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February 10, 1987
Vol. XXXIX No. 3

U.S. Department of Health and Human Services

National Institutes of Health

The NIH Record

Oral Biology and Biomedical Objectives Subject of NIDR Symposium, Feb. 25

In honor of the NIH Centennial celebration, the National Institute of Dental Research will sponsor a symposium entitled "Oral Biology and Biomedicine: Mutual Research Objectives." The day-long program, beginning at 8:30 a.m. on Wednesday, Feb. 25, in Masur Auditorium, features seven outstanding investigators whose presentations reflect the convergence of research interests of the dental and medical communities. All interested members of the NIH community are invited to attend.

Dr. Gideon Rodan, director of the department of biology and osteoporosis, Merck, Sharpe and Dohme, will discuss findings from recent studies of osteoblasts, the bone-forming cells. Dr. Rodan focuses on the role of these specialized cells in the synthesis of connective tissue matrix macromolecules and the production of mineralized matrix. He will also present information on the regulation of osteoblast function by hormones, and the production of regulatory growth and differentiation factors.

Dr. Keerti V. Shah, professor in the department of infectious diseases and immunology at Johns Hopkins University, will speak on human papillomavirus (HPV) infections. Some HPVs are adapted to infect cutaneous epithelium and others to infect mucosal surfaces, causing a wide variety of benign and malignant lesions. Dr. Shah will highlight studies concerning the prevalence and consequences of HPV infections in the oral cavity.

New research findings on collagens will be presented by Dr. Paul Bornstein, professor in the departments of biochemistry and medicine at the University of Washington. Dr. Bornstein will discuss the rapid progress being made in the characterization of newly recognized collagen types. He will also focus on efforts to understand how the genes for the many collagen types are regulated in accord with the suspected functions of these proteins.

Dr. Donald Clewell, professor in the department of microbiology at the University of Michigan, will outline research on various aspects of conjugative DNA transfer in the genus *Streptococcus*. Certain plasmid-containing strains of *Streptococcus faecalis* exhibit a mating response to peptide sex pheromones excreted by plasmid-free cells.

In addition, various species of streptococci have been found to contain "conjugative transporons," elements which can transfer conjugatively from a donor chromosome to a recipient cell chromosome in the absence of plasmid DNA. Dr. Clewell will discuss the nature of these phenomena in detail.

Dr. Jiri Mestecky, professor of microbiology at the University of Alabama Medical Center, will speak on mucosal immunity. This presentation focuses specifically on the mechanisms involved in the production of secretory antibodies by GALT (gut-associated lymphoreticular tissues) and the development of novel approaches of antigen delivery to GALT to stimulate generalized protective immunity on mucosal membranes—the most common port of entry of infectious microorganisms.

Dr. Marilyn Farquhar, professor in the departments of cell biology and pathology at Yale University School of Medicine, will discuss her laboratory's major contributions to the definition of the role of the Golgi complex in the vesicular traffic and sorting operations that are involved in many important cellular processes such as biogenesis and delivery of membrane proteins, uptake of peptide hormones and growth factors, and the regulation of various cell surface receptors.

Dr. Farquhar will also present the current findings concerning the analysis of Golgi subfractions, charting the pathway of lysosomal enzyme delivery, and the recycling of specific receptors.

Dr. Gerald Weissmann, professor in the department of medicine at New York University School of Medicine, will speak on activation of the neutrophil in inflammation. Specifically, Dr. Weissmann focuses on the mechanism by which nonsteroidal anti-inflammatory drugs inhibit neutrophil function. His current investigations define the effects of these agents on the interaction of various ligands with neutrophil receptors as well as identify the specific step in the sequence of events involved in neutrophil activation that the drugs inhibit. □

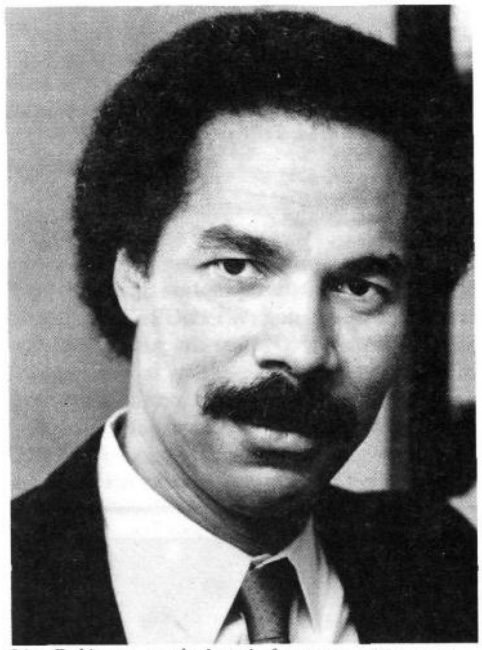
'Centennial Scholars' to Visit NIH

A group of 56 "NIH Centennial Scholars" will come to NIH for a 3-day visit beginning Feb. 28. These scholars are high school students representing each state, U.S. territory, and the District of Columbia. They were chosen by the respective governors as outstanding science students. The scholars will be accompanied by 56 "Centennial Teachers" selected by each student as his or her most influential science teacher. Their visit will include a tour of NIH, a luncheon with Nobelists, a sightseeing visit to Washington, D.C., and a breakfast on Capitol Hill.

Black History Program Features Randall Robinson

The 15th annual observance of Black History Month will be observed on Thursday, Feb. 12. The program will be held in Masur Auditorium, Clinical Center, from 11:30 a.m. to 1 p.m. The theme for this year's program is "Three Hundred Years of Progress—Myth or Reality?"

The program will feature as the keynote speaker, Randall Robinson, executive director of TransAfrica, a black-American organization that is concerned with United States foreign policy toward the nations of Africa and the Caribbean. He will focus his remarks on the historical accomplishments of African-Americans and on the current issues and problems facing the black community.



Mr. Robinson, on the board of trustees at Hampton Institute, is a member of the Council on Foreign Relations and the Massachusetts State Bar Association.

Mr. Robinson, a Harvard Law School graduate, served as a public interest lawyer in Boston for several years. He came to Washington in 1975 where he worked first as an aide to Rep. William Clay of Missouri, and then as an aide to Rep. Charles Diggs of Michigan.

He has written numerous articles on racism and oppression in South Africa that have appeared in several publications, including the Boston *Globe*, the Washington *Post*, the *Black Scholar* and *Essence* magazine. He has been honored for his achievements with the Congressional Black Caucus Humanitarian Award, the Southern Christian Leadership Conference

(See BLACK HISTORY, page 4)

TRAINING TIPS

The NIH Training Center of the Division of Personnel Management offers the following:

Courses and Programs	Dates
Management and Supervisory 496-6371	
Positive Influence & Negotiation	2/11–13
Federal Budget Process	2/25–27
Report Writing	2/17–19
Communication Issues	3/24–27
Capitol Hill	3/19–20
Developing Motivational Strategies	3/12
MBTI II	3/18–19 4/22–23
Networking—Silent Politics	4/2
Office Skills 496-6211	
Medical Terminology II	4/7–6/11
Improving Management Skills for Secretaries and Administrative Assistants	3/9–11
Telephone Techniques	2/25
Advanced Typing	3/3–4/28
Improving Management Skills for Executive Secretaries and Administrative Assistants	3/9–11
Basic Time and Attendance	3/18–19
Special Programs 496-6211	
Adult Education 496-6211	
Training and Development Services Program	Continuous Availability

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Can you identify the persons in the above photograph? The picture was found when DRS was searching through old files in preparation for their 30th anniversary. According to some reports, BEIB used to hold regular exhibits on the campus at NIH. This photo was taken as part of one of their exhibits. The building in the background is Stone House and the date guessed to be in the 1950's. If you know any of the above persons or anything about the exhibit, call The NIH Record, 496-2125.

Dr. Giovanni Di Chiro, chief of the NINCDS Neuroimaging Section, has been selected to receive the Gold Medal of the Radiological Society of North America. The award, considered the highest honor in American radiology, will be presented at the society's next annual meeting in Chicago. An internationally recognized leader in radiological research, Dr. Di Chiro has pioneered the use of advanced neuroimaging methods to study diseases of the central nervous system.

FAES Accepts Applications For Wellcome Stipends

FAES administers special funds known as Wellcome Stipends to augment the stipends of postdoctoral level guest workers at NIH. A maximum of $3,600 per year ($300/month) may be granted to each approved individual as an income supplement to a maximum total family income of $15,000 per year plus $1,000 for each dependent including spouse.

The selection committee will consider the scientific merit of the research to be conducted as well as need and professional qualifications of the applicant.

Awards will be made twice a year, Mar. 31 and Sept. 30, for the 12-month periods beginning Apr. 1 and Oct. 1. Applications must be received in the FAES office by Mar. 6 or Aug. 31 for the March and September awards, respectively. Applications are being accepted now for the Mar. 31 awards.

Forms are available in the FAES office, Bldg. 10, Rm. 2C207A, or by calling 496-7976. □

The NIH Record

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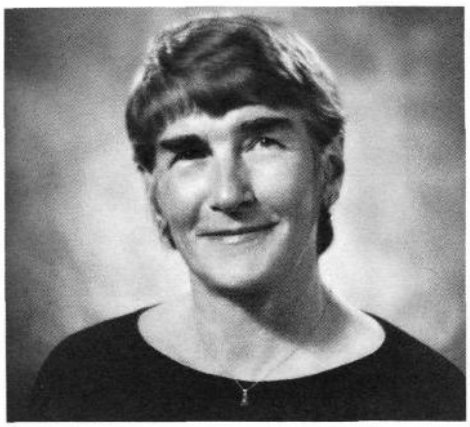
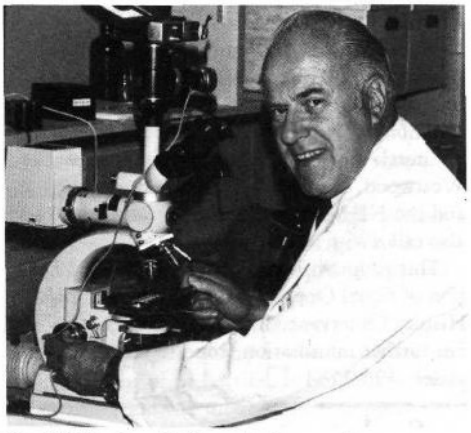


Dr. Thressa C. Stadtman, chief of the intermediary metabolism and bioenergetics sections in NHLBI's Laboratory of Biochemistry, has been named recipient of the William C. Rose Award for 1986. The award is in honor of Dr. Stadtman's outstanding contributions to the field of biochemistry and her dedication to training investigators in biochemistry. Dr. Stadtman and her coworkers have done extensive investigations of selenium and its role in biologic systems, providing fundamental knowledge on the biochemistry of selenium and identifying and purifying five additional selenium-containing enzymes. Five of the 12 enzymatic processes that involve vitamin B–12 were discovered by Dr. Stadtman and her coworkers.



Dr. Willy Burgdorfer, scientist emeritus at NIAID's Rocky Mountain Laboratories in Hamilton, Mont., was recently presented an honorary medical degree (doctor medicine honoris causa) on the occasion of the 152nd anniversary of the medical faculty of the University of Bern in Switzerland. He was honored for his investigations of bloodsucking arthropods that serve as vectors of human pathogens, and especially for his discovery of the spirochete named Borrelia burgdorferi. *This organism, carried by ticks, is the cause of Lyme disease, a form of inflammatory arthritis. An international authority on rickettsial diseases, Dr. Burgdorfer is a native of Switzerland and has been with the NIAID since 1951.*

Synthetic Hormone Corrects Anemia of Kidney Dialysis

A new treatment has been developed that is expected to improve the lives of thousands of patients on kidney dialysis. A synthetic kidney hormone, erythropoietin, has been successfully used to stimulate production of red blood cells in dialysis patients with anemia, a major complication of dialysis. The hormone eliminates the need for blood transfusions. It may prove useful in treating other forms of anemia as well.

This successful use of erythropoietin was reported in the Jan. 8 issue of the *New England Journal of Medicine* by Drs. Joseph W. Eschbach and John W. Adamson of the University of Washington, Seattle, NIDDK grantees, and their colleagues at the Northwest Kidney Center, Seattle, and AMGen Corporation, Thousand Oaks, Calif. Similar results of another smaller study were reported in late 1986 in the British journal, *Lancet*.

Iron Builds Up

An estimated 90,000 people require kidney dialysis, according to the Health Care Financing Administration, and approximately 25 percent of dialysis patients become sufficiently anemic to warrant frequent blood transfusions. Anemia can impair the rehabilitation of patients on dialysis and is ordinarily treated with either blood transfusions or androgens.

Transfusions carry the risk of iron overload, sensitization to blood products, and exposure to infectious agents such as the hepatitis or AIDS viruses. Androgens often provide only temporary or incomplete responses. Therefore, a more adequate treatment for anemia has long been needed.

Drs. Eschbach and Adamson and their colleagues now report that the need has been met. "Transfusions had been required by nearly three-fourths of our patients," according to the investigators, "and this need was eliminated in all patients who responded to recombinant human erythropoietin."

"These patients are more active," commented Dr. Eschbach. "They feel better and are able to do physical activities that they could not do before."

Scientists have been interested in the hormone erythropoietin for more than a century. In 1863, a French physician, working in the highlands of Mexico, noted that his patients, living in a low oxygen environment, had thicker blood and an increased number of red blood cells.

By the 1950's, scientists had found that the substance erythropoietin was produced by the kidney in response to a low oxygen supply and stimulated production of oxygen-carrying red blood cells.

Since the kidneys are the primary source of erythropoietin, as the kidney is destroyed by disease, the hormone progressively falls, leading to deepening anemia. Thus another source of erythropoietin was needed. The application of recombinant DNA techniques in the field of molecular biology has now made this possible. In 1983, the hormone was synthesized and sufficient amounts have been produced for both research and treatment.

During the 7 months of the study, the investigators administered erythropoietin to 25 anemic patients with end-stage renal disease who were undergoing hemodialysis. In 17 of the patients, who were treated with erythropoietin for from 3 to 7 months, the researchers found that levels of hemoglobin (the oxygen-carrying part of red blood cells) were directly correlated with the amount of the hormone administered.

Improvements Noted

In patients receiving a dose sufficient to increase the hemoglobin significantly, well-being also improved. Twelve patients who had previously required blood transfusions no longer needed them. These preliminary results demonstrate that the synthetic hormone is effective, and as yet there have been no serious side effects.

In an accompanying editorial, Dr. Allan Erslev of Thomas Jefferson University in Philadelphia, calls this research and the recent British study "a crowning achievement." Dr. Erslev, who in 1953 proved the existence of erythropoietin, states that:

"The research suggests a future in which the physical and emotional debilities of anemic hypoxia may be alleviated in patients with chronic renal disease and possibly anemia from other causes. . . . In the future erythropoietin will probably be investigated as a possible treatment for almost all types of anemia."—

By Jim Fordham □

Bethesda Youth Theater Presents 'Experiments,' Mar. 6, 7

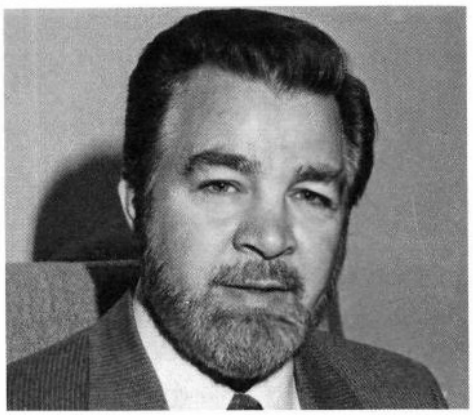
Experiments, a comedy based on the selling of science and life in and around the NIH, will be presented by the Bethesda Youth Theater, at Ayrlawn Youth Program, 5650 Oakmont Ave., Bethesda, Md., on Mar. 6 and 7.

The comedy was written by Dr. Robert G. Martin, NIDDK, and produced and directed by Johanna Grodzicki, OD.

To obtain tickets ($8), contact Leanne Mertz, YMCA, 9401 Old Georgetown Rd., Bethesda, MD 20014. □

Visiting Program

11/1 **Dr. N. Vidya Shankar,** India. Sponsor: Dr. Wayne Anderson, Laboratory of Tumor Immunology and Biology, NCI, Bg. 10, Rm. B1B38.
11/1 **Dr. Takao Tanaka,** Japan. Sponsor: Dr. Igal Gery, Laboratory of Vision Research, NEI, Bg. 10, Rm. 10N208.
11/3 **Dr. Sina Bahmanyar,** Iran. Sponsor: Dr. Carleton Gajdusek, Laboratory of Central Nervous System Studies, NINCDS, Bg. 36, Rm. 5B21.
11/3 **Dr. Arepalli Rao,** India. Sponsor: Dr. Glaudemans, Laboratory of Chemistry, NIDDK, Bg. 8A, Rm. B1A11.
11/5 **Dr. Christoph Gleiter,** Germany. Sponsor: Dr. Markku Linnoila, Laboratory of Clinical Studies, NIAAA, Bg. 10, Rm. 3B19.
11/5 **Dr. Bore Raju,** India. Sponsor: Dr. Louis Levy, Laboratory of Molecular Biophysics, NIEHS, Research Triangle Park, N.C.
11/6 **Dr. Humberto A. Carrillo-Calvet,** Mexico. Sponsor: Dr. John Rinzel, Mathematical Research Branch, NIDDK, Bg. 31, Rm. 4B54.
11/6 **Dr. Hitoshi Hasegawa,** Japan. Sponsor Dr. Akio Sugino, Laboratory of Genetics, NIEHS, Research Triangle Park, N.C.
11/7 **Dr. Francois Clavel,** France. Sponsor: Dr. Roy Repaske, Laboratory of Molecular Microbiology, NIAID, Bg. 5, Rm. B135.
11/9 **Dr. Hozumi Tatsuoka,** Japan. Sponsor: Dr. Thomas S. Reese, Laboratory of Neurobiology, NINCDS, Woods Hole, Mass.
11/10 **Dr. Sonia Doi,** Brazil. Sponsor: Dr. Leonard D. Kohn, Laboratory of Biochemical Pharmacology, NIDDK, Bg. 10, Rm. 9B12.
11/10 **Dr. Gabriele Gusella,** Italy. Sponsor: Dr. Luigi Varesio, Laboratory of Molecular Immunoregulation, NCI, FCRF, Bg. 560, Rm. 3152, Frederick, Md.
11/10 **Dr. Daniele S. Liscia,** Italy. Sponsor: Dr. Robert Callahan, Laboratory of Tumor Immunology and Biology, NCI, Bg. 10, Rm.5B50.
11/10 **Dr. Tomoaki Mitsuhashi,** Japan. Sponsor: Dr. Vera Nikodem, Clinical Endocrinology Branch, NIDDK, Bg. 10, Rm. 8N323.
11/10 **Dr. Manuela Pintor,** Italy. Sponsor: Dr. Roger Porter, Medical Neurology Branch, NINCDS, Bg. 10, Rm. 5N246.
11/10 **Dr. Tomoaki Mitsuhashi,** Japan. Sponsor: Dr. Vera Nikodem, Clinical Neurology Branch, NINCDS, Bg. 10, Rm. 5N246.
11/10 **Dr. Emil Varga,** Hungary. Sponsor: Dr. James B. Sidbury, Human Genetics Branch, NICHD, Bg. 10, Rm. 8C429.
11/10 **Dr. Zhang Lu,** China. Sponsor: Dr. Joseph M. Rifkind, Gerontology Research Center, NIA, Baltimore, Md.
11/12 **Dr. Emmanuel Opara,** Nigeria. Sponsor: Dr. Vay Go, Division of Digestive Diseases and Nutrition, NIDDK, Bg. 31, Rm. 9A23.
11/13 **Dr. Charis Liapi,** Greece. Sponsor: Dr. George P. Chrousos, Developmental Endocrinology Branch, NICHD, Bg. 10, Rm. 10N262.
11/19 **Dr. Trevor K. Archer,** Bahamas. Sponsor: Dr. Gordon L. Hager, Laboratory of Experimental Carcinogenesis, DCE, NCI, Bg. 37, Rm. 3C19.
11/24 **Dr. Xue Bao Gang,** China. Sponsor: Dr. Jerry Gardner, Digestive Diseases Branch, NIDDK, Bg. 10, Rm. 9C103.
12/1 **Dr. Kaye E. Brock,** Australia. Sponsor: Dr. Louise Brinton, Epidemiology and Biostatistics Program, DCE, NCI, Landow Bg., Rm. 3C06.
12/1 **Dr. Massimo Cardinali,** Italy. Sponsor: Dr. Soo Il Chung, Laboratory of Oral Biology and Physiology, NIDR, Bg. 30, Rm. 114.
12/1 **Dr. Therese Loughlin,** Ireland. Sponsor: Dr. Gordon B. Cutler, Developmental Endocrinology Branch, NICHD, Bg. 10, Rm. 10N262.
12/1 **Dr. Paolo Lusso,** Italy. Sponsor: Dr. Robert Gallo, Laboratory of Tumor Cell Biology, DCT, NCI, Bg. 37, Rm. 6A09.
12/1 **Dr. Akira Masuda,** Japan. Sponsor: Dr. Michael Brownstein, Laboratory of Cell Biology, NIMH Bg. 36, Rm. 3A31.
12/1 **Dr. Arun Thiagarajan,** India. Sponsor: Dr. Robert L. Eskay, Laboratory of Clinical Studies, NIAAA, Bg. 10, Rm. 3C216.
12/1 **Dr. Zhang Wan Qin,** China. Sponsor: Dr. Hugh Tilson, Laboratory of Behavioral and Neurological Toxicology, NIEHS, Research Triangle Park, N.C.
12/7 **Dr. Kim Chen,** China. Sponsor: Dr. Peter Munson, Laboratory of Theoretical and Physical Biology, NICHD, Bg. 10, Rm. 8C413.
12/8 **Dr. Shehnaz Gangjee,** India. Sponsor: Dr. John French, Carcinogenesis and Toxicology Evaluation Branch, NIEHS, Research Triangle Park, N.C.
12/8 **Dr. Guo Neng-hua,** China. Sponsor: Dr. Victor Ginsburg, Laboratory of Structural Biology, NIDDK, Bg. 8, Rm. 2A21.
12/10 **Dr. Rachel Zohar,** Israel. Sponsor: Dr. Dennis Murphy, Laboratory of Clinical Studies, NIMH, Bg. 10, Rm. 3D41.
12/11 **Dr. Yasuyuki Hatada,** Japan. Sponsor: Dr. Thomas Chase, Experimental Therapeutics Branch, NINCDS, Bg. 10, Rm. 5C108.
12/16 **Dr. Tetsumi Irie,** Japan. Sponsor: Dr. Josef Pitha, Laboratory of Cellular and Molecular Biology, NIA, GRC, Baltimore, Md.
12/17 **Dr. Setsuo Takai,** Japan. Sponsor: Dr. Katherine Sanford, Laboratory of Cellular and Molecular Biology, NCI/DCE, Bg. 37, Rm. 2D15.
12/19 **Dr. Yoshio Akagi,** Japan. Sponsor: Dr. Kador, Laboratory of Mechanisms of Ocular Diseases, NEI, Bg. 10, Rm. 10B04.
12/21 **Dr. Esther Sternberg,** Canada. Sponsor: Dr. Candace Pert, CC, Bg. 10, Rm. 3N258.
12/22 **Dr. Tetsuo Takano,** Japan. Sponsor: Dr. Steven S. Li, Laboratory of Genetics, NIEHS, Research Triangle Park, N.C.
12/29 **Dr. Michio Masumura,** Japan. Sponsor: Dr. Ichiji Tasaki, Laboratory of Neurophysiology, NIMH Bg. 36, Rm. 2B16.
1/1 **Dr. Maria P. Canevini,** Italy. Sponsor: Dr. Roger Porter, Medical Neurology Branch, NINCDS, Bg. 10, Rm. 5N246.
1/1 **Dr. Wilhelm Kaulfersch,** Austria. Sponsor: Dr. Thomas Waldman, Metabolism Branch, NCI/CB, Bg. 10, Rm. 4N108.
1/1 **Dr. Toshio Doi,** Japan. Sponsor: Dr. Striker, Metabolic Diseases Branch, NIDDK, Bg. 10, Rm. 3N110.
1/4 **Dr. Peter Herscovitch,** Canada. Sponsor: Dr. Steven Larson, Nuclear Medicine Department, CC, Bg. 10, Rm. 1C455. □



Dr. Samuel C. Rawlings was recently appointed chief of the Behavioral and Neurosciences Review Section in DRG's Referral and Review Branch. He had previously served as executive secretary of the Human Development and Aging Study Section-2, one of DRG's initial review groups responsible for conducting the scientific and technical merit review of grant applications submitted to NIH and other PHS components.

BLACK HISTORY

(Continued from page 1)

Drum Major for Justice Award and the Johnson Publishing Company Award.

Following the keynote address, musical selections will be performed by the Paul Lawrence Dunbar Senior High School Choir of Washington, D.C.

Sign language interpretation will be provided. If accommodations for other disabling conditions are needed, contact the NIH Division of Equal Opportunity, 496-6301.

Shuttle service will be provided between Westwood, Federal and Landow Buildings and the NIH campus. For departure times, also call 496-6301.

This program is sponsored by the NIH Division of Equal Opportunity and its 1987 Black History Observance Planning Committee. For further information, contact James S. Alexander, 496-1584. □

1987 Federal Pay Scales

Steps	1	2	3	4	5	6	7	8	9	10
GS-1	$ 9,619	$ 9,940	$10,260	$10,579	$10,899	$11,087	$11,403	$11,721	$11,735	$12,036
2	10,816	11,073	11,430	11,735	11,866	12,215	12,564	12,913	13,262	13,611
3	11,802	12,195	12,588	12,981	13,374	13,767	14,160	14,553	14,946	15,339
4	13,248	13,690	14,132	14,574	15,016	15,458	15,900	16,342	16,784	17,226
5	14,822	15,316	15,810	16,304	16,798	17,292	17,786	18,280	18,774	19,268
6	16,521	17,072	17,623	18,174	18,725	19,276	19,827	20,378	20,929	21,480
7	18,358	18,970	19,582	20,194	20,806	21,418	22,030	22,642	23,254	23,866
8	20,333	21,011	21,689	22,367	23,045	23,723	24,401	25,079	25,757	26,435
9	22,458	23,207	23,956	24,705	25,454	26,203	26,952	27,701	28,450	29,199
10	24,732	25,556	26,380	27,204	28,028	28,852	29,676	30,500	31,324	32,148
11	27,172	28,078	28,984	29,890	30,796	31,702	32,608	33,514	34,420	35,326
12	32,567	33,653	34,739	35,825	36,911	37,997	39,083	40,169	41,255	42,341
13	38,727	40,018	41,309	42,600	43,891	45,182	46,473	47,764	49,055	50,346
14	45,763	47,288	48,813	50,338	51,863	53,388	54,913	56,438	57,963	59,488
15	53,830	55,624	57,418	59,212	61,006	62,800	64,594	66,388	68,182	69,976
16	63,135	65,240	67,345	69,450	71,555*	73,660*	75,765*	77,870*	79,975*	
17	73,958*	76,423*	78,888*	81,353*	83,818*					
18	86,682*									

***The rate of basic pay payable to employees at these rates is limited to the rate payable for level V of the Executive Schedule, which would be $70,800.**
SOURCE: The White House.

NICHD Projects To Study Fetal Growth Retardation

Researchers in Ohio and Colorado have recently begun a major effort to understand why some babies' growth is retarded in their mothers' wombs. They are also searching for better ways to predict and treat this complex condition, called intrauterine growth retardation (IUGR).

Scientists at the University of Cincinnati and the University of Colorado, under grants awarded by the NICHD, will explore the biological mechanisms that control fetal growth and how these processes go awry to produce IUGR. Over the next 5 years, multidisciplinary teams at each center will approach the problem of IUGR from different angles—studying physiological, hormonal, and nutritional influences.

Major Research Initiative

"To prevent IUGR, we have to understand why it happens," said Dr. Charlotte Catz, a pediatrician with NICHD who will oversee the projects. "Ultimately, if the causes of IUGR can be prevented, then we won't have to treat it."

Both projects are part of a major research initiative developed by the Institute to prevent low birth weight. In the United States, two-thirds of all infant deaths occur among low birth weight babies, due to IUGR or premature birth, or both.

Growth-retarded babies, unlike premature babies, are born at full term. But like preterm babies, they usually weigh less than 5.5 pounds at birth. These small babies are 40 times more likely to die in the first year after birth than infants of normal birth weight.

And those who survive face a much greater risk of developing lifelong disabilities such as mental retardation, cerebral palsy, and learning problems.

At the University of Cincinnati, Dr. Reginald Tsang, director of the newborn division in the department of pediatrics, is heading several studies using animal models. In one project, researchers will test the belief that an oversupply of growth-controlling hormones released during a critical time of development may signal cells to stop dividing.

In another animal study, researchers will test whether certain minerals important in fetal bone production such as calcium and phosphorus adequately cross the placenta from the mother to the fetus.

Dr. Tsang's research group will also begin a large-scale study of pregnant women to determine if maternal bed rest decreases IUGR, a much-debated issue among obstetricians. Some believe that bed rest increases the flow of blood carrying oxygen and nutrients to the fetus, thereby diminishing growth retardation in the womb.

At the University of Colorado, Dr. Edgar L. Makowski, chairman of the department of obstetrics and gynecology, is directing studies on nutrition's role in IUGR. The mother's nutritional status, the transfer of nutrients from mother to fetus, and the fetus's ability to compensate during malnutrition—all may affect fetal growth.

Dr. Makowski's group will also study the regulation and control of blood flow through the human placenta and its possible role in IUGR. This research will provide valuable information about how the placenta works during normal pregnancy and whether it differs in IUGR.

Because IUGR may involve deficiencies or imbalances between the mother, fetus, and placenta, Dr. Catz is hopeful that the diversity of these research projects will reveal the causes of IUGR. With this knowledge, she said, many of the complications resulting from IUGR can be eliminated. □

Dr. Salzman Joins Georgetown University Expert in Biochemistry of Animal Viruses

Dr. Norman P. Salzman is leaving NIH to follow a new course in his career at Georgetown University. As chief of the Laboratory of the Biology of Viruses (LBV) at the National Institute of Allergy and Infectious Diseases, Dr. Salzman has been a leader in the field of the biochemistry of animal viruses.

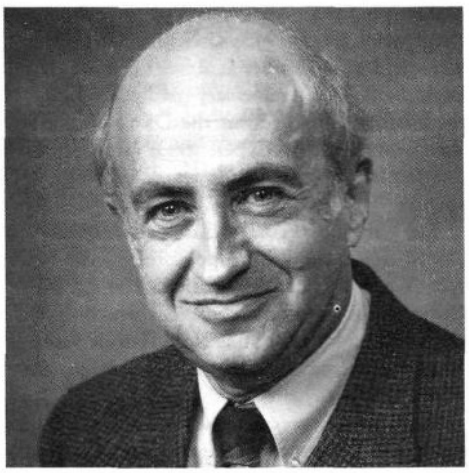
When Dr. Salzman became chief of LBV in 1967, he gave a new focus to the laboratory's activities, attracting highly qualified and innovative scientists to his program. The laboratory has since made important contributions to the fundamental knowledge of viral replication.

Research Noted

In particular, his pioneering work has provided significant insights into the mechanisms of vaccinia virus replication, and it has been invaluable as a basis for classifying viruses. His early studies on isolation and fractionation of human chromosomes served as the basis for subsequent studies in many other labs.

Much of Dr. Salzman's research activity has been concentrated on oncogenic viruses, particularly the DNA replication and gene transcription of SV40. As a result of his leadership and the international stature that his laboratory achieved in virology and in cell biology research, he was selected for the NIH Superior Service Award in 1973.

His most recent work has involved studies with adenovirus. At Georgetown, he will explore alternative approaches in developing an effective vaccine against the virus that causes the acquired immune deficiency syndrome (AIDS). He will also examine methods for detecting the AIDS virus in tissue samples.



Dr. Salzman will be exploring new approaches in developing an effective vaccine against the AIDS virus.

Dr. Salzman came to NIH directly after receiving his Ph.D. from the University of Illinois, where he did his graduate work as an Abbott, Upjohn, Eli Lilly fellow. Throughout his career at NIH, he has been in demand as a lecturer and as a visiting scientist, both in the United States and abroad. He has served as editor of the *Journal of Virology* in addition to being on the editorial boards of other journals in his field. □

Feb. 15 Chamber Concert Postponed

The Feb. 15 concert by the NIH R&W Chamber Orchestra Concert has been postponed to March. A new date will be announced shortly. For further information, call Dr. J. B. Wolff, 496-7070.

NIEHS Celebrates Centennial and 20th Anniversary

Week-long events observing NIH's Centennial and the 20th Anniversary of the National Institute of Environmental Health Sciences were held in December at Research Triangle Park, N.C. The anniversary marked NIEHS' establishment in 1966 as the Division of Environmental Health Sciences. NIH Director Dr. James B. Wyngaarden was a featured speaker.

The Centennial/Anniversary events began Dec. 1, with a walk/run sponsored by the Recreation and Welfare Association. The R&W Outing Club organized the event which included 2- and 5-mile runs and a 1-mile walk. Participation was excellent despite chilly, windy weather.

The week's centerpiece was a 2-day scientific conference featuring presentations on major topics in environmetnal health sciences by NIEHS researchers and grantees. Dr. Wyngaarden delivered the keynote address for the conference, reviewing NIEHS history and its leading role in biomedical research on the health effects of environmental agents.

Topics highlighted were reproductive and developmental biology, neurotoxicology and cancer, areas featuring both rapid advances in basic biology and potential health effects of chemicals in the environment. Dr. David P. Rall, NIEHS Director, concluded the scientific conference with a presentation on the future of environmental health science research.

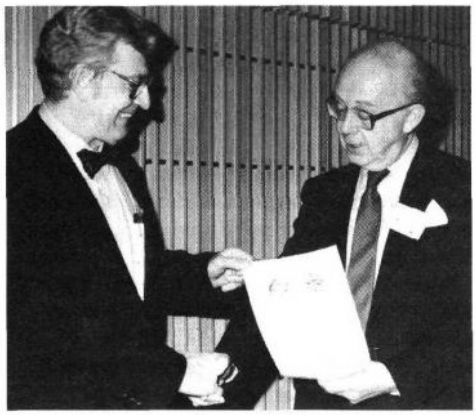
Arranged along the length of the NIEHS Bldg. 101 Mall were 130 poster sessions which displayed detailed discussion and graphics on research in the four major NIEHS programs: intramural research, extramural research, toxicology research and testing, and biometry and risk assessment. Those attending the sessions included nongovernment scientists from nearby research universities, Duke University, University of North Carolina at Chapel Hill, and North Carolina State University.

Scientists from numerous research institutions in Research Triangle Park, including the Chemical Industry Institute of Toxicology, Research Triangle Institute, the U.S. Environmental Protection Agency, and Burroughs Wellcome Company were also present.

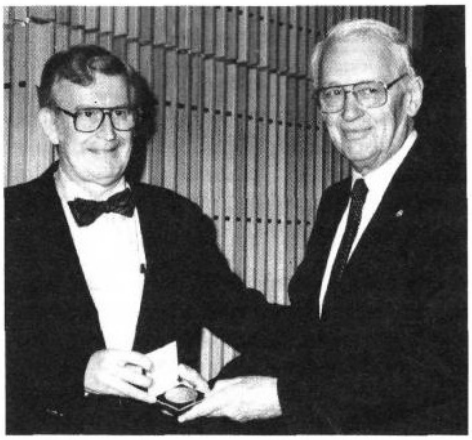
Dr. Rall accepted two major international awards on behalf of the Institute. The Silver Medal of the Highest Order from the Karolinska Institute in Sweden was presented by Dr. Lars Friberg of Karolinska, and the Distinguished Service Medal of the Finnish Occupational Health Institute, was presented on behalf of that agency by Dr. Emmanuel Somers, Director-General of the World Health Organization's Environmental Health Directorate in Ottawa.

After the commemorative program, NIEHS employees were honored at a picnic luncheon and an afternoon of activities including hayrides in horse- and mule-drawn carts around the campus' 28-acre lake, and with special music and slide show produced by the R&W Camera Club. □

Showing a variety of styles at the starting line, NIEHS employees brace for the start of the 2-mile run, the first event in a week commemorating the 20th Anniversary of NIEHS and the Centennial of NIH. NIEHS' R&W Association sponsored 5- and 2-mile runs and a 1-mile walk, that were officiated by the R&W Outing Club to promote the benefits of health and exercise.



Dr. Somers (r), Director-General, Environmental Health Directorate, Ottawa, presents Dr. Rall with the Distinguished Service Medal of the Finnish Occupational Health Institute, which he accepted on behalf of the Institute. The award was made at the NIEHS 20th Anniversary Commemorative Program in Research Triangle Park.



Dr. Friberg (r) presents Dr. Rall, NIEHS Director, with the Silver Medal of the Highest Order from the Karolinska Institute. NIEHS was honored for its outstanding research in the environmental health sciences. Dr. Friberg is the chairman of the Karolinska department of environmental health.

Speakers for the NIEHS 20th Anniversary Commemorative Program were, l to r: Dr. James B. Wyngaarden, NIH Director; Dr. Paul Kotin, first NIEHS Director, now consultant with the Manville Corporation; The Honorable Tim Valentine, U.S. House of Representatives (D–N.C.); Dr. Lars Friberg, chairman, department of environmental health, Karolinska Institute, Stockholm, Sweden; Dr. David P. Rall, NIEHS Director; Dr. Emmanuel Somers, Director-General, Environmental Health Directorate, Ottawa; and Ned E. Huffman, executive vice president, Research Triangle Foundation.

NIEHS employees paused for hot cider halfway through the hayride around the lake which was a featured event in an afternoon honoring employee contributions to the Institute in its first 20 years. The wagon was pulled by a champion team of Belgium dray horses (and another team of champion mules, not pictured). In the background is NIEHS' Bldg. 101, the large laboratory and office facility that is Institute headquarters in Research Triangle Park.

Douching Associated With Ectopic Pregnancy Risk

Douching, a part of many women's personal hygiene regimen, appears to increase the risk of ectopic pregnancy. In a recent study, women who douched once or more a week had an average of twice the incidence of ectopic pregnancy compared with women who had never douched. This risk, however, was influenced by the type of douche a woman used and how often she used it.

The researchers found that women who used a commercial douching preparation at least weekly had the highest risk of tubal pregnancy. These women had more than four times the risk of women who had never douched. Women who used water or a noncommercial douching mixture such as vinegar and water at least once a week had only a slightly higher risk of ectopic pregnancy than women who never douched.

Ectopic pregnancy occurs when the fertilized egg implants in a fallopian tube or in the abdominal cavity rather than in the uterus. Such implantations can be life-threatening to the woman if not promptly diagnosed and treated surgically.

Statistics show that ectopic pregnancy is becoming a serious public health problem in this country. Its annual incidence has more than doubled in the past decade, rising from 4.2 per 10,000 women ages 15 to 44 years in 1970 to 9.9 per 10,000 in 1980. This increase has coincided in part with an increase in sales of commercial douches. The sale of these products in the U.S. has more than tripled since 1974.

The researchers, supported in part by the National Institute of Child Health and Human Development, interviewed 155 women who had a tubal ectopic pregnancy between 1975 and 1979. The women were asked about their reproductive, contraceptive and medical histories, and were compared with 456 women who gave birth during the period of the study. Women who had used IUDs or had a prior ectopic pregnancy were not included in the study.

Among the women with tubal pregnancies, twice as many (16.8 percent) had douched at least once a week, compared with the control group (8.4 percent). Women who douched less than once a week, regardless of the type of douche they used, had very little increased risk compared to those who never douched, according to the investigators.

Douching is sometimes prescribed by physicians as part of the treatment for certain vaginal infections. More commonly, though, many women douche routinely as part of their personal hygiene program, although doctors say there is no benefit from doing so. In fact, most physicians believe routine douching is harmful since beneficial bacteria in the vagina are destroyed.

Also, the mucous plug in the cervical canal which protects against bacteria invading the uterus can be washed away. Although it is ineffective, some women use douching either as a primary or backup method of birth control. The researchers did not ask the women in this study the reasons for their douching.

Previous studies have linked douching with the occurrence of pelvic inflammatory disease (PID), a major risk factor for ectopic pregnancy. For example, one team of investigators has reported that 90 percent of the women with PID in their study had douched more than once per week and that these women had douched for many years prior to their being diagnosed with PID.

Doctors suspect that douching may contribute to PID by pushing infectious bacteria or other organisms from the vagina through the cervix into the uterus and fallopian tubes.

According to Dr. Jeffrey Perlman, chief of the NICHD Contraceptive Evaluation Branch, "This study clearly indicates a relationship between vaginal douching and tubal ectopic pregnancy." He adds that although the association between vaginal douching and vaginal infection—and their joint effects on the occurrence of tubal ectopic pregnancy—still needs to be clarified, women who douche on a regular basis without a specific medical indication should discuss this practice with their physician.

This study was published in vol. 153, no. 7 of the *American Journal of Obstetrics and Gynecology*. □

HLA Lab Seeks Pregnant Donors

"If you have it, please share!" says the Department of Transfusion Medicine's HLA lab.

This month the lab continues it's "Special Delivery" campaign in search of pregnant women who are willing to give blood to be screened for HLA antibodies. February is a month for caring and sharing, so—have a heart! Give to the HLA lab. And, take heart. All donors will receive financial compensation.

If you are interested in donating, call 496-8852 between 8 a.m. and 4 p.m., Monday through Friday, to schedule an appointment. □

Volunteers Needed at NIMH

The Clinical Psychobiology Branch, NIMH, is seeking volunteers between the ages of 18 and 60 to participate in a study examining the various daily bodily rhythms.

Volunteers must be free of medical illnesses and currently not taking medication, as well as having no family history of psychiatric illness or alcoholism. Subjects will spend 5 consecutive nights at NIMH and will be paid in accordance with the procedure of their visit.

For further information, contact Susan Glick, 496-6981, Monday through Friday, 9 a.m. to 5 p.m. □

Ruth McClure Retires, NIA Grants Management Officer

Ruth McClure, NIA grants management officer, retired recently after 30 years of government service, the last 10 with the Institute.

Ms. McClure joined the newly formed NIA in 1976 as a grants management specialist and later became NIA's first grants management officer.

When asked what she'll miss the most about NIH, Ms. McClure replied, "I'm going to miss all the people, my coworkers, and dealing with the people in the outside community. The grantee community has a lot of people that I've grown close to over the years." She adds that the work has been rewarding although difficult.

At a recent retirement luncheon NIH Deputy Director Dr. William F. Raub described Ms. McClure as "a model." He also added that she demonstrates "ability, diligence and good humor."

Ms. McClure is now looking forward to spending more time with her husband, Warren, who retired from NIH in 1985. She plans to do volunteer work, possibly with the new Rescue Squad and Life Support Unit in Walkersville, Md.

She also wants to devote some time to her hobbies, which include crafts and needlework. Another hobby is stamp collecting. According to Ruth she hasn't had time to sort out her stamp collection in 20 years.

In 1962 she moved to Walkersville. Ruth says at that time, "Walkersville had a population of less than 500 if you counted dogs and cats."

Ms. McClure is a member of several organizations including the Frederick County Society of Model Railroaders; the Carroll County Philatelic Society; and the Order of the Eastern Stars, Frederick Chapter #79.

Born in Waynesboro, Va., she began her government career at the Department of the Navy in Norfolk and later moved to the Pentagon.

Ms. McClure came to NIH in 1962 as a grants fiscal clerk and worked in the Division of Research Facilities and Resources (now the Division of Research Resources) until 1976.

At one time, Ms. McClure heard that the Postal Service was considering closing smaller branches because of a lack of income. To help the small town Walkersville branch generate funds, she would purchase large amounts of stamps and bring them to NIH and resell them.

NICHD Study Shows Premature Delivery Linked to Smoking During Pregnancy

Pregnant women who smoke are more likely to deliver prematurely, a new study shows. Smoking is most strongly linked with earlier, higher-risk premature births, which occur more than 7 weeks too soon. The investigators estimate that if pregnant women would not smoke, 1 out of 11 of these "very premature" births could be prevented.

"A large portion of infant deaths in this country occur among very premature infants, so smoking during pregnancy is a significant factor in our Nation's relatively high infant mortality rate," according to Dr. Duane Alexander, Director of the National Institute of Child Health and Human Development. He noted that though the U.S. infant mortality rate is at an all-time low, this country ranks only 15th on the international scale.

In a study of more than 30,000 women, NICHD researchers led by Dr. Patricia Shiono, found that overall, preterm delivery (less than 37 weeks of gestation, compared to the normal 40 weeks) was 20 percent more common among women who smoked at least one pack of cigarettes per day, compared to nonsmokers. Lighter smokers had a 10 percent higher risk of premature delivery.

Of even greater public health significance, the researchers noted, is the finding that very premature births (less than 33 weeks of gestation) are increased by about 60 percent among women who smoke one or more packs a day, and by 10 percent in lighter smokers. Most babies born this early are low birth weight infants (weighing 5½ pounds or less) who are likely to suffer from respiratory, neurological, and other life-threatening problems.

The statistics show that any individual woman who smokes during pregnancy has only a "modest increase" in the risk of premature delivery. But this small increase, when applied to the 3.7 million of pregnancies in the U.S. each year, translates into several thousand premature deliveries that could be prevented.

This is one of many studies that have linked maternal smoking with adverse effects on the fetus. Previous research has established that babies born to women who smoke during pregnancy are on the average 7 ounces lighter than those born to comparable women who do not smoke.

The study was reported in vol. 255, no. 1 of the *Journal of the American Medical Association* by Drs. Patricia H. Shiono; Mark A. Klebanoff, and George G. Rhoads, of the NICHD Epidemiology Branch. □

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