The NIH Record

U.S. Department of Health and Human Services

April 26 1983 Vol. XXXV No. 9

National Institutes of Health

NIDR Pain Research Clinic Opens for Patients in ACRF

By Judy Dove

The first multidisciplinary pain clinic in the United States devoted exclusively to research was opened Mar. 21 by the National Institute of Dental Research on the third floor of the NIH Clinical Center's Ambulatory Care Research Facility.

In collaboration with other NIH Institutes, NIDR scientists are conducting studies of acute and chronic pain to generate and expand knowledge about mechanisms and treatment of pain, and develop better methods of assessing pain.

The new clinic will enable all NIH Institute researchers and clinicians to pool their knowledge and exchange ideas about the pathophysiology and treatment of pain.

Consultation on managing difficult pain problems is also offered by the research facility's team of scientists and clinicians who are currently accepting qualified patients for their research studies.

Patients who have pain problems coinciding with the research interests of the new clinic should have their dentists or physicians call or address letters of referral to Dr. Mitchell Max, c/o the Clinical Pain Section, NIDR, NIH, Bldg, 10, Rm. 1B15, 9000 Rockville Pike, Bethesda, Md. 20205, (301) 496-5483.

The clinic evolved from NIDR's longstanding interest in pain research.

Pain is a central concern of dentistry because it is a common symptom of most oral and dental problems; about 25 percent of all chronic pain problems are associated with the face and oral cavity.

NIDR scientists have been assessing experimental and clinical pain, and use of new agents for pain control since 1974 under direction of Dr. Ronald Dubner, chief, NIDR Neurobiology and Anesthesiology Branch.

The investigators have also been studying how the brain codes messages related to painful stimulation. They are studying how these signals can be modified at different levels of the nervous system by chemicals such as morphine-like substances produced by nerve cells.

"Our knowledge about pain has increased rapidly in the past 15 years. We now have a unique opportunity to apply this knowledge to the clinical situation," Dr. Dubner said.

Institutes now participating in the program include the CC Anesthesiology Department, NCI, NHLBI, NINCDS, and NIMH. The Uniformed Services University of the Health Sciences is also involved in a few studies.

Dr. Dionne administers an intravenous injection to relax and sedate the patient while Dr. Philip Fox of the NIDR clinical investigations section, assisted by Barbara Clark of the Neurobiology and Anesthesiology Branch, extracts the patient's wisdom tooth. Peggy Wirdzek monitors the patient's blood pressure, cardiac output, respiratory rate, and EKG and records these data throughout the procedure.

NIDR staff comprise the nucleus of the clinic. Dr. Mitchell Max, a neurologist, serves as clinical coordinator; Dr. Richard Gracely, an experimental psychologist, is responsible for pain assessment; Dr. Raymond Dionne, a clinical pharmacologist and dentist, provides expertise on pain control agents; and Peggy Wirdzek is nurse coordinator.

Major advances in neuroscience have led to greater knowledge about the basic mechanisms involved in pain transmission and modulation. "There have been tremendous advances in terms of our understanding of how the pain system works on a cell by cell basis," explained Dr. Max.

"Yet we still need to find out how the pieces fit together, so we can translate this knowledge into clinical breakthroughs. Much of this information can be provided only by our patients," he said.

Pain research remains a complicated field because pain assessment is a subjective phenomenon. Pain serves as a signal of impending or already present tissue damage. But the area of the body in which the pain occurs and a patient's cultural back-

(See PAIN CLINIC, Page 9)

Ranitidine Therapy Nullifies Cimetidine Side Effects

Cimetidine, a histamine H_2-receptor antagonist, is an effective drug for healing peptic ulcers and for preventing their recurrence. However, cimetidine can produce certain antiandrogenic side effects like gynecomastia (enlargement in either or both breasts) and sexual impotence in male patients receiving relatively high doses of the drug.

The ability of cimetidine to cause antiandrogenic side effects in male patients was examined and evaluated by Drs. Robert T. Jensen, Jerry D. Gardner and colleagues from the Digestive Diseases Branch of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases.

They also reviewed the use of Ranitidine, another effective antiulcer drug, which does not produce such antimale side effects.

This study, "Cimetidine-Induced Impotence and Breast Changes in Patients With Gastric Hypersecretory States," appeared in the Apr. 14 issue of the *New England Journal of Medicine*.

Twenty-two patients were studied. Of these patients, 20 had Zollinger-Ellison syndrome, a disease characterized by peptic ulcers, marked increase in gastric acid secretion, and islet cell tumors. Two had idiopathic gastric hypersecretion.

To control excess acid secretion, these patients were receiving cimetidine in doses approximately three and one-half times that used in the treatment of duodenal ulcers.

Of the 22 patients followed and evaluated, 11 complained of recent onset of antiandrogenic symptoms: 9 were sexually impotent, 9 had breast changes, and 7 had both. The remaining patients showed no symptoms.

The 11 patients who developed impotence and-or breast changes did not differ significantly in age, acid output, serum gastrin levels, or time treated with cimetidine from those patients who did not develop side effects.

They did tend to receive higher doses of cimetidine, but their doses did not differ by a statistically significant amount from patients without symptoms.

Ranitidine is a new histamine H_2-receptor antagonist reported to not have such antiandrogenic side effects. In 9 of the 11 patients with side effects, cimetidine was discontinued and therapy with ranitidine begun. In each of these patients, symptoms disappeared.

To determine whether the impotence was

(See NEW DRUG, 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 field. 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
Herschel Cribb

Staff Writers
Joyce F. McCarthy
Anne Barber

Editorial Assistant
Marilyn Berman

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, Clarissa Wittenberg; NIAID, Jeanne Winnick; NIADDK, Barbara Weldon; NICHD, James Hadley; NIDR, Sally Wilberding; NIEHS, Hugh J. Lee; NIGMS, Wanda Warddell; NIMH, Harry Bell; NINCDS, Diane Striar; NLM, Roger L. Gilkeson.

Training Tips

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

Career Development	*Course Starts*	*Deadline*
Self Assessment and Career Options	5/9	4/29
Office Skills		
Letterwriting for Secretaries	5/18	5/2
Travel Orders and Vouchers	5/16	5/9
Communication Skills		
Intermediate Editing	6/1	5/13
Stress Management for Increased Productivity	6/7	5/20
Executive, Management and Supervisory		
*Manage Your Meetings	6/14	5/23
White House Workshop	6/22	5/27
Federal Budget Process	5/24	5/9
Project/Program Management Workshop	6/1	5/13

To learn about these and other courses, contact the Development and Training Operations Branch, DPM, 496-6371.

Nominations Being Accepted For R&W Board of Directors

The NIH Recreation and Welfare Association is accepting nominations for president, 2nd vice president, assistant treasurer and corresponding secretary for its Board of Directors.

The closing date of nominations is May 13.

Nominees may pick up their forms at the R&W Office in Bldg. 31, Rm. B1W30. □

Two Rabid Raccoons Captured on NIH Campus; Avoid Contact and Report Sightings Immediately

Two rabid raccoons were recently captured on the NIH Bethesda campus. No one was bitten by either animal.

All NIH'ers are urged to avoid any contact with raccoons and to immediately report sightings of raccoons on campus to the Animal Disease Investigation Service (ADIS), Veterinary Resources Branch, DRS, at 496-4463.

After regular working hours, call the NIH Police at 496-5685.

Suspiciously behaving animals will be humanely and safely captured and sent to the State Animal Health Laboratory for examination. The capture is made cooperatively by ADIS veterinarians and personnel of the NIH Police and the Grounds Maintenance and Landscaping Branch, DES.

There is currently an outbreak of rabies among raccoons in Montgomery County. Since they are nocturnal animals, their appearance during the day is a sign of abnormal behavior and in the present situation should be considered a strong indication of possible rabies.

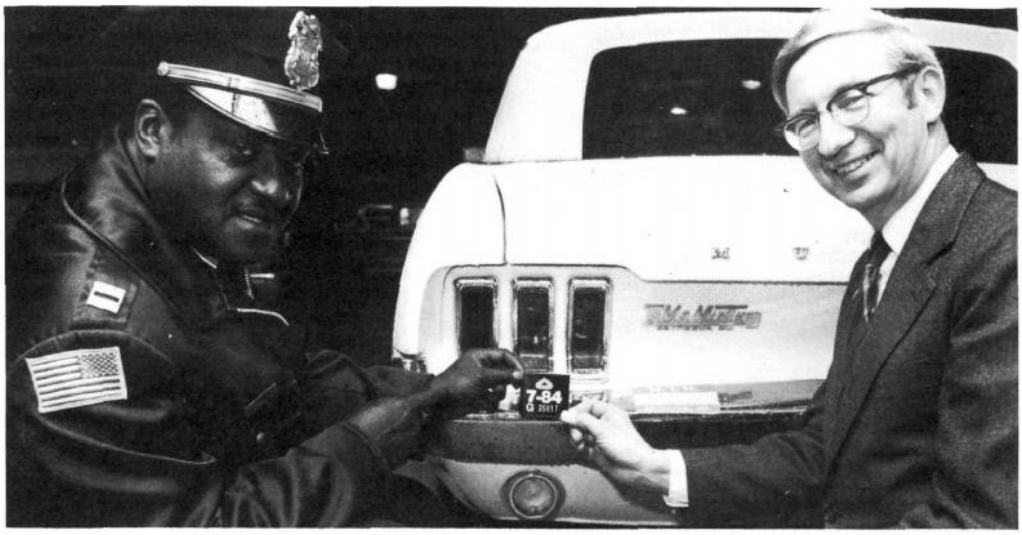
Rabies outbreaks in wild animals are usually concentrated within one species, and the disease is unlikely to become epidemic in other small animals normally found on campus, such as squirrels. However, a variety of other wild and domestic animals may become infected by associating with raccoons.

