

The NIH Record

U.S. Department
of Health
and
Human Services

February 16
1982
Vol. XXXIV
No. 4

National
Institutes
of
Health

Attorney Richard Riseberg To Assume New HHS Post

For the past decade, Richard J. Riseberg, NIH's legal advisor, has successfully navigated the National Institutes of Health through the prevailing legal squalls that have centered around Congress, special interest groups, and private individuals. He is now moving on to a position of additional responsibility as assistant general counsel for public health, Office of the General Counsel, HHS, at the Parklawn Bldg.

The 44-year-old Harvard Law School graduate will be heading an office of 30 attorneys and staff and will be involved in the legal work from such agencies as: the Centers for Disease Control, National Institute of Occupational Safety and Health, Health Resources Administration, Health Services Administration, and the Health Care Financing Administration.



Mr. Riseberg was the first non-NIH employee to be given the NIH Director's Award.

Even though he will no longer be handling NIH's day-to-day legal affairs, Mr. Riseberg will still include it as one of his supervisory responsibilities. He will also serve as the legal advisor to the Office of the Assistant Secretary for Health.

He sees as among his first duties the implementation of the "administration's programs relating to block grants and the New Federalism."

During the 10 years he has been at NIH, Mr. Riseberg says that it has been "a dec-

(See MR. RISEBERG, Page 10)

President's 1983 Budget Provides NIH Increase of \$108.6 Million

President Reagan's FY 1983 budget for the National Institutes of Health presented to the Congress Monday, Feb. 8, calls for an increase of \$108.6 million (or 3 percent) over FY 1982, and a \$179.5 million (or 5 percent) increase over FY 1981.

The total requested for NIH research project grants, \$1,856.6 million, represents an increase of \$36.3 million over FY 1982, and would permit the funding of 4,100 new and competing grants during the year and the continuation of 11,041 noncompeting grants.

Research training funds of \$151.7 million during FY 1983 would support approximately 8,915 (full-time equivalent) trainees, a decrease of 787 from the FY 1982 level.

Funding for intramural NIH research

would be increased by \$31.7 million to a FY 1983 total of \$484.5 million. Most of the additional funding would be used to cover mandatory cost increases, such as utilities and higher costs of laboratory supplies and equipment.

The NIH budget request also includes \$6.6 million for the fifth year of the Clinical Center modernization program, and \$5 million for the first phase of renovation of Bldg. 8, part of a 10-year project in which several older NIH laboratory buildings would be upgraded to correct fire and safety hazards, and to provide proper levels of air purity and temperature stability to ensure quality of experimental results.

(See PRESIDENT'S BUDGET, Page 12)

Dr. F. K. Goodwin To Head NIMH Intramural Program

Dr. Frederick K. Goodwin has been named director of the Intramural Research Program, National Institute of Mental Health. An international authority in the study of depression, he was the former chief of the NIMH Clinical Psychobiology Branch.

Dr. Goodwin's special interest in major depressive and manic-depressive illnesses has resulted in greater understanding of the biological and pharmacological mechanisms involved in these disorders and their treatment. He was the first to provide controlled data demonstrating the antidepressant effect of lithium.

He began his career with NIMH in 1965 after his psychiatric residency at the University of North Carolina, Chapel Hill. He received his M.D. from St. Louis University's School of Medicine in 1963.

Although known primarily as a clinical investigator, Dr. Goodwin acquired considerable bench experience early in his career, including 1½ years of biochemical research at the National Heart Institute.

Under his leadership, NIMH scientists have developed techniques for the indirect evaluation of brain chemistry in patients, tested new drug treatments, and studied the interaction of psychotherapies and drug treatment. Work in his laboratory has also led to the development of biochemical predictors of specific drug responses

in the depressive disorders.

Other laboratory studies have provided insights into the roles involving sleep, 24-hour biological cycles, seasonal cycles,



As NIMH Intramural Research Program director, Dr. Goodwin intends to continue bridge-building between research, academia, and the practicing community.

and naturally occurring psychoactive agents in the depressive illnesses. His research over the past 15 years has resulted in more than 300 scientific papers.

In his new position, Dr. Goodwin will preside over the world's largest mental health

(See DR. GOODWIN, Page 8)

The NIH Record

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

The NIH Record reserves the right to make corrections, changes, or deletions in submitted copy in conformity with the policies of the paper and HHS.

NIH Record Office
Bldg. 31 Room 2B-03, Phone 496-2125

Editor
Jerry Gordon

Staff Writers
William B. Reinckens
Joyce F. McCarthy

Staff Correspondents
CC, Barbara Smakula; DCRT, William Hall; DPM, Judy Fouche; DRG, Sue Meadows; DRR, Barbara Menick; DRS, Jim Doherty; FIC, Susan P. Stark; NCI, Patricia A. Newman; NEI, Marsha Corbett; NHLBI, Bill Sanders; NIA, Ann Dieffenbach; NIAID, Jeanne Winnick; NIADDK, Barbara Weldon; NICHD, Pamela Driscoll; NIDR, Sally Wilberding; NIEHS, Hugh J. Lee; NIGMS, Wanda Wardell; NIMH, Harry Bell; NINCDS, Diane Striar; NLM, Roger L. Gilkeson.



Six Fogarty International Center employees were presented awards by FIC Director Dr. Claude J.M. Lenfant in January. Left to right are: Silvia Mandes, Toula Bocking, Mary Dasher, Elsie Fulton, Eileen Trevisan, and Fran Ottman. A group award was presented for their involvement in restructuring work processes and methods due to an organizational change. Mrs. Ottman was given a cash award for her contribution to the orderly and timely processing of NIH international travel notifications. Mrs. Fulton received recognition for sustained superior performance of her duties as European affairs program assistant.

FASEB Meeting To Be Held In New Orleans in April

The Federation of American Societies for Experimental Biology will hold its 66th annual meeting in New Orleans, Apr. 15-23.

More than 9,000 submitted and invited papers reporting research findings in the spectrum of life science will be presented in meeting rooms in the Louisiana Superdome and in neighboring hotels serving as headquarters for the individual societies.

The meeting will feature four interdisciplinary themes within the framework of the traditional format: 1) Connective Tissue, Apr. 17-19; 2) Control of Cell Growth, Apr. 17-19; 3) Diabetes Mellitus, Apr. 19-21; and 4) Hypertension, Apr. 20-23.

Dr. Thomas Will Speak

Pulitzer Prizewinner Dr. Lewis Thomas, chancellor of Memorial Sloan-Kettering Cancer Center, will be the general session speaker. His address, *The Anatomy of Basic Science*, will be given on Apr. 20.

At the general session, FASEB president Dr. Earl H. Wood will make the 7th annual presentation of the \$10,000 3M Life Sciences Award.

Approximately 325 organizations will be represented by some 650 scientific, technical, and education exhibits, including those from the various NIH components.

Scientists and students wishing to attend the meeting may direct requests for information to Barbara Nichols, FASEB, 9650 Rockville Pike, Bethesda, Md. 20814, or phone 530-7010. □

February Is Heart Month

President Ronald Reagan has proclaimed February as American Heart Month and invited Americans to join him in "reaffirming our commitment to the resolution of the nationwide problem of cardiovascular disease." □

NIH Extramural Trends, Topic of STEP Forum Series

Joseph A. Brackett, chief, Reports, Analysis and Presentations Section, Division of Research Grants, will talk on NIH Extramural Trends, at the Staff Training in Extramural Programs Forum Series on Wednesday, Mar. 10, from 2 to 4 p.m., in Conf. Rm. D, Westwood Bldg.

He will give a slide presentation on key trends and characteristics of NIH extramural activities from FY 1972 to FY 1981.

The STEP Forum series is open to all employees. For further information, call Arlene Bowles, 496-1493. □

Training Tips

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

	Course Starts	Deadline
<i>Office Skills</i>		
Files Maintenance and Improvement	4/7	3/22
Effective English Workshop	4/19	4/2
<i>Communication Skills</i>		
*Sign Language, Intermediate	3/9	2/24
Interpersonal Problem Solving	4/14	3/30
Human Relations Workshop	5/12	4/26
Writing Workshop	5/24	5/3

*This course will be held at NLM, Bldg. 38, Conf. Rm. A.

To learn more about these and other courses in office and communication skills, contact the Training Assistance Branch, DPM, 496-2146.

Management Intern Applications Accepted Through Feb. 23

The NIH Management Intern Program is accepting applications for positions at the GS-5, 7 and 9 levels for five positions through Feb. 23. The program consists of four different on-the-job administrative training assignments over a 1-year period. Interns will also enroll in formal course work and attend seminars.

