard M. Krause, NIAID Director, stressed that work during the past 30 years has established a base upon which the Institute can move ahead in the 1980's, not only in basic research but also in clinical application of new knowledge in treating and preventing diseases.

"Although our mission is focused on investigations into infectious, allergic, and immunologic diseases," Dr. Krause said, "our research is applicable to other diseases as well."

In particular, the Institute's contributions in immunology have greatly expanded understanding in this complex area of science. This new knowledge can now be applied to almost every branch of medicine, touching on an ever-widening range of practical medical problems in such fields as cancer, maternal-fetal relations, and aging.

**Are You Afraid of Your Anger?
Call Employee Assistance Program
496-3164**

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Special 30th Anniversary Feature



Dr. Richard M. Krause, Director of the National Institute of Allergy and Infectious Diseases and Assistant Surgeon General, PHS, is an internationally known scientist and spokesman in the areas of immunology, allergy, and infectious diseases. Since his appointment in November 1975, he has provided new stimulus to the research programs conducted and supported by NIAID. One of Dr. Krause's primary concerns is investigations in immunology. He has maintained an active interest in the practical application of this new knowledge to the prevention and control of diseases, and has sparked renewed interest in a number of areas, including the problems of sexually transmitted diseases. Also, he has played an active role in the development and implementation of the World Health Organization's research program on diseases of special importance in developing nations.

Major Events 1948-78

1948—National Microbiological Institute established Nov. 1

1951—Grants program initiated and new branch established to administer research, training and fellowship grants: grants to be reviewed by the National Advisory Health Council

1955—National Microbiological Institute renamed National Institute of Allergy and Infectious Diseases

1956—First official meeting of NIAID National Advisory Allergy and Infectious Diseases Council held March 7-8

(See *EVENTS*, Page 8)

NIAID Reorganized To Fulfill Its Mission

The National Institute of Allergy and Infectious Diseases has as its mission the development of better means of diagnosing, treating, and preventing infectious, allergic, and immunologic diseases.

To reach this goal, the Institute conducts basic and clinical research in laboratories at NIH in Bethesda, Md., and in Hamilton, Mont., and supports, through grants and contracts, investigations in universities, hospitals, and laboratories throughout the country.

As a result of a reorganization in 1977, all grants and contracts awarded by NIAID are divided into two areas: Microbiology and Infectious Diseases; and Immunology, Allergic and Immunologic Diseases.

An Extramural Activities Program directs the program and project review process, admin-

isters grant and contract funding awards and expenditures, and oversees the acquisition, standardization, and distribution of certain research materials such as viral reagents and allergens.

The Intramural Research Program, headed by the Scientific Director, antedates the extramural programs and encompasses broad efforts to solve some of the more difficult research problems. There are 10 laboratories in Bethesda and Montana.

Institute scientists, as well as NIAID grantees and contractors, publish the results of their research in scientific journals and report their findings at national and international meetings of professional societies and take part in efforts aimed at development and application of new knowledge.

Former NIAID Directors

Four directors preceded Dr. Richard M. Krause, present NIAID Director.

Dr. John R. Seal was Acting Director of NIAID from August until November 1975 when the new Director Dr. Krause arrived. Presently, as deputy director, Dr. Seal is responsible for coordinating day-to-day NIAID operations.

He became director of Intramural Research, NIAID, after his retirement from the Navy in 1965, and was appointed scientific director in 1970, remaining in that position until he assumed the duties of Acting Director.

While in the Navy, in which he served for 23 years, Dr. Seal held the post of Commanding Officer of the Naval Medical Research Institute, and various naval positions.

Serves 11 Years

Dr. Dorland J. Davis served as NIAID Director from October 1964 to August 1975.

Before becoming Director, he served in several leadership positions within the Institute.

He retired, after 36 years with the PHS, in 1975, and lives in the Bethesda area.

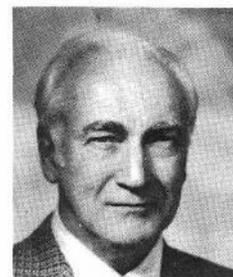
Dr. Justin M. Andrews served as Director of NIAID from April 1957 until his retirement in October 1964. Before that, he was chief of the Communicable Disease Center in Atlanta.

Dr. Andrews died in 1967.

Dr. Victor H. Haas was appointed Director



Dr. Seal



Dr. Davis



Dr. Andrews



Dr. Haas

of the National Microbiological Institute (later renamed NIAID) in 1948, and served until April 1957. He had been officer in charge of PHS malaria investigations from 1943 to 1948.

Dr. Haas now lives in San Francisco.

First Successful Drug Treatment Of Systemic Viral Disease

The first successful drug treatment of patients with a systemic viral disease was announced by NIAID in August 1977.

The drug used—adenine arabinoside (ara-A)—significantly reduced both neurological damage and deaths due to herpes virus encephalitis, a highly fatal brain infection.

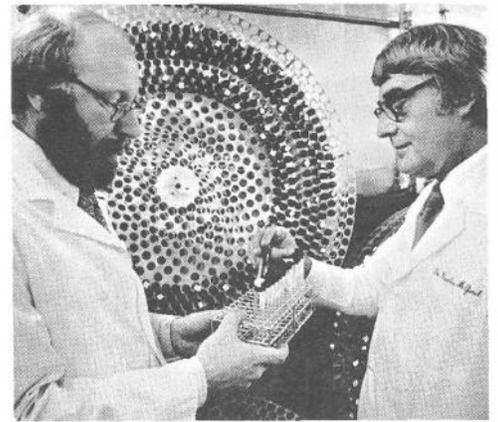
Herpes encephalitis is the most common type of non-epidemic fatal encephalitis (inflammation of the brain) in the U.S. If a patient survives, his central nervous system is usually permanently damaged. Until this study, there had been no effective treatment for the disease.

The study was coordinated by Drs. Richard J. Whitley and Charles A. Alford of the University of Alabama, Birmingham, who

worked with scientist-physicians from 15 universities around the country.

