



## Dr. Montgomery Is Head, Comparative Pathology, NCI Lab Animal Science

Dr. Charles A. Montgomery, Jr., has been appointed head, Comparative Pathology, in NCI's Office of Laboratory Animal Science.

### Advises on Animal Models

Dr. Montgomery, an expert in comparative pathology and quality assurance in laboratory animal production, will advise NCI investigators on matters involving animal models for human disease. He also will be responsible for monitoring animal health and diagnostic activities for the Institute.

A U.S. Army Veterinary Corps Officer and Chief of the Animal Colonies Division at Pine Bluff Arsenal in Ark., Dr. Montgomery also served as chief of the veterinary pathology department, Division of Pathology, at the Walter Reed Army Institute of Research, Washington, D.C. from 1972 to 1977.

### Interests Detailed

His interests include cancer research, infectious disease, diagnostic pathology, clinical comparative medicine, and teaching.

He recently was appointed clinical associate professor of comparative pathology at the new Uniformed Services University of the Health Sciences in Bethesda, Md.



Comparative pathologist Dr. Montgomery is the author of 23 scientific publications and is a diplomate of the American College of Veterinary Pathologists.

### Press Briefing Wednesday On X-rays, Thyroid Cancer

A press briefing on irradiation-related thyroid cancer will be held on Wednesday, July 13, at 11:00 a.m. in the Clinical Center's Masur Auditorium.

Participants in the briefing will be: Dr. Diane J. Fink, director of the National Cancer Institute's Division of Cancer Control and Rehabilitation; Dr. Margaret H. Sloan, DCCR program director for this activity; Dr. Oliver H. Beahrs, director, Division of Surgical Oncology, Mayo Clinic.

Also, Dr. Jacob Robbins, chief, Clinical Endocrinology Branch, National Institute of Arthritis, Metabolism, and Digestive Diseases; Dr. Norman Telles, deputy associate director for Medical Affairs, Bureau of Radiological Health, Food and Drug Administration; and representatives from the American Thyroid Association, the American College of Radiology, and the American Cancer Society.

## New Award Established; Honors NHLBI Scientist

The Bernard B. Brodie Award in Drug Metabolism has been established by the Ciba-Geigy Corporation of Summit, N.J., to honor the fundamental contributions of Dr. Bernard Brodie in the field of drug metabolism and disposition.

The award, consisting of \$2,000 and a commemorative medal and certificate, will be presented every other year to recognize outstanding original research contributions in drug metabolism and disposition, particularly those having a major impact on future research in the field.

### Studied Metabolic Responses

Beginning in 1939 as a newly graduated Ph. D. in chemistry from New York University, Dr. Brodie pioneered in the application of chemistry to the study of drug metabolism.

During the 1940's he found that animal species—and individuals within a species, such as man—may vary widely in their responses to a drug because they metabolize it at different rates.

(See Dr. Brodie, Page 5)

## Dr. Bennett, NIAMDD Diabetologist, Receives Lilly Research Award

At the awards banquet of the American Diabetes Association in St. Louis, Mo., in early June, Dr. Peter H. Bennett, chief of the National Institute of Arthritis, Metabolism, and Digestive Diseases Epidemiology and Field Studies Branch in Phoenix, Ariz., received the 1977 Eli Lilly Award for Research in the field of diabetes.

Over the last decade, Dr. Bennett has led an epidemiologic investigation of diabetes mellitus in the Pima Indians who live on a reservation outside of Phoenix, and who have the highest prevalence of the disease in the world.

### Have High Diabetes Incidence

His studies demonstrated that the Pima Indians have a previously unsuspected high prevalence of specific late complications of diabetes, including retinopathy and nephropathy.

Dr. Bennett is chairman of the Committee on Statistics of the ADA



Dr. Bennett examines a Pima Indian woman. His studies have found an unusually high incidence of diabetes mellitus and late complications among the Pimas.

and served on the National Commission on Diabetes in 1975 and 1976. He is also associate professor of medicine in the College of Medicine at the University of Arizona in Tucson. In 1974, he received a Superior Service Award from DHEW.

Born in Farnsworth, England, Dr.

## Dr. Thomas C. O'Brien Named Chief, Scientific Programs Branch, NEI



Dr. O'Brien served as a commissioned officer in the U.S. Public Health Service from 1969 to 1971. For his work at NEI he received the NIH Superior Performance Award in 1973.

Dr. Thomas C. O'Brien has been appointed chief of the Scientific Programs Branch, National Eye Institute.

He will be responsible for administering grants as well as training and career development awards for research related to blinding and disabling diseases of the visual system. He will play a major role in formulating policies concerning these awards and in implementing NEI's program priorities.

### Works With Dr. Raub

Dr. O'Brien will work under Dr. William F. Raub, NEI associate director for Extramural and Collaborative Programs.

Previously Dr. O'Brien had served as Glaucoma Program director in the NEI Scientific Programs Branch from July 1972 to December 1973. During this period, he was also responsible for developing and coordinating NEI research contracts,

(See Dr. O'Brien, Page 7)

Bennett holds degrees from the Manchester Royal Infirmary and the University of Manchester Medical School.

Prior to his work in the U.S., he held staff positions in several hospitals in Manchester and London.

the  **Record**

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### NIHS' Barbara Nichols Wins Library Scholarship

Barbara Nichols, library technician at the National Institute of Environmental Health Sciences in Research Triangle Park, N.C., has been named to receive one of three national scholarship awards from the Medical Library Association.

Ms. Nichols, who completed her undergraduate work through the NIEHS Upward Mobility College program, received the B.S. degree in home economics (human development and the family) at North Carolina Central University on May 22.

Using the scholarship, she will begin work this summer toward the Master of Library Science degree in NCCU's School of Library Science.

The scholarship award announced by Richard A. Lyders of the Houston Medical Academy-Texas Medical Center Library, chairman of the Medical Library Association's scholarship committee will be officially presented at the Medical Library Association's annual meeting in Seattle, Wash.

### Human Behavior Course Given at NIH Aug. 29-31

Understanding and Managing Human Behavior, a course in Transactional Analysis, commonly referred to as TA, will be offered by the Civil Service Commission Aug. 29 to Aug. 31 at NIH.

The course is for supervisors and managers but is not limited to NIH employees.

The nomination deadline is Aug. 8. Call the Training and Education Branch, Ext. 62146, for further information.

### Biotechnology Resources Listed in DRR Booklet

A 56-page booklet, *Biotechnology Resources, a Research Resources Directory*, has been published by the Division of Research Resources. The free booklet identifies current DRR grantee facilities which may be used by the national biomedical community, including:

- large-scale and mini-computer systems,
- biochemical and biophysical instruments (mass spectrometers, nuclear magnetic resonance spectrometers, electron spin resonance spectrometers),
- million-volt electron microscopes,
- electron microprobes,
- biomedical engineering technologies, and
- production of biochemical and cellular materials.