Two cases of rabies in cats have been reported in nearby Montgomery County. Caution should be exercised when stray dogs and cats are encountered. Rabies is a disease of mammals and does not occur in birds.

Anyone on campus who is bitten by any animal—raccoon or other—should report immediately to the Occupational Medical Service (OMS), Division of Safety, on the sixth floor of the ACRF, Bldg. 10, for evaluation and possible treatment. The Animal Disease Investigation Service should also be notified so that the animal can be captured and examined.

If the bite occurs outside OMS working hours (8 a.m. to 12:30 a.m. weekdays), call telephone number 116 for the NIH Fire Department, who will transport the bitten person by ambulance to Surburban Hospital.

In the present situation, it is especially important that dog and cat owners have their pets vaccinated against rabies. □



Captain Howard Davenport, NIH Special Police, instructs Dr. Edwin D. Becker, NIH Associate Director for Research Services, in the placement of his new NIH parking permit. Dr. Becker's vintage 1967 Mustang shows one of the old permits used at NIH several years ago. The new permits have been designed to be clear and unobtrusive.

NIH Challenge Relay Slated for Noon, Wednesday, May 18

The 6th Annual NIH Institute Challenge Relay will be held at noon on Wednesday, May 18, in front of the Shannon Bldg. (Bldg. 1) by the Health's Angels Jogging Club.

The relay consists of a 2.5-mile course around the Shannon Bldg. It is run in 1/2-mile segments by teams of five runners with each team member running a 1/2-mile leg.

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

Entry forms and instruction sheets are available at the R&W Activities Desk located in Bldg. 31, Rm. B1W30. Completed forms must be returned to the Activities Desk by Friday, May 13. Entries will be limited to 80 teams.

A $2.50 entry fee will be required of each team to help defray the costs of the event. Please make checks payable to the R&W Association.

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

NIH Managers Attend Workshops on Employing Disabled

Managers from NIH and other PHS agencies attended the training workshops on employing the disabled. The workshops were sponsored by the PHS Handicapped Employees Committee and the PHS Office of Equal Employment Opportunity.

Selected NIH managers participated in Human Management Training on Employment of Disabled Individuals on Mar. 29.

The workshop, held at the Lister Hill Center, was cosponsored by the PHS Handicapped Employees Committee and the PHS Office of Equal Employment Opportunity.

Opening remarks and statements were made by such top officials as Assistant Secretary for Health Edward N. Brandt, Jr., and Dr. James B. Wyngaarden, NIH Director, endorsing their commitment to maximize human potential and capability.

Three workshops were presented on the topics of awareness, reasonable accommodations, and complaints.

The morning awareness session brought attendees face-to-face with a four-person panel of fellow employees who are or were disabled. Members of the panel spoke of their work, their lives and the barriers they overcame to arrive where they are now, employable and taking part in society. This session was designed to make managers aware of situations facing the disabled individuals in the workforce.

The afternoon workshop on reasonable accommodations was kicked off by James Mueller, consultant to private and public organizations who have found it profitable to hire disabled persons and adapt the work environment.

His presentation gave managers an understanding of the bioengineering technologies, and cost effectiveness of accommodating qualified disabled workers in doing their jobs.

Dr. Edward N. Brandt, Jr., Assistant Secretary for Health, addresses NIH managers at workshop on employment of disabled persons. An interpreter (r) translates speech into sign language.

The final session on the complaints system was cochaired by James Joiner of the PHS Complaints Management and Adjudication Staff and Dick Roscio of the Office of Legal Counsel for the Equal Employment Opportunity Commission. Mr. Roscio discussed complaints that have been filed by employees based on handicapping conditions. Pertinent aspects of the cases were presented to give managers insight into what constitutes disparate or discriminatory treatment of disabled individuals.

Videotapes are available from these sessions. For more information contact George Yee, 496-2906. □

DAS Branch to Sponsor Workshop

The Supply Operations Branch, DAS, will sponsor a product exhibit/workshop on Thursday, May 12, from 9 a.m. to 2 p.m., in Bldg. 37, 1st floor Conf. Rm. Products of the Millipore Corp., Continental Water Systems Corp., and Waters Associates will be on display. Technologies and product applications will be discussed and demonstrated. □

R&W Has Discount Tickets To Amusement Parks

R&W has discount tickets for the following amusement parks: Busch Gardens, The Old Country, $11.25; King's Dominion, $10.50; Hershey Park, $10.25; Great Adventure, $10.85 and many other interesting places.

R&W is also an authorized ticket agent for all Orioles games in Memorial Stadium.

For further information, contact the R&W Activities Desk, Bldg. 31, Rm. B1W30. □

NIH Tightens Procedures On Research Misconduct

Dr. Edward N. Brandt, Jr., Assistant Secretary for Health, details improved Public Health Service policies and procedures for dealing with misconduct in its research program in the March-April 1983 issue of *Public Health Reports*, the official journal of the U.S. Public Health Service.

Among other statements, Dr. Brandt notes that the National Institutes of Health has begun compiling information "with respect to its activities ... on fraudulent practices such as fabrication, falsification and misrepresentation of data, failure to observe requirements for the protection of human subjects and the welfare of laboratory animals; and other practices constituting a serious breach of professional ethics or violations of terms and conditions of an award."

He also notes that only "45 cases of alleged or suspected misconduct had come to the agency's (NIH's) attention between October 1, 1980 and September 30, 1982 of which more than half were shown not to involve misconduct. ..."

This number, he noted, was "small, almost insignificant" given the fact that 20,000 NIH grants had been made during that period.

But he added: "Viewed in the context of the ethics of science, the public's faith in research and the unknown dimensions of possible unreported incidents, they are profoundly disquieting. ..."

The article further notes specific steps that PHS has taken to tighten procedures and policies on research including an expanded "alert" system.

The improved safeguards include methods for "evaluating the significance of allegations, conducting an investigation, taking interim administrative actions when appropriate and imposing postinvestigational sanctions when warranted."

Both the focus and format of Public Health Reports have changed. Current and future issues will carry a new cover design and formalize the journal's emphasis on disease prevention. Each issue is partly devoted to papers and short reports on prevention topics.

Subscriptions to Public Health Reports, at $19 per year, are available through the Government Printing Office, Washington, D.C. 20402. Visa and Master Charge can be used. □

Researchers To Discuss Bone Formation Mechanisms

A workshop entitled "Local Mechanisms Regulating Bone Formation" will be held at NIH May 3 and 4 in The Lister Hill Auditorium. The workshop, sponsored by the Division of Arthritis, Musculoskeletal and Skin Diseases, NIADDK, and the National Institute of Dental Research, will consist of 2 full days of presentations and discussions, starting at 8:30 a.m. both days.

The workshop is free and is open to interested members of the scientific community. For more information, contact Dr. Stephen L. Gordon, director, Musculosketal Diseases Program, NIADDK, at 496-7326. □

Professional Secretaries Week Recognizes The Role of Office Support Employees

At NIH there are over 3,000 office support employees (predominately women) who continue to make significant contributions to important programs such as management, communications, human relations, modern technology, domestic and international affairs. To recognize the role of office support staff at NIH, the 8th annual observance of Professional Secretaries Week will be held Apr. 24-30.

Secretarial jobs are especially important at NIH where the most outstanding scientists in the world do research. The secretary performs administrative tasks indispensible to the executive and to the organization.

The NIH secretary independently performs a wide variety of duties, such as administration, personnel, training, supervision, procurement, budget, travel, research services and resources, including extensive human relations with NIH staff and the outside community.

The office support series, to name a few, includes secretaries, clerk typists, procurement clerks/assistants, mail and file clerks, editorial clerks/assistants, and travel clerks.

A secretary is defined by Professional Secretaries International as an executive assistant who possesses a mastery of office skills, demonstrates the ability to assume responsibility without direct supervision, exercises initiative and judgment and makes decisions within the scope of assigned authority.

The purpose of Professional Secretaries Week, sponsored by Professional Secretaries International, is to recognize all secretaries for their contributions to every field of endeavor. Since 1952, the last week in April has been proclaimed Professional Secretaries Week, with Wednesday highlighted as Professional Secretaries Day.

The Office Support Staff Coordinating Committee, NIH/NIMH (OSSCC), an officially recognized employee group which serves as a central forum for discussion of common concerns of office support workers, is encouraging managers and supervisors to take this special opportunity to recognize the invaluable contributions that office support employees have made to meet the needs of the ever-changing technology. They urge that support staff be encouraged to attend a professional educational activity.