Since 1956, the MI program has been the starting point for many individuals interested in beginning careers leading to responsible management positions. It is designed to attract people with high potential and provide them with special training and development. (This year, recruitment of candidates is limited to HHS employees.)

Eligibility Requirements

Eligible candidates must:

- Have a career or career-conditional appointment and have worked at HHS for 1 year immediately prior to Feb. 23.
- Be willing to work full time.

Employees eligible at the GS-5 level must have:

- Successfully completed a 4-year course in an accredited college or university leading to a bachelor's degree; or
- Three years of experience in administrative, professional, technical, investigative, or other responsible work which has provided a general background of the position; or
- Any time-equivalent combination of such education and experience.

At the GS-7/9 levels:

- Requirements for GS-5; and
- Additional education or experience appropriate for GS-7 or 9.

Application forms may be obtained from the Career Development Branch, DPM, Bldg. 31, Rm. B2C-39. □

New Protection of Human Subjects Regulations Will Be Discussed in February 22 Open Forum

New HHS Regulations for the Protection of Human Subjects will be the theme of the next Extramural Program Management Committee expanded forum on Feb. 22, it was announced by Dr. William F. Raub, NIH Associate Director for Extramural Research and Training. The meeting at Masur Auditorium will start at 9:45 a.m., and continue to 4 p.m. with a break for lunch.

"The new regulations represent a major change, and the start of a new phase in history of protection of human subjects," Dr. Raub explained.

Acting NIH Director Dr. Thomas E. Malone will open the program with introductory remarks. Dr. Philippe Cardon, former associate director of the Clinical Center, will be the principal speaker. He will give an overview of the new HHS regulations and their impact on the research community.

Dr. Cardon is currently a key consultant to the NIH Office for Protection from Research Risks in the drafting of a guide to the new HHS regulations to replace the earlier "HEW Guide." He has given several workshops earlier to NIH and other government research staff, and has been working

under contract to OPRR to complete an extensive analysis of the regulations as part of the effort to assist the extramural research community in adjusting to the major changes in the regulations.

"Among the key changes are exemptions of many types of low or no risk from coverage by the regulations and expedited review," Dr. Cardon said. "These new regulations succeed in reducing or eliminating cumbersome procedures in kinds of research that really never posed possible harms to individual research subjects."

The forum will cover several critical topics; informed consent, expedited review, exempt research, and waiver of informed consent. In addition, the chief policy changes in the NIH Manual Issuance on grants (4107) and contracts (6000-3-4.55) will be presented. Participants will be provided explanatory materials and problem cases in application of the regulations for discussion.

The forum is open to all NIH employees. No advance registration is required. For additional information, contact Roberta Garfinkle or Ruth Sevin on 496-7005. □

Fire Safety Ideas Sought From Handicapped at NIH



Handicapped NIH employees and their relatives can now have an opportunity to help themselves and the NIH Fire Department by submitting written suggestions, recommendations, or general information

about how fire evacuation and safety procedures might be improved here.

Currently, the NIH Fire Department is evaluating fire safety standards for the handicapped. Persons interested in contributing to this plan can forward their suggestions to A.W. Benson, assistant fire chief, NIH Fire Department, Bldg. 12, Rm. 103.

Those contributing should not expect a reply from the fire department because the information obtained will be incorporated into an overall NIH fire safety and evacuation plan. However, officials say, that much of the submitted material will be used to improve existing procedures for the handicapped.

Additionally, the NIH Fire Department would like all handicapped NIH employees, whether they take part in the survey or not, to submit the name, telephone, and room number of the handicapped aide currently teamed with them under the existing Building Warden program. □

Developmental Biology Society Seeks May Meeting Participants

Participants are being sought for the Mid-Atlantic Regional Conference of the Society for Developmental Biology to be held at NIH, May 16-18.

The meeting is intended as a forum for the exchange of information about developmental biology; and in particular, to encourage the participation of graduate students, postdoctoral workers, and junior faculty.

This will be the first regional society conference held at NIH. The Laboratory of Biochemical Genetics, National Heart, Lung, and Blood Institute; and the Laboratory of Developmental Neurobiology, National Institute of Child Health and Human Development, are the sponsors.

Anyone interested in presenting a paper or poster session may contact Dr. Gerald Grunwald, Bldg. 36, Rm. 1C-21, 496-1288. □



Noted American theatrical and screen actors Ossie Davis and his wife, Ruby Dee, combined their talents to give a reading of the works of black poets this country has produced over the years. They were heard in the Masur Auditorium on Feb. 5 at the start of NIH's Tenth Annual Black History Month Observance.

—Photo by L. Bass.

NIH Cafeterias Report Increased Equipment Loss

The loss of over 50,000 pieces of cafeteria eating paraphernalia has been reported by NIH campus cafeterias for the 11-month period from January to November 1981. The total estimated cost for this loss comes to approximately \$30,650.

According to Janice Weymouth, NIH liaison to the GSI-operated cafeterias, the shortages experienced each year have been steadily rising, despite the efforts of NIH Space Management and cafeteria managers to curtail them.

Specifically, the shortages include 1,538 trays, 11,727 dishes, bowls and cups, 9,948 salt-and-pepper shakers and ashtrays, and 27,315 forks, knives, and spoons during the 11 months.

Two Areas of Concern

An analysis of these steady losses indicates two major areas which may be attributed to the deficits.

Employees disregard the posted signs which discourage the removal of trays of food from the cafeterias. They carry the food trays to an office or lab. In many cases, they remain there stuck away in a corner or under a desk or bench. The employees forget about it, and take away additional trays, dishes, and utensils on subsequent carry-out meals.

The second and most important major reason for losses is the deliberate "filching" of dishes, glassware, and utensils for personal use at home or in summer residences.

Actually, cafeteria users are paying for these losses in increased food prices.

All employees are urged to inspect offices and labs for cafeteria property, and return the trays and utensils to the respective cafeterias. □

NINCDS Survey Finds MS Higher In Whites, Females; 37th Parallel

Females, whites, 30- to 50-year-olds, and people living above the 37th parallel have a higher rate of multiple sclerosis than the general population, according to a national survey sponsored by the National Institute of Neurological and Communicative Disorders and Stroke.

MS is a progressively disabling disease of the central nervous system. It is characterized by the destruction of myelin, a fatty covering of the nerve fibers in the brain and spinal cord.

Survey authors Dr. Herbert N. Baum of NINCDS's Office of Biometry and Field Studies and Beth B. Rothschild of Booz-Allen and Hamilton, Inc., report that on Jan. 1, 1976, there were an estimated 123,000 MS patients in the 48 contiguous states of the U.S. (a prevalence rate of 58 per 100,000).

The NINCDS survey, which was published in the November issue of the *Annals of Neurology*, also found an estimated incidence of 8,800 new MS cases each year (based on data obtained between 1970 and 1975).

Survey material was obtained from physicians, hospitals, and over 1,200 patient interviews. The age, sex, race and latitude results derived from the prevalence cases confirm both clinical experience with MS and other research findings.

Nearly twice (1.7) as many females as males were diagnosed as having MS. Also, the MS rate for whites was double that of nonwhites.

Prevalence in the region above the 37th parallel, an area that in the U.S. stretches from Newport News, Va., to Santa Cruz, Calif., was 1.9 times that in the lower region. Dr. Baum and Ms. Rothschild report

that climate, sanitation and diet have all been suggested as possible reasons for the geographic variation in MS cases. None of these theories, however, has been proven.

Scientists have also speculated on the reasons for the increased number of female MS cases, offering such possibilities as male/female differences in hormones and lifestyles.

Dr. Baum and Ms. Rothschild found no major sex differences for date of onset or diagnosis. The median age at onset for females was 32 versus 35 years for males. The median age of diagnosis for females was 35 compared to 37 for males. The authors note that health surveys have "repeatedly shown that women seek physician care more often than men, which presumably accounts for their earlier age at diagnosis."

Racial differences were more pronounced. For nonwhites, the median age of onset of MS was 23 years compared to 32 for whites. Nonwhites also had a longer interval between age of onset and diagnosis—6 years compared to 4 years for whites.

According to Dr. Baum and Ms. Rothschild, the longer interval for nonwhites may be partially due to the physicians' assumption that MS is primarily a disease of whites. Therefore, an MS diagnosis in a nonwhite patient may be delayed or made only after a long period of observation.

Additional information on the symptoms, migrational patterns and adaptation to the disease of the surveyed MS patients will be published in a forthcoming series of papers. □

Slow Viral Infections Topic of Science Writers' Seminar

Slow viral infections is the subject of the next NIH Science Writers' Seminar which will be held Mar. 4, from 9:30 to noon in Wilson Hall.