The directory details the instruments, services, and current research applications at the 56 individual resources listed. Complete names, addresses, and phone numbers of the principal investigators and user contact persons are also included.

A geographical index lists available resources by state and within each state.

For a single free copy of the booklet, write to: Research Resources Information Center, 1776 East Jefferson St., Rockville, Md. 20852, or the Office of Science and Health Reports, DRR, NIH, Bethesda, Md. 20014.

Do not try to live forever. You will not succeed.—George Bernard Shaw.



Roswell A. Reed (r) biologist technician in the National Cancer Institute Protein Section, received his 30-year certificate and pin June 20 from section head Dr. Andrew C. Peacock. After World War II, Mr. Reed entered Government service in San Francisco, where he worked with Dr. Michael Shimkin. Since 1953, he has worked at NIH on a wide range of studies, including the use of ultraviolet microscopy and television visualization of cancer cells. Currently, he is conducting electrophoretic studies of RNA.

### PEF Benefit Softball Game Is Scheduled for August 8

The NIH Gashouse Gang softball team will play Johnny Holliday's WWDC Wonders in a benefit for the Clinical Center's Patient Emergency Fund.

#### Note Site, Free Admission

The game is scheduled for a twin-night doubleheader on August 8 at 6 p.m. The game will be at the Georgetown Prep field because the NIH field has been removed for the construction of the Lister Hill National Center for Biomedical Communications.

Admission is free. Funds for the PEF will be raised through the sale of hot dogs, pop, ice cream, and baked goods.

The game will begin with CC Di-

rector Dr. Mortimer Lipsett throwing out the first ball.

Door prizes, such as a football autographed by Sonny Jurgenson, tickets to the Washington Caps opening hockey game, dinner for two at the Casual Gourmet, and a \$25 certificate from the John Greenan Company, also will be featured.

NIH'ers are all invited to come and to bring families and friends to root, root, root for the home team.



WHO'S NUMBER ONE?—Team captains in the Patient Emergency Fund benefit softball game are Johnny Holliday (l) of the WWDC Wonders and Dr. Abe Macher, NIAMDD, of the NIH Gashouse Gang.

### DRS Schedules Seminars On Hazardous Chemicals, Lab Safety on July 20

Four seminars on handling hazardous chemicals will be conducted on July 20 under the auspices of the Environmental Safety Branch, Division of Research Services.

The seminars aim to inform laboratory personnel on safety considerations in the use, storage, and transport of chemicals used in the laboratory.

The seminars, each identical, will be at 8:45 a.m., 10:15 a.m., 1:15 p.m., and 3 p.m. in the Dental Institute Conference Room, Bldg. 30, Room 117.

Each seminar will last approximately 90 minutes. Enrollment is open to all laboratory personnel, including summer employees.

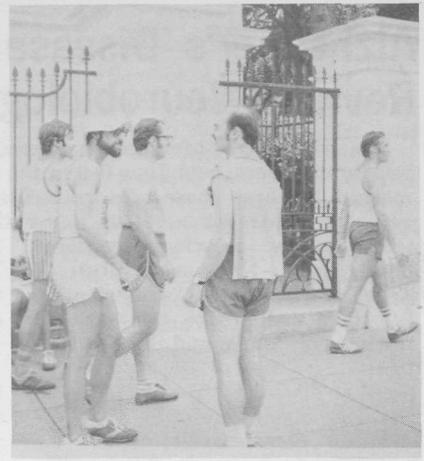
For further information on enrollment, contact the Occupational Safety and Health Activities Section, Environmental Safety Branch, DRS, Ext. 65323.

### Caribbean Charters Are Topic Of Sailing Assoc. on July 28

Have you ever wanted to sail away from it all in the Caribbean?

Find out what's involved at the July NIH Sailing Association meeting Thursday, July 28, when the program will feature a promotional film on bare-boat chartering in the Caribbean.

The meeting starts at 8 p.m. in Room 117, Bldg. 30. Refreshments will be served, and everyone is welcome.



NEITHER 90° HEAT NOR 90 PERCENT HUMIDITY dampened the spirits of the Health's Angels on Friday, July 1, when 48 members of the NIH Jogging Club ran a 1-mile route on campus and 37 members completed the second annual run to the White House (13.1 miles). NIH Deputy Director Dr. Thomas Malone commemorated the occasion and fired the starting pistol for the two runs (1). Allen Lewis presented a plaque to Dr. David

Young, co-president of the club, who is moving to Montana. Some of the first runners to reach the White House (in 1 hour 40 minutes) cooled off with iced drinks, "showers" sloshed from a bucket, stretching aching muscles, and just plain sitting. Dr. Young (r) heads for the White House guard office with a T-shirt bearing the club logo to be presented to President Carter. Shirts are available in R&W shops.

### NIH Visiting Scientists Program Participants

6/15—Dr. Janusz Slusarczyk, Poland, Laboratory of Infectious Diseases. Sponsor: Dr. Robert Purcell, NIAID, Bg. 7, Rm. 202.

6/16—Dr. Massako Kadekaro, Brazil, Laboratory of Cerebral Metabolism. Sponsor: Dr. Louis Sokoloff, NIMH, Bg. 36, Rm. 1A27.

6/19—Dr. Uriel Bachrach, Israel, Laboratory of Biochemical Genetics. Sponsor: Dr. Marshall Nirenberg, NHLBI, Bg. 36, Rm. 1C27.

6/19—Dr. James W. Bridges, United Kingdom, Pharmacology Branch. Sponsor: Dr. Rajendra S. Chhabra, NIEHS, P.O. Box 12233, Research Triangle Park, N.C.

6/19—Dr. Richard Ying Zou Chen, Germany, Environmental Mutagenesis Branch. Sponsor: Dr. Steven Li, NIEHS, P.O. Box 12233, Research Triangle Park, N.C.

6/19—Dr. Juan M. Mata, Mexico, Laboratory of Biochemistry. Sponsor: Dr. Beverly Peterkofsky, NCI, Bg. 37, Rm. 4C15.

6/19—Dr. Makoto Miyaoka, Japan, Laboratory of Cerebral Metabolism. Sponsor: Dr. Louis Sokoloff, NIMH, Bg. 36, Rm. 1A27.

6/19—Dr. Thomas Y. Shih, Taiwan, Laboratory of Tumor Virus Genetics. Sponsor: Dr. Edward Scolnick, NCI, Bg. 37, Rm. 1B17.

6/20—Dr. Eli Canaani, Israel, Laboratory of Viral Diseases. Sponsor: Dr. Wallace P. Rowe, NIAID, Bg. 7, Rm. 304.

