Dr. Otis Bowen, New HHS Secretary, Tours NIH and ADAMHA Facilities for First Time

Dr. Otis R. Bowen, Secretary of the Department of Health and Human Services, was warmly welcomed during his first visit to the NIH campus on Mar. 26. Employees shook hands with the new Secretary as he walked through the Clinical Center corridors.

Secretary Bowen, escorted by NIH Director Dr. James B. Wyngaarden and Acting Assistant Secretary for Health Donald I. MacDonald and accompanied by executive assistant to the Secretary Stephan Chertoff, toured NIH and Alcohol, Drug Abuse and Mental Health Administration facilities in the Clinical Center.

The ADAMHA portion included a walk through the National Institute on Alcohol Abuse and Alcoholism Ward, the National Institute of Mental Health Childhood and Eating Disorders Ward, the NIMH Alzheimer's Ward and several NIMH laboratories.

The NIH tour included visits to the National Institute of Allergy and Infectious Diseases AIDS facility, Clinical Pathology, and the National Cancer Institute Surgery Branch.

Before touring the NIH facilities, Dr. Wyngaarden welcomed Secretary Bowen in a meeting with the BID Directors and OD staff. Dr. Bowen, a former governor of Indiana and longtime family practitioner, said, "I'm proud to be associated with the Department and with the NIH. The professional reputation of NIH is well known. It is a pleasure to be able to meet some of the staff responsible for that well-deserved reputation."

Before leaving NIH, the Secretary and Mr. Chertoff had lunch with some of the NIH and ADAMHA staff in the Clinical Center B1 cafeteria.

NIH Lifts Ban on U. Pa. Animal Research Funds

NIH has lifted the ban against the University of Pennsylvania's receiving Public Health Service funds for new animal research projects. But the suspension of funds for research on primates at the university's Experimental Head Injury Laboratory, imposed last summer, continues in effect.

Dr. James B. Wyngaarden, NIH Director, said his decision lifting the funds restriction was based on "an intensive evaluation of the University of Pennsylvania's laboratory animal care and use program by our (NIH) Office for Protection From Research Risks," This evaluation included a 5-day on-site visit in January.

NIH, the Director continued, has "provisionally accepted the university's animal welfare assurance document which describes an acceptable program for laboratory animal care and use at the university. Although not yet fully implemented, the program meets the provisions of the Public Health Service animal welfare policy and the NIH Guide for the Care and Use of Laboratory Animals and therefore meets university institution requirements for receiving PHS funds."

Dr. Wyngaarden set three conditions which must still be met before the university's animal program will be fully accepted by the NIH. These are:

- The newly established position of university veterinarian must be filled.

(See ANIMAL RESEARCH, Page 6)

NIH Saluted as 'Angel of Healing', Pioneer of Major Public Health Breakthroughs

NIH was saluted as "an angel of healing" which has "disturbed the stagnant pools of ignorance and apathy and fear and breathed life and direction into the tide of change that has led to many magnificent breakthroughs in public health."

The words were those of J. Richard Munro, chief executive officer of Time Inc., spoken on behalf of the Juvenile Diabetes Foundation which put on the recent gala, "Salute to NIH," at the Hyatt Regency in Bethesda. (Mr. Munro is a member of NIADDK's National Advisory Council.)

They were spoken to Dr. James B. Wyngaarden, NIH Director as he accepted a sculpture of the "Angel of Bethesda," based on the Biblical account which says: "An angel went down at a certain season into the well and troubled the water: whosoever then stepped in was made whole of the disease he had."

The Angel, sculpted by Washington artist Phillip Ratner without fee, has the words, "Bethesda...The Healing Well" at its base. It will soon be placed on display on the first floor of Bldg. 10 near the entrance to the ACRF Amphitheater.

Noting that "for almost a century now NIH has done what the angel did"...[but]...in every phase of their work."

The gala salute was organized and staged by the National Capital Committee of the Juvenile Diabetes Foundation. Chairing it were Kathi Iacocca, president of the Iacocca Foundation, and Sheldon Fante, president of People's Drug Stores.

(See HEALING ANGEL, Page 6)
TRAINING TIPS
The following courses are sponsored by the NIH Training Center, Division of Personnel Management.