The seminar moderator, Dr. John L. Sever, chief, Infectious Diseases Branch, NINCDS, and Dr. Sidney A. Houff, also of IDB, will present an overview of two slow viral infections caused by conventional viruses, namely, subacute sclerosing panencephalitis (SSPE) and progressive rubella panencephalitis (PRP).

Dr. William T. London, chief of IDB's Experimental Pathology Section will discuss viral-induced brain tumors in nonhuman primates and their implications in human disease.

The expression of human papovavirus in human and primate cells will be the subject of a talk by Dr. Eugene Major of IDB's Viral Immunology Unit.

An analysis of JC viral DNA in a primate tumor model will be presented by Dr. Nancy R. Miller, also of the Viral Immunology Unit.

Dr. William C. Wallen, chief, Viral Immunology Unit, IDB, will describe the applica-

tion of a primate tumor model system and how it relates to human disease.

The unconventional viruses that cause slow viral infections will be discussed by Dr. Clarence J. Gibbs, Jr., deputy chief, Laboratory of Central Nervous System Studies, NINCDS, in his presentation entitled *From Ether to Cosmos: Transmissible Dementias to Hemorrhagic Fevers with Renal Syndrome*.

Science Writers' Seminars, sponsored by the intramural scientists of NIH and the Division of Public Information, OD, are designed to provide members of the press with background information on the various areas of research conducted at NIH.

For more information, call Bobbi Bennett, 496-1766. □

The sublime and the ridiculous are often so nearly related, that it is difficult to class them separately. One step above the sublime makes the ridiculous; and one step above the ridiculous makes the sublime again.—*Tom Paine* □

Dr. Martha B. Denckla New Autism Section Chief



Dr. Denckla, whose interest has always been "the overlap between psychiatry and neurology," has published numerous papers on learning disabilities and dyslexia.

The first chief of NINCDS's Autism and Behavioral Disorders Section, Dr. Martha B. Denckla, plans to create a multifaceted research program on autism and other developmental disabilities not associated with mental retardation.

Dr. Denckla, who joined NINCDS at the end of December, replaces acting chief Dr. Joseph S. Drage who directed the section since its creation in 1978.

"We need to encourage careful study of both communication and attention-arousal disorders in autistic children—particularly those who have normal intelligence," said Dr. Denckla, who received her M.D. from Harvard Medical School and subsequently became associate professor of neurology at Harvard's Children's Hospital Medical Center.

Autism, a severely incapacitating developmental disability, usually appears between ages 1 to 3 years and—in its classic form—affects 5 of every 10,000 children.

Symptoms include abnormal ways of relating to people, objects, and events; language retardation; ritualistic or compulsively stereotyped behavior; impaired social and learning skills; and abnormal responses to sensations.

The identified causes of autism such as untreated phenylketonuria, congenital rubella, and viral encephalitis need to be investigated thoroughly, according to Dr. Denckla, as do other rare illnesses that may cause the disorder.

Other research goals she identified include genetics studies, which in turn require the development of improved classification of behavioral disorders. "Most people are familiar only with dyslexia and hyperactivity," she said.

She has served as assistant clinical professor of neurology and psychiatry at the Columbia University College of Physicians and, more recently, as associate professor of neurology at the Uniformed Services University of the Health Sciences in Bethesda. She was also a consultant to the Clinical Center and the National Naval Medical Center. □

NIH Bank of Bethesda Branch Switching to Computer Service

As of Mar. 1, the eight tellers at the Bank of Bethesda NIH branch office in Bldg. 10, will be using on-line computers for faster window service. The new equipment will replace the old telephone



The eight tellers at the windows in the Bank of Bethesda's Bldg. 10 location will soon be assisted by an automatic teller machine. It will be installed in the first window, and employees may make withdrawals if their bank is a member of the ATM network.

account-checking system now used. "Hopefully, this will speed up service to customers," said Louis Rowe, Bank of Bethesda president.

In addition, possibly by July, an automated teller machine will be installed. The ATM will be available 24 hours a day, 7 days a week. "The ATM is the wave of the future," according to Mr. Rowe, who envisions the \$50,000 machine operating in the first teller window next to the Post Office vending machines on the B-1 level, Bldg. 10.

ATM will enable employees, who are depositors of several area banks, to make withdrawals and receive information on the balances on their respective accounts. Member banks on the Bank of Bethesda ATM network include Riggs, American Security, NS&T, Perpetual American, Columbia First, Mercantile Bank Shares Corporation (Baltimore), Dominion Bank Shares and Virginia National Bank.

Accounts Charged Monthly

Money withdrawn from the ATM will be taken from a clearinghouse and the accounts charged once a month by the member banks. Customers of the Bank of Bethesda using the bank's machines will not be charged for transactions. If using other machines in other areas, there will be a nominal charge.

The NIH campus branch office, which opened in April 1950, offers NIH employees many unique banking opportunities. Foreign services, patient and volunteer accounts, and interest-free loans to Federal employees in the event of a "payless payday" (as when Congress failed to pass a continuing budget resolution), or furloughs, are available.

Foreign services are particularly valuable to visiting scientists, Fogarty scholars, et al., and include letters of credit, telegraph and cable transfers, drafts and

remittances, and the purchase and sale of foreign currencies. These services have helped the NIH foreign visitor adjust more easily to NIH's work-a-day world.

English, French, German, Swiss, Canadian, Japanese, Belgian and other currencies are usually on hand and sometimes are specially ordered before NIH'ers travel to a symposium to be held in another country, or a large number of foreign visitors are expected on campus.

Accounts for patients and volunteers are set up regularly to assist in making their Clinical Center stay as convenient as possible, in terms of finances. Checking and savings accounts are opened and closed very frequently by new and departing patients. The bank will cash any non-member customer's check from any bank up to \$50. All well-known traveler's checks are also cashed for an unlimited amount.

The Bank of Bethesda first opened its doors to the Montgomery County commu-



The bank's first office was located in a building known as the "Gate House" in then still rural Bethesda. This picture was taken in 1919 when the bank originally opened.

nity in 1919 on a site facing Edgemoor Lane. The bank continued to operate in the original quarters until the present main office, at the corner of Old Georgetown Road and Wisconsin Ave., was acquired in 1923 and formally opened in 1926.

By the end of 1981, the bank had 11 branch offices, 19 drive-in and walkup windows, in excess of 30,000 depositors, and resources totaling \$86 million.

The Bank of Bethesda NIH campus office also offers extended hours on Civil Service paydays, from 8:30 a.m. to 4 p.m. Drive-in and walk-up windows in other branch offices are open Monday through Thursday from 8:30 a.m. to 7 p.m., and until 8 p.m. on Fridays. The branch offices are also open on Saturdays (but not NIH) from 9 a.m. to noon.

For more information, call the Bank of Bethesda NIH branch, 496-2728. □

Another Date With Lady Luck

Atlantic City bus junkets from NIH will resume on Friday, Mar. 12. Price per person is \$22.

Buses will leave Bldg. 31C at 8 a.m. and depart from Atlantic City at 6 p.m.

Tickets are available at the R&W Activities Desk, Bldg. 31. □

Hip Joint Replacement To Be Discussed Mar. 1-3 During Consensus Meeting

An NIH Consensus Development Conference on Total Hip Joint Replacement (THJR) will be held Mar. 1 through 3 in the Bldg. 10 Masur Auditorium.

The National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases is organizing and sponsoring the meeting with the NIH Office for Medical Applications of Research providing assistance in the planning and conduct of the program.

Over 100,000 total hip joint replacements are performed in the United States each year. The high success level of this procedure in the short term is well documented; the long-term prognosis (10 years and beyond) is less familiar. Although the operation is firmly established, the technological elements such as biomaterials and design of the prosthesis, are changing rapidly as knowledge increases.

The consensus development conference will provide a forum for scientific examination of the various techniques and designs currently used in total hip joint replacement. Participants will evaluate the safety and effectiveness of these approaches and discuss areas for future research to improve the success of the procedure.

Biomedical and bioengineering research scientists, orthopedic surgeons, rheumatologists, other professionals from relevant fields, consumers, and representatives of public interest groups have been invited to participate in the conference.

Following 2 days of presentations by experts in THJR procedures and audience discussions, a consensus panel composed of members drawn from health professions and organizations interested in this procedure, will consider the scientific evidence offered and issue a draft statement.

Their statement will respond to the following questions: What are the indications and contraindications for THJR? What are the current scientific principles guiding selection of materials, devices, and procedures for THJR? What is the short-term and long-term prognosis for medical status and functional activity after THJR?