### Comes From Japan

6/20—Dr. Kazushi Tanabe, Japan, Laboratory of Biochemistry. Sponsor: Dr. Samuel H. Wilson, NCI, Bg. 37, Rm. 4D23.

6/21—Dr. Tomowo Kobayashi, Japan, Laboratory of Chemical Pharmacology. Sponsor: Dr. Ronald Blasberg, NCI, Bg. 37, Rm. 5C21.

6/22—Dr. Gladwin T. Roberts, Australia, Laboratory of Mammalian Genetics and Cytogenetics. Sponsor: Dr. Eugene Soares, NIEHS,

### Sailing Course by Coast Guard Begins July 19; Register Now!

The NIH Sailing Association has again invited the U.S. Coast Guard Auxiliary, Flotilla 7-10 to teach the Coast Guard Auxiliary Sailing Course at NIH.

Beginning Tuesday, July 19, at 7:30 p.m., there will be one lecture per week for 7 weeks and a final exam administered the 8th week. A certificate of achievement is awarded to those successfully completing the final exam.

The course material addresses itself to the details of a sailboat and sailing theory at a level for beginners and those with limited sailing experience.

Classroom space is limited, and pre-registration will be on a first come, first serve basis. Pre-register with Bob Velthuis in Bldg. 37, Room 1A01, Ext. 62287.

A course fee of \$6.50 for text and workbook must be paid at registration. Registration will also be held at the first class meeting if space is still available.

### Other Training Offered

The NIH Sailing Association will offer on-board training in late September for any Sailing Club member who has finished the Coast Guard Auxiliary Sailing Course.

P.O. Box 12233, Research Triangle Park, N.C.

6/24—Dr. Mostafa H. Mostafa, Egypt, Division of Cancer Cause and Prevention. Sponsor: Dr. E. K. Weisburger, NCI, Bg. 37, Rm. 3B25.

6/27—Dr. Tadayashi Taniyama, Japan, Laboratory of Immunodiagnosis. Sponsor: Dr. Howard Holden, NCI, Bg. 8, Rm. 114.

6/28—Dr. Werner Pichler, Austria, Metabolism Branch. Sponsor: Dr. Samuel Broder, NCI, Bg. 10, Rm. 4N115.

6/28—Dr. Alec N. Salt, United Kingdom, Environmental Biophysics Branch. Sponsor: Dr. Teruzo Konishi, NIEHS, P.O. Box 12233, Research Triangle Park, N.C.

## High Blood Pressure Month Poster Project Held; 10 Winners Are Selected Nationwide

How does America's youth picture high blood pressure? How would they depict this "silent killer" on a poster to tell not only contemporaries but older generations of high blood pressure's serious consequences?

### Contest Encourages Youth

To find the answer to these questions and encourage artistic expression among the Nation's youth, the National High Blood Pressure Education Program and the National Art Education Association conducted a National poster project in conjunction with High Blood Pressure Month.

School systems across the country were invited to participate, and over half responded with nearly 500 children sending in posters. Ten were picked as being representative of the project entries.

The lucky 10 were invited to the Nation's Capital by the NAEA, given a sightseeing tour, dinner, and a visit to the National Institutes of Health.

At NIH, the children, ranging in age from 6 to 17, received their own poster reproduced on a handsome walnut plaque from Dr. Robert I. Levy, NHLBI Director.

He congratulated awardees and told them about the serious consequences of high blood pressure, how it leads to heart attacks, stroke, and kidney damage. He urged the youngsters to look after their parents, and relatives, and to remind them to follow the doctor's instructions, if they have high blood pressure.

### Visit NIH

The awardees and their chaperones also heard NHLBI staff tell about the Institute, the NHBPEP, and all saw an audiovisual presentation about the mission of NIH.

Dr. Levy presents Ricky Walker with a walnut plaque displaying a reproduction of Ricky's entry into the poster contest. The poster reads "Avoid Hypertension—Check it out, O.K.?" Ricky is a 17-year-old student at Northside High School in Memphis, Tenn.



## Alzheimer's Disease Conference Held; Reviews Neurobiology of Aging Process

The workshop/conference on Alzheimer's disease—senile dementia and related disorders, held June 6-9 in the Clinical Center's Masur Auditorium, marked the first phase of a trans-Institute effort to focus attention and generate research interest on this national health problem.

The 3-day meeting sponsored jointly by the National Institute of Neurological and Communicative Disorders and Stroke, the National Institute on Aging, and the National Institute of Mental Health brought together scientists from around the world to review the current knowledge on the neurobiology of the dementias, to emphasize future areas of investigation, and to suggest strategies for resolving this medical problem.

Senile dementia—which is characterized by memory loss, disorientation, loss of coordination, and impaired analytic ability—is often associated with the aging process.

However, certain degenerative disorders with early symptoms much like senility strike people in their 40's and 50's. Alzheimer's disease is the most common of these so-called pre-senile dementias.

The world was alerted to this important area of research last year when Dr. D. Carleton Gajdusek of the NINCDS received the Nobel Prize in Medicine for his work on slow viruses. It was Dr. Gajdusek who first linked the subacute demencing disease kuru to an unconventional virus infection.

He and his associates demonstrated the transmissibility of kuru, and a second rare degenerative brain disorder, called Creutzfeldt-Jakob disease, by injecting material from the brains of human victims of the disease into animals. After many months, the animals developed the same deadly disease.

Dr. Clarence Gibbs, deputy chief of the NINCDS Laboratory of Central Nervous Systems Studies, and a long-time associate of Dr. Gajdusek, presented evidence at the meeting indicating that a slow virus may be involved in an Alzheimer's-type disease.

Evidence of impaired neural transmission in Alzheimer's patients and degeneration of specific nerve cells involved in transmitting chemical messages in the brain (the cholinergic system) was reported by several investigators.

As part of one study on senile dementia, Dr. Peter Davies of the Thomas Clouston Clinic, Edinburgh, Scotland, found that while the enzyme that synthesizes acetylcholine was decreased, at least one type of receptor for this transmitter substance is unaffected, indicating that it may be possible to restore or replace this neurotransmitter.

Dr. David Drachman, of Northwestern University Medical School,

Chicago, was able to produce cognitive deficits mimicking those of dementia in normal individuals by blocking the cholinergic system with the agent scopolamine.

Using various memory tests, Dr. Drachman showed that the pattern of cognitive performance in individuals given scopolamine was similar to the profile seen in normal aged subjects. He believes that the dementia-like effects produced by cholinergic blockade are due to a specific action on cholinergic nerve cells.

His studies led him to speculate that facilitation of the cholinergic system might improve cognitive function in the aged.

A preliminary study with aged subjects showed a slight but not statistically significant improvement trend in certain cognitive functions following administration of an agent to enhance neural transmission. He concluded that the cholinergic system plays a central role in memory and cognitive functions.