NIAID is sponsoring further studies to evaluate the effectiveness of ara-A against herpes zoster, herpes encephalitis, neonatal herpes, and progressive mucocutaneous herpes. These are being conducted by NIAID's Collaborative Antiviral Clinical Study Group involving investigators at 22 centers throughout the country.

This study group is part of the Institute's Antiviral Substances Program, a contract-supported program initiated in 1969 to encourage development of substances effective in the prevention and treatment of viral diseases.



Drs. Whitley (l) and Alford examine samples of tissue cultures to identify the herpesvirus in order to diagnose herpes encephalitis.

NIAID Continues Vigorous Malaria Research Program

From the very earliest days of malaria research in the Laboratory of Tropical Diseases (under the direction of Dr. G. Robert Coatney) through investigations in immunology and parasitology of malaria by Dr. Victor Haas, the first Institute Director, scientists supported by NIAID have had as their goal the ultimate development of a malaria vaccine.

Unique System Developed

In 1975, Dr. James A. Dvorak, Dr. Louis Miller, and Tsugiye Shiroishi, all of NIAID, and Willard C. Whitehouse of the Television Engineering Section, Patient Services Department, CC, developed a unique electro-optical system which enabled them to observe and record, for the first time, the invasion of red blood cells by malaria parasites.

This system—which can be applied to other areas of biomedical research—has helped to

clarify the crucial sequence of events by which the organism causing malaria begins its life cycle in the blood.

Through use of this new system, NIAID scientists have discovered the manner in which merozoites, a form of the malaria parasite, enter normal red blood cells.

This discovery was followed shortly by identification of a specific blood group substance (Duffy) on red cells which facilitated attachment and penetration of certain types of malarial parasites. Absence of this substance could be equated with resistance to malarial infection.

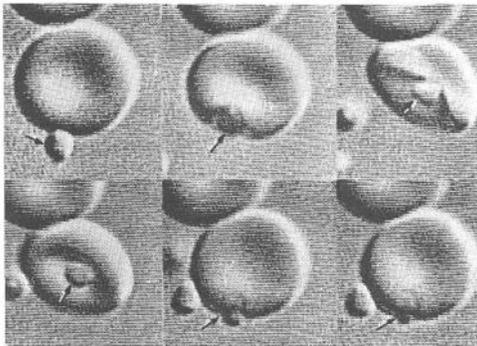
In 1976, two groups of investigators—one led by NIAID-supported scientists, Drs. William Trager and James Jensen, at the Rockefeller University, and the other at the Walter Reed Army Institute of Research—reported independently their success in growing in culture *Plasmodium falciparum*, the most lethal type of malaria parasite.

Vaccine Possible

This breakthrough holds out hope that the malaria parasite can be grown in the test tube—a prerequisite for the development of a malaria vaccine.

Also in 1976, Drs. Robert Gwadz and David Chen of NIAID's Laboratory of Parasitic Diseases developed a vaccine against gametes—the sexual forms of the parasite that infect the mosquito. By inducing this immunity in chickens on which the mosquitoes feed, they have blocked the parasite's development in the mosquito, thus preventing it from transmitting the disease to its next victim.

Scientists have maintained a thread of continuity in their research which they hope will lead to the eradication of malaria, one of the major killers of mankind.



This inverted microscope sequence shows (from upper left to lower right) the invasion of a red blood cell by a malaria parasite (arrow). Following attachment of the parasite to the red blood cell, there is a marked distortion of the red blood cell followed by the relatively slow invasion of the red blood cell by the parasite.

Ongoing Trials Promise Prevention, Control Of Viral Hepatitis

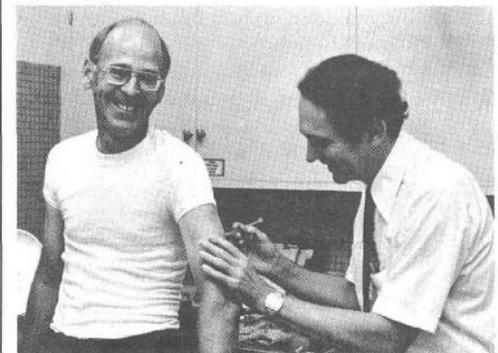
Since the 1960's, NIAID has supported and conducted an extensive research program on viral hepatitis. During this time, intramural scientists have been responsible for many accomplishments in the prevention and control of this disease, including the development of experimental hepatitis B vaccines, now in the first phases of clinical trials.

At the present time, there is no effective treatment for hepatitis B infection, but experimental vaccines under investigation at NIAID and elsewhere offer hope for controlling this disease.

Testing of the NIAID hepatitis B vaccines in humans has been under way since last fall in small groups of Trappist monks, selected because these individuals are unlikely to have had prior exposure to hepatitis B infection.

In addition, NIAID volunteers have received the vaccine because they also represent a low risk population and are readily available for testing and evaluation. Other NIH professionals are being recruited for these tests.

Hepatitis A has also been studied by Institute scientists and grantees. Intramural scientists have photographed and identified the virus that causes hepatitis A, and have developed a practical laboratory technique for detecting this virus and the antibody to it.



Dr. Franklin J. Tyeryar, NIAID's Viral Hepatitis project officer, receives an experimental hepatitis B vaccine—developed by NIAID scientists—from Dr. Robert H. Purcell, head of the Institute's Hepatitis Viruses Section. Dr. Tyeryar was one of several volunteers who received the vaccine as part of ongoing clinical trials to evaluate its effectiveness in stimulating antibodies against the hepatitis B virus.

Major Efforts Directed To Develop, Test Vaccines

For many years, NIAID has directed major efforts toward the development and testing of vaccines to prevent a variety of diseases. In 1953, when Institute scientists isolated adenoviruses—a cause of upper respiratory tract disease—the groundwork was laid for the development of oral vaccines now used to prevent adenovirus infections in military recruits and in civilian populations should outbreaks occur.