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<th>Course</th>
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CENTENNIAL
NIH Centennial: 'A Century of Science for Health' Will Be Celebrated From October 1986 to October 1987

In 1987 the National Institutes of Health will celebrate 100 years of biomedical research, or, as the centennial theme puts it, "A Century of Science for Health."

NIH began as the Hygienic Laboratory, a one-room facility in the Marine Health Service Hospital on Staten Island. The sole researcher was Dr. Joseph Kinyoun, a physician and bacteriologist who worked in the labs of Pasteur and Koch.

The Hygienic Laboratory moved to Washington in 1891, residing first in the Butler Building next to the Capitol. Dr. Milton Rosenau succeeded Dr. Kinyoun in 1899 as Director of the Hygienic Laboratory. In 1904 the Laboratory moved to 25th and E Streets, NW. The Randsell Act of 1930 designated the Hygienic Laboratory as the National Institute of Health.

Mr. and Mrs. Luke Wilson donated the first parcel of their Bethesda estate "Tree Tops" as the future site of the NIH in 1935. The cornerstone for Building 1 was laid June 30, 1938. Eventually over 40 buildings were erected on the Bethesda "campus," which grew from the Wilson's 92-acre gift to encompass 319 acres.

In 1948 the National Institutes of Health came into being, and in the next 27 years the NIH experienced exponential growth in every sense. There has been nothing like it in the history of American science.

The NIH Centennial Year will run from October of 1986 to October of 1987. Each of the 12 Institutes will have a particular month in which to celebrate the Centennial in cooperation with their grantees institutions.

Specific events planned for the Centennial celebration will be announced and explained in future stories as the Centennial draws nearer.

Potential Vanpoolers Sought From Manassas/Catharpin Area

The NIH Parking Office wants to locate employees who commute from the Manassas/Greater Catharpin area (zip codes 22018; 22110; 22111) and are interested in vanpooling.

Employees are requested to contact Larry Holman, NIH Parking Office, Bldg. 31, Rm. B1C19; 496-5050.
Savings Bonds Earnings Equal to Money Market Funds: Some Tax Advantages

U.S. Savings Bonds are paying better than ever and are an attractive part of any investment program. The return on investment is similar to money market funds, with interest rates on series EE and outstanding series E Bonds and Savings Notes being adjusted semi-annually on a market-based interest formula.

Tying the interest rates for U.S. Savings Bonds to Treasury Security rates means that bond interest can go as high as the market allows. At the same time, the government guarantees that the interest rate on U.S. Bonds will drop no lower than 7.5 percent on bonds held 5 years or longer, even if the market falls below that level.

To publicize the benefits of Savings Bonds, HHS Secretary Otis R. Bowen has designated Apr. 1-May 2 for the Department-wide Savings Bond drive. The National Heart, Lung, and Blood Institute is coordinating the NIH efforts with Robert Namovicz, executive officer, and Jack Nance, deputy executive officer, acting as co-ordinators.

A U.S. Savings Bond investment program is easy to set up through the payroll savings plan. When an individual enrolls, he or she specifies how much is to be withheld each payday to be invested in bonds. The savings plan adds up rapidly. Withholding of only $5 per pay period will add up to $764.76 in only 5 years at the base rate of 7.5 percent.

Bonds are purchased at half their face value, so a $100 bond only costs the investor $50. At 7.5 percent interest, the bond will reach full face value of $100 in 10 years. With variable interest rates, which have been higher than the base rate in recent years, the bonds can reach face value in a shorter time. For example, at 10 percent interest, the bonds mature in less than 8 years.

A payroll savings deduction can be as little as $3.75 per pay period and go up to any amount. U.S. Savings Bonds are available in denominations of $50, $75, $100, $200, $500, $1,000, $5,000 and $10,000 face value. Since you buy the bonds at half the face value, a $100 Savings Bond can be purchased with a payroll deduction of only $10 for five pay periods. Over the course of a year, the investor will accumulate five $100 Savings Bonds.

U.S. Savings Bonds offer tax advantages also. Reporting of interest for Federal income taxes, but are subject to inheritance and estate taxes levied by state and local governments.