Dr. David H. Ingvar of the University Hospital of Lund, Sweden, described a dramatic technique developed in his laboratory for measuring cerebral blood flow. Radioactively labeled xenon injected into the brain via the carotid artery is measured with a computerized detection device and the measurements are converted into a color coded "photograph" of the brain.

The color differences indicate variations in blood flow. Dr. Ingvar has observed reductions in blood flow in certain regions of the brain in Alzheimer's patients.

An intriguing feature of Dr. Ingvar's technique is that it can be used to visualize thought processes. For



Dr. Denis McCarthy of NIAMDD's Digestive Diseases Branch gets a surprised reaction concerning the impact of peptic ulcer from Helen Hutchinson on Canada AM. The Canadian news program dealt with preventive measures, therapy, and research of the disease.

## TV and Various Media Messages Emphasize High Blood Pressure Education Program

When you see a television public service announcement or hear a radio spot that uses the theme "take your blood pressure medicine for them," you know it is a message developed by the National High Blood Pressure Education Program and endorsed by the Advertising Council.

These new messages were introduced at a press and media conference in May to communications executives as well as members of the press in New York City.

The educational announcements stress the importance of persons with high blood pressure continuing on medication so that serious consequences of high blood pressure—heart attack, stroke, and kidney damage—are much less likely to occur, thereby saving the family the loss or function of one of its members.

Dr. Robert I. Levy, Director of the National Heart, Lung, and Blood Institute, presented the audience with an update on high blood pressure control in the U.S. and current activities of the National High Blood Pressure Education Program.

He also used awareness statistics gleaned from the NHLBI-sponsored Hypertension Detection and Follow-Up Program; for instance, in 1974, 71 percent of the hypertensive population were aware of their condition but only 29 percent were under adequate control.

example, when a person is asked to close his eyes or is presented with a problem to solve, color changes indicating changes in blood flow can be seen on the computerized picture.

Three commissions which met during the conference/workshop will send reports to the Directors of the three sponsoring Institutes recommending additional support for programs in the epidemiology, characterization, causes, and course of the dementias.

Although the reports have not yet been formally submitted, the Directors have expressed their determination to actively support programs in this area.



Dr. Levy measures the blood pressure of Sanford Buchsbaum, vice-president for advertising of Revlon, Inc., who is the volunteer coordinator of the High Blood Pressure Campaign for the Advertising Council. Jacquelyn Admire, an assistant coordinator of NHBPEP, looks on.

Awareness of high blood pressure does nothing for an individual unless he or she acts on this information and achieves a normal blood pressure.

Normalization of blood pressure has been shown to prevent the consequences of high blood pressure: stroke, renal failure, and heart failure.

Dr. Levy stressed that an effort was clearly warranted to make people more aware of the necessity to take medicine and stay on therapy.

He also identified three major misconceptions about high blood pressure:

- High blood pressure can be cured.

*(High blood pressure can be controlled, but seldom cured. Treatment must be continued for life.)*

- When feeling tense, blood pressure is up and that is the time to take medication.

*(There is no way individuals can tell when their blood pressure is high. If medication is prescribed by a doctor, it must be taken regularly to lower and maintain blood pressure at normal levels.)*

- A patient can choose which of the doctor's directions to follow. *(Along with prescribing medication, physicians sometimes advise diet, smoking restrictions, or weight loss. These additional aids to lowering blood pressure are not substitutes for taking prescribed pills.)*

Dr. Levy encouraged the press to assist the program in informing the public about the high blood pressure problem and asked television representatives to run the educational messages as often as they could during the coming year.

## Six New Members Join NICHD Advisory Council

Six new members of the National Advisory Child Health and Human Development Council have recently been appointed: Dr. Elwood V. Jensen, Dr. James W. Lash, Mary Lynn Glasgow Porter, Dr. Jack A. Pritchard, Dr. Clara L. Stevenson, and Dr. Harry Woolf.

As members of the Council, they will take part in evaluating National Institute of Child Health and Human Development programs concerned with child and maternal health and disease, human development, fertility regulation, and population dynamics, and will make recommendations to the NICHD Director and NIH Director concerning directions, goals, and priorities of these programs.

### Backgrounds Noted

Dr. Jensen is director of the Ben May Laboratory for Cancer Research and a professor in the department of biophysics and theoretical biology at the University of Chicago.

A member of the National Academy of Sciences, he was awarded the G.H.A. Klowses Award of the American Association for Cancer Research in 1975, and the Roussel Prize in 1976 for research in steroids.

Dr. Jensen received his Ph.D. in organic chemistry from the University of Chicago in 1944 and a D.Sc. degree from Acadia University, Nova Scotia in 1976.

### Serves on Biology Panel

Dr. Lash is professor of anatomy at the University of Pennsylvania School of Medicine in Philadelphia. An embryologist and specialist in developmental biology, he also serves on the NIH Biology Advisory Panel. Like Dr. Jensen's, his Council term runs through October 1980.

He received his Ph.D. in zoology from the University of Chicago in 1954 and an honorary M.A. from the University of Pennsylvania in 1971.

Mrs. Porter, a specialist in child development, is director of Auburn Day Care Centers, Auburn, Ala. She has served as a vice-president of the Southern Association for Children Under Six and as president of the Alabama Association for Young Children.

She earned her M.S. at the University of Alabama in 1959, and has since undertaken postgraduate study at Auburn University and at the University of Louisville, Ky. Her term expires in October 1979.

Dr. Pritchard—a specialist in the study of blood disorders and high risk pregnancy—is Gillette professor of obstetrics and gynecology at the University of Texas Southwestern Medical School and also director of obstetrics at Parklawn Memorial Hospital in Dallas.

He is senior editor of Williams' *Textbook of Obstetrics*, serves as a

## NIDR-Supported Study Finds Bacteria Multiply Freely From Salivary Nitrogen

Scientists have found that two bacteria commonly found in the mouth can grow when saliva alone provides their source of nitrogen. These studies, supported in part by the National Institute of Dental Research, were conducted at the University of Miami and the Veterans Administration Hospital in Miami, Fla.

Awareness that decay-causing organisms are also able to multiply when humans are asleep emphasizes the need to dislodge and remove as many bacteria as possible each evening, as well as during waking hours, in order to maintain a healthy mouth.

Both *Streptococcus mutans*, a cause of tooth decay, and *S. sanguis* believed to be harmless, colonize on teeth and form plaque. Moreover, because each can grow separately in the mouths of rats reared free from other bacteria, it is evident that neither is dependent for its metabolic needs on the ability of other organisms to break down dietary nutrients.

Although it is known that some bacteria living in the mouth can provide for their carbohydrate needs by extracting simple sugars from the complex nopolysaccharides in human saliva, the scientists

consultant to the Surgeon General of the U.S. Air Force, and has authored almost 100 papers on hematology and obstetrics.