In the early 1960's, NIAID became involved in an intensive program to test rubella, or "German measles," vaccines. The information obtained in these clinical trials helped lead to a licensed product in 1969.

Another advance in vaccine development occurred in the late 1960's when an inactivated vaccine for *Mycoplasma pneumoniae* was produced through the efforts of NIAID scientists, contractors, and grantees. *M. pneumoniae* is a primary cause of pneumonia, especially in children and young adults.

Although the experimental vaccine developed has proved useful in reducing pneumonia in Marine recruits, the vaccine has not yet been developed for civilian populations.

Prevention of influenza is a major goal of the Institute's vaccine development program. In 1976, the Institute, in conjunction with the Center for Disease Control and the Bureau of

Biologics, FDA, supported unprecedented activity in this field of research, including the largest field trials ever conducted of any flu vaccine.

Information obtained in these studies has provided scientists with a much better base of information about immunization against influenza in populations never previously exposed to the virus or against those who have been infected with related viruses.

NIAID's latest successes in vaccine development concern organisms causing bacterial infections. Some years ago the Institute initiated studies of vaccines to prevent pneumococcal pneumonia and, in 1977, FDA gave approval to a polyvalent vaccine which prevents pneumococcal infection by 14 of the most common types of pneumococcal bacteria.

A major benefit of this vaccine, developed largely for use in the elderly, is its demonstrated effectiveness in preventing serious pneumococcal infections in children with sickle cell anemia or whose splenic function has been otherwise impaired and who are particularly susceptible to serious pneumococcal infections.

NIAID has also focused research efforts on the development of vaccines to prevent bacterial meningitis in infants and young



Dr. Irving Goldschneider (l) comforts a boy—at Newington Children's Hospital, Hartford, Conn.—who is about to receive an injection of meningitis vaccine from Dr. Martha Lepow, a pediatrician participating in NIAID field trials.

children. Presently, the only commercially available meningitis vaccines are for meningococcal types A and C. The A vaccine is licensed for use in all ages and the C vaccine is licensed for individuals over age 2.

The current licensing of the A vaccine was obtained, in part, because an NIAID-supported study in Finland demonstrated the effectiveness of this vaccine in preventing infection in children as young as 3 months.

Asthma, Allergic Disease Centers Supported



At the Asthma and Allergic Disease Center at Johns Hopkins University, Dr. Philip Norman (r), Center Director, confers with the husband-wife team of Drs. Kimishige and Teruko Ishizaka.

The National Institute of Allergy and Infectious Diseases supports 14 Asthma and Allergic Disease Centers around the country. These were established to translate rapidly expanding knowledge of the immune system into improved diagnosis, prevention, and treatment of asthma and allergic disorders.

Leaders in this field of research, the husband and wife team of Drs. Kimishige and Teruko Ishizaka of the Asthma and Allergic Disease Center at Johns Hopkins University, have investigated many aspects of the antibodies (ordinarily protective substances in the blood)

Progress Made in Treatment, Prevention Of Allergic Reactions to Insect Stings

Major progress has recently been made in both the treatment and prevention of life-threatening allergic reactions to stinging insects. In July 1978, NIAID-supported researchers at Johns Hopkins School of Medicine announced that insect venom had proved useful in desensitizing allergic individuals.

A NIAID-sponsored consensus conference last month recommended more widespread use of emergency insect sting kits by allergic persons.

Reactions Serious

Allergic reactions to stings of insects, such as honeybees, yellow jackets, wasps, and hornets, can be serious, at times leading to a sudden drop in blood pressure, shock, and possibly death within minutes.

Although 50 to 100 Americans are reported to die annually from such reactions, many more deaths probably occur but are attributed to other causes, such as heart attacks. As a preventive measure, injections of whole body extracts have routinely been given to persons with insect allergies to build up their tolerance to insect stings.

which, in the case of allergy, cause tissue damage and produce disease.

The discovery in 1967 by the Ishizakas of a new class of antibodies (IgE) involved in the allergic disease process opened a new era of research into hypersensitivity reactions and has provided leads for the development of better

The Johns Hopkins scientists believe their study provides evidence that injections of insect venoms—the actual cause of allergic reactions—are safe and effective in preventing life-threatening allergic reactions to insect stings and should be utilized in treating allergic patients.

Concerning the emergency treatment of allergic individuals, a panel of experts from the NIAID consensus conference reached an agreement that reducing the problem of fatal allergic reactions from stinging insects requires two approaches.

Instruction Suggested

The panel suggested that extensive instruction of the public, both lay and professional, be carried out, educating persons to the dangers of insect stings and the means for treating them.

In addition, the panel felt that a service approach is also necessary. This embodies increasing the availability of emergency treatment by encouraging its administration by properly trained personnel.

ways to diagnose and treat allergic patients.

In addition to the center at Johns Hopkins, others are located at the Clinical Center and in Colorado, Illinois, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Wisconsin, and two in California.

First Maximum Containment Facilities

The first laboratory certified as a maximum containment facility for conducting recombinant DNA research opened in March 1978. The laboratory—operated for NIH by NIAID—is located on the grounds of the Frederick Cancer Research Center, Frederick, Md.

In addition, a smaller Mobile Containment Laboratory has been operational on the NIH campus since June. Another maximum containment facility is scheduled to open in the late summer of 1979 in Bldg. 41 on the NIH campus.

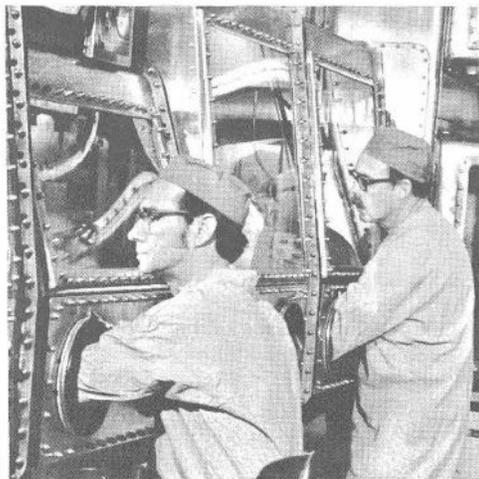
These new P4 laboratories, as they are called, have been designed to meet the highest standards of physical safety as set forth by the NIH guidelines which specify conditions and procedures designed as safeguards for conducting this research.

