Dr. M. Nirenberg To Deliver Annual Robbins Lecture

Marshall W. Nirenberg, Ph.D., Chief of the Laboratory of Biochemical Genetics, National Heart Institute, will present the annual Fred J. Robbins Lecture. The principal public lecture, "The Genetic Language," will be delivered tomorrow night. The others, entitled "Deciphering the Genetic Code," "Regulation of Gene Translation I," and "Regulation of Gene Translation II" will be delivered March 8, 9, and 10 in the afternoon.

New Camera at CC Locates, Visualizes Radioisotopes in Body Quickly and Easily

Dr. Cobert LeMunyan Named to DEHS Post

Psychologist-Physiologist Cobert D. LeMunyan has joined the National Environmental Health Science Center, DEHS, NIH. He will serve as Acting Chief of the Animal Science and Technology Branch. The appointment was announced by Dr. Paul Kotin, DEHS Director.

Before joining the Center in North Carolina, Dr. LeMunyan was Chief of the Animal Production Section, Division of Research Services, NIH, preceded by service with the Navy's Medical Research Institute as Head of its Animal Research Laboratories Division.

Highlights of his career include the development of special genetic strains of medical research animals which are used internationally; invention of a rat-breeding battery.

NIH Mononucleosis Victims Urged to Join NIAID Study

The Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Diseases, is currently studying infectious mononucleosis and related diseases.

NIH employees with acute infectious mononucleosis-like illnesses are invited to participate in the study with full diagnostic evaluation and clinical care provided at the Clinical Center.

Appointments for evaluation may be made by calling Dr. John Lynch or Dr. Anthony DeMee, Employee Health Services, Ext. 64413; Dr. Lawrence Chessen, Ext. 65647; Dr. Philip R. Glade, Ext. 65675; or NIAID Acting Clinical Director, Dr. Sheldon M. Wolf, Ext. 64963.

Kathleen Henderson, Isotope Technician, poses to show how the CC's new scintillation camera can be maneuvered to take pictures of isotopes in the head. Dr. William L. Ashburn, Head of the Diagnostic Isotope Section, is at the camera's control console.—Photo by Tom Joy.

By Bowen Hosford

Dr. Jack D. Davidson, Chief of the NIH Clinical Center's Department of Nuclear Medicine, announces to clinicians and other investigators that a flexible and rapid system is now available at the Clinical Center for location and visualization of radioisotopes in the body.

The expanded service is made possible by a new scintillation camera, located in the Department's Diagnostic Radioisotope Section. The camera permits a quicker diagnostic interpretation than before and allows the patient to be placed in any convenient position for examination. It was procured by the National Cancer Institute.

Pictures Blood Flow

The camera's speed of operation means that blood-flow pictures can be made, Dr. William L. Ashburn, head of the section, said.

A physician can inject a radioisotope into an arm vein and can take successive views of its flow through neck arteries into the head. This may reveal evidence of obstruction in blood vessels, such as occurs in strokes.

With information from other radiation detection devices, this can help the physician decide quickly whether partial paralysis is due to...

NIH Mononucleosis Victims Urged to Join NIAID Study

Appointments of Dr. D. Palmer Saunders as Associate Director of Extramural Activities of the National Cancer Institute were announced recently by Dr. Kenneth M. Endicott, Director of the Institute.

Dr. Saunders succeeds Dr. T. Phillip Waalkes who has been appointed Special Assistant to the Associate Scientific Director for Clinical Trials of the National Cancer Institute.

Program Described

The Extramural Activities Area plans and administers the Institute's programs of grant-supported cancer research and training.

Grants are awarded to universities and hospitals to support a variety of research projects initiated by individual investigators and to provide advanced training for scientists and physicians interested in cancer research and care of the cancer patient.

The Extramural Activities Area also includes financial management of research contracts which are initiated by Institute scientists and awarded to institutions to support studies and provide services directly related to Institute intramural research programs.

Background Given

As Associate Director for Extramural Activities, Dr. Saunders serves as Executive Secretary to the National Advisory Cancer Council.

Dr. Saunders joined NIH in 1956 after serving for many years as a Pharmacologist at the Chemical Corps Medical Laboratories where...
The Bank of Bethesda's NIH Branch to Initiate Pay Day Express Line

Pay day transactions for customers of the NIH Branch Office of the Bank of Bethesda, Rm. B1-C-25, Bldg. 10, will be less hectic beginning Tuesday, March 21.