Two educators have been appointed to Council terms which expire in October 1977. Dr. Clara L. Stevenson, an educational psychologist and specialist in the needs of exceptional children, is supervising director for Pupil Personnel Services for Region One of the D.C. Public Schools.

Previously, she was associate director of services for the handicapped in the D.C. Public Schools. She has also been a member of the psychology faculty at Howard University and coordinator of curriculum for its Project Mainstreaming—concerned with the educational needs of mild to moderately handicapped children and adolescents.

Dr. Stevenson earned an M.S. in psychology from Howard University in 1958, and a Ph.D. in special education from the University of Maryland in 1974. In 1970, she received the Public Services Award of the Concerned Citizens for Exceptional Children.

Dr. Harry Woolf is director of the Institute for Advanced Study at Princeton. From the beginning of his academic career, he has been concerned with science as an historical and cultural force.

In 1948 he received his B.S. in physics and mathematics from the University of Chicago, and an M.A. in physics and history a year later.

While working toward his Ph.D. in the history of science from Cornell University in 1955, he was a physics instructor at Boston Univer-

were uncertain whether, in the absence of dietary foods, bacteria could multiply when the only available nitrogen was in saliva.

This fluid contains limited amounts of the particular free amino acids that bacteria require. If any bacterium could grow independently of human food or other bacteria, it would presumably have an ecological advantage, especially when an individual is sleeping and food is not eaten.

The bacteriologists learned that neither of these streptococci would grow and multiply in a chemically-defined basal medium of glucose, salts, minerals, and vitamins without the nitrogen in protein.

However, both would grow if a sterilized protein fraction (molecular weight over 10,000) of saliva was added. A fraction with a molecular weight less than 10,000 barely sustained growth through one transfer.

Although saliva does not contain free cysteine, an amino acid essential for bacterial growth, both streptococci grew on saliva. Therefore, the scientists believe that the bacteria were able to metabolize the salivary proteins to obtain cysteine and other amino acids needed for growth.

Amino acid analyses and isoelectric focusing studies of the culture media were made before and after bacterial growth. The findings that certain protein bands disappeared after growth, with a concomitant loss of amino acids, provided evidence that these bacteria were able to use salivary proteins as a source of nitrogen.

These findings were reported by Dr. Richard A. Cowen, Dr. Robert J. Fitzgerald, Sally J. Schaefer, Margaret M. Perella, and Ann H. Cornell in *Caries Research* 11: 1-8, 1977, and in the December 1976 special supplement of *Microbiology Abstracts*.

sity and a history instructor at Brandeis University.

In 1955, he joined the history faculty at the University of Washington, Seattle, becoming professor of history in 1960. In 1961 he became chairman of the department of the history of science at the Johns Hopkins University, where he became Provost in 1972.

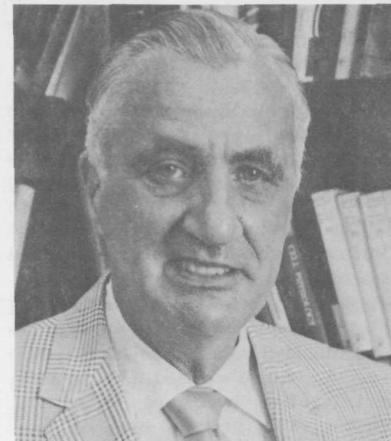
Dr. Woolf has also toured India and West Africa as a visiting professor and served as president of the Johns Hopkins Program for International Education in Gynecology and Obstetrics, which trains physi-

## DR. BRODIE

(Continued from page 1)

Thus, he concluded, proper dosage depends upon the level a drug must reach in the blood to be effective.

This research led to the effective use by military physicians of atabrine against malaria during World War II. The Army was about to shelve the drug as worthless, when studies of atabrine metabolism by Dr. Brodie and his associates showed



Dr. Brodie, now Scientist Emeritus of the National Heart, Lung, and Blood Institute, was chief of its Laboratory of Chemical Pharmacology from 1950 to 1970.

that priming doses were necessary to attain effective blood levels.

He found that human and animal responses to drugs are much the same, providing the criteria of measurement include the level attained by the drug in the blood, not just conventional body weight and size data, which can otherwise be misleading.

The research by Dr. Brodie's team in the 1950's on the evolutionary development of the drug-detoxifying enzymes in liver microsomes helped to establish principles for the prescribing of drugs in pregnant women and the newborn.

The studies of these hepatic enzyme systems continue in the NHLBI under Dr. James Gillette, Dr. Brodie's former co-worker and now his successor as chief of the Laboratory of Chemical Pharmacology.

The first recipient of the Bernard B. Brodie Award will be announced at the 1978 spring meeting banquet of the American Society for Pharmacology and Experimental Therapeutics.

Formal presentation of the award and medal will be made by a committee of the ASPET Division of Drug Metabolism at the 1978 fall meeting of that Society.

cians from developing countries in techniques of family planning and health services delivery.

From 1948 to 1964, he served as editor of *Isis*, and international review devoted to the history of science and its cultural influences. The author of several books and numerous articles, Dr. Woolf was Bicentennial Lecturer for the scientific honor society, Sigma Xi, in 1976.

## NICHD Scientists Present Data on TV Concerning Teenage Pregnancy Rise

More than a million American girls between the ages of 15 and 19 will become pregnant this year—with almost two-thirds of them giving birth. The birthrate to teenagers in the U.S. is twice as high as that of Sweden; about 20 percent of all births in the U.S. can be attributed to teenagers, as compared with only one percent in Japan.

These statistics were revealed by Dr. Wendy Baldwin, a sociologist with the Center for Population Research, National Institute of Child Health and Human Development, when she appeared recently on WETA's 1-hour documentary, "Guess Who's Pregnant?" Aired on June 3, the report may be rebroadcast on area stations in the future.

### Planning Methods Stressed

The director of CPR Dr. Philip Corfman, who joined Dr. Baldwin on the video-taped documentary, stressed the need for development of a wide variety of new family planning methods for both men and women, and discussed the special contraceptive needs of teenagers, whose sexual activity may be sporadic.

Drs. Baldwin and Corfman appeared on the show with other Federal officials, religious leaders, parents, and teachers. In the inter-

view, two unwed teenage mothers described the anguish and difficulties they experienced due to their pregnancies.

Praised by newspaper reviewers as a "straightforward and deadly serious look at a national problem," the documentary explored the pro's and con's of sex education in the schools, advertisements of contraceptives on television, and teenage birth control clinics in communities.

Adolescent pregnancy is a research emphasis area of the NICHD because pregnancies in the young are often high risk pregnancies.

### Babies May Be Premature

These young women are likely to have difficulty during delivery and their babies are more likely to be premature or have birth defects than the offspring of more mature women.