Also, a co-owner or beneficiary is named on the bonds, they do not become part of a decedent’s estate for probate. They pass directly to the hands of the co-owner or beneficiary, but are subject to estate or inheritance taxes if any apply. The bonds can be issued in the name of one person, of one person with co-owner listed (either party can cash them), or of one person with beneficiary specified (payable to the beneficiary only upon the death of the owner).

50 Percent Participation

DHHS has set a goal of 50 percent employee participation for this year. NIH is currently below this rate. The hope is that with the knowledge that U.S. Savings Bonds are an attractive investment, NIH staff will increase participation rates significantly. Savings Bonds are an attractive investment. You owe it to yourself to get the facts so that you can make an informed judgment on their value.

Several free travel and shopping incentives have been donated by U.S. Air, Ober-Travel and the NIH R&W Association for some lucky payroll savings participants this year. To learn more about these incentives and about purchasing U.S. Savings Bonds, contact your local bond canvasser.

Institute coordinators for the bond campaign this year are:

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<tr>
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<td>NIHES</td>
<td>Nancy Stark</td>
<td>P.O. Box 12233</td>
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Savings Bonds Earnings Equal to Money Market Funds: Some Tax Advantages
L. Lee Manuel, DCRT Executive Officer Retires After 36 Years of Federal Service

L. Lee (Bucky) Manuel, executive officer of the Division of Computer Research and Technology recently retired after 36 years of Federal service, 32 at NIH.

Born in Virginia, he moved to Gaithersburg in the early thirties and has lived there most of his life.

He began his career at NIH as a clerk in the Buildings Management Branch (part of the Office of Research Services). Shortly thereafter, he moved to the Microbiological Institute (NIAID). When the nationwide polio vaccination program began in the mid-fifties, one branch of the Institute became the nucleus of a newly created Division of Biologic Standards and he moved to that organization.

Mr. Manuel recalled that as a unique period, "during the U.S. polio crisis, President Eisenhower disbanded all the procurement rules."

In the early 1960s he joined the National Cancer Institute’s Intramural Research program.

Twenty years ago Mr. Manuel came to DCRT, first as a digital computer systems analyst, then as budget officer and administrative officer, and for the past 16 years, as executive officer.

During his employment with NIH he received three sustained high-quality performance awards.

Mr. Manuel’s friends and long-time colleagues roasted him at a retirement luncheon. Cal Baldwin, former NIH Associate Director for Administration said, “DCRT is a remarkable organization with a remarkable reputation; Bucky, you should be extremely proud to be a contributor to the house that Scotty (Dr. Pratt) built.”

Mr. Manuel closed his farewell remarks by saying, “NIH and DCRT have been both interesting and exciting places to work and after 32 years it’s difficult to say goodbye—having friends here makes it easier.”

Mr. Manuel plans to travel, pursue his hobbies, and just relax.

Liquid Chromatography Workshop; Planned by BEIB on Apr. 14—16

Workshops on high performance liquid chromatography (HPLC) for intramural scientists will be held in the Biomedical Engineering and Instrumentation Branch, DRS, (Bldg. 13, Rm. 3W54) on Apr. 14, 15, and 16 at 9 a.m. They will be presented by LKB Instruments Inc., under sponsorship of BEIB.

The following topics will be discussed:

• Mon., Apr. 14, 9 a.m.-noon: "Chromatography Theory: Gel Permeation, Ion Exchange, Reversed Phase, and Hydrophobic Interaction."

• Tues., Apr. 15, 9-11 a.m.: "Diode Array Detection for HPLC: Principles and Applications."

• Wed., Apr. 16, 9-11 a.m.: "Strategies for Multidimensional Protein Purification by HPLC."

Attendance is limited. To register, call Evelyn Harne (963-3200) and indicate which workshop(s) you want to attend.

Dr. Ruth Davis To Present Third Joseph Leiter Lecture

Dr. Ruth M. Davis, the first director of NLM's Lister Hill National Center for Biomedical Communications, will deliver the third Joseph Leiter NLM/Medical Library Association Lecture. Dr. Davis’ talk, “Where Will Technology Put the Library of the Twenty-First Century?”, will be presented at 4 p.m., Apr. 11, in the Lister Hill Center Auditorium.