Through the OSSCC, support staff have been able to serve with management on committees devoted to issues that affect the office support staff. The OSSCC also coordinates this week's activities at NIH.

For further information on Professional Secretaries Week or the OSSCC, contact Mary Fisher, 496-3571.

ACTIVITIES SCHEDULE

• **DAS: Apr. 29**—Will hold its annual luncheon for support staff. The speaker has not been confirmed. Open only to DAS employees.

• **DCG: Apr. 29**—Will sponsor a 1-hour presentation/workshop on "Super Woman." Ms. Coy Patrick, ACSE/LCSW, who is affiliated with the Jewish Social Service Agency in Rockville, will give the presentation at 12:30 p.m. in Conf. Rm. 6 of Bldg. 31 (C Wing). She will discuss the career women's responsibilities in the work place and in the home. Open to all NIH employees. Contact Ms. Betty Hopkins (496-4422) for further information.

• **DRG: May 5**—Ms. Johnnie Griffin, Director, Secretaries Evaluation Clinic, Inc., Washington, D.C., will present a seminar in the Westwood Bldg. Open to DRG and NIGMS employees.

• **DRR: Apr. 26**—Will have a lunchtime program on Development and Training Opportunities offered at NIH. This program will be presented by Ms. Meadie Osborne of the Development and Training Branch, NIH.

• **Apr. 25**—A reception recognizing DRR support staff will be held. Open only to DRR employees.

• **NIA: Apr. 26**—Will sponsor a workshop entitled "Positive Self Image for the Secretary." This workshop will be presented by Ms. Mary E. Dietterle, CPS. Open only to NIA employees.

• **NIGMS: May 3**—Will sponsor a "Career Development Strategies" seminar presented by Georgetown Secretarial College. This seminar will be in the Westwood Bldg. from noon until 2 p.m.

Open to all NIH employees. Contact Ms. Fu Temple (496-7219) for further information.

• **NHLBI: Apr. 23**—Is paying for eleven support staff to attend the seminar "Beyond the Basics: Close Encounters of the Grammar Kind." This seminar is sponsored by Professional Secretaries International Chapters in the Washington area.

• **CC: Apr. 26**—Will honor all support staff at a reception. Open only to CC employees.

• **NCI: Apr. 27**—Will sponsor a panel discussion entitled "Office Automation—Your Key to the Future." This discussion will center around office automation and what employees can expect as far as an impact on their work lives from such automation.

Speakers relating to the discussion are: Ms. Barbara Young, Association Director, Office Systems Center, OPM and Ms. Portia Jackson, Managing Editor, *Future Office*, PHS. The seminar will be held in Wilson Hall, Shannon Bldg., from 11:30 a.m. until 1:30 p.m.

Open to NCI employees and other employees on a first-come basis. Individuals needing assistance with physical access or sign language interpretation should contact Ms. Sharon Quinn (496-6266).

• **NIDR: Apr. 28**—Will sponsor a seminar entitled "Short-Cut To A Long Life." Dr. Louis Chacos, Head, Leadership Development Associates, will present this program in Bldg. 30, Rm. 117, from 2 until 4 p.m. This program will be a humorous approach to longevity and how to obtain it; and the importance of laughter in coping with stress for physical and mental health.

Open to all NIH employees. Contact Ms. Ethel Roseman (496-7239) for further information.

• **NIADDK: Apr. 23**—The Institute is offering an expense-paid professional workshop—"Beyond the Basics: Close Encounters of the Grammar Kind," sponsored by Professional Secretaries International Chapters in the Washington area.

• **Apr. 27**—Will have a luncheon seminar on "Networking" and how you can use it to your advantage for career advancement. Ms. Heidi Hoffman from the Montgomery County Commission on Women will conduct the seminar.

Open only to NIADDK employees.

• **NICHD: Apr. 27**—The NICHD Women's Organization, in conjunction with the EEO Office, continues its program of year-round educational activities for all employees, addressing such subjects as career ladders, stress management, and research trends on the mental and physical health needs of women. All employees are welcome to attend. Contact Barbara Witkin (496-1511) for further information. □

NEI Holds Seminar On Grants Procedures

Forty-nine people from university departments of ophthalmology, schools of optometry and central administrative offices of 10 other NIH-grantee institutions attended the seminar on grants management and application procedures held recently by the National Eye Institute.

Organized by Anna Marie Perrell, chief of the Extramural Services Branch, NEI, the seminar explored many of the continuing problems facing grants administrators today.

Anna Marie Perrell, chief of the Extramural Services Branch, NEI, addressed grants administrators at a seminar sponsored by the National Eye Institute.

Included were discussions of research grant budget development, preaward budget reviews, postaward administration, and reporting requirements. NEI extramural staff members explained how decisions are made during various phases of the peer review and award process.

Guidelines Reviewed

Together, NEI grants management specialists, health scientist administrators, and seminar participants reviewed NIH and Institute guidelines for issues pertinent to the participants' work at their institutions.

Participants were also encouraged to share experiences in the hope that knowing how others had solved problems would enhance their own effectiveness.

According to Dr. Ronald Geller, associate director for Extramural and Collaborative Programs, NEI, "The seminar was a part of our ongoing effort to foster more effective local management of grants by developing a strong communications network between the administrators and NEI extramural staff."

The NEI recognized the need for programs for administrators while sponsoring seminars at grantee institutions and at vision research meetings around the country.

Although NEI has always encouraged participation of vision research administrators in these seminars, the primary participants were principal investigators and not grants administrators.

Because of the success of the grants administrators seminar, a second sesion has been scheduled for September 1983. □

NHLBI Grantee Receives Research Award For Cholesterol Transport in Lipoproteins

NHLBI grantee Dr. Joseph L. Goldstein of the University of Texas Health Science Center at Dallas has been awarded the 1982 Lita Anneberg Hazen Award for Excellence in Clinical Research. He shares the award with his longtime colleague Dr. Michael S. Brown also of the Texas center.

Drs. Goldstein and Brown were chosen for the Hazen Award for research which culminated in the identification of the low density lipoprotein (LDL) receptor pathway—the mechanism by which body cells obtain cholesterol—and the discovery of how a genetic flaw in this pathway can lead to dangerously high levels of blood cholesterol and ultimately premature atherosclerosis and heart attack.

The inherited disorder, familial hypercholesterolemia (FH), has been recognized clinically for decades yet the pathogenesis of this disorder has only recently been recognized. Research results by Drs. Goldstein and Brown are especially valuable in expanding the body of knowledge concerning cholesterol transport in lipoproteins.

In patients who are homozygous for FH (receiving the defective gene from each parent), cholesterol levels are grossly elevated from birth and clinical manifestations of premature arteriosclerosis may become evident during childhood or adolescence; few survive past the age of 30.

Cholesterol levels in these patients may reach 1,000 mg/dl. This form of familial hypercholesterolemia occurs with a population frequency of one in a million.

Among patients who are heterozygous for the disease (receiving a single defective gene), cholesterol levels, though less marked, are still substantial—300 to 500 mg/dl. This is the most common form of familial hypercholesterolemia, having a population frequency of 1 in 500. Heterozygous males have an 85 percent chance of sustaining a heart attack before the age of 60—about five times greater than men who do not have FH. Women face a 45 percent chance of heart attack before the age of 60 compared to a 10 percent chance among unaffected women.

Studies by Drs. Goldstein and Brown confirm that elevations in blood cholesterol in patients with familial hypercholesterolemia result from a genetic deficiency of LDL receptors in the cells of liver and other tissues. These receptors are involved in removal of LDL cholesterol from plasma for cellular use.

For cholesterol to circulate freely in the blood, it is carried by specific transport proteins called lipoproteins. Normally, almost three-quarters of blood cholesterol is carried by low density lipoproteins. Research has shown that elevated LDL is a major contributor in the development of atherosclerosis.

LDL molecules attach to receptors on the cell surface. The LDL is then encapsulated and pulled inside the cell where enzymes release the cholesterol. Release of cholesterol within the cell supresses the cell's own production of cholesterol, triggers a cholesterol storage mechanism inside the cell, and turns off the production of LDL receptors.

When the cell demands more cholesterol for use in membrane synthesis or for other metabolic purposes, the cell resumes production of LDL receptors. This normal sequence of events, however, does not take place in patients with FH.

Drs. Goldstein and Brown studied regulation of cholesterol synthesis in cultured skin fibroblasts (connective tissue cells) taken from normal subjects as well as from patients heterozygous and homozygous for FH.

In comparison with normal cells, they found that cells from homozygous patients had an absence or near absence of LDL receptors. Absence of these receptors blocks entry of LDL cholesterol into the cell and thus allows cholesterol to accumulate in plasma to levels six to eight times higher than normal.

Those heterozygous for the condition produced only half the normal number of receptors creating a partial block in LDL cholesterol entry. Lipoprotein accumulations in these patients are about 2½ times normal.