What are the medical and surgical complications of THJR? What are the problems related to revision surgery for THJR? And, in what directions should the science base and techniques of THJR be advanced?

On the last day of the meeting, panel chairman Dr. Philip D. Wilson, Jr., surgeon-in-chief at the Hospital for Special Surgery, N.Y., will read the preliminary consensus statement before the conference audience and invite comments and questions.

The 2½-day conference is open to the public; there is no registration charge. For further information, contact Peter Murphy, (301) 983-0535. □

Might and Right are always fighting.
In our youth it seems exciting.
Right is always nearly winning.
Might can hardly keep from grinning.

—Clarence Day □

Dr. A. E. Heming Retires; Was GMS Program Official



An American flag that flew over the Capitol on the day of his retirement was presented to Dr. Heming (l) by Dr. Ruth L. Kirschstein, NIGMS Director.

Dr. Arthur E. Heming, associate director for program activities, National Institute of General Medical Sciences, retired recently, after 13 years with the Federal Government and NIGMS.

Of these years, Dr. Heming said, "I've seen the Institute grow from infancy into the NIH Institute with the largest number of research grants."

Joined Institute as Chief

He joined NIGMS in 1968 as chief of the Pharmacology/Toxicology and Medicinal Chemistry Section of the Research Grants Branch.

The following year, Dr. Heming became assistant chief of scientific programs and took on the responsibility of developing the Institute's nationwide basic science research grants programs.

In 1970, he assumed the position of acting associate director for research and act-

ing branch chief and in 1971 became associate director for research and branch chief. In 1973, he was appointed as associate director for program activities.

Dr. Heming received the DHEW Superior Service Award in 1974.

Born in Detroit, he received his A.B. and M.S. degrees in 1937 and 1938 from Kalamazoo College, and his Ph.D. from the University of Wisconsin in 1941.

After receiving his bachelor's degree, Dr. Heming accepted a fellowship from the Upjohn Company to do drug research. In 1941, he joined Johnson & Johnson as chief chemist for Sao Paulo, Brazil, and Buenos Aires, Argentina.

By 1948, his research interests had broadened to pharmacology, endocrinology, and biochemistry, and he began a 20-year career of research and administration with Smith, Kline & French Laboratories.

Studied Metabolic Problems

As head of their biochemistry section, Dr. Heming researched drugs that could be used in the treatment of diseases involving broad metabolic problems, such as: diabetes, atherosclerosis, and obesity.

A major accomplishment of his career with the firm was his research on the drug tri-iodothyronine. Studies carried out by his research team showed the drug to be a hormone in its own right, with a quicker action in the rate of cell metabolism rather than that of the hormone thyroxin. After 3 years, in collaboration with many academic scientists, it was said that "the group learned as much about tri-iodothyronine as had been learned about thyroxin in 40 years."

From 1957 to 1967, he served as associate director of research and development for the SKF laboratories.

In retirement, Dr. Heming plans to find time for his hobbies—fishing and leather work. □

TORCH Test Kits Not Always Reliable

Physicians testing women for rubella antibody by using kits claiming to provide "complete antibody profiles" may be doing their patients a disservice.

According to Dr. John Sever, chief of the Infectious Diseases Branch, NINCDS, the widely available kits, which include tests for four or more different antibodies, can give unreliable results leading to wrong diagnoses and treatment.

Collectively called TORCH packages after the microbial agents (toxoplasma, rubella, cytomegalovirus, herpes simplex, and others) whose antibodies are being tested, the TORCH tests can cost over \$55, in contrast to the \$10 charge for an individual rubella test.

In an article in the November 1981 issue of *Contemporary Obstetrics/Gynecology*, Dr. Sever points out the importance and general reliability of separate rubella tests for verifying the immune status of women,

but advises against the routine use of the broader TORCH tests for pregnant patients.

Results from TORCH testing are frequently inconclusive, he said, and individual tests are often a better choice when a specific infection is suspected.

The microbial agents whose antibodies are sought in TORCH testing cause perinatal infections that can seriously damage the fetus or newborn. Infected women usually show no symptoms or have relatively limited disease. Infants infected in the perinatal period may have mild to severe damage or can die.

Tests offered by clinical laboratories for toxoplasma, cytomegalovirus, or herpes simplex can also be unreliable. Should testing be needed, Dr. Sever urges physicians to seek the services of reference laboratories such as the Centers for Disease Control or the larger state labs. □

Three FIC Scholars Arrive To Continue Research

Three Fogarty International Center scholars-in-residence—Drs. Rolf Luft, Herman Kalckar, and Irwin C. Gunsalus—arrived recently at NIH to continue their research.

Dr. Luft is professor emeritus of medicine and former director of the endocrinology department at the Karolinska Institute in Stockholm, Sweden. For the past several years he has been master of ceremonies for the Nobel Prize, and chairman and long-time member of the Nobel select committee for physiology or medicine.

He is returning to NIH for a second term as a Fogarty scholar and will again be associated with the Diabetes Branch, NIADDK, where he devoted much of his first term to work on the genetics of human diabetes.

Dr. Kalckar is embarking on his third term as an FIC scholar. He was here initially as a visiting scientist in 1953-55 and then as a Fogarty scholar in 1975-76 and 1981.

His career began in Denmark, his native country, where he worked on oxidative phosphorylation, but it was at NIH that he did his classic work on galactosemia.

Prior to assuming his present position as professor of chemistry at Boston University, Dr. Kalckar was professor of biological chemistry at Harvard Medical School and professor of biology at Johns Hopkins University.

Dr. Gunsalus, professor of biochemistry at the University of Illinois, is beginning his first term as a Fogarty scholar.

He is recognized for his research in many areas of biochemistry. In a series of classic papers, he elucidated the role of the vitamin pyridoxine as a coenzyme pyridoxal phosphate, demonstrating that it was a cofactor in tyrosine decarboxylation. He and his colleagues discovered the coenzyme lipoic acid and demonstrated its role in the metabolism of pyruvate and α -ketoglutarate.

In recent years, Dr. Gunsalus' research has concerned the biochemistry of cytochrome P-450 and the role of plasmids in determining microbial biochemical diversity.

During his scholarship, he will be associated with several laboratories including the Laboratory of Biochemistry, NHLBI. He will help prepare an FIC workshop on International Collaboration in Biomedical Research and will give several seminars to be announced later.

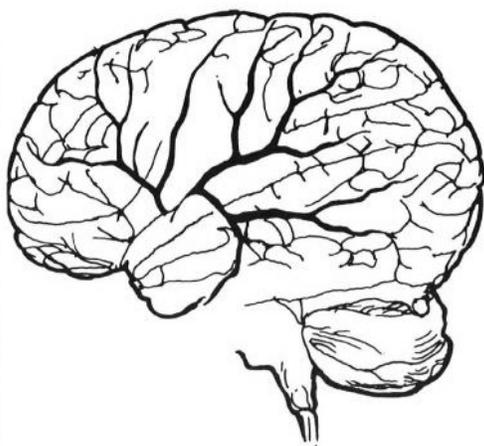
The three scholars have offices in Bldg. 16 (Stone House) and can be reached at 496-1213. □

Retirement Planning Sessions Offered

The Recruitment and Employee Benefits Branch, DPM, is offering another Retirement Planning Program for NIH employees on Apr. 21 and 22.

A personnel bulletin will be distributed desk-to-desk giving more detailed information. □

The 'Aged Brain': Why Does Dementia Occur Despite Viable Brain Function?



In a recent Medicine for the Layman talk, Dr. Stanley Rapoport, chief of the Laboratory of Neurosciences, National Institute on Aging, discussed the anatomy and physiology of the brain, the changes that normally occur with aging, and the abnormalities of brain dementias, which today affect 1 million people in the U.S. over age 65.

Dr. Rapoport explained that the two hemispheres of the brain are divided into regions, each of which controls specific functions. For example, the frontal lobe of the brain controls the associative processes, emotions, anticipatory thoughts, and motor functions.

The brain stem is responsible for autonomic functions such as respiration, heart rate, and blood pressure; the temporal lobe houses the centers for hearing and memory storage and processing; and the cerebellum regulates posture and coordination. This "division of labor" applies to all other brain regions as well.

50,000 Brain Cells Lost Daily

According to Dr. Rapoport, the brain is made up of about 10 billion nerve cells. In the normal aging process, 50,000 brain cells are lost each day from the age of 20 on.

Also, the dendritic branching (network of nerve processes) become sparser, and the amount of neurotransmitter decreases as the brain ages. It would seem, therefore, that brain function would decline with age.

He reported, however, in studying healthy individuals ranging in age from 20 to 83 years, scientists found that—despite the decline in cell number and complexity—brain blood flow and metabolism do not decrease significantly with age. Also, although some functions of intelligence do decline with age, others increase.