Dr. Davis, president and founder of the Pymatuning Group Inc., which specializes in industrial modernization strategies and technology development, was with NLM from 1967 through 1970. Her extensive background in computer technology includes key positions with the Department of Defense, Bureau of Standards, and the DHHS.

The Joseph Leiter Lectureship was established in 1983 to honor Dr. Joseph Leiter, who was associate director of NLM’s Library Operations Division for 18 years. Dr. Leiter retired in 1983 after a 50-year Federal career.

TDSP Announces Workshops, Orientation Sessions

The Training and Development Service Program (TDSP), which offers college classes to eligible NIH employees, will present a series of orientation sessions this spring.

TDSP representatives will visit the Federal Bldg. on Apr. 9, Bldg. 36, Apr. 16; and Westwood Bldg., Apr. 29. Additional orientations are scheduled in May and June.

TDSP also presents workshops on topics of interest to NIH employees who are taking classes and working fulltime.

A “TDSP Presents” workshop will be held on Apr. 29 from 5 to 6 p.m., in Bldg. 31, Conf. Rm. 3. Dr. Nancy Weiner and Pat Haskell will discuss “Reducing Stress Through Conscious Integration of Your Roles.”

For more information on TDSP offerings, call 496-9228.

Equal Employment Open Forum Scheduled by NCI on Apr. 22

The National Cancer Institute’s Equal Employment Advisory Group is sponsoring an open forum for NCI staff members in the Masur Auditorium, Bldg. 10, from noon until 1:30 p.m., Apr. 22.

Dr. Vincent T. DeVita Jr., NCI Director, will make opening remarks, answer questions submitted in advance by NCI staff, then take questions from the floor. NCI’s division directors and other senior staff will also be present and available to answer questions.

All NCI staff members are encouraged to attend.

‘Post’ Health Section Editor To Speak to Writer’s Guild

Larry Thompson, assistant editor of the Washington Post health section, will speak at the April meeting of the NIH Science Writers Guild on Apr. 16, at 11:30 a.m., in Bldg. 31, Rm. 2A52. Mr. Thompson will tell about the work of the science writers and editors who ready the health section for publication.

Male Hypertensives Sought

The Laboratory of Neurosciences, National Institute on Aging, is currently seeking male volunteers over age 45 with a 10-year history of hypertension (high blood pressure). Participants must be in good health and free of other medical problems.

For further information call 496-4754.
Cancer Prevention Tape And Panel Set on Apr. 14

Cancer Prevention is the theme of an Apr. 14 slide tape presentation and panel discussion sponsored by Occupational Medical Service. It will take place in Bldg. 10, ACRF Amphitheatre, at 11:30 a.m. The slide tape, developed by NCI’s Office of Cancer Communications, focuses on the steps individuals can take to lower cancer risk.

Panelists, drawn from the NIH, will be available to answer questions about various aspects of cancer risks. They are: Dr. Harry Mahar, Division of Safety, occupationally related cancers; Dr. Louise Light, NCI, nutrition and cancer prevention; and Dr. Lillian Gigliotti, NCI, estrogen replacement and breast cancer issues.

The slide program will also be shown at the following locations:

- Bldg. 1, Wilson Hall 11:30 Apr. 10 a.m.
- Blair Bldg., Rm. 110 11:30 Apr. 11 a.m.
- Bldg. 38, Rm. B1N-30B 11:30 Apr. 17 a.m.
- Bldg. 13, G-313 11:30 Apr. 18 a.m.
- Federal Bldg., Rm. B-119 11:30 Apr. 22 a.m.
- Westwood Bldg., Conf. Rm. D 11:30 Apr. 24 a.m.

Don’t miss this chance to learn about cancer risks. Every day you can do something to help protect yourself from cancer.

STEP Forum
Does Sex of Investigator Affect Experiment’s Results?

Do the results of a scientific experiment depend in any way on the sex of the investigator? Are you sure? Are men or women more likely to be sure of the answer to this question?

The quality of science improves when women participate—this is the novel perspective to be presented when the STEP Committee presents a forum on “Women and Science,” Wednesday, Apr. 30, from 1:30 to 4 p.m., in Wilson Hall, Bldg. 1.

Speakers will be Dr. Shirley Malcom of the American Association for the Advancement of Science, and Dr. Eugene Frankel of the Office of Technology Assessment, U.S. Congress. All NIH employees are invited to attend. No preregistration is required.