Therapy in FH is directed toward reducing the concentration of LDL cholesterol without disturbing cholesterol delivery to cells. Attempts to normalize blood cholesterol in homozygotes have proved unsuccessful, but heterozygotes may be managed successfully with therapeutic diets supplemented with cholesterol-lowering drugs. □

NIADDK Holds Briefing for Visiting Urologists

A special briefing on urological research conducted and supported by NIH was held Mar. 28 for approximately 23 members of the American Association of Clinical Urologists.

The group was greeted by Dr. Lester B. Salans, Director of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, the NIH component with primary responsibility for research on urological disorders. He spoke about the importance of research in the field of urology, stating "the needs are enormous."

Dr. Nancy B. Cummings, NIADDK associate director for Kidney, Urologic and Hematologic Diseases who organized and chaired the meeting, spoke on overall NIH support of intramural and extramural urology research, and extramural research support mechanisms.

Donald F. Cyphers, NIADDK financial management officer, described the Institute's financial operations and discussed the place of urological research in the budget. Presentations on various urological research programs supported by NIH were also given by other attendees.

Following presentations and informal discussions, Dr. Marston Linehan, senior urologic surgeon, NCI Surgery Branch, led the visiting urologists on a tour of the Clinical Center Surgery Branch. □

John R. Edwards Retires After 42-Year Career

John R. Edwards, a computer assistant on the systems analysis staff of the Office of Research Services, retired on Apr. 1, ending a career in government that spanned 42 years.

Mr. Edwards began his service by enlisting in the Army in 1940 and retiring from the military 20 years later as a sergeant first class.

Mr. Edwards says of his retirement, "I'll play it by ear as long as I'm busy and meeting more people."

In September 1960, he joined the Civil Service in the housekeeping unit of the White House. He came to NIH in April 1961 as a medical records clerk in the Medical Records Department, CC. He later transferred to the Office of the Director, CC, as a file clerk.

In 1967, Mr. Edwards joined DCRT in the output distribution services unit where he remained for 13 years. He assumed his final position on the systems analysis staff in August 1980.

He has been very active in NIH employee programs. He participated in the 1975 Savings Bond campaign and received an award for his efforts. He served as DCRT R&W representative for 3 years and was commended for creating and developing the R&W Awards Program. He is also active in the NIH Bike Club and was part of the group that formed the NIH Walking/Hiking Club.

Mr. Edwards also has contributed many hours to community service projects. During 19 years with the Boy Scouts, he has held the offices of assistant scout master, scout master, and assistant district commissioner for training and membership.

In 1964, he received the Wood Badge Award and in 1978 was awarded the Silver Beaver, the highest honor an adult leader can achieve.

He also regularly participates in the March of Dimes Walk-A-Thons and Bike-A-Thons as well as other charity events.

Mr. Edwards' many plans for his retirement include doing "some serious biking." He has been a member of the Potamac Peddlers Touring Club since 1970 and last year bicycled over 3,500 miles, a figure he hopes to beat in 1983. □

What can be more pathetic than an empty speaker pouring himself forth to a full house?—*John Andrew Holmes* □

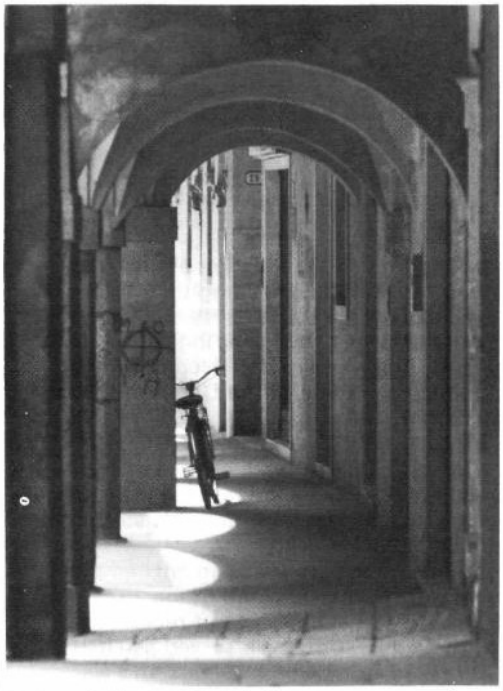
NIH Camera Club Holds Annual Competition

The 1983 NIH-wide annual photo competition, sponsored by the NIH/R&W Camera Club, was held Apr. 12 in Wilson Hall. Over 200 photographs were entered in the show which was judged by three well-known area photographers, Leon Rothenberg, Thelma Grey and Morris Graff. Competition was open to all NIH employees, and club members and their families.

First place winners in the three competition categories were John Boretos for black and white prints; Martin Heavner for color prints; and Henry Scheele for slides.

BLACK AND WHITE PRINTS

FIRST PLACE John Boretos "Indian Reader"
SECOND PLACE I.M. Chaiken "Padova Antica"
THIRD PLACE Bob Young "Maine Still Life II"

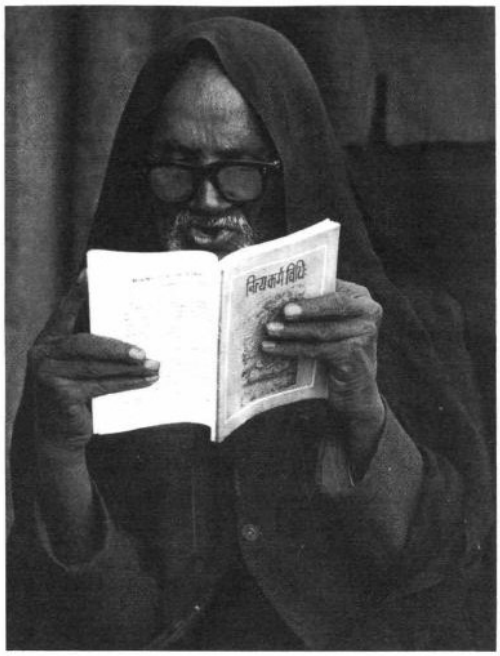


Padova Antica by I.M. Chaiken

HONORABLE MENTIONS

I.M. Chaiken	"Man Feeding Pigeon"
John Boretos	"Little White Cloud"
John Boretos	"Coronado"
Bob Young	"Newagon Cove"
Martin Heavner	"Clouds"
Ken Rhodes	"Shakespeare"
Ken Rhodes	"Shadows"
Ken Rhodes	"Rainy Day"
I.M. Chaiken	"Rocky Mountain Study"

Black and White Print Entries



Indian Reader by John Boretos

COLOR PRINTS

FIRST PLACE Martin Heavner "Target Practice"
SECOND PLACE Paul Kolenbrander "Kinfolk"
THIRD PLACE Pierre Henkart "Cecropia"

HONORABLE MENTIONS

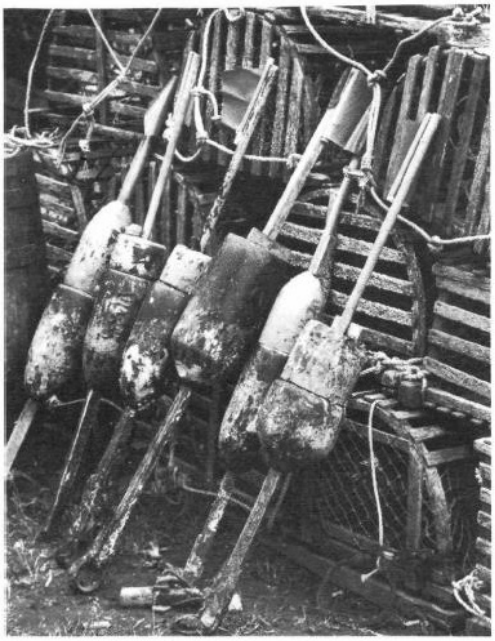
Richard Davey	"Ice Wave"
Danny Pascal	"Wife"
Martin Heavner	"Warning"
Carolyn Tylenda	"Before the Mosque"
Carolyn Tylenda	"The Market Place"
Jack Kalberer	"African Bull Elephant"
Jack Kalberer	"Marine Iguana"
Bob Young	"Town Fair in Ghent"
Pierre Henkart	"Estelle Fonard"
Donald Spence	"Autumn in New England"
John S. Small	"Morning in Maine"
Joy Richmond	"Rims"
Henry Hartley	"Great Blue"
Paul Kolenbrander	"Waiting"
Bob Young	"Gringo"
Joy Richmond	"Waterlillies"

SLIDES

FIRST PLACE Henry Scheele "Big Ape"
SECOND PLACE Bob Young "Falls at Dixville Notch"
THIRD PLACE DISQUALIFIED

HONORABLE MENTIONS

Jack Kalberer	"Samburu Woman"
Jack kalberer	"Baboon Mother and Infant
Stan Phillips	"Lone Cactus"
Lois Kochanski	"Fireworks"
Lois Kochanski	"Texas Sunset"
Peter Vander Ven	"Wonder Lake"
Arlene Kantor	"Sunrise at Nags Head"
Arlene Kantor	"Run to the Finish"
Carol Waldmann	"Fiddlehead"
Carol Waldmann	"Climber"
Carol Waldmann	"Half Dome"
Carol Waldmann	"Dog Tooth Villet"
Tom Waldmann	"Contemplation"
Tom Waldmann	"Riders in the Fog"
Bob Young	"Lunch Time - St. Marko"
LeRoy Kerney	"Soap Bubbles"
Henry Hartley	"Great Blue Heron"
Frieda Weise	"Pink Waterlily"
Frieda Weise	"Fall and Winter"



Maine Still Life II by Bob Young

Vision Research Featured in Next Science Seminar

An NIH Science Writers' Seminar on "Advances in Vision Research: From the Gene to the Brain" will be held May 12, 9:30 a.m. to noon, in Bldg. 31, Conf. Rm. 9.