In addition, the teenage woman may be less able to assume the emotional and economic responsi-



Dr. Baldwin (foreground) and Dr. Corfman recently appeared on a WETA-TV documentary on adolescent pregnancy. Both have conducted extensive studies in this area. Copies of Dr. Baldwin's study, published in the *Population Bulletin*, are available from NICHD, Bldg. 31, Room 2A-22, Bethesda, Md. 20014 (301-496-5133).

lities of motherhood, thus placing herself and her child at a disadvantage.

### Analyzed Data

Although scientists have recognized, for some time, the dangers of adolescent pregnancy, it was not until recently that the scope of the problem became recognized. Responding to a gap in statistical and sociologic information about the problem, Dr. Baldwin recently analyzed available data and found that:

- Sexual activity at younger and younger ages is resulting in an increasing number of births to girls under age 15. In 1975 over 12,000 girls under age 15 were reported to have given birth in the U.S.—almost twice the number of young teenagers who delivered in 1960, of a cohort of 1,366,000.

The corresponding cohort in 1975 was 2,105,000.

- Although in the past 20 years the birth rate among all U.S. teenagers has fallen over 40 percent, the actual number of births has dropped only 2 percent, because of our large teenage population.

The young parents belong to the generation of the late 1950's and early 1960's, when birth rates were high.

- Most teenage mothers are married, but an increasing number are not. In 1960 about 92,000 teenage births were out of wedlock, but that number rose to 224,000 by 1975.

Fewer women are selecting marriage as the "solution" to an out-of-wedlock conception and more are rearing the child as a single parent.

- While most teenagers want to avoid pregnancy, their knowledge of how to avoid it is far from perfect. Their motivation to use contraceptive methods is confounded by their fears of going to a doctor, clinic, or drugstore.

Sporadic sexual activity and a

## Grants Advisory Comm. Meets at NIEHS, Views Site, Development Plans

On June 24, the NIH Grants Management Advisory Committee—chaired by Steven C. Bernard, deputy director of the Division of Contracts and Grants—held its regular monthly meeting at the National Institute of Environmental Health Sciences.

The GMAC is comprised of the grants management officers of the NIH B/I/D's as well as representatives from the Division of Contracts and Grants, the Office of Extramural Research and Training, the Division of Financial Management, and the Division of Research Grants.

The GMAC is the primary advisory body to the NIH Director on matters related to the business and fiscal management of the NIH grant programs.

Following the meeting a presentation was made describing the facilities and programs of NIEHS at its present location as well as the development of the permanent NIEHS site.

Contracts have recently been awarded for the construction of new laboratories and administrative spaces to be built adjacent to the present facility.

### Only Institute Elsewhere

The only Institute located outside of the NIH complex in Bethesda, Md., NIEHS is situated in Research Triangle Park which covers over 5,200 acres of rolling, wooded land in the Raleigh-Durham-Chapel Hill area of North Carolina.

The Park has developed as a major center for organizations engaged in research, development, and scientifically oriented production.

A recent study showed that the area now ranks first in the U.S. among the 100 largest metropolitan areas in the number of Ph. D. scientists and engineers per 100,000 population.

desire to keep information about their sexual activity from parents may also complicate contraceptive efforts.

Future CPR studies will examine factors leading to teenage sexual activity, the use, non-use, and safety of contraceptives in this age group, and the long-term consequences of teenage pregnancy and childbearing on the attitudes, emotions, and lifestyles of the mother, child, father, and other family members.

Copies of Dr. Baldwin's study, *Adolescent Childbearing—Growing Concerns for Americans*, are available from the Office of Research Reporting, NICHD, NIH, Bldg. 31, Room 2A-22, Bethesda, Md. 20014. Phone (301) 496-5133.

## Native Americans Confer on High Blood Pressure

The National High Blood Pressure Education Program recently sponsored a local conference calling together representatives of a number of Native American communities throughout the country to assess specific needs of those communities in high blood pressure control.

Sol Bird Mockicin, conference moderator and representative of the Cherokee/Choctaw Indian Nations, said that Indian people have learned not to live on reflections but in hope of greater things to come, particularly in the areas of health programs.

### Work Just Beginning

When the conference was over, the work of those assembled was just beginning, he added. There would have to be efforts made to follow through on recommendations presented to the conference by the Native American communities, particularly:

- epidemiological studies of the prevalence of HBP and its impact on mortality and morbidity in Native American populations be implemented in order to provide a data base for further planning;

- representatives from the Bureau of Quality Assurance, the Indian Health Service, NHBPEP, the American Indian Health Care Association, and

Official academies are more likely to exhibit enthusiasm over the improvements of the commonplace than to recognize the unexpected when it is first brought to them.—*Rene J. Dubos*



Mr. Mockicin, moderator of the conference, addressed the group as a representative of the Cherokee/Choctaw Indian Nations.

other interested parties should meet to discuss means of ensuring high quality care in the treatment of hypertension in Native Americans; and

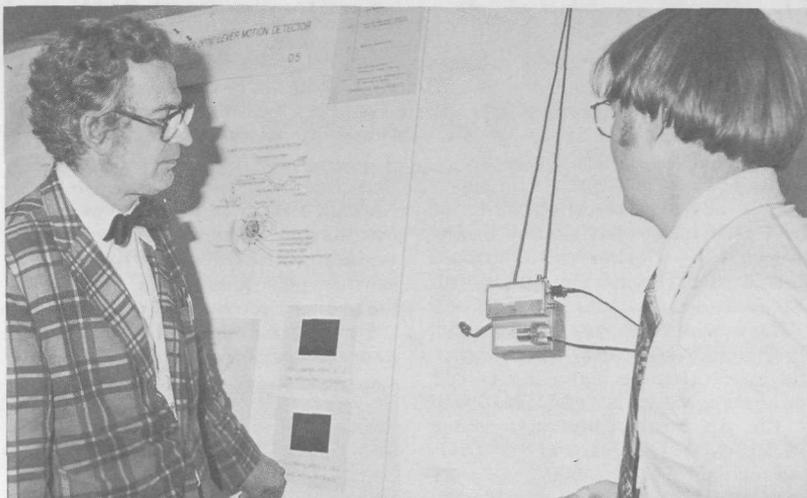
- increased efforts be made to disseminate materials and information on HBP control to all Native American communities.

### Native Americans Honored

At the conclusion of the conference, interested parties visited NIH to enjoy a presentation celebrating Native American Week on campus and to see an audiovisual presentation describing the mission of NIH.

He preaches patience that never knew pain.—*Anonymous.*

## NIEHS Conducts a Seminar on Models for Measuring Carcinogen Exposure



NIEHS Director Dr. Rall (l) examines a fiber optic lever motion detector at the Science Seminar held in Chapel Hill, N.C.