For additional information contact the STEP Office, 496-1493.

A pessimist is a man who looks both ways before crossing a one-way street.—Lawrence J. Peter

NIH Launches Major Study of Family Changes

By Tineke Boddé

Times have changed since grandma was young. Parents have fewer children. More mothers work for wages. More unmarried adults live together. More couples delay parenthood or remain childless. More children live with one parent, yet may have two homes. More grandparents are living alone.

How do all these changes—unprecedented in peacetime history—affect the well-being of children, adults and families in America? The National Institute of Child Health and Human Development is launching a nationwide, multigenerational study to assess how these new variations in lifestyle are affecting husband/wife and parent/child relationships and the children’s development, career choices, marital, and childbearing decisions. The survey, titled the Health and Well-being of Families in Transition, is the largest of its kind ever undertaken in the United States and will collect data from 18,000 individuals.

“The need for this study is widely felt,” says Dr. Wendy Baldwin, chief of the Demographic and Behavioral Sciences Branch of the Institute’s Center for Population Research, sponsors of the multimillion dollar research project.

“There is a great need to better understand the causes and consequences of these family changes. While there have been some studies on these topics in the United States, there is no recent large-scale survey that allows us to look at the many facets of this problem. We need data that are both broad in terms of coverage—by ethnic group, age, geographic region—and also rich in detail,” Dr. Baldwin says.

The data in this 3-year study will be collected through personal interviews with 12,000 men and women from across the U.S. and through questionnaires to be filled out by 6,000 spouses or partners of the respondents, according to Drs. Larry L. Bumpass and James A. Sweet, principal investigators and professors of sociology at the University of Wisconsin in Madison.

Because of their significance for science and public policy, persons in one-parent families and in households with stepchildren will be overrepresented in the study, they say.

Explaining the project’s value to American families, Dr. Baldwin says: “Families are critical links between individuals and society. It has been projected that 45 percent of today’s marriages will end in divorce. Over half of the mothers of children under age 6 are employed, and more than 50 percent of the children born today will spend part of their growing-up years in a single-parent family. This study will allow us to better understand the nature of these family changes and their impact on its members and society as a whole.” The study will allow researchers to assess:

- How the parents’ divorce will affect a child’s own attitude as an adult toward marriage and parenthood;
- How the employment of women affects the relationships and well-being of family members;
- What factors influence the relationship between noncustodial parents and their children, and the payment of child support; and
- What factors affect the relationship between adult children and their elderly parents.

An innovative aspect of the study is that it is designed to permit followup studies at different times in the future and using a variety of scientific approaches. This will allow future researchers to pursue questions about modern family life that will arise in the interim, according to Dr. Baldwin.

Findings of the study are expected to be released in 1988.

Film on Use of Animals In Research To Be Shown

A film about the use of animals in biomedical research will be shown at noon in various NIH buildings from Friday, Apr. 11 to Thursday, Apr. 17.

Will I Be All Right, Doctor? was produced by the Foundation for Biomedical Research and is presented by the NIH Animal Research Committee.

Dates and places for the 25-minute film are:

- Fri., Apr. 11: Westwood Bldg., Conf. Rm. 428.
- Tues., Apr. 15: Bldg. 31, Conf. Rm. 4.
- Wed., Apr. 16: Bldg. 10, Visitors’ Information Center Little Theater.
- Thur., Apr. 17: NIH Animal Center, Poolesville, Bldg. T-8 (2:30 p.m.).

The film tells the stories of several persons whose lives have been saved by procedures developed through research involving animals. Representatives of the NIH Animal Research Committee will be present to answer questions and participate in discussion.

For further information call 496-5424.

Male Twins Needed for Research

NIH is seeking male twins to participate in psychological research. No painful procedures are involved and participants will be paid.

For details and to determine your eligibility for the study, call Dr. Gabbar at (301) 496-7672.
Scientists Show How Drugs Stop Fibrillation; Conclude Highly Touted Lidocaine Doesn’t

Lidocaine has long been the drug of choice for treating life-threatening heart irregularities. Reports in recent years, however, have indicated that lidocaine may be incapable of stopping one specific irregularity: ventricular fibrillation, the uncoordinated beating of cells in the heart’s pumping chamber.