Faced with this knowledge, scientists have sought to understand why brain blood flow and metabolism and the human intellect do not show a decline commensurate with the loss of cell number and complexity.

Redundancy and Plasticity

This may be explained in part by the phenomena of redundancy and plasticity.

Redundancy refers to an overabundance of brain cells. The brain contains an oversupply of cells actually needed to maintain intellectual function and personality. Thus, a gradual loss may not affect intellectual processes.

Research in animals and in man has shown that although nerve cells do not replicate, the remaining cells can grow more axons and dendrites which help compensate for the loss in number. This is known as plasticity.

Dr. Rapoport posed the question: If these compensatory mechanisms maintain brain functions, what accounts for the dementias that affect 15 percent of the people over 65 in this country—severely enough in 5 percent to require institutional care?

These individuals experience a progressive and irreversible deterioration of mental function, manifested by marked memory loss, disorientation, impairment of learned skilled movements, language disturbances, and personality changes.

Two Types of True Dementia

Ruling out the treatable dementias which may be caused by drug toxicity, depression, vitamin B₁₂ deficiencies, and other correctable pathologies, there are two types of true dementia, neither of which presently can be cured.

The first type is arteriosclerotic, or multiple infarct, dementia. This arises when blood flow to part of the brain is impeded because the vessel is blocked or hemorrhaging. Without nourishment, the cells normally fed by this artery die and the area of cell death—the infarcted area—softens and ceases to function.

Progressive deterioration leads to the appearance of the behavioral characteristics of dementia.

A second type of dementia, called Alzheimer's disease, is characterized by a loss of brain mass. The massive cell death that occurs (for unknown reasons) is too extensive to be compensated for by the mechanisms of redundancy and plasticity.

Many of the cells are filled with a fibrillary material that accumulates and accelerates their death. The cell death is accompanied by a corresponding reduction in blood flow.

Current research on the causes of Alzheimer's dementia focuses on the possible roles of genetics, immunology, environmental factors, and perhaps a virus implicated in the development of the disease.

New techniques to measure brain blood flow and oxygen consumption will help scientists evaluate new therapies that might be developed and perhaps identify individuals at risk for this debilitating and relentless disease, Dr. Rapoport concluded. □

The greater the difficulty, the greater the glory.—*Cicero* □

Handicapped Leave Policy Developed for Stormy Weather

As a result of recent experience with inclement weather, a new liberal leave policy is being developed for severely handicapped employees at NIH.

It was discovered that snow removal procedures actually cause additional problems for the handicapped by creating huge snow piles at the recessed curbs and sidewalks. Moreover, parking spaces often remain unsafe.

Under the new policy, supervisors will be allowed to grant leave and/or excused absences to those employees who have worked out a previous liberal leave plan. Each plan will be individually tailored to that employee's specific needs, and should list those circumstances considered unsafe or hazardous for safe travel to and from work.

Accommodations can also be made for those employees who have temporary disabling conditions such as a broken leg, fractured ankle, foot surgery, etc.

At present, only 26 employees are enrolled to participate in the new liberal leave program.

Employees who feel that they may be covered under the new procedure and wish to participate should contact their B/I/D EEO coordinator or personnel officer, or E. Condon, chairman, NIH Handicap Advisory Committee, 496-1636, for further information. □

Golfers Start Swinging April 13

The NIH Golf League will begin its 1982 season with the Betty Sanders Open on Tuesday, Apr. 13. Registration forms will be mailed to all members.

Anyone interested in joining the league should send name, address, telephone number, 1982 R&W membership number, and a \$5 check to Dorothy Viener, Westwood Bldg., Rm. 6A-11, before Mar. 5.

For further information contact Ms. Viener, 496-7332, or Jean Russell, 496-5437. □



Thomas G. Barbour, chief, Compensation and Classification Branch, DPM, has been selected as assistant director for development and training, DPM.

Ground Squirrels Offer Scientists Clues on Nerve Cell Regeneration

Victims of spinal cord injury—some 10,000 last year in the U.S. alone—may spend their lives yearning for restored mobility.

Recent research conducted by NINCDS grantee—and former Institute scientist—Dr. Lloyd Guth offers hope for paraplegics by providing new clues about how damaged nerve cells in the central nervous system can regenerate.

Dr. Guth formerly headed the NINCDS Section on Neural Development and Regeneration, Laboratory of Neurochemistry, and is currently professor and chairman of the department of anatomy at the University of Maryland School of Medicine.

His study of spinal cord injury in hibernating ground squirrels reveals evidence of extensive regeneration of spinal axons—the nerve fibers that serve as essential linkups to other nerve cells. Previous

the two groups of animals responded differently both to the injury and to the challenge of regeneration.

The nonhibernating squirrels had a dense collagenous scar, extensive formation of cysts and cavities, and showed little evidence that the axons had regenerated. By contrast, the hibernating squirrels had no cysts or cavities within the spinal cord, and the lesion site was composed of a loose, healthy meshwork of cells.

Fibers Had Regrown

Dr. Guth found that in the hibernating animals a great number of spinal cord nerve fibers had regrown to the margin of the lesion.

"It looks as if these fibers are regenerating, because they have many of the characteristics—the varicosities and growth cones—of regenerating fibers," he said.



Left: Nonhibernating squirrel 12 weeks after surgery shows development of cysts. "CC" indicates the dilatation of the central canal in the spinal cord adjacent to site of injury.



Right: Hibernating squirrel 12 weeks after surgery shows little collagenous scarring or cyst formation within the lesion "L" or adjacent neural tissue "P."

studies on nonhibernating mammals have found only minimal regeneration of these axons following spinal cord injury.

Dr. Guth, whose work is also supported by the Paralyzed Veterans of America, chose to study the hibernating squirrel because its sleeplike condition allows the animal to maintain the capacity for nerve cells to regenerate while slowing the formation of excess tissue protein or collagen.

Collagen formation, along with tissue death and the growth of cysts at the site of injury, has been considered a possible reason why spinal cord nerve cells do not regenerate completely.

In the experiment conducted at the University of Maryland, he and a team of scientists severed the spinal cords of 30 hibernating ground squirrels and 12 nonhibernating ground squirrels that served as controls. Autopsies performed 1 to 6 months after the operation revealed that

However, the regrowing nerve fibers did not enter the lesion site. Instead, upon reaching the margin of the lesion, they turned and ran at right angles to the injured area.

Dr. Guth speculates that changes in the cellular structure of the wound site stop the regenerative process in its tracks somehow—perhaps because the cells cannot provide a proper life-support system for nerve fibers.

In a paper published in the Dec. 1 issue of the *Journal of Comparative Neurology*, he suggested that in animals having a backbone, regeneration of spinal axons requires those axons to interact with other types of cells that surround or support nervous tissue.

"Since the wound tissue at the site of spinal transection in the hibernating squirrel was composed primarily of macrophages, fibroblasts, and vascular elements (cells that make up blood vessels and fi-

brous tissue)," Dr. Guth wrote, "it is not surprising that the regenerating nerve fibers refused to enter the lesion and preferred to grow along a terrain containing neuronal and glial components." Glial cells provide a supporting structure for nervous tissue.

Replace Tissue

"The problem that confronts scientists now," he said at a recent NINCDS National Advisory Council meeting, "is to replace the pathological tissue at the site of injury with tissue that might provide factors essential to regeneration. We have to provide a proper environment—one that will guide the neurons across the lesion."

In related research, investigators have successfully transplanted spinal cord tissue from a fetal animal into the same animal's brain. The nerve cells in these grafts continue to develop, mature, and differentiate.

"Transplantation studies," concluded Dr. Guth, "are among the most promising approaches in the field of experimental paraplegia research." These continuing studies now make up a major portion of the research program at the University of Maryland's Laboratory of Paraplegia Research, which is being supervised jointly by Dr. Guth and another NINCDS grantee, Dr. Paul J. Reier. □

DR. GOODWIN

(Continued from Page 1)

research complex. He will direct approximately 500 staff members, set research priorities, and select key scientists to carry out the basic and clinical studies that shed light on the causes and treatments of mental disorders and the factors that determine human behavior and development.

Will Serve on NIH Board

He will also serve on the NIH Board of Scientific Directors, participating in policy decisions regarding research by NIH scientists. In addition, he will continue his leadership in national and international collaborative projects, including the mental health component of the cooperative health agreement between China and the United States. Dr. Goodwin played a critical role in establishing the dialogue between Chinese and American mental health scientists which eventually stimulated the agreement and its implementation.