Two NIAID virologists—Drs. Wallace Rowe and Malcolm Martin—are conducting the first experiment in the P4 facility at Frederick. They are evaluating the theoretical risks involved in recombinant DNA research.

Upon completion of the risk assessment studies, the P4 laboratories will be available to other NIH and visiting scientists who will conduct their experiments with the assistance of a trained staff.

The three P4 level laboratories are interim facilities set up pending completion of renovations for the National Biomedical Containment Laboratory which will also be located at the Frederick center. The national facility is expected to be operational in 1981.

Managed and staffed for NIH by NIAID, the NBCL will function as a permanent facility available to NIH researchers and to qualified investigators nationwide. It will be used primarily for health-related research on infectious diseases and for projects using recombinant DNA technology and other techniques that present real or potential risk to investigators or to the environment.



Workers simulate an experimental procedure within the cabinet system of the P4 laboratory for recombinant DNA research.

NIAID Serum Bank Source Of Reagents for Research



Vials of sera are kept in the serum bank's cold room (-28° C) until needed by investigators.

The NIAID serum bank is the country's chief source of reagents used in research for "matching" organ donors and recipients. These histocompatibility (HLA) typing sera are also used in research aimed at the solution of a variety of disease problems.

Sera from the serum bank, located at Flow Laboratories in Rockville, Md., are also used to type for "matches" in white blood cell and platelet transfusions on which some cancer and anemia patients depend. A more recent use of sera is in genetic research and in studies on the relationship between the presence of certain HLA antigens and specific diseases.

The sera from the bank identify specific HLA antigens found on both tissue and white blood cells. These are coded by genes located on the sixth chromosome within an area known as the major histocompatibility complex. This consists of a group of inherited genes that seem to affect both histocompatibility and regulation of a person's immune response.

During 1977, 465 investigators throughout the world received reagents from the serum bank.

Events

(Continued from Page 5)

1962—Collaborative research program, funded mostly by contracts, established within Institute to direct nationwide projects on infectious diseases, vaccine development, transplantation immunology, research reagents, and antiviral substances

1968—Some NIH international programs, including U.S.-Japan Cooperative Medical Science Program and the International Centers for Medical Research, transferred from Office of International Research to NIAID

1971—First seven Asthma and Allergic Disease Centers established for clinical investigation of allergic diseases

1974—Centers established for study of sexually transmitted diseases and influenza

1977—First centers established for study of gastroenteritis and diarrheal disorders; NIAID Extramural Program reorganized into three areas: Microbiology and Infectious

Role in International Health Is Increased

Some research appears to have come full-circle for NIAID. Diseases such as malaria, schistosomiasis, etc., studied in the early days of the Institute because of the exposure of U.S. servicemen in World War II, are once again under investigation due to their threat to the population of developing countries.

These studies are carried out by NIAID scientists and grantees in cooperation with researchers in other countries around the world.

NIAID's International Biomedical Research program supports research and scientific training on infectious diseases important to the health of the world's developing countries. The ultimate goal of this research is improving technology for prevention, diagnosis, and treatment.

In the past, the Institute has operated four International Centers for Medical Research. Each has had a domestic base with an overseas research site. In June 1980, this program will become the International Collaboration in Infectious Diseases Research Program.

It will foster the development of research centers of excellence in developing countries through use of both multidisciplinary program project grants and individual research grants to U.S. investigators who have established scientific collaborators in a foreign country.

In this new program, special emphasis will be given to those six infectious diseases of the World Health Organization's Special Program for Research and Training in Tropical Diseases—malaria, schistosomiasis, filariasis, trypanosomiasis, leishmaniasis, and leprosy.



NIAID's Rocky Mountain Lab in Hamilton, Mont., has the world's largest tick collection, and is one of two centers for worldwide identification of ticks. Its Bishop collection is especially important for its historical value, according to Dr. James E. Keirans, an entomologist at RML, who is shown examining one of the jars in the collection.

Diseases; Immunology, Allergic and Immunologic Diseases; and Extramural Activities

1978—First maximum containment facility (P4) for recombinant DNA research opened in Frederick, Md. International Program Projects Grants and International Exploratory/Development Research Grants programs established. Centers established for interdisciplinary research on immunologic diseases

Project REACH Continues on Nov. 8 With Program on Heart Disease

Health Information from NIH via satellite continues on Project REACH (Research, Education and Community Health) with a program on heart disease on Wednesday, Nov. 8, from 6 to 8 p.m.; originating from the studios at the National Library of Medicine.

Representing NIH will be Dr. Michael B. Mock, project officer for the unstable angina and the coronary artery surgery studies. His presentations will be beamed via the Communications Technology Satellite to studios at the Medical University of South Carolina at Charleston.

A panel composed of cardiologists from the faculty of the medical school will discuss his talk for the audience of viewers from 14 southeastern states, the Ohio Valley, and Massachusetts.

For the first half hour, the subject will be Coronary Disease: Risk Factors and will be aired via open circuit to 1,800 homes in the Spartanburg Telecable System in South Carolina, and to 8 stations in the South Carolina Educational Television Network. This presentation will be tailored for the general public.

At 6:30 p.m. Dr. Mock will speak on The Role of Randomized Multi Center Trials in Evaluating the Comparison of Medical and Surgical Approach to Treatment of Coronary Artery Disease for medical and paramedical audiences. This will be followed by a talk on Anginal Syndromes by Dr. Peter Gazes, professor of medicine and director of the cardiovascular division, MUSC.