Dr. Joram Piatigorsky, chief, Laboratory of Molecular and Developmental Biology, NEI, will be the moderator. He will also discuss his research on lens genes and the implications of this work for cataracts.

Studies of the mechanisms by which retinal cells detect light will be presented by Dr. William A. Hagins, chief, membrane biophysics section, Laboratory of Chemical Physics, NIADDK.

Dr. Gerald J. Chader, chief, Laboratory of Vision Research, NEI, will present his work on cyclic GMP, an intracellular messenger involved in normal photoreception and in inherited retinal degenerations.

Research on how the brain controls eye movements and visual attention and how these studies help understanding of deficits caused by certain kinds of strokes will be discussed by Dr. Michael E. Goldberg, chief, section of neuro-ophthalmological mechanisms, Laboratory of Sensorimotor Research, NEI. For additional information, call Bobbi Bennett, 496-1766. □

Photocopying Service Hours Extended at NIH Library

Hours for photocopying at the NIH Library's Division of Research Services have been extended. Self-service photocopying is now available from 8 a.m. to 5:30 p.m., Monday through Friday.

Also, copy service staff at the NIH Library will now perform same-day photocopying for library users if the materials for copying are brought to the photocopy window between 8 a.m. and noon. Copying service by staff is limited to three journal articles, none longer than 15 pages.

Forms Available

To get photocopying performed by staff, fill out NIH Form 232 (NIH Library Loan and Copy Request) for each article. The forms are available at the circulation desk. Leave the journals and completed forms at the photocopy service window, Rm. B1L210 on the lower level before noon. The copies will be available by 4 p.m. the same day.

Self-service photocopying is limited to 30 pages at a time whenever others are waiting for access to the machines. □

First Marjorie Guthrie Memorial Lecture Will Be Delivered by Nobel Laureate

Dr. David Baltimore, Nobel Laureate of the Massachusetts Institute of Technology, will deliver the first annual Marjorie Guthrie Lecture in Genetics, sponsored jointly by the National Institute of Neurological and Communicative Disorders and Stroke and the National Institute of General Medical Sciences.

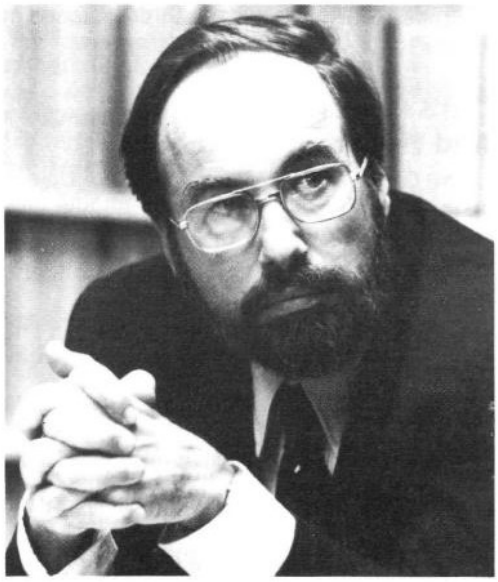
The inaugural lecture, "Illumination of Disease Processes Through Molecular Genetics," will be presented at NIH in Masur Auditorium on May 11, at 8 p.m.

The new lectureship honors the late Marjorie Guthrie's outstanding contributions to the promotion of research on genetic diseases, particularly disorders of the brain and central nervous system.

"Not only was Marjorie dedicated to focusing additional patient care, research, and political attention on Huntington's disease—a disease that challenged her family—but on all genetic disorders," said Dr. Murray Goldstein, NINCDS Director.

"Not only was she dedicated to the prevention and improved therapy of disorders of the brain and nervous system, but of all crippling disorders. She had the vision to use the specific to draw attention to the importance of the whole."

Marjorie Guthrie, a leading advocate for research on all genetic disease but particularly disorders of the brain and central nervous system, died Mar. 13.



Dr. David Baltimore

Mrs. Guthrie was the widow of folksinger and songwriter Woody Guthrie, who died of Huntington's disease in 1967. After her husband's death, Mrs. Guthrie founded the Committee to Combat Huntington's Disease; she later chaired the National Commission for the Control of Huntington's Disease and Its Consequences.

Mrs. Guthrie served on the National Advisory General Medical Sciences Council from 1973 to 1977, and was instrumental in the development of voluntary health organizations for Tourette's syndrome, dystonia, neurofibromatosis, and other neurogenetic disorders. She died on Mar. 13, 1983.

Dr. Baltimore is professor of biology at MIT and director of the Whitehead Institute for Biomedical Research in Cambridge, Mass. He has played a major role in creating the field of molecular genetics, and is the recipient of many awards. In 1975, he was awarded the Nobel Prize in Physiology or Medicine. □

Scientists Agree AIDS Research Needed

Scientists at the recent 2-day NIAID Workshop on the Search for Etiological Agents in Acquired Immune Deficiency Syndrome (AIDS) agreed that an expanded investigative effort is crucial to the goal of identifying the infectious agent responsible for this disease.

Announced at the meeting was the joint plan of the National Cancer Institute and NIAID to prepare a request for cooperative agreement applications for research to find the infectious agent causing AIDS. Approximately $2 million ($1 million by each Institute) will be set aside by the Institutes to fund the first year's grant awards.

At a briefing following the workshop, Dr. Richard M. Krause, NIAID Director, said that, in response to this public health emergency, NIH funding for AIDS, which was $3.3 million in 1982, would increase to over $9 million in 1983.

According to Dr. Kenneth Sell, NIAID scientific director, "the workshop also stimulated plans for the exchange of valuable resources, such as patient blood samples and other tissues and materials."

New Technologies

The scientists also discussed the collaborative use of new technologies such as immunoelectron microscopy and molecular biology techniques to provide greater sensitivity in the detection of new viruses.

Although no infectious agent has actually been identified as the cause of AIDS, investigators suspect that a virus or other infectious agent plays a role in its transmission. Some of the participants reported that extensive testing for viruses has already begun.

AIDS, a disease characterized by a severely depressed immune system that leaves patients vulnerable to serious illness, strikes homosexual males, intravenous drug users, Haitians, as well as hemophiliacs who require injections of a special blood factor.

It has recently been identified in other segments of the population as well, including infants born to parents in a high-risk group and women who have had intimate contact with IV drug users. The mortality rate for AIDS is approaching 40 percent and there have been no reported cases of immune suppression reversal. □

It is not necessary to take a person's advice to make him feel good. All you have to do is ask it.—*Richard Armour* □

Gerald L. Duvall Retires From ORS With 39 Years

Gerald L. Duvall, head of the planning and estimating section of the Office of Research Services, retired Apr. 2 with 39 years of government service—37 with NIH.

When Mr. Duvall joined NIH, he worked in what was called the "bull gang." This group performed various duties connected with the support of laboratory services throughout the reservation that then consisted of approximately eight buildings.

He later worked in the Division of Tropical Diseases until transferring to the plumbing shop. He continued working in the shop and for the past 5 years served as foreman for the planning and estimating section.

Mr. Duvall was one of the first members of the NIH Fire Brigade which had a chief, one pickup truck size unit, and several people who worked within the various trades for the Buildings and Grounds Division.

Mr. Duvall first came to NIH in 1943, left to serve in the Army, and later returned in 1947.

He has been active in NIH-sponsored sports such as softball, bowling, and golf, and for 20 years, was a fast-pitch pitcher in a highly competitive league in the Baltimore-Carroll County area.

Mr. Duvall is an active member of the Damascus American Legion Post #171 and presently is serving as first-vice commander for Montgomery County.

He is married with four sons. His wife, Miriam, who works for NIADDK in Bldg. 10, says his retirement plans include gardening, fishing and golfing, along with the usual homeowner maintenance chores. □

Dr. Michael Potter Awarded Ehrlich Prize For Study of Mouse Plasma Tumor Cells

Dr. Michael Potter, chief, NCI Laboratory of Genetics, received the 1983 Paul Ehrlich-Ludwig-Darmstaedter prize from the Paul Ehrlich Foundation in Frankfurt, Germany, on Mar. 14.

Dr. Potter was honored for his research on mouse plasma cell tumors. These tumors have become important to immunological research because they are sources of specific moleculear forms of immunoglobulin molecules.

Each tumor makes only one form, and because the tumors grow to large size, enormous quantities of immunoglobulin molecules can be isolated.

Mouse Tumors to Antibodies

Dr. Potter began studying the genetics of mouse tumors in 1956, 2 years after NCI pathologist Dr. Thelma Dunn first identified them, and with Dr. John Fahey, showed that they produced myeloma proteins. These natural proteins occured so rarely in mice that only one a year became available for study.