### DR. O'BRIEN

(Continued from page 1)

including those for the nationwide Diabetic Retinopathy Study.

#### Worked for NIDR

In December 1973, Dr. O'Brien left NEI to become chief of the Caries Grant Programs Branch, National Institute of Dental Research. There he developed guidelines for an institutional training program in cariology, organized international workshops on dental caries, and directed research grant activities of the National Caries Program.

A graduate of Catholic University in Washington, D.C., Dr. O'Brien also received his M.S. in 1967 and his Ph.D. in 1969, both in microbiology, from that institution.

#### Researched Plant Viruses

He did research in plant viruses at the U.S. Department of Agriculture in 1966 and came to NIH in 1969 to work at the Laboratory of Virology and Rickettsiology, Division of Biologics Standards. He was head of the DBS Immunoseriology Unit when he first joined NEI in 1972.

### NLM Division Acquires Valuable New Additions

The History of Medicine Division of the National Library of Medicine has recently acquired some valuable new additions.

Emilio Parisano's *Nobilium exercitationum libri duodecim, de subtilitate* (Venice, 1623-43) is of primary significance because it contains the almost complete text of Harvey's *De motu cordis*, with Parisano's commentary.

This represents the second printing of Harvey's great work, and the second early edition added to the Library's collection in recent years.

Another significant addition is the *Naturbuch* of Konrad van Megenburg, printed in Frankfurt in 1536. Konrad, who lived in the 14th century, based this popular work on Thomas of Cantimpre's *De natura rerum*.

It includes information on the anatomy and physiology of man and the medicinal virtues of herbs and other natural products. Although printed several times in the 15th and 16th centuries, this is the first early edition to be added to the NLM collection.

The outstanding 18th century

Swedish physician Nils Rosen von Rosenstein, is best known for his work on pediatrics.

These articles—originally published in 50 issues of the official Swedish almanac from 1753 to 1771—were first collected in 1764; a later compilation included the entire series.

It was a very popular work, published in more than 25 editions, including translations into seven other languages.

The Library, which acquired the 1764 edition in 1969, has now added a unique collection of all the separate issues of the almanacs which together comprise the first edition of this pediatric classic.

The Division has also acquired the only known copy of a 51-page pamphlet by the English surgeon Dale Ingram (1710-1793): *An Essay, on the nature, cause, and seat of dysentery's*, printed in Barbados in 1744.

The manuscript collection also received the papers of Dr. Albert Baird Hastings, former Hamilton Kuhn Professor of biological chemistry at Harvard.

One of the problems in the relatively new field of environmental

health sciences is the lack of quick relay of research findings that might have immediate regulatory or medical significance.

#### Two Hundred Attend

To develop more effective means of spreading the results of its research programs, NIEHS decided to see how useful it might be to hold science seminars at which Institute program directors and scientists describe research programs ongoing at NIEHS or supported at other institutions.

Mixed with these more formal presentations are poster sessions designed to give laboratory scientists the chance to display and discuss findings from their own research projects.

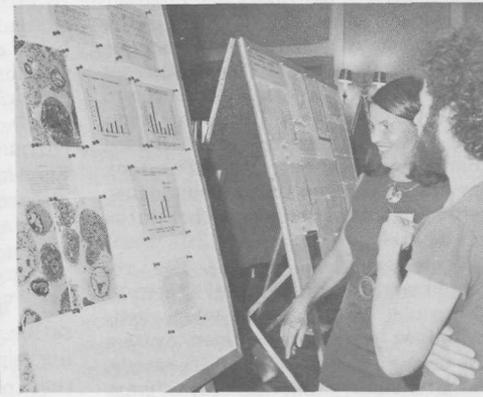
Approximately 200 representatives from across the country—from Federal agencies, universities, medical schools, private industry, congressional staffs, and the science press, as well as from NIEHS—turned out for the first science seminar on June 2-3 and heard about more than 90 research projects underway at the Institute.

Dr. David Rall, the Institute's Director, said the key reason for the meeting was to find new ways to stimulate "better scientific communication." Most scientific reports take months or years to distribute.

#### More Seminars Promised

"We don't have the liberty of taking this slow, precise route. Any information that just sits in our notebooks is useless," he said.

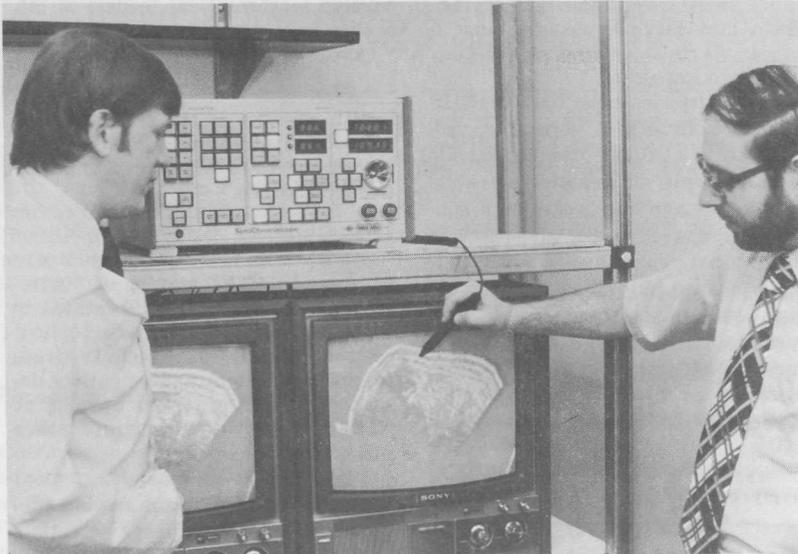
At the end of the 2-day session, Dr. Rall said the seminar had been such a success that more would take place in the future. "And the bonus is we got our own scientists talking together and coming up with ideas for joint projects," he said.



Participants in the recent NIEHS Science Seminar learned how mathematical models are being developed to pin down how large carcinogenic exposures must be before cancer starts appearing. Numerous exhibits depicted the research findings of laboratory sci-

tists. About 200 representatives from Federal agencies, universities, medical schools, private industry, congressional staffs, and the science press—as well as from NIEHS—attended the 2-day program.

## CC Scientists Participate in Symposium On New Ultrasound Diagnostics Areas



Dr. Shawker (l), CC ultrasound radiologist, and Dr. Linzer, NBS physical chemist (r), discuss abdominal scan obtained with the ultrasonic instrument developed by Dr. Linzer.

Clinical Center scientists recently participated in the Second International Symposium on Ultrasonic Tissue Characterization held at the National Bureau of Standards in Gaithersburg on June 13-15.

Dr. Mortimer Lipsett, CC Director, addressed opening remarks to over 280 scientific and medical authorities who attended the meeting to learn about the latest applications of ultrasound techniques to medical diagnosis.