Also participating in the program from MUSC will be Drs. Grady H. Hendrix, associ-

ate professor of medicine and director of the heart catheterization laboratory; Charles P. Summerall, III, associate professor of medicine and director of the heart clinic; and William H. Barnwell, II, assistant professor of medicine and director of the MUSC stress laboratory.

The satellite ground station operated by the Lister Hill Center is in the studio on the ground floor of NLM. Persons wishing to attend should contact in advance Constance Barton, staff director, Task Force on Communication, 496-9151.

In addition to audiences at the satellite ground station sites in South Carolina and Bethesda, there will be groups of viewers at 36 hospitals and 15 health departments in South Carolina, 23 receiver sites with the Greater Cleveland Hospital Association and the Ohio Valley Medical Microwave System, and at satellite links in Birmingham, Atlanta, Athens, Louisville, Jackson, St. Louis, Oklahoma City, Austin, Norfolk, Harrisonburg, Va., and Columbia, S.C.

The program will also be available to 14 southeastern states in the Southern Education Communications Association.

The next program in the series will be on Diabetes on Nov. 15. The final program in the series from South Carolina will be aired Dec. 15.

The REACH project also has included programs linking Bethesda with the University of Washington Medical School, Seattle; the University of Alaska Medical School, Fairbanks; and the University of Colorado Medical School, Denver.

4 DCRT Employees To Present Papers At Computer Applications Symposium

Four Division of Computer Research and Technology employees will participate in the Second Annual Symposium on Computer Applications in Medical Care, Nov. 5-9, at the Sheraton Inn in Silver Spring, Md.

Dr. Judith M. S. Prewitt will present a paper on An Application of Pattern Recognition to Epithelial Tissues. She will discuss computer image processing and decision making techniques relevant to the detection and diagnosis of precancerous and cancerous states.

Chairman of a session on Language Processing and Representation, Martin N. Epstein will describe research toward developing a system to allow physicians personal access to patient medical data in his paper entitled National Language Access to a Melanoma Data Base.

Dr. Mohler Chairs Segment

Dr. William C. Mohler, DCRT associate director, will chair the segment on Representation of Medical Knowledge. His paper, Introduction to Representation of Medical Knowledge, will establish the perspective from which this year's symposium will view the problem.

Chief of the Laboratory of Applied Studies, Dr. Eugene K. Harris will present Appropriate Uses of Population and Individual Reference Data in Patient Care, which describes two general areas of statistical research: time series models for short series of observed values from a single patient; and empirical Bayes methods to improve estimates of individual patient means, using population reference data.

Registrations can be made at the door or through Glenda L. Snow, Department of Continuing Medical Education, Medical College of Virginia/VCL, Box 91, Richmond, Va. 23298, telephone: (804) 786-0494.

Tickets to Sackler Play Available From R&W

R&W is offering tickets to a fine play, "Sammelweiss" by Howard Sackler, now playing at the Eisenhower Theatre in the Kennedy Center. The play is based on the real life story of a 19th century European physician who crusaded for antiseptic conditions.

Orchestra seating is being held for NIH'ers on Thursday, Nov. 9, at \$11.50 per ticket. Performance begins at 7:30 p.m.

Contact the R&W activities desk, Bldg. 31 for reservations or phone 496-4600.

**Do You Think Nobody Listens?
Call Employee Assistance Program
496-3164**

VISITING SCIENTIST PROGRAM PARTICIPANTS

9/20—**Dr. Jacques Hiernaux**, Belgium, Laboratory of Theoretical Biology. Sponsor: Dr. Charles DeLisi, NCI, Bg. 10, Rm. 4B43.

9/24—**Dr. Jin-ichi Sasaki**, Japan, Molecular Biology Division. Sponsor: Dr. Edgar Ribi, NIAID, Rocky Mountain Laboratory, Hamilton, Mont.

10/1—**Dr. Francois Erard**, Switzerland, Clinical Endocrinology Branch. Sponsor: Dr. Sheuc-yann Cheng, NIAMDD, Bg. 10, Rm. 8N319.

10/1—**Dr. Masahiro Ohata**, Japan, Gerontology Research Center. Sponsor: Dr. Stanley Rapoport, NIA, GRC, Baltimore.

10/4—**Dr. Claes Emilson**, Sweden, Caries Prevention and Research Branch. Sponsor: Dr. William Bowen, NIDR, Park Bg., Rm. 451E.

10/5—**Dr. Ian David Gust**, Australia, Laboratory of Infectious Diseases. Sponsor: Dr. Robert Purcell, NIAID, Bg. 7, Rm. 202.

10/6—**Dr. Masahiro Tetsuo**, Japan, Laboratory of Clinical Sciences. Sponsor: Dr. Irwin J. Kopin, NIMH, Bg. 10, Rm. 3N325.

10/8—**Dr. Amos Ben-Zvi**, Israel, Laboratory of Microbiology and Immunology. Sponsor: Dr. Joost Oppenheim, NIDR, Bg. 30, Rm. 322.

10/8—**Dr. Gilbert Jay**, United Kingdom, Laboratory of Molecular Virology. Sponsor:

Dr. George Khoury, NCI, Bg. 41, Rm. 200.

10/10—**Dr. Nava Epstein**, Israel, Laboratory of Parasitic Diseases. Sponsor: Dr. Louis H. Miller, NIAID, Bg. 8, Rm. 326.

10/10—**Dr. Roger Mason**, United Kingdom, Laboratory of Biochemistry. Sponsor: Dr. Vincent Hascall, NIDR, Bg. 30, Rm. 107.

10/10—**Dr. Shigeru Mori**, Japan, Laboratory of Central Nervous System Studies. Sponsor: Dr. D. Carleton Gajdusek, NINCDS, Bg. 36, Rm. 5B25.

10/10—**Dr. Fredrika Pekonen**, Finland, Clinical Endocrinology Branch. Sponsor: Dr. Jacob Robbins, NIAMDD, Bg. 10, Rm. 8N315.

10/11—**Dr. Jordan Zjawiony**, Poland, Laboratory of Micromolecular Chemistry. Sponsor: Dr. Josef Pitha, Gerontology Research Center, NIA, Baltimore.