Among the many prestigious awards he has received include the A. E. Bennett Award, the Hofheimer Prize, the International Anna-Monika Prize, and the Taylor Manor Award.

Dr. Goodwin serves on the editorial boards of major journals such as the *Archives of General Psychiatry*, and is founder and coeditor-in-chief of a new journal, *Psychiatry Research*. He holds memberships in numerous professional societies and is a fellow of the American Psychiatric Association and the American College of Neuropsychopharmacology. □

NIMH Studies Find Whole Brain Resting While Body Sleeps

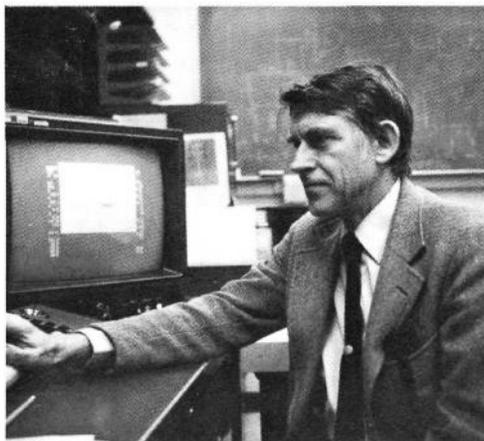
Contrary to the long-held belief that there are selectively active sleep centers in the brain which may permit other parts to sleep, scientists from the National Institute of Mental Health have found no such centers in recent studies, according to Dr. Charles Kennedy, senior research scientist, NIMH Laboratory of Cerebral Metabolism.

"We found that during the major portion of sleep, referred to as slow-wave or non-REM (rapid eye movement) sleep, the metabolic rate is reduced in all brain systems. This indicates generally reduced activity. It would appear that the brain 'rests' both metabolically and functionally during slow-wave sleep," Dr. Kennedy stated.

These studies were collaboratively conducted by NIMH researchers Drs. Kennedy, Mortimer Mishkin, acting chief, Laboratory of Neuropsychology, Christian Gillin, chief, Unit on Sleep Studies, and Louis Sokoloff, chief, LCM.

The experiments employed the new deoxyglucose method developed by Drs. Sokoloff, Kennedy, and others. The simultaneous measurement of glucose utilization in all subdivisions of the brain in the same animal is enabled by this new technique. It provides a visual image of activity levels in all structures throughout the entire brain during a single type of behavior.

Aided by a computerized image process-



In the NIMH Laboratory of Cerebral Metabolism, Dr. Kennedy and his colleagues are studying the parts of the brain which appear active during different motor tasks.

ing system, autoradiographs can be converted to color-coded images on a video-screen. Each color represents a narrow range or rates of glucose utilization in a cross-sectional image.

"There is such a good correlation between metabolic rate and the frequency of cellular discharge that we consider the metabolic rate to be an index of the level of activity of the part of the brain we've examined," said Dr. Kennedy. "Marks in-

dicative of elevated rates in wakefulness, particularly the marks in the visual and auditory cortex, disappear during slow-wave sleep. These findings give credence to the old theory of sleep as a period of rest," he continued.

Stipulating that the deoxyglucose method was first used to examine sensory systems, such as visual and auditory pathways, the researchers plan, in addition to looking at the sleeping brain, to examine brain activity associated with a particular motor task.

In experiments with monkeys trained to push a lever with one hand in response to visual stimuli, the scientists were able to identify the movement-related brain structures. However, Dr. Kennedy found their study results puzzling.

"Anatomical knowledge and electrical evidence has indicated where brain structures are involved in motor activity. We had expected an increment in metabolic rate to occur in all of these. Curiously, we found the increments confined to a selected number. We found many activated areas in sharply delineated regions of the cerebella cortex," he said.

One of the most significant findings of their studies was the coupling of the sensory system with motor activity. "Many sensory pathways are activated during a motor task, presumably to guide and increase movement accuracy," he added.

Future studies with the deoxyglucose method, in addition to brain protein synthesis during sleep, will include attempts to look at REM sleep. □

NIDR Survey Finds Dental Caries Decreased in School-Age Children

A substantial reduction in the prevalence of tooth decay among U.S. school-age children over the past few years was clearly shown in recently published data from a survey conducted by NIDR's National Caries Program. The nationwide study of dental caries (tooth decay) among the children was performed during the 1979-1980 school year.

In addition the survey monitored dental caries prevention efforts, including school-based fluoride programs introduced by the NCP in demonstration projects during 1975 to 1979.

Targeted Age Group Surveyed

NCP staff designed the survey in conjunction with the National Center for Health Statistics. The survey targeted children age 5 through 17 because this age group has the highest incidence of tooth decay.

A probability sample of some 40,000 children enrolled in public and private schools in seven broad U.S. geographic subdivisions was drawn to represent the country's 48 million school-age children.

Survey results showed that by age 12, U.S. children have, on the average, more than four decayed, missing or filled-tooth surfaces in their permanent teeth; by age 17 they have more than 11.

Results confirmed previous observations

that females have a slightly higher caries prevalence than males in permanent teeth at every age. As was predicted when the survey was designed, children living in urban areas where fluoridated public water supplies are common, have a lower prevalence of caries.

Data from this survey, when compared with those from a study conducted in 1971 to 1973, by the National Center for Health Statistics, indicate that caries among children has decreased 25-32 percent over the 8 intervening years. This should result in a



The 1979-80 National Dental Caries Prevalence Survey sampled seven geographic regions in the United States. The regions included 146 school districts consisting of 572 schools (500 public, 72 private) located in 210 communities in 30 states, including the District of Columbia. The data are based on the dental examinations of 37,956 school children.

dramatic savings in the annual expenditure for dental care which, in 1980, was reported to be approximately \$16 billion.

Although the NCP cannot offer any single definitive reason for the decrease in caries prevalence, it is likely that the more widespread use of fluorides, including community water fluoridation, school-based fluoride tablet and mouthrinse programs, and the use of dentifrices containing fluoride, have had a significant effect in reducing the level of tooth decay.

Using the present study as a baseline, the NCP staff plans to repeat the survey at intervals to detect changes in the prevalence of tooth decay in different geographic regions, to target special prevention programs toward high-risk age groups, and to measure how effectively new preventive measures have reduced dental decay.

Results of the prevalence survey have been published by NIDR. Single copies of the 159-page publication entitled *The Prevalence of Dental Caries in United States Children 1979-1980*, are available without charge from the National Caries Program, Westwood Bldg., Rm. 532, 5333 Westbard Ave., Bethesda, Md. 20205. □

No one can make you feel inferior without your consent.—Eleanor Roosevelt □

MR. RISEBERG

(Continued from Page 1)

ade in which NIH has emerged into the public's eye." He notes Congress' and the media's interest in recombinant DNA and the effects of radiation from the atmospheric leak at Three Mile Island and from nuclear weapons testing.

Assessing what has transpired in regard to meeting the challenges presented to NIH, he observes that the country's biomedical institution has withstood these pressures because of "the high caliber of the leadership and staff at NIH."

Mr. Riseberg also noted that the tests of major litigation has reaffirmed NIH's method of peer review for dealing with grant applications. "These victories in court in the seventies have discouraged further lawsuits of this type." He says that during his tenure he has taken special satisfaction in being part of NIH's carefully planned process to meet compliance standards for the National Environmental Policy Act.

Among the government committees that he has been asked to chair or be a member of have been the legal subcommittees for: Interagency Committee on Federal Research into the Biological Effects of Ionizing Radiation; Interagency Committee on Recombinant DNA Research; and the Secretary's Task Force on Smoking.

In addition, he has served on the NIH Executive Committee on Recombinant DNA Research; Interagency Task Force on Compensation for Radiation-Related Illness; and DES Task Force.

Currently, he acts as liaison to the President's Commission for the Study of Ethical Problems in Medicine and Biomedical Research; and NIH Extramural Program Management Committee.

"I knew very little about NIH and biomedical research when I first came here," says Mr. Riseberg about his appointment after serving as an attorney for 9 years in the HHS Regional Attorney's Office in Boston.

Over the years, however, he noted that, after being involved in long discussions with and listening to presentations by NIH's cadre of scientific advisors as they explained their research and its ramifications, he has developed a greater understanding and appreciation of the purposes of science. □

Dr. Charles Edwards Joins NLM Board of Regents

Dr. Charles C. Edwards has been appointed to the National Library of Medicine's Board of Regents.

Dr. Edwards is president of Scripps Clinic and Research Foundation in La Jolla, Calif. He was formerly Commissioner of the Federal Food and Drug Administration, and Assistant Secretary for Health, Department of Health, Education, and Welfare.