Fortunately, Dr. Ruth Merwin of the NCI found these tumors could be induced in an inbred strain of mice called BALB/c. Working with Charlotte Robertson Boyce of NCI, Dr. Potter found these tumors could be induced with mineral oil.

Hundreds of plasmacytomas, each producing a specific protein, were established in laboratory cultures. In later studies, Dr. Potter and coworkers showed that many of these proteins actually were antibodies to environmental antigens.

Plasmacytomas became very useful and popular items for immunologists, and Dr. Potter sent them all around the world. Their uniformity and large supply enabled scientists to crystalize these pure antibody proteins and uncover their molecular structure with X-rays.

The plasma tumor cells also provided investigators with large amounts of the RNA and DNA that encoded each antibody.

Many other applications followed: At the Basel Institute for Immunology in Switzerland, Susumu Tonegawa and his colleagues found that DNA from Dr. Potter's plasmacytomas was arranged differently than in mouse embryos.

In 1975 immunologists Cesar Milstein and Georges Kohler in Cambridge, England, fused the mouse tumor cells to normal antibody-producing mouse spleen cells. The resulting hybridomas were a nonstop factory for monoclonal antibodies.

New Ideas Emerge

Many of the new ideas emerging from studies of plasmacytomas were discussed at annual NIH workshops on homogeneous immunoglobulins that Dr. Potter held from 1969 to 1980.

More recently, he has begun to study the relationship of antibody genes to oncogenes, genes with the potential of causing cancer.

After the award ceremony, Dr. Potter traveled to the Basel Institute to attend a conference on the role of oncogenes in B-lymphocyte neoplasms that he helped organize.

Dr. Michael Potter received an award from the Paul Ehrlich Foundation in Germany last month for his work on plasmacytomas.

Dr. Potter shared the Ehrlich Award, named for the turn-of-the-century father of immunology, with two other researchers: Dr. Peter Doherty of the John Curtin School of Medical Research in Australia, and Dr. Rolf Zinkernagel of Switzerland. They were recognized for their work on how animal cells develop immunity.

Dr. Potter joined NCI in 1954, became a section chief in 1970, and was appointed a laboratory chief in 1982. He is known among his colleagues in Bldg. 8 as a biker, who rides in to work "rain or shine." He credits some of his scientific accomplishments to "the sharing of ideas among immunologists. They're a great bunch of people, and because they talk to each other they continuously generate fascinating new ideas. Plasma cell tumors turned out to be good models for testing whether some of these notions were right or wrong."

Dr. Potter received the U.S. Public Health Service Meritorious Service Award in 1959 and the Distinguished Service Medal in 1981. Last year he was elected to the National Academy of Sciences.—**Ron Cowen**

NEW DRUG

(Continued from Page 1)

psychogenic or organic and thus actually caused by drug therapy, the investigators conducted measurements of penile erection in sleeping patients with complete impotence.

Nocturnal penile erection is impaired with organic but not with psychogenic impotence. This test indicated that the patients did have impaired erection while taking cimetidine, but normal penile tumescence after cimetidine was replaced by ranitidine.

Because of its lack of antiandrogenic side effects and its effectiveness in inhibiting gastric acid secretion, this study showed that ranitidine appears to be a preferable histamine H_2-receptor antagonist in the treatment of male patients with gastric hypersecretory states. □

Physiologist Joins NCI Lab As Fogarty Scholar

Professor John A. Jacquez, professor of physiology in the School of Medicine and professor of biostatistics in the School of Public Health, University of Michigan, arrived on Apr. 1 to begin his first term as a Fogarty International Center scholar-in-residence.

Dr. Jacquez was educated in New York. He attended Cornell University, graduating in 1943, and Cornell University Medical School, receiving his M.D. in 1947. He spent several years on the staff of the Sloan-Kettering Institute before moving to Ann Arbor in 1962.

Well known for his research on mechanisms of transport across cell membranes in normal and pathological cells, Dr. Jacquez has developed an extensive model for kidney transplants.

He is an authority on compartmental analysis and has published several books on biomathematics, including standard texts on computer diagnosis, respiratory physiology, and compartmental analysis.

Dr. Jacquez, who will be primarily associated with the Laboratory of Mathematical Biology, NCI, while he is here, has an office in Stone House, where he can be reached at 496-1213. □

OMS Presents Film on Salt And Hypertension in May

The Occupational Medical Service, Division of Safety, will present a 26-minute film entitled, *Salt and Hypertension: How to Save Your Own Life*.

The film examines the link between salt intake and hypertension, offers useful strategies for maintaining a low salt diet and gives information on how to cook flavorfully without salt.

It will be presented on the following dates and locations:

Thursday, May 19, Westwood Bldg., Rm. 740, 11:30 a.m.

Friday, May 20, Bldg. 38, Rm. B1N30B, 11:30 a.m.

Monday, May 23, Federal Bldg., Rm. B119, 11:30 a.m.

Tuesday, May 24, Bldg. 10, Masur Auditorium, 11:30 a.m. and 12:15 p.m.

Wednesday, May 25, Shannon Bldg., Wilson Hall, 11:30 a.m. and 12:15 p.m.

Thursday, May 26, Bldg. 13, Rm. G313, noon

Friday, May 27, Blair Bldg., Rm. 110, 11:30 a.m.

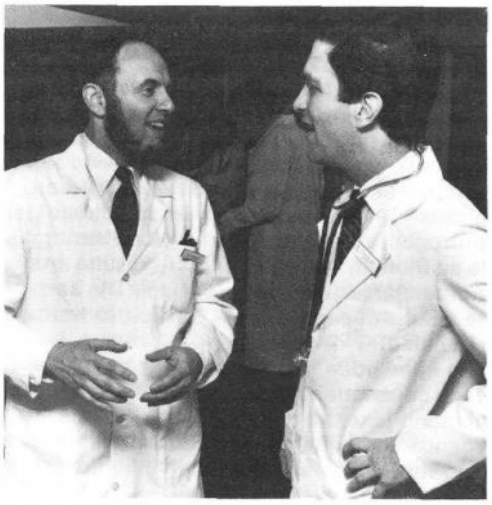
Also, a blood pressure screening and monitoring service, on an ongoing basis, is being offered at the OMS clinic, in Bldg. 10. During May, NIH employees may have their blood pressure checked at the following locations: Shannon Bldg., Bldgs. 31, 38A, 12A, 7, 14G, 29, 37, 36, 30, ACRF Lobby, and Blair Bldg. A detailed schedule will be published in a desk-to-desk memorandum. □

R&W Has New Location

The NIH R&W Association Activities Desk in Bldg. 31, has been relocated to the basement level (B1W30) adjacent to the audio/visual section. □

NIDR Pain Research Clinic Opens for Patients

(Continued from Page 1)



Drs. Dubner (l) and Max confer next to the central station in the newly opened NIDR pain research clinic in Bldg. 10.

ground, emotional state, previous sensory experience, and significance of a given situation can influence reaction to pain.

To help standardize pain assessment, NIDR scientists have developed new scales for verbally measuring pain that more adequately quantify the many aspects of the pain experience. Patients are asked to separately report two major aspects of pain: its unpleasantness and its intensity.

The new research program has two components—an acute pain program and a chronic pain program.

ACUTE PAIN PROGRAM

Acute pain studies center around a dental model for measuring surgical and postsurgical pain associated with extraction of third molars (wisdom teeth). This model is excellent because findings from these studies have general applicability for studying postsurgical pain at other sites.

The effects of analgesic drug combinations and sedative agents on pain, anxiety, and patient cooperation are also being evaluated.

NIDR investigators have found that using a long-lasting local anesthetic in combination with a nonsteroidal anti-inflammatory drug significantly reduces postoperative pain. About half the patients report no postoperative pain at all.

Other studies seek to correlate plasma levels of various neurochemicals with pain reported by patients during and following surgery; assessment of pain using the newly developed pain scales, and mechanisms involved in the placebo effect. The effect of stress in activating the brain's own pain-suppressing chemicals is also being investigated.

CHRONIC PAIN PROGRAM

The chronic pain program includes studies of the following conditions:

• *Myofascial pain*—Pharmacological and nonpharmacological approaches to treatment of myofascial pain are being explored in patients suffering from pain and dysfunction of the temporomandibular, jaw-hinge joint. These muscles often go into a spasm or cramp, leading to tissue damage, pain and tenderness.

Treatment for this condition has varied. Sometimes high spots on the teeth have been ground away or surgery performed on the joint. Researchers will compare outcomes in patient groups treated with drug therapy and with other more conservative forms of treatment.

• *Painful Diabetic Neuropathy*—Some diabetic patients develop nerve damage, particularly in the feet. NIDR scientists are examining patients who have nerve pathology accompanied by pain, and are evaluating the effectiveness of amitriptyline, an antidepressant drug, in controlling the pain.

Previous animal studies have demonstrated that amitriptyline increases the availability of serotonin, a chemical released at some nerve endings that inhibits painful sensations.

Researchers are trying to learn whether with diabetic patients the drug produces actual pain relief or the patients report less pain because they have become less depressed.

Dr. Gracely programs a digital computer that controls the presentation of stimuli to subjects and patients, and records patient responses to the intensity and unpleasantness of the stimuli. The computer also analyzes the data derived from these experiments.