10/16—**Dr. Gabriel Vogeli**, Switzerland, Laboratory of Molecular Biology. Sponsor: Dr. Ira Pastan, NCI, Bg. 37, Rm. 4B27.

10/17—**Dr. Deep Chand Kaushal**, India, Laboratory of Parasitic Diseases. Sponsor: Dr. Louis Miller, NIAID, Bg. 8, Rm. 326.

10/18—**Dr. Jaap Goudsmit**, The Netherlands, Laboratory of Central Nervous System Studies. Sponsor: Dr. Clarence Gibbs, NINCDS, Bg. 36, Rm. 4A15.

Dr. Gastel Will Aid NIA To Communicate Aging Research Data to Physicians, Public

Dr. Barbara Gastel has been assigned to the National Institute on Aging through an appointment to the National Cancer Institute. During her 2-year assignment, Dr. Gastel will assist NIA staff in better communicating information on aging research to the medical profession and the public.

Plans NIA History

In addition to serving as a technical consultant, she will prepare papers and publications on topics such as the relationship between cancer and aging, the management of pain and discomfort, bereavement, immunology, and a brief history of NIA and the movement which led to its creation.

In order to improve the healthy, productive middle years of life, NIA has identified the development of geriatric medicine as a priority. Because too few medical students and physicians are routinely exposed to information about the care of older patients, Dr.

Gastel will produce materials which address physicians, many of whom have large numbers of elderly patients. As well as encouraging the teaching and practice of geriatric medicine, she plans to prepare guidelines for physicians based on NIA consensus conferences.

Before joining NIA, Dr. Gastel completed a summer internship with *Newsweek* magazine, a position sponsored by the American Association for the Advancement of Science. Most notable was the extensive work in preparing the *in vitro* fertilization article—the Aug. 7 cover story—"That Baby!"

Johns Hopkins Graduate

She received her B.A. from Yale University, where she majored in biology and the history of science and medicine. In May 1978 she received her M.D. and M.P.H. from The Johns Hopkins University Schools of Medicine and Hygiene and Public Health.



Throughout her training, Dr. Gastel has been active in journalism, including serving as executive editor of the *Yale Scientific Magazine* and assistant editor of the *Johns Hopkins Medical Journal*, in addition to writing and editing.

Dr. Rapoport Heads New Neurosciences Laboratory At NIA's Gerontology Research Center

Neuroscientists have long searched for an explanation of what goes on inside the human brain: what makes it work and how? Because of the demanding problems created by organic brain disease in the elderly and the far-reaching effects of CNS function and dysfunction, these questions are of particular interest to aging researchers.

To lead a program of research in this area, Dr. Stanley I. Rapoport has been appointed chief of the National Institute on Aging's new Laboratory of Neurosciences at the Gerontology Research Center in Baltimore.

Dr. Rapoport's research plan for the intramural neurosciences program includes studies of genetic molecular control mechanisms and evaluation of neuroendocrine control and homeostasis, which involves exploration of the immune system, the muscular system, and the central nervous system.

Both normative neuropsychobiology and the neuropathology of aging will be studied as the laboratory staff look at the many time/age-related problems and changes in function of these integrative systems.

He is best known for his work on the blood-brain barrier, the functional barrier between the brain capillaries and the brain tissue which regulates the rate of entry of substances from the bloodstream into the brain.

The importance of the blood-brain barrier can hardly be exaggerated: it normally excludes antibodies from the brain that could kill cells and alter function. When the blood-brain barrier breaks down, many of the body's homeostatic mechanisms are impaired.

Vascular disease, including hypertension and arteriosclerosis, lead intoxication, convulsions, trauma, viral encephalitis, and autoimmune disorders, all affect barrier function.

Dr. Rapoport and the laboratory staff will investigate the relationship between these



Dr. Rapoport, the recipient of many honors and awards, has authored numerous articles on the neurosciences. His book, *Blood-Brain Barrier in Physiology and Medicine*, was published in 1976.

conditions and the aging process, continue studies of the blood-brain barrier, and pursue research in other areas of special interest, including:

Brain metabolism, muscle function and muscle fatigue, excitation and contraction fatigue, the various forms of transport of materials to the brain (simple passive diffusion, facilitated diffusion, and active transport), and the regulation of delivery of drugs and metabolites.

He also hopes to extend the work done on aging at the National Institutes of Mental Health in the 1960's and 1970's. One major study indicated, for instance, that whereas the brain of a younger individual normally consumes glucose as its only energy source,

the brain of an aged person is provided with ketone bodies from the blood that partially replace glucose as an energy source.

Given the fact that the brain is very susceptible to glucose deprivation with resulting sensory changes, this altered availability of substrates for brain metabolism could bring about far-reaching functional and structural changes in learning, memory, and neurotransmission.

Specific studies on problems common to the elderly also are planned. It is well known that multiple drug use is common in the later years. In order to learn more about age-related alterations in pharmacokinetics and pharmacodynamics, new noninvasive techniques will be used to study the site of uptake in the brain of many medications.

Will Study Brain Edema

In addition, Dr. Rapoport intends to conduct intensive studies on the phenomenon of brain edema, recognizing the fact that the older population is prone to falls with resultant head injuries.

Before joining NIA, he served as an investigator in the Laboratory of Neurophysiology, NIMH, from 1964 to 1978. He received a B.A. from Princeton University, and studied a year as a Fulbright Scholar at the Grenoble University, France. He graduated in 1959 from Harvard Medical School, and is currently a professorial lecturer in physiology and biophysics at Georgetown University School of Medicine.

Dr. Rapoport began his career as a medical researcher while still a medical student, serving as a student investigator at the University of Pennsylvania Medical School, Harvard Medical School, Massachusetts General Hospital, and at the Massachusetts Institute of Technology.