A new study by Drs. John Clay of the NINCDS Laboratory of Biophysics, Martin Bacaner of the University of Minnesota, and Alvin Shrier and Richard Brochu of McGill University clarifies why this may be so: lidocaine, the study found, has little effect on an electric current that flows across heart cell membranes, and therefore fails to halt fibrillation.

This discovery has important ramifications regarding the clinical use of lidocaine.

"In the past people have assumed that because lidocaine was effective in suppressing some heart arrhythmias, or irregularities, it must be good at suppressing fibrillation too," Dr. Clay explains. "But that is not the case."

The new study, published in the April Proceedings of the National Academy of Sciences, shows that ventricular fibrillation can be corrected by blocking the potassium current, which normally flows from the inside to the outside of heart cells.

"The blockage of potassium current is the key to stopping fibrillation," Dr. Clay says, "and lidocaine does not significantly inhibit this current."

In contrast, the investigators found that bretylium, an antifibrillatory drug for which Dr. Bacaner holds the patent, is a strong blocker of the potassium current.

By impeding the flow of potassium, bretylium changes conduction pathways in the heart, Dr. Clay explains. Instead of running across individual cell membranes, current now flows more readily between cells. This process synchronizes the beating of heart cells and stops fibrillation as the cells again contract in unison.

Bretbylium and a related drug, bethanidine, stop the potassium current by closing off the membrane channels, or holes, through which potassium flows, says Dr. Clay, whose research is performed at the NINCDS laboratory at the Marine Biological Laboratory in Woods Hole, Mass.

Drs. Clay and Bacaner studied electrical current changes in the nerve cells of the squid, a marine animal abundant off the shores of Cape Cod. The squid is noted for its giant nerve cell fiber, or axon, which has a diameter of one-half millimeter. It is one of the largest known axons in the world. A potassium current similar to the one in heart cells flows in the axon.

"We know that if a drug blocks potassium current in the squid axon, it probably will do the same thing in the heart," Dr. Clay says. This prediction was confirmed by Drs. Shrier and Brochu, who found that bretylium blocks potassium current in chick embryo heart cells.

There are few known antifibrillatory drugs, Dr. Clay says; more are needed because the ones now in use have side effects. Tests employing the squid axon or chick heart cell techniques may provide a rapid method for screening potential antifibrillatory compounds to determine if they can block potassium current.—Lynn J. Cave.

Diet and Disease Relationship Topic for NRC Committee

The Committee on Diet and Health of the Commission on Life Sciences’ Food and Nutrition Board, National Research Council, will hold a public meeting on May 13 at 10 a.m. at the National Academy of Sciences.

Purpose of the meeting is to solicit scientific information and comments pertaining to the role of dietary patterns and dietary constituents in susceptibility to chronic diseases. The committee will consider criteria for interpreting data and evaluate current evidence on the relationship of diet to chronic diseases such as cancer, atherosclerosis, hypertension, diabetes, obesity, osteoporosis, and others.

Individuals who wish to make a presentation or submit material for the committee’s consideration should forward written statements to Dr. Susan Berkow at the National Academy of Sciences by Apr. 23.

For further details, contact Dr. Berkow at (202) 334-2905.

ANIMAL RESEARCH (Continued from Page 1)

- Planned renovations of laboratory animal facilities should be substantially completed.
- Copies of university agreements with all institutions that cooperate with the university in housing animals for, or participate in the conduct of PHS-supported laboratory animal research must be sent to the NIH.

HEALING ANGEL (Continued from Page 1)

Members of the Congress on the honorary advisory committee for the affair included Reps. William H. Natcher, John D. Dingell and Henry A. Waxman; Sens. Mark Hatfield, Orrin Hatch, Charles Mathias Jr., Lowell Weicker, Paul Sarbanes and Robert Dole.

An educational forum on “Diabetes Research Today” preceded the dinner.

Diabetes experts participating as panelists were: Drs. George F. Cahill Jr., Howard Hughes Medical Institute; Kevin LaFerrty, Barbara Davis Center for Childhood Diabetes; Jesse Roth, National Institute of Arthritis, Diabetes and Digestive and Kidney Diseases; Arthur H. Rubinstein, University of Chicago and Noreen Papatheodorou, MSS, ASCW.