• *Parkinson's Disease*—Patients who have Parkinson's disease undergo degeneration of a portion of the brain stem called the locus coeruleus. The locus coeruleus is believed to modify action of the brain's own pain-suppressing system that involves endorphins (morphine-like natural substances).

Scientists in the clinic are trying to find out how this tissue atrophy affects pain perception, and if these patients experience pain more intensely. They are also investigating whether morphine acts on Parkinson's patients in the same manner as it does other people.

• *Cancer*—NIDR and NCI scientists will examine alternatives to low-dose narcotics in cancer patients with pain. Flurbiprofen, an investigational new drug that is a member of the aspirin family, will be used in this study. The drug has the analgesic strength of narcotics, but doesn't produce grogginess and nausea.

In another study, investigators will evaluate the effectiveness of a novel opiate drug, DADL-enkephalin, in patients who no longer receive relief from morphine. The brain contains three or four opiate receptors that are involved in the suppression of pain signals.

Morphine works specifically on one of the receptors, but as a patient becomes tolerant to morphine, that receptor no longer functions. DADL-enkephalin may be a useful alternative in these cases since the drug acts on a different receptor.

The research clinic is also interested in developing and testing specially designed games to measure pain in young children with cancer. This study will lay the groundwork for research on pain treatment in children.

The effectiveness of hypnosis on children undergoing diagnostic procedures such as bone marrow withdrawal and usefulness of morphine infusions on those with severe pain will be examined.

• *Low Back Pain*—The effects of deep brain electrical stimulation for treatment of intractable chronic pain will be evaluated in another chronic pain study. This controversial technique, which requires brain surgery, is being used in patients at the Medical College of Virginia whose low back pain has been unsuccessfully treated by other methods.

The stimulator technique presumably activates the brain's pain-suppressing mechanisms and thereby reduces the patient's pain. The patients are admitted to the pain research clinic for independent testing of the effectiveness of this procedure.

"Patient participation is essential for the success of this program. Those who become involved in these studies are making valuable contributions which hopefully will lead to new and improved methods of pain control in the future," said Dr. Dubner. □

STEP Forum on Rotator System To Be Presented May 4

The STEP committee will present a forum on The National Science Foundation Rotator System: The Active Researcher as Scientist Administrator on Wednesday, May 4, from 2 to 4 p.m., in Wilson Hall, Shannon Bldg.

The rotator system involves getting a practicing active research scientist to serve as a scientist/administrator for the National Science Foundation on a temporary basis for 1 year.

Speakers include Drs. Richard Louttit, director, Division of Behavioral and Neural Sciences, National Science Foundation, and William Yost, program director for Sensory Physiology and Perception, National Science Foundation.

Dr. Louttit will discuss the philosophy of and rationale for the use of rotators at NSF and the impact on the agency. Dr. Yost will discuss the specific role of a rotator, its impact on the person and the home institution as well as its advantages and disadvantages.

The forum is open to all NIH employees. No advance registration is necessary. □

False Agreement Can Mask Organizational Problems

When agreement is a false mask, problems can be serious and the consequences catastrophic for an organization and the people involved, concludes Dr. Jerry B. Harvey, a professor of management science at George Washington University.

Fear of taking risks is at the core of the problem, he emphasized. All actions have consequences that may be worse than the evils of the present situation.

Dr. Harvey recently spoke to about 100 NIH employees at the second seminar in the Division of Personnel Management's Professional Personnel Program Series. The series is designed to assess the latest trends, technological advances, legal changes and other critical issues facing personnel specialists.

Dr. Harvey has published articles in the field of management and organizational development, and conducted numerous seminars for various industrial, governmental, service and religious organizations.

This seminar, sponsored by the National Institute of Child Health and Human Development's Personnel Management Section, focused on the dynamics and consquences of organizational decisionmaking.

He described the symptoms, causes and problems encountered by organizations that make decisions contrary to the desires of the decisionmakers themselves. He discussed the underlying reasons for this problem and suggested ways to recognize and deal with it.

The most pressing issue facing modern organizations, contends Dr. Harvey, is the inability to cope with agreement, rather than the inability to manage conflict.

Often employees agree privately on the nature of the problem and the steps necessary to solve them, he explained. However, they fail to openly communicate their beliefs to one another, creating a collective misperception of reality.

As a result, employees exhibit low morale in the form of frustration, anger, irritation and dissatisfaction with their job and the organization. Consequently, they form subgroups with trusted acquaintances and blame other subgroups for the organization's problems.

Dr. Harvey said employees know what the problems are and how to solve them, but they suffer anxiety pangs when they think of the consequences of being labeled "whistleblowers" or "troublemakers," rather than "teamplayers."

"Separation, alienation and loneliness are things we do know about—and fear," he said. "Both research and experience indicate that ostracism is one of the most powerful punishments that can be devised. The evidence is overwhelming that we have a fundamental need to be connected, engaged and related, and a reciprocal need not to be separated or alone."

How does an organization deal with the problem?

While stressing that there is no risk-free solution, Dr. Harvey recommended direct confrontation, preferably in a group setting. He cautioned, however, that the results are unpredictable. The process is delicate and the results depend on how the confrontation is handled.

He concluded that people must be aware of the consequences of confrontation and be willing to take the risk for the sake of the organization and their individual sanity, integrity and job and personal fulfillment. □

Tickets on Sale for May R&W Theatre Group Play

Tickets are now on sale for the May NIH R&W Theatre Group's production, *The Whole Town's Talking*. General tickets are $4, and $3 for senior citizens. Tickets can be purchased at the R&W office, Bldg. 31, Rm. B1W30, or from an R&W representative in other buildings.

The play, a 1920's era comedy by Anita Loos and John Emerson, will be presented in the Bldg. 10 Masur Auditorium on May 6, 7, 13 and 14, at 8 p.m., and a matinee on May 8 at 3 p.m. For more information, call the R&W Activities Desk, 496-6061. □

Six NIH Employees Show How to Overcome Disability

Six NIH employees show how they cope with disability in a new exhibit entitled, *Getting the Job Done*, now on display in Bldg. 31.

The exhibit is one of several programs developed by the NIH Division of Equal Opportunity's (DEO) Handicapped Advisory Committee to show the NIH community that a disability need not be a handicap at NIH.

"These employees have learned to cope successfully," said Dan Kenney, committee chairman. "They did not let blindness, multiple sclerosis, learning disability, hearing impairment or loss of a limb prevent them from building a useful career here at NIH.

"We hope this exhibit will encourage other handicapped employees to step forward and let us know if they need help. This exhibit will also show employees who are not disabled that the people pictured in this exhibit are friendly, caring people who cannot be simply lumped together under the label 'handicapped'."

The NIH Handicapped Advisory Committee, now in its third year, advises the NIH Director, Division of Equal Opportunity, EEO offices, handicapped placement coordinators, and the BIDs about the needs and concerns of the handicapped at NIH. The committee includes representatives from each BID and meets monthly.

Recently the committee has been working with the campus police to improve usage of parking facilities for the handicapped, has helped the NIH Fire Department to develop coordinated fire emergency procedures for the disabled and is preparing a resource directory of services for the handicapped in the Greater Washington Area.

Several members of NIH's Handicapped Advisory Committee stand in front of their new exhibit now on display in Bldg. 31. They are (l to r): Susan E. Grove, NIAID; Evelyn Laten, NIGMS; Daniel S. Rogers, NIA; and Ignacio A. Smith, NIADDK.

Dr. Lance A. Liotta Wins Arthur S. Flemming Award

Dr. Lance A. Liotta, chief, NCI Laboratory of Pathology, has been awarded the Arthur S. Flemming Award for his outstanding research on the invasion and spread of cancer cells. Dr. Liotta and his group pioneered research on the specific biochemical mechanisms that play a role in tumor invasion and metastasis.

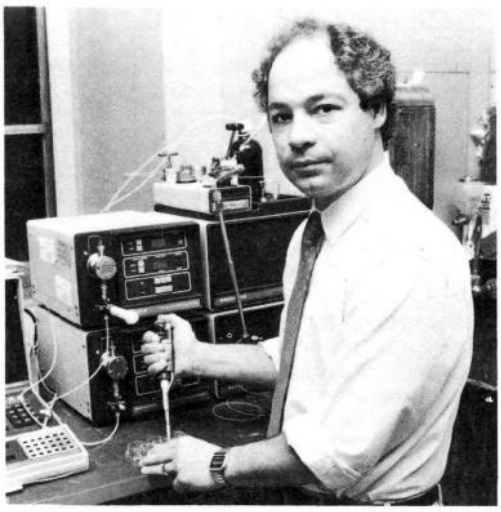
Dr. Arthur Flemming, former DHEW Secretary (1958-61), and HHS Secretary Margaret Heckler jointly presented the award Apr. 22. The Arthur S. Flemming Awards Commission and the Downtown Jaycees of Washington, D.C., present the annual award to honor outstanding Federal Government scientists or administrators under 40 years of age.