On that day Margaret Mathis, NIH Branch Manager of the Bank of Bethesda, is inaugurating an "express line" for the exclusive use of those wishing to cash pay checks. This line will form at the first window and will be served by Patricia Harper.

It is hoped that the express line, by relieving demands on the remaining windows, will also speed other banking services on pay day, Mrs. Mathis said.

Mrs. Mathis also noted that in the past, the bank could not have served as many personnel on pay day as it did without the cooperation of the NIH Guards in keeping the lines moving.

The express line will operate only on Civil Service pay days, when the Bank of Bethesda Branch Office here is open from 9 a.m. to 4 p.m.

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2 Win Certificates: Complete 18-Month Course

Two Clinical Center Blood Bank medical technologists, Mary H. McGinniss and Mary M. Lostumbo, were recently awarded certification in Blood Banking by the American Association of Blood Banks in association with the Registry of Medical Technologists of the American Society of Clinical Pathologists.

The two technologists were presented NIH certificates by Dr. Jack Masur, CC Director, marking completion of their 18-month training course.

In First Group

Mrs. McGinniss and Mrs. Lostumbo were among 26 technologists throughout the nation who were the first to receive the new certification. At present 45 students are in training nationwide. Three of these are at the Clinical Center.

Training includes evening school courses, lectures, and practical training at the Blood Bank; and performance of a project work on which the technologist is examined and which she must defend.

Dr. Paul J. Schmidt, CC Blood Bank Chief, said the certification program recognizes the technologist who is trained and experienced in performing routine tests, more difficult technical procedures, and administration.

Dr. Jack Masur, Director of the NIH Clinical Center, presents a certificate to Mary M. Lostumbo following completion of an 18-month training course as a Clinical Center Blood Bank medical technologist. Mary H. McGinniss of the CC also completed the course.—Photo by Tom Jay.

TAX TIP

Need help with your income tax return? Have some questions? Get in touch with Mrs. Dorothy Wipf, on either Ext. 61420 (Bldg. 10) or on Ext. 62400 (Bldg. 31).

The CC Department of Spiritual Ministry Gives On-the-Job Training to 8

Now receiving clinical pastoral experience at the Clinical Center are a Baptist pastor, 4 Methodist and Lutheran theological students, a professor and 2 students of religious education.

These 8 persons visit the Clinical Center once a week, listen to lectures and take part in seminars with CC Chaplains, following which they must defend their theses.

The Rev. Robert C. Crowley, Pastor of the Montgomery Baptist Church, is among these 8 persons who are also accompanying the chaplains on pastoral visits to selected patients.

Sponsored by Wesley

The 15-week course is sponsored by the Wesley Theological Seminary, Washington, D.C., although students are drawn from other seminaries as well. This is the second year that the CC's Department of Spiritual Ministry has participated.

The Rev. Robert C. Crowley, Pastor of the Montgomery Baptist Church, attends in partial fulfillment of his M.A. degree program at Eastern Baptist Seminary, Philadelphia.

Dr. Edwards Attends

Dr. Mary Alice Edwards, Professor of Christian Education at Wesley, attends because of her strong interest in religious education of child patients.

The chaplains say her CC experience is being reciprocated by exchanges of ideas on such education.

Religious education students attending with Dr. Edwards are Marie Allnutt of Frederick, and Kathryn W. Orno of Bethesda.

Theological students plan to use their CC experience in later parish ministry in the D.C. area. They are already aiding in Washington-area churches.

Edwin Delong is Assistant Pastor at the North Chevy Chase Christian Church; Wallace D. Robinson is Associate Pastor at the Eldersburg Methodist Church, Washington; Phillip Goldbeck is Vicar-Intern at St. James Lutheran Church, Washington, and Donald D. Parsons is Vicar-Intern at Grace Lutheran Church, Washington.
Wants to Teach

LaVarne Matthews aspires to become, not a scientist but a teacher. She came to NIH via interest in science fostered by an American Heart Association summer science program for high school students. While at D.C.’s Roosevelt High, Matthews attended an AHA-sponsored series of lectures and science demonstrations designed, hopefully, to encourage young people toward careers in science.

While her job varies according to patients’ needs, LaVarne spends a portion of her time each week in the lab and full-time study at Howard University.

NIAMD Scientists Utilize Computer for Routine Physical and Laboratory Tests

By Susan Overath

A recent medical cartoon, in which a worried patient confronts an array of computer equipment, shows humorously a promising new diagnostic technique now used by scientists of the National Institute of Arthritis and Metabolic Diseases, studying diabetes among Pima Indians at