NIGMS Co-Hosts Burn Care Therapy Consensus Exercise

New modes of treatment for burn injuries have been developed over the past decade through interdisciplinary basic and applied research and have been used in a few highly specialized burn centers throughout the U.S. This has improved the survival of severely burned patients by as much as 50 percent.

On Friday and Saturday, Nov. 10-11, NIH will seek a consensus of experts as to whether certain of these therapies might be applied as effectively, and far more widely, by physicians in less specialized hospitals.

Measures to be considered relate to fluid resuscitation, control of infection, metabolic balance, the use of excisional therapy and biologic coverings, and the damage of smoke inhalation.

The Consensus Development Conference on Supportive Therapy in Burn Care, sponsored by the National Institute of General Medical Sciences in collaboration with the American Burn Association, will be held in the Masur Auditorium. Dr. G. Thomas Shires, professor and chairman of the department of surgery, Cornell Medical College, will chair the 2-day conference.

Deliberations will have widespread significance. Nearly two million Americans each year suffer medically significant burns, of whom 130,000 are hospitalized and 70,000 require intensive care at a cost exceeding \$300 million.

Of the 10,000 burn victims who die annually, one-third are children under 15, with the great majority being preschoolers. Another large fraction involve elderly persons, 65 years and older.

Animal Center's Automated Blood Processor Improves Efficiency of Antibody Production

In 11 months of operation, the NIH Animal Center's automated blood processor has greatly improved the efficiency of antibody production at the Poolesville facility.

For many years NIH investigators have depended upon Animal Center staff to produce antibodies in farm animals for a wide variety of research needs. Now, with an automated blood processor in use, investigators receive up to twice as much plasma or serum as before with less processing required before research use.

"The plasmapheresis service by the Division of Research Services provides NICHD with antiserum from sheep which would have a commercial value of more than \$250,000 annually," noted Dr. Gary Hodgen, chief of the Institute's Pregnancy Research Branch. "In addition, this service has freed our technical staff from repeated booster preparations and the harvest of antiserum from clotted sheep blood.

"Key among the advantages," he added, "is that each animal which achieves a high antibody level can yield far more antiserum in a very few days, before the quality of the antiserum declines."

The technique used to collect these antibodies was the subject of a paper presented by Dr. Martin Morin of DRS at the 29th annual meeting of the American Association for Laboratory Animal Science in New York City, Sept. 25-29.

"This equipment can do more than improve antibody collection," said Leonard Stuart, head of the Ungulate Unit at the Animal Center. "We can also collect white blood



Jim Poole, a biomedical technician at the Animal Center, collects blood from a burro for a plasmapheresis procedure.

cells and platelets from horses, burros, sheep, goats, cattle, pigs, dogs and large monkeys." The Animal Center staff has already performed a leukopheresis (white blood collection) on a horse for investigators.

Interested individuals are invited to attend a Veterinary Resources Branch seminar on Nov. 8, at 2 p.m. in Bldg. 31, Conference Room 6. Plasmapheresis and Leukopheresis in farm animals, using a blood processor, will be discussed along with the research potentials of the equipment. A movie of the technique entitled "Automated Plasmapheresis for the Horse" will be shown. The movie is available in the NIH Library.

CFC Campaign Enters Final Weeks; Contributions Less Than Half of Goal

Collections for the 1978 CFC at just about the midpoint of the campaign continue to be encouraging. But indications are that NIH will fall short of its goal of \$277,195 unless employee pledges increase in the final weeks of the campaign. Thus far, only \$134,000 has been collected, less than 50 percent of the NIH goal.

It's not too late to contribute. If you haven't pledged yet, do it today. The campaign continues through Nov. 10.

Individual B/I/D participation is shown in the following mid-campaign status report:

NIH Ski Club Meets Nov. 14

The NIH Ski Club will hold its organizational meeting, Tuesday, Nov. 14, at noon in Wilson Hall, Bldg. 1. Trips locally and abroad will be discussed along with a slide show of last year's excursions.

All new members are welcome to attend. For additional information, call the R&W activities desk, 496-4600.

B/I/D	% of Goal	% of Participation
OPRR	234	85
FIC	168	75
OPPE	161	56
DMSR	144	58
DRG	143	70
OC	141	45
DMP	124	90
DEEO	110	133
OD	107	38
DRR	105	101
DPM	97	61
DES	88	54
DFM	78	78
NIGMS	69	77
NLM	66	32
NIA	62	74
NINCDS	60	42
NEI	52	61
NIDR	46	28
NICHD	38	12
NHLBI	35	19
DRS	34	17
NIAID	26	28
NIAMDD	26	13
CC	24	32
DCRT	19	5
DCG	13	8
DAS	13	16
NCI	9	4
NIH	39	25.6

Medicine for Layman Series Offers Lectures on Health At CC Tuesday Nights

Part of the Medicine for the Layman series, tonight's lecture entitled Cancer and the Environment, will be presented by Dr. Marvin Schneiderman, associate director, Field Studies and Statistics Program, Division of Cancer Cause and Prevention, NCI. He will also speak about the different disease trends observed in rural and urban settings.

On Tuesday, Nov. 7, Dr. Denis McCarthy, senior investigator, Gastroenterology Section of the Digestive Diseases Branch, NIAMDD, will discuss peptic ulcer, explaining the economic and cultural aspects of this disease, its diagnosis, and treatment.

The following Tuesday, Nov. 14, Food, Growth, and Your Baby will be the topic discussed by Dr. Norman Kretchmer, NICHD Director. His research interests center on developmental biochemistry and perinatal biology, particularly as they relate to nutrition and the ability of the developing individual to adapt to the environment.

All lectures are on Tuesday evenings at 8 in the Masur Auditorium.

For further information, call the CC Office of Clinical Reports and Inquiries, 496-2563.

Dr. Perry Serving as Acting Director Of New Office of Health Technology

The Office of Health Technology has recently been established by HEW Secretary Joseph A. Califano, Jr.