Dr. John Doppman, chief of the CC's Diagnostic Radiology Department, and Dr. Thomas H. Shawker, head of the ultrasound diagnostic unit, co-authored a paper on a comprehensive ultrasonic tissue analysis system developed in collaboration with a group of researchers led by Dr. Melvin Linzer, National Bureau of Standards.

Dr. Doppman was also a member of a panel which discussed ultrasonic techniques in diagnosis of breast cancer.

### Used Increasingly

Ultrasound has rapidly developed into a powerful, noninvasive diagnostic technique during the last 10 years, and the symposium, co-sponsored by NIH, NBS, and the National Science Foundation, served as a forum for the exchange of ideas in a new area of diagnosis—tissue characterization.

Ultrasound is being used increasingly to detect heart disease, breast cancer, obstetrical complications, and abdominal disorders. Ultrasonic scanners send out a series of pulsed sound signals which "echo" as they encounter various tissue boundaries, returning information on the status of the tissue.

Some scanners receive the reflected sound waves, convert them to electronic signals, and when synchronized with a television system are seen as a black and white image.

Ultrasound capability for "imaging" soft tissue and of doing so in "real-time"—that is, simultaneous and continuous viewing—enables vis-

ualization of dynamic movement within the body, such as heart beat or fetal movement.

Dr. Ernest Ambler, Acting Director, NBS, opened the symposium by noting that ultrasound's "clinical applications are on the increase and one of the promising applications . . . may be in the diagnosis of breast cancer."

He predicted that "ultrasound may be second only to conventional radiography within the next decade."

Elaborating on the value of ultrasonic diagnostics, Dr. Lipsett said that NIH support of ultrasound research exceeds 5 million dollars.

"One of the major advantages of ultrasound as a diagnostic tool," he said, "is that at the proper dosage it apparently has none of the damaging tissue effects that X-rays have."

### Expands Beyond Mapping

Continuing, Dr. Lipsett said that the Clinical Center is contributing to ultrasonic research in two areas. A real-time ultrasonic system has been designed and constructed by William Schuette, Biomedical Engineering, DRR, with Willard Whitehouse, TV Engineering, CC, and is currently being evaluated by Dr. Shawker for use in abdominal disease.

An ultrasonic tissue analysis system has been developed as a joint effort of the CC and NBS.

By moving into tissue characterization, ultrasonic imaging is expanding beyond anatomical mapping into the area of histological techniques.

Dr. Melvin Linzer, symposium chairman and NBS research physical chemist, told the attendees that

## New Species of Amoeba Named to Honor Dr. Stephen Hatchett, Late Director of DRG

A new species of amoeba has been named after Dr. Stephen P. Hatchett, the late Director of the Division of Research Grants.

The species, *Acanthamoeba hatchetti*, was isolated from Brewerton Channel in Baltimore Harbor by Dr. Thomas K. Sawyer, Dr. Govinda S. Visvesvara, and Bruce A. Harke.

Dr. Sawyer, a former NIH scientist, is now investigation chief of the Pathobiology Division, U.S. Department of Commerce's National Marine Fisheries Service in Oxford, Md.

The new species was named after Dr. Hatchett because of the guidance and inspiration Dr. Sawyer received while studying as an undergraduate at the American University under Dr. Hatchett, chairman of the Division of Natural Sciences some 25 years ago.

Dr. Hatchett joined NIH in 1955 and became DRG Director in 1969. He died in August 1976.

Dr. Sawyer himself has been an NIH scientist at various intervals in his career.

### Career Noted

From 1953 to 1954 he worked in the Laboratory of Pathology of the then National Institute of Arthritis and Metabolic Diseases; from 1957 to 1959 he was with the Laboratory of Cell Biology of the National Cancer Institute; and from 1960 to 1964 he worked in the Laboratory of Parasitic Diseases in the National Institute of Allergy and Infectious Diseases.

He has been a marine biologist with the Department of Commerce since 1964.

The newly discovered species is the second *Acanthamoeba* to prove pathogenic to laboratory mice.

The first species of the small pathogenic flose amoebas, *Acanth-*

ultrasound's most exciting potential lies in its capability for obtaining an enormous amount of information on both diseased and normal tissue.

It may be possible to detect subtle changes in tissue condition brought about by a disease such as breast cancer. How best to extract this multiplicity of information from quantitative measurements of ultrasonic energy was the thrust of the symposium.

Dr. Linzer later described the comprehensive ultrasonic tissue analysis system he developed in collaboration with Dr. Doppman and Dr. Shawker at NIH.

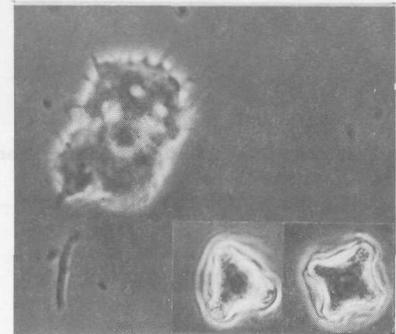
He believes it has many advantages over existing systems for certain types of medical diagnosis.

Clinical tests on the systems' value in medical diagnosis of various diseases are being planned, and will be carried out at the CC's Diagnostic Radiology Department.

The attending scientists heard about some of the most dramatic advances in clinical applications of ultrasound. They saw a motion pic-

*amoeba culbertsoni*, was isolated in the mid-1960's. It was discovered in the marine environment by the investigators in the mid-1970's from a sewage-spoil dump site near Ambrose Light off New York City.

Some less virulent strains of *Acanthamoeba* reportedly may pro-



*Acanthamoeba hatchetti* is the second *Acanthamoeba* to prove pathogenic to laboratory mice. The authors of work on the newly-discovered species were pleased to have had the opportunity to honor the memory of Dr. Hatchett.

duce chronic disease of the human eye.

The infinite distribution of *Acanthamoeba* in nature and the ability of certain species to survive and grow in seawater suggest that their role in diseases of humans and animals is just beginning to be understood and documented.

### Note: Apology, Correction

The June 28 issue of *the NIH Record* appeared 2 days late due to a strike by the local pressmen's union, causing the delay and the use of a different paper by the Government Printing Office, which printed that issue and this.

Unfortunately, the photographs of Lucia M. Atlas and Mary R. Emerson, both Clinical Center employees and winners of PHS Commendation Medals, were inserted over each other's names on page 7.

Since the strike has not been settled at press time, we hope this issue arrives on time and without problems.

ture of very small atherosclerotic lesions inside a human carotid artery obtained by an ultrasonic scanner, and viewed ultrasonograms of the heart, brain, and of a fetus.

Researchers from Japan, France, Australia and the U.S. described their results in screening programs using ultrasound. Others talked about instrumentation developments.