Dr. Liotta came to NCI in 1976 after completing his medical studies at Case Western Reserve University. He had already earned a Ph.D. in biomedical engineering from Case Western Reserve in 1974. The subject of his Ph.D. dissertation was tumor metastasis.

As a resident pathologist at NCI, Dr. Liotta continued the work he had begun at Case Western Reserve. He theorized that for a cancer cell to travel to a different site, it needs some mechanism to breach the basement membrane, a thin but tough, mesh-like membrane layer that separates and supports tissue. He therefore purified specific components of the basement membrane and studied how tumor cells biochemically interact with these components.

Histological studies had already shown that the basement membranes and connective tissue are disrupted at the point where tumor cells invade. He discovered that cancer cells produce an enzyme that selectively breaks down a type of collagen (tough, elastic protein material) found only in the basement membrane.

His group was the first to identify and purify the enzymes that destroy the elements unique to the basement membrane. In the most aggressive cancer cells, these enzymes are markedly higher than in normal cells or those cancer cells that do not metastasize.



Dr. Liotta at work in his laboratory at the National Cancer Institute.

The next step was to determine how the cell attaches to the basement membrane long enough to break down this collagen. Through a series of experiments, the group discovered that tumor cells have surface regions that bind to another protein also unique to basement membranes.

This protein, laminin, is found closer to the membrane's outer area. The laminin molecule has four arms extending from a central base. The ends of the three short arms attach to the basement membrane collagen (the fourth arm is not involved), while the central base serves as an attachment point for the cancer cell.

The laminin holds the cancer cell in contact with the basement membrane. Once in contact, the tumor cell enzymes dissolve the basement membrane, the cell passes through the looser inner tissues, and then enters the blood or lymph system. Once in the circulatory system, the cancer cell can move to another site and grow as a metastasized tumor.

After 5 years of experimentation, Dr. Liotta's group found a way to change the molecular structure of the laminin so that it could prevent, rather than aid, the spread of cancer cells.

They used an enzyme to break down the bulky end of the three short arms of the molecule and then injected the "crippled" laminin fragment into the tails of mice previously injected with cancer cells.

The altered laminin could still bind to the cancer cell at the molecule's unaltered base area, but not to the collagen in the basement membrane. With the bond to the collagen broken, the cancer cell enzyme could not dissolve the barrier to breach the membrane and enter the circulatory system. Dr. Victor Terranova of NIDR later collaborated in these studies by testing how the altered laminin affects the behavior of cells.

Dr. Liotta believes that the altered laminin competes with the natural laminin for attachment to cancer cells. The more cancer cells that bind to the altered laminin fragments, the fewer are available to spread to other tissues. This competitive binding does not stop cancers from growing within an original site, but it may prevent or at least slow the cancer spread to other sites.

Dr. Liotta's inventiveness reaches beyond his laboratory. He has six registered patents and three more awaiting registration in the United States. He also has four others awaiting registration with foreign governments. Although most are scientific, one of these patents is an aerial toy commercially sold by Warren Industries as a "Soarbi." He described it as "a rotating disk, something like a flying yo-yo."

He helped his wife, Linda, design experiments and teaching aids for a PTA-sponsored math/science lab at Wyngate Elementary School in Bethesda. To enrich his volunteer work and to entertain his own two children, he has constructed a robot, built and launched hot-air balloons, constructed working telephones, and assembled an 8-foot model of a *Tyrannosaurus rex* dinosaur skeleton. □

NIH Will Sponsor Booth At Asian American Festival

NIH is sponsoring a booth at the Fifth National Asian Pacific American Heritage Festival to be held May 7 at the Washington Monument Grounds in Washington, D.C. The festival times are 11 a.m.-6 p.m. and the rain date is May 8.

The exhibit will provide information and materials of interest to Asian Americans on the NIH mission and job opportunities in biomedical research.

For more information, contact George Yee, 496-2906. □

Free 1-Hour Concert May 9

The Newington High School Band will give a free concert May 9 in the Bldg. 10 Masur Auditorium from 11:30 a.m. to 12:30 p.m. The Newington High School's music department has been presenting concert tours for the last 10 years, receiving bronze, silver, and gold medals from major music festivals in the U.S. and abroad.

The program has been labeled as representative of the most "outstanding" quality of youth music in the nation by judges from both the U.S. and Canada. □

Nursing Research Symposium Scheduled for May 5

The Clinical Center Nursing Department is sponsoring its 9th Annual Nursing Research Symposium on May 5, from 8:30 a.m. to noon in the ACRF amphitheater. Two keynote speakers will address the symposium: Dr. Barbara Stevens speaking on "Research in Nursing Administration: Where We Are, Where We Need to Be," and Dr. Phyllis B. Kritek speaking on "Alterations in Self Concept: Research Perspectives."

Poster sessions following these presentations will feature such topics as nursing diagnosis in the chronically ill and the effects of caffeine on postlumbar puncture headaches.

For more information on the symposium, call Susan Simmons-Alling, 496-3253. □

Culture and Organization Subject of Management Forum

Dr. Terrence Deal, a professor at Harvard, will discuss his recent best seller, *Corporate Cultures*, at a Forum for NIH managers, May 2, 9 a.m.-12 noon in the ACRF amphitheater.

Dr. Deal writes that a smart leader understands his culture and how to use it to accomplish his goals. He recognizes that every event—hirings, promotions, problem solving, decisionmaking—is an opportunity to reinforce the values of the culture. Understanding culture helps managers identify why their organizations are succeeding or failing.

Executive-Management Forums, sponsored by the Development and Training Operations Branch, are designed to provide NIH managers with the latest research findings relevant to administration.

For more information call Gary Combs or Cindy Howell at 496-6371. □

Dr. K. C. Rice, Senior NIADDK Investigator, Accepts Sato Pharmaceutical Prize in Tokyo

Dr. Kenner C. Rice, senior investigator, section on medicinal chemistry, Laboratory of Chemistry, NIADDK, received the Sato Memorial International Award in Tokyo, Japan, on Apr. 3. The award is cosponsored by the Foundation for the Advanced Education in the Sciences and the Japanese Pharmaceutical Society.

Established in 1978 in memory of Dr. Yoshio Sato, the award is presented to persons who have greatly contributed to the fields of pharmacology, therapeutics and pharmaceutical science in Japan or the United States.

Dr. Rice's recent research has focused on the chemistry and action mechanism of drugs that affect the central nervous system.

He is particularly noted for his development of the first commercially feasible synthesis of opium-derived narcotics and antagonists such as codeine, morphine and the thebaine (paramorphine)-derived drugs, naloxone and oxycodone.

Codeine is the most commonly prescribed analgesic-antitussive (anticough) medicine in the world. The medical importance of codeine is reflected by its rising production and use. More than 55,000 kilgorams are produced each year in the U.S. and 190,000 kilograms per year worldwide.

In 1973-1975 a shortage of opium necessitated the release of about half of the United States' strategic materials reserve of opium to domestic processors to meet U.S. requirements for medical opiates. The Rice process eliminates long-standing U.S. dependence on foreign sources of opium as raw material for drugs essential to the effective practice of modern medicine.

This highly significant advance had previously resisted worldwide efforts for nearly 60 years—ever since the chemical structures of codeine, and morphine and thebaine were first identified.

Dr. Rice's work was recognized at the 9th Annual World Fair for Technology Exchange where he won second prize in the government division. He had also received a U.S. patent on the process.

The Rice process is also equally applicable to production of the unnatural, mirror image forms of the opiates, some of which are essential research tools for study of the opiate receptor-endorphin system.

Large amounts of these unnatural opiates, previously inaccessible in quantity, are now being prepared at Research Triangle Institute, Research Triangle Park, N.C., under the auspices of the National Institute on Drug Abuse.

Besides his work on the synthesis of opium-derived drugs, Dr. Rice—in collaboration with Drs. Phil Skolnick, NIADDK, and Steven Paul, NIMH—has investigated the chemical and biological actions of other central nervous system agents.

He synthesized the first irreversible inhibitors of the benzodiazephine (Valium) receptors, which subsequently led to the demonstration of multiple benzodiazephine recognition sites. He also synthesized the first irreversible inhibitors of the high affinity binding site for tricyclic antidepressants.

These inhibitor compounds should prove extremely useful in isolation, purification, and eventual structure elucidation of this binding site.

Dr. Rice received his B.S. degree in chemistry from Virginia Military Institute, and his Ph.D in organic chemistry from Georgia Institute of Technology. □

Senior engineer officer Harvey W. Rogers (c) recently received the PHS Commendation Medal for sustained high quality performance in the environmental engineering programs of the National Institutes of Health. Mr. Rogers, a commissioned officer in the Public Health Service, is the chief of the environmental systems section, Environmental Protection Branch, Division of Safety. The division director Dr. W. Emmett Barkley (r) and Donald W. Mantay, branch chief, presented the award.

U.S. GOVERNMENT PRINTING OFFICE 1983—341-134/16

DEPARTMENT OF
HEALTH & HUMAN SERVICES
Public Health Service
National Institutes of Health
Bldg. 31 Room 2B-03
Bethesda, Maryland 20205

Official Business
Penalty for Private Use $300

Postage and Fees Paid
U.S. Department of H.H.S.
HHS 396