In close consultation with NIH, this multi-disciplinary unit will serve as HEW's lead agency for health technology management, reporting to Dr. Julius B. Richmond, Assistant Secretary for Health, HEW.

Dr. Seymour Perry is designated the Acting Director of OHT and Acting Deputy Assistant Secretary of Health for Technology, effective immediately. He will also continue to serve as the head of the Office for Medical Applications of Research at NIH.

A search for a permanent director for the OHT is currently being conducted under Dr. Perry's direction.

Each Public Health Service agency has been

asked to designate a representative to the OHT which will provide a forum for inter-action of all the PHS agencies in technology assessment. The output of these activities will be conveyed to the Health Care Financing Administration for its use in reimbursement decisions.

Information will also be disseminated to the practicing community and to the health systems agencies.

A bill providing a legislative base for the OHT was passed in the closing days of the Congressional session, and is awaiting the President's signature. Under provisions of the bill, the new office will be renamed the National Center for Health Care Technology, but otherwise makes little change in the original mandate of the office.

Give Thanks By Giving Blood



The Clinical Center Blood Bank is giving away a special bookmark to celebrate the Thanksgiving holiday.

This bookmark may be obtained from the NIH Library in Bldg. 10 during November.

Celebrate Thanksgiving early this year! Call 496-1084 today for an appointment. GIVE THANKS BY GIVING BLOOD.

Free Blood Pressure Checks Continue

All employees in Bldgs. 8, 7, 5 and 9, get ready to roll up your sleeves. We're coming your way!

Bldg. 8
Wednesday, Nov. 1
9 a.m. to 4:30 p.m.
2nd floor Conference Room 226

Bldg. 7
Thursday, Nov. 2
9 a.m. to 4:30 p.m.
Library, Room 105

Bldgs. 5 and 9
Tuesday, Nov. 7
9 a.m. to 4:30 p.m.
2nd floor Conference Room 216, Bldg. 5

continue until June 1979. The NCI grants were for study of the molecular biology of tumor viruses and viral tumorigenesis research.

Dr. Smith, 47, has received support from NIAID—both a Research Career Development Award and a research grant during the years 1967 to 1975—for studies on genetic control of lysogenization and induction and mechanisms of prophage integration and recombination. He also worked on DNA integration and recombination. He is now working under an NCI grant with Dr. Nathans, his department chairman, as principal investigator.

The enzyme which Dr. Smith isolated is called a restriction endonuclease. The enzyme is important because it makes cuts in double-stranded DNA (deoxyribonucleic acid), the genetic component of the cells, at precise, predictable points and thereby destroys or "restricts" the activity of the DNA.

The enzyme cuts produce "sticky ends" on the DNA which are receptive to binding with DNA fragments from other sources. Thus, the enzyme can be used to isolate gene segments and to splice the segments into compatible sites in bacterial cell extrachromosomal elements.

An example of such an application is the recent insertion of the insulin gene or genes into a bacterial particle, a potential source of

NIAMDD Establishes New Laboratory Of Bioorganic Chemistry

A new laboratory, Bioorganic Chemistry, has been established in the National Institute of Arthritis, Metabolism, and Digestive Diseases with Dr. John W. Daly serving as chief. He was formerly chief of the Pharmacodynamics Section of the Institute's Laboratory of Chemistry.



Dr. Daly

The new laboratory combines two former sections of the Laboratory of Chemistry—Pharmacodynamics and Oxidation Mechanisms. The latter section's chief is Dr. Donald M. Jerina.

The new laboratory's research will emphasize the interactions of pharmacologically active substances with biological systems. Mechanisms of the action and fate of physiologically and pharmacologically active agents will be studied. This research is designed to discover and develop chemical agents as tools to study cell functions and determine their potential use as therapeutics. Spectral investigations of new chemical agents, especially their interactions with macromolecules, are planned.

Dr. Daly, a graduate of Oregon State College, received his Ph.D. degree from Stanford University in 1958, and has been with NIAMDD since. His research interests concern biogenic amines, cyclic nucleotides, biologically active natural products, and drug metabolism.

Dr. Daly was instrumental in isolating and determining the structure of a cardioactive venom from the kokoa frog, considered the most toxic venom known. The action of the venom provides insights into the basic biochemical mechanisms of nerve transmissions. This work was recognized by the Hillebrand Award in 1977.

insulin to treat diabetes in the future. The enzyme can also be used to determine the pattern of subunits in complex DNA and to locate the position of various genes, or control centers, within the DNA. In this capacity, the new enzyme is a tool for the study of gene regulation.

Dr. Nathans used Dr. Smith's restriction endonuclease to make the first map of the genes of SV40, a tumor-causing virus. By cutting mutant SV40 DNA with the site-specific restriction enzyme, Dr. Nathans was able to demonstrate the location of important SV40 genes, including the site on the DNA which controls the tumor-producing factor.

Using radioactively labeled SV40 DNA, Dr. Nathans identified the position of "early" and "late" genes which control proteins produced during different stages of the SV40 infectivity cycle. This was the first functional map of animal viral genes.

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Dr. Arber was credited with postulating the existence of restriction enzymes, Dr. Smith was cited for discovering and isolating the first site-specific restriction enzyme obtained from an influenza bacterium, and Dr. Nathans was honored for using the enzymes to study viral DNA.

The citation from the Nobel Prize Committee at Stockholm's Karolinska Institutet pointed out that the work on restriction enzymes could help in prevention and treatment of hereditary diseases and cancer.

Drs. Smith and Nathans received support early in their research careers from NIGMS and NCI, respectively. Dr. Smith received an NIGMS fellowship to study genetics from July 1962 through June 1964, and Dr. Nathans—an NCI clinical associate from 1955 to 1957—received an NCI fellowship in biochemistry from July 1959 through June 1962.

Since their fellowship grants, both men have continued with NIH-supported research.

Dr. Nathans, 49, chairman of the department of microbiology, received an NIGMS grant from 1962 to 1974 to study protein synthesis. He was also the recipient of grants from NCI starting in June 1970, scheduled to