Diabetes afflicts some 12 million persons in the U.S.
NIDR-Funded Scientists Develop Artificial Mouth; Can Measure Wear on Teeth in Shorter Time

Scientists at the University of Minnesota School of Dentistry, supported by the National Institute of Dental Research, have developed an artificial mouth that simulates both the chewing motion and “environment” in the human mouth.

The device could cut the time needed to evaluate new dental materials, and transfer new practices from the lab to the dentist’s office. This could reduce research costs and, eventually, costs to the patient.

Developed by Drs. William Douglas and colleagues Ralph Long and Jon Dalrymple, ART (an acronym for artificial resynthesis technology) can subject dental materials and restoration techniques to 5 years of wear in just a few weeks.

Recreates Mouth’s Environment

In designing the new device, Dr. Douglas and his colleagues first mounted freshly extracted human teeth in a flexible base to mimic the minor movement of the periodontal ligament.

To reproduce the warm, wet environment of the human mouth, the research team devised a system of jets in a chamber that constantly circulates fluid at body temperature onto the teeth and surrounding tissues. These jets can vary both the chemical composition and the temperature of the fluid as specific tests require.

Mimics Chewing

With the environmental chamber in place, the scientists focused on the mouth’s natural chewing, snapping and grinding movements.

Simulating the loads and displacements of normal chewing posed the greatest challenge in the development of the artificial mouth. By modifying a sophisticated engineering device called a closed loop servohydraulics, Drs. Douglas and DeLong overcame the technical obstacles and were able to duplicate the complex range of human chewing forces and movements, as well as the duration of each phase in the mastication process. This makes it possible to study the consequences of tooth wear.

Computer Evaluates Teeth

Investigators also developed a computer system that monitors changes in the surface anatomy of teeth and evaluates wear on the materials used to restore teeth.

ART’s computer system can identify tooth wear changes of 4 to 5 microns while an experienced operator without the new computer system can only detect changes in a tooth or a restoration of about 40-50 microns (about the thickness of a human hair).

Early detection of minor changes in dental products or natural teeth may prevent more serious problems months or years later.

Studies Under Way

Studies are under way to test ART’s capacity to define the degree of wear under four separate test conditions: human enamel against amalgam, porcelain, composite, and against human enamel itself. If successful, this technology could play a prominent role in both developmental research and, more significantly, in clinical trials.

Video Conference on AIDS Set For May 6 by Georgetown U.

Georgetown University will present a 6-hour satellite videoconference on AIDS (acquired immune deficiency syndrome) of health professionals in 27 cities in the U.S. and Canada on Tuesday, May 6. The program, “AIDS: Understanding and Managing the Disease,” will feature AIDS researchers and clinicians as well as present live case studies of pediatric and adult AIDS patients.

Dr. Joseph A. Bellanti, professor of pediatrics and microbiology and director, G.U. Center for Interdisciplinary Research on Immunological Diseases (CIRID), will be the codirector of the videoconference along with Dr. Jack Whitescarver, assistant dean, Emory University School of Medicine.

The conference will provide an opportunity to question presenters and patients. Key speakers will focus on the scope of the epidemic; trends of exposure to the AIDS virus; management and counseling of seropositive patients; clinical manifestations and management of AIDS patients; medical ethics guidelines for practitioners; current treatment modalities; patient management from nursing and dental points of view; safety for health care professionals; and future prognosis of AIDS.

For more information and registration, call (800) 238-1000.

Post-Traumatic Stress Topic Of Amnesty Group’s Panel

A panel discussion on “Post-traumatic Stress in Victims of Political Oppression and Violence” will be cosponsored by the Amnesty International Group at NIH, NIMH, and FAES.

The discussion will be held in the ACRF Amphitheatre of Bldg. 10, NIH, at 8 p.m. on Monday, Apr. 14. Admission is free.

Patient Emergency Fund Auction To Be Held, Apr. 9 at CC

Support, donate to and attend the annual NIH Patient Emergency Fund Auction. Mark your calendars for Apr. 9 and come to the Clinical Center (14th floor Auditorium), anytime between of 11 a.m. and 2 p.m. Take a lunch break! Hotdogs, sodas and chips will be served from 11:30 a.m. to 1 p.m.