The NLM Board of Regents meets three times a year to oversee Library policy and to review applications for grants. □

Visiting Scientist Program Participants

Sponsored by Fogarty International Center

1/1—**Dr. Ezio Bonvini**, Italy, Laboratory of Immunodiagnosis. Sponsor: Dr. Thomas Hoffman, NCI, Frederick Cancer Research Facility.

1/1—**Dr. Georgios Thomaidis**, Greece, Laboratory of Experimental Atherosclerosis. Sponsor: Dr. Howard Kruth, NHLBI, Bg. 10, Rm. 5N113.

1/1—**Dr. Ranganathan Parthasarathy**, India, Laboratory of Biochemistry and Metabolism. Sponsor: Dr. Frank Eisenberg, NIADDK, Bg. 10, Rm. 9B07.

1/4—**Dr. James Kunec**, U.S., Arthritis and Rheumatism Branch. Sponsor: Dr. John Decker, NIADDK, Bg. 10, Rm. 9N218.

1/4—**Dr. Olivier Peter**, Switzerland, Arthropod-Borne Diseases Section. Sponsor: Dr. Willy Burgdorfer, NIAID, Rocky Mountain Laboratory, Hamilton, Mont.

1/10—**Dr. Thomas A. Luger**, Austria, Laboratory of Microbiology and Immunology. Sponsor: Dr. Joost Oppenheim, NIDR, Bg. 30, Rm. 322.

1/11—**Dr. Menachem Banai**, Israel, Laboratory of Molecular Microbiology. Sponsor: Dr. Donald LeBlanc, NIAID, Fort Detrick, Frederick, Md.

1/11—**Dr. Ing-Ming Chiu**, Taiwan, Laboratory of Cellular and Molecular Biology. Sponsor: Dr. Stuart Aaronson, NCI, Bg. 37, Rm. 1A07.

1/11—**Dr. Carlo Masullo**, Italy, Laboratory of Central Nervous System Studies. Sponsor: Dr. Clarence J. Gibbs, NINCDS, Bg. 36, Rm. 4A17.

1/11—**Dr. Dimitrios Monos**, Greece, Laboratory of Pathophysiology. Sponsor: Dr. Herbert Cooper, NCI, Bg. 10, Rm. 5B54.

1/11—**Dr. Anne Seiler-Tuyns**, Switzerland, Laboratory of Biochemistry. Sponsor: Dr. Bruce Paterson, NCI, Bg. 37, Rm. 4A21.

1/12—**Dr. Christine Chan**, Hong Kong, Laboratory of Metabolism. Sponsor: Dr. Richard Veech, NIAAA, 12501 Washington Ave., Rm. 55A, Rockville.

1/15—**Dr. Sandra Colombini**, Italy, Laboratory of Tumor Cell Biology. Sponsor: Dr. Prem Sarin, NCI, Bg. 37, Rm. 6B04.

1/15—**Dr. Veronica O'Neill**, Scotland, Laboratory of Molecular Carcinogenesis. Sponsor: Dr. Francine Eden, Bg. 37, Rm. 4A15.

1/18—**Dr. Alberto Bocchetta**, Italy, Biology Psychiatry Branch. Sponsor: Dr. John F. Tallman, NIMH, Bg. 10, Rm. 2N315.

1/18—**Dr. Catherine Ronin**, France, Laboratory of Endocrinology. Sponsor: Dr. Bruce Weintraub, NIADDK, Bg. 10, Rm. 8D13.

1/19—**Dr. Wallace Langdon**, Australia, Laboratory of Microbial Immunity. Sponsor: Dr. Herbert Morse, NIAID, Bg. 5, Rm. 218.

1/19—**Dr. Kenji Sekikawa**, Japan, Laboratory of Infectious Diseases. Sponsor: Dr. Ching-Juh Lai, NIAID, Bg. 7, Rm. 26.

1/21—**Dr. Carlo Nobile**, Italy, Microbial Genetics Section. Sponsor: Dr. Robert Martin, NIADDK, Bg. 2, Rm. 322.

1/24—**Dr. Akichika Mikami**, Japan, Laboratory of Sensorimotor Research. Sponsor: Dr. Robert Wurtz, NEI, Bg. 36, Rm. 1D18.

1/25—**Dr. Ignacio Sandoval**, Spain, Laboratory of Biochemistry and Metabolism. Sponsor: Dr. William Jakoby, NIADDK, Bg. 10, Rm. 9N109.

1/27—**Dr. Mounanandham Panneerselvam**, India, Laboratory of Pathophysiology. Sponsor: Dr. David Salomon, NCI, Bg. 10, Rm. 4B44.

2/1—**Dr. Philippe Maeder**, Switzerland, Laboratory of Cerebral Metabolism. Sponsor: Dr. Louis Sokoloff, NIMH, Bg. 36, Rm. 1A27.

2/1—**Dr. Anthony Maxwell**, United Kingdom, Laboratory of Molecular Biology. Sponsor: Dr. Martin Gellert, NIADDK, Bg. 2, Rm. 322.

Clinical Trial To Begin On Chickenpox Vaccine

The National Institute of Allergy and Infectious Diseases recently began a multicenter clinical trial of a live, attenuated chickenpox (varicella) vaccine in children with leukemia.

In normal children, chickenpox is considered a routine illness with low risk, but in children with leukemia, chickenpox can be extremely dangerous because chemotherapy can weaken the body's immune system, thereby allowing spread of the virus to lungs and liver.

The study will involve 500 children at 27 medical centers and hospitals, and has been funded for approximately \$500,000. The principal investigator is Dr. Anne A. Gershon, associate professor of pediatrics, New York University Medical Center.

It is estimated that of the 500 children vaccinated, about 20 will have household exposure to chickenpox in the subsequent 2 years.

Without vaccination, approximately 90 percent of those would be expected to develop chickenpox after exposure. Investigators believe it will be possible to determine the effectiveness of the vaccine after 2 years. □

See the World in Knoxville

R&W is sponsoring a trip to the World's Fair in Knoxville, Tenn., Aug. 9-12.

Cost is: single, \$285; double, \$199; and triple, \$169. The price includes round trip motor coach transportation, three nights at the Holiday Inn West hotel, 2-day tickets to the fair, hotel taxes and baggage handling. A \$50 deposit is required at time of booking.

Check R&W Activities Desk, Bldg. 31, Rm. 1A-18, for further details. □



Dr. John E. Holman (l), director of the Division of Research Resources' Laboratory Animal Sciences Program since 1971 (accompanied by his wife Marilyn), was awarded the PHS Commendation Medal for "... program leadership in meeting the extramural community's research animal resource needs." Dr. Holman has guided many projects aimed at improving the health and increasing the availability of animals used in human health-related studies. Improvement of animal care facilities has been carried out through grants to 113 institutions under Dr. Holman's direction.

Hypnosis: A Clinical Tool To Control Pain, Anxiety?



Woodblock courtesy National Library of Medicine

The use of hypnosis is now being examined by research clinicians as a treatment to relieve some of the pain, anxiety, and other effects of chronic disease.

In addition, self-hypnosis is being considered as a potential tool for chronically ill patients to use to control the pain and anxiety associated with medical crises that occur away from the hospital.

Several research projects, supported by the Biomedical Research Support Program of the Division of Research Resources, have begun to explore what constitutes the hypnotic state in the brain, and how it might fit into clinical treatment of patients with chronic diseases.

Hypnosis is described by researchers as an altered state of consciousness characterized by a person's focused attention on potent internal mental images to the exclusion of the external environment.

"In order to experience hypnosis, there must be a sense of immediate involvement in one's mental imagery and detachment from the surrounding external environment," says Dr. Erika Fromm, professor emeritus of psychology at the University of Chicago.

Depending on the images suggested by the hypnotist (heterohypnosis), or by oneself (self-hypnosis), a variety of physiological and emotional states result.

Hypnotic suggestions can be made in relation to sensations of taste, touch, smell and sight. Suggestions can also be made concerning expectations about forthcoming expectations or activities, usually called posthypnotic suggestions.

Research at the University of Chicago laboratory showed that the cognitive and perceptual processes in the heightened imagery so characteristic of hypnosis are infused with more intensive emotions than walking-state phenomena. These images seem to be especially real to the hypnotized person.

In a pilot experiment to explore the dif-

ferences between heterohypnosis and self-hypnosis, Dr. Fromm used a standard series of tests to identify easily hypnotized subjects.

Through several heterohypnotic sessions, subjects learned the main induction and deepening techniques. They were then told to use either these or techniques of their own invention for self-directed responses in the absence of a hypnotist.

The subjects practiced self-hypnosis 1 hour a day for 4 weeks, keeping a diary of the length of the trance, its depth (how distant from environmental realities), its content, resulting images, types of self-suggestions attempted for inducing and deepening the trance, and subjective impressions of the experience.

Results indicated many similarities as well as some differences between self-hypnotic and heterohypnotic experiences of the subjects.

The subjects initially experienced anxiety, skepticism, and self-doubts about their ability to hypnotize themselves. After a week, however, they began to feel more at home with the self-hypnotic state, according to Dr. Fromm.

Gradually the trance state felt more natural and comfortable, and the ability to enter it quickly and easily increased, as did absorption, fading of awareness of the external environment, and ability to go to greater hypnotic depth with confidence.

Most clinical self-hypnosis consists of the self-directed performance of therapist-taught tasks, such as control anxiety, reducing anxiety and pain in medical procedures, prevention of nausea and vomiting associated with chemotherapy and other treatments.

Additional exploration into the clinical possibilities of hypnosis is being conducted at the University of Texas Health Center, supported by the National Cancer Institute, and also at Thomas Jefferson University in Philadelphia. □

Foreign Scientists Assistance Chief Named

Wanda J. Pifer was recently designated chief, Foreign Scientists Assistance Branch, Fogarty International Center. In this capacity, she will provide administrative management for the NIH Visiting Program.

Prior to that, Mrs. Pifer worked for 10 years with the Special Events Section of the Clinical Center, programming profes-



Mrs. Pifer has served since 1969 as center activities management assistant for the International Visitors Center.

sional domestic and international visitors and serving as conference coordinator for various lectures and symposia held in Masur Auditorium.

A native of West Virginia, she first came to the NIH in 1957, when she was employed by the Division of Administrative Services, OD.

Among the HHS/PHS/NIH honors Mrs. Pifer has received are awards for Superior Work Performance (1963), for Sustained High-Quality Work Performance (1977), and for Special Achievement (1980). □

New Literature Searches Available From NLM

The three new Literature Searches are available from the National Library of Medicine's Reference Section:

LS 81-27 *Audiovisual aids, computer assisted instruction, and programmed instruction in education for the health professions.* January 1978 through October 1981, 391 citations.

LS 81-28 *The National Library of Medicine.* August 1978 through December 1981, 185 citations.

LS 81-29 *Diet and hyperactivity.* January 1975 through December 1981, 148 citations.

These Literature Searches, part of a series of printed bibliographies on subject of current interest, were produced through NLM's computer-based system, MEDLINE. They are available without charge.

A complete list of available titles appears in each issue of *Index Medicus* and *Abridged Index Medicus*.

When requesting Literature Searches, please include title and number, enclose a self-addressed gummed label, and mail to: Literature Search Program, Reference Section, National Library of Medicine, Bethesda, Md. 20209. □

National Institutes of Health
1983 PRESIDENT'S BUDGET
Summary by Appropriation
(Budget Authority in thousands)

IRD's:	1981 <i>Comparable¹</i>	1982 <i>Comparable¹</i>	1983 <i>Request</i>	<i>Change</i>
Cancer	\$947,283	\$943,029	\$955,449	\$12,420
Heart	549,730	559,637	577,143	17,506
Dental	71,189	71,983	74,462	2,479
Arthritis	369,550	368,191	379,422	11,231
Neurology	252,648	265,901	274,505	8,604
Allergy	232,201	235,895	246,043	10,148
General Medical Sciences	329,375	335,462	345,621	10,159
Child Health	220,681	226,309	233,575	7,266
Eye	117,991	127,374	131,550	4,176
Environmental Health	140,034	154,258	157,448	3,190
Aging	75,683	81,903	84,556	2,653
Research Resources	175,659	184,177	191,024	6,847
Fogarty Center	9,124	9,205	10,147	942
Subtotal, IRD's	3,491,148	3,563,324	3,660,945	97,621
Nat'l Library of Medicine	44,666	44,402	46,043	1,641
Office of the Director	21,669	22,562	24,283	1,721
Buildings and Facilities	11,750	9,898	17,500	7,602
TOTAL, NIH	3,569,233	3,640,186	3,748,771	108,585

¹Reflects comparable transfers for the National Toxicology Program (Cancer to Environmental Health: 1981—\$46,540; 1982—\$47,988) and Diagnostic Radiology Grants (General Medical Sciences to Cancer: 1981, 1982—\$4,400)

Aging Does Not Impair the Heart Muscle

If it is free of disease, the heart of an old person pumps about as well as that of a young adult, and any problems related to the older heart's ability to move blood must be considered the effect of disease—not aging.

This striking conclusion, reached recently by scientists involved in the NIA's Baltimore Longitudinal Study of Aging (BLSA), conflicts with common notions that uncomfortable and activity-limiting cardiovascular symptoms are inevitable in old age.

Collaborating in the studies were scientists at Baltimore's Gerontology Research Center and the Johns Hopkins Medical Institutions. The Johns Hopkins scientists include Drs. Myron Weisfeldt and Gary Gerstenblith, both GRC alumni. Among the NIA staff scientists in the study were Drs. Edward Lakatta, Jerome Fleg, and Reubin Andres.

Although the sturdiness of the healthy heart in old age may be reassuring, the investigators point out that coronary artery disease (CAD) is probably twice as prevalent among older men as previously documented. Nearly all major epidemiologic or population-based studies may therefore be in error because attempts were not made to measure latent CAD, according to the researchers.

To reach their conclusions, the investigators used highly sophisticated methods for detecting any significant narrowing of the coronary arteries in community-living volunteers who had no cardiovascular symptoms.

Conventional investigations employ electrocardiograms taken with the subject at rest. They show that 20 to 30 percent of older people have CAD. However, post-mortem examinations disclose a 50 to 60 percent rate.

The NIA studies help to resolve this discrepancy

by using a method that detects CAD accurately in the living person without the need for painful diagnostic procedures. Individuals exercise vigorously while an electrocardiogram is made. During the exercise—walking "uphill" on a treadmill—a solution of a radioactive form of the element thallium is infused.

Stress/thallium tests of the heart were performed on 233 BLSA volunteers and the results were compared with their health histories and resting electrocardiograms. These tests showed CAD occurring twice as often as had been indicated by the conventional tests.

These findings caused the investigators to wonder how the older heart performs in the absence of latent CAD.

To get at this issue, the investigators did a second study in which 36 volunteers who had been found free of CAD on stress/thallium tests were examined with another scanning technique. Using technetium-99, a radioactive element that stays in circulation rather than dispersing into muscle tissue, the scientists obtained scans of the volunteers during maximal exercise on a stationary bicycle. The scans allowed measurement of the quantity of blood ejected with each stroke of the heart.

Traditional data suggested that cardiac output declined with age, so that a 90-year-old person's heart would pump at half the capacity of a 20-year-old's. The NIA examination, however, showed no age-associated reduction in pumping. Thus, reduction indicates disease, not aging.

This study also demonstrated how the aging heart compensates for an inability to achieve as high a rate of pumping as the younger heart. The older heart muscle compensates by enlarging, thus increasing its capacity to eject blood with each stroke. □

Thomas Reed To Direct CC Management Services

Thomas S. Reed, former chief of the National Library of Medicine's Office of Personnel and Management Analysis, was recently appointed to the new position of director of management support services for the Clinical Center.

Mr. Reed will oversee and direct the activities of the CC personnel office and the budget. He came to this position in October with experience in personnel and budgetary matters.

Prior to joining NLM in January 1980, he worked for 5 years at the National Cancer Institute in personnel and general administration positions, spending 1½ years as an administrative officer in the Division of Cancer Treatment.



Mr. Reed finds relaxation in his off time by participating in local musical theater. Among other backstage duties, he plays the string bass. He is currently with the Rockville Musical Theatre which is mounting a production of *West Side Story*.

Mr. Reed, a University of Notre Dame graduate, says that his first goal is to improve communication between the personnel office and all of the CC departments. He also wants to improve case processing and the flow of information.

"One of the major problems facing people in this profession is that personnel has always been in the middle between regulations and with assisting in programs. But, as communication improves and we better explain the decisions being made, I think the departments will understand the issues more thoroughly and help us make more favorable interpretations," he said. □

Dr. Leffall Will Speak on Feb. 17

The NIH Black Cultural Committee has announced a slight program change in the Black History Month Observance activities.

On Feb. 17, Dr. LaSalle D. Leffall, Jr., professor and chairman of the department of surgery, Howard University College of Medicine, will be the featured speaker. He will speak on the Black Scientist's Role in American History. The program will start at noon in Masur Auditorium. □

U.S. GOVERNMENT PRINTING OFFICE: 1981—341-134-11