Through the generous support of the NIH populace, family, friends, and local retailers, there are over a hundred new, different and exciting donations.

Bids will be taken from 11 a.m. to 2 p.m. for the silent auction and live auction begins at 12:30 p.m.
Dr. Leroy E. Hood, Innovator in Immunology, Will Deliver R.E. Dyer Lecture on Apr. 23

The 1986 R.E. Dyer Lecture will be delivered by Dr. Leroy E. Hood, Bowles professor and chairman, division of biology at the California Institute to Technology. Dr. Hood will speak on the “Immunoglobulin Gene Superfamily and Biological Instrumentation.”

The lecture will be delivered on Wednesday, Apr. 23, at 8:15 p.m. in the Clinical Center’s Masur Auditorium.

The Dyer lecturer is selected by the NIH Director from among those scientists internationally recognized for contributions to medical and biological knowledge relating to infectious diseases. The Dyer lecture was established in 1950 to honor Dr. Rolla Eugene Dyer, NIH Director from 1942 to 1950, and an eminent scientist in the area of infectious diseases.

Dr. Hood received an M.D. degree from the Johns Hopkins School of Medicine and a Ph.D. in biochemistry from the California Institute of Technology, where he has spent most of his research career. His thesis work, in part, inspired the proposal of the two gene-one polypeptide theory which revolutionized molecular immunology and is the central focus for this field even today some 20 years later.

From 1967 to 1979 Dr. Hood was a senior investigator in the Immunology Branch of the National Cancer Institute, where he studied the diversity and genetics of antibody molecules.

In 1970 he returned to Caltech where he and his laboratory extended their expertise from protein chemistry to molecular biology. In the last 10 years Dr. Hood’s laboratory has focused on studying the genes in three systems that play an important role in the vertebrate immune response—the antibody genes, the genes of the major histocompatibility complex, and, most recently, the T-cell receptor genes. In addition, his laboratory has played a major role in developing automated microchemical instrumentation that permits highly sensitive sequence analysis of proteins and genes and the synthesis of peptides and gene fragments.

Dr. Hood

In his lecture, Dr. Hood will analyze members of the immunoglobulin gene superfamily that encode receptors for the vertebrate immune response. He will explore the basic biological strategies for the diversification of these receptors which leads to their ability to react with any foreign molecular pattern. He will also discuss how sophisticated biological instrumentation has facilitated these efforts and offers investigators unparalleled opportunities to resolve fundamental problems in biology.

He is the director of the Cancer Center at Caltech and an editor of five professional journals. He has written more than 200 professional articles and coauthored four textbooks.

In 1982 he was elected to the natural academy of sciences, and in 1985 was selected as California Scientist of the Year and received the Science Digest Award as one of the 100 leading technological innovators in the U.S.

GA Program Expands; Gets New Title/Programs

The Grants Associates Program in the Office of Extramural Research and Training has developed three new training options, in addition to the traditional GA training that will continue to be offered. To better reflect these four training activities, the name of the program has been changed to Health Scientist Administrator Development Programs.

The first addition, the New Hire Trainee Program, is designed for newly hired individual health scientist administrators. Applicants must be reviewed by the GA board whose recommendation for selection must be approved by the NIH associate director for Extramural Affairs. The training, involving working assignments and course work, totals about 10 weeks over 12 months.

The second new program, the Health Scientist Administrator Trainee Program, allows someone not qualified as an HSA to obtain the necessary HSA skills and to receive training comparable to that of a grants associate. This training totals 6 months spread over 2 years. These persons are automatically classified as HSAs noncompetitively at the end of training. This allows BIDs to hire someone not eligible as an HSA directly into an HSA position if he or she has the scientific expertise needed.

The third new program, the Professional Development Assignment Trainee Program, is designed for the more senior HSA who wants broader work experience than his/her current position gives. This training of 3 months would be spread over a 2 year period. Applicants must be reviewed by the GA board whose recommendation for selection must be approved.

For further information about any of these programs, contact A. Robert Polcari, director, Health Scientist Administrator Development Programs, Bldg. 31, Rm. 1B62, 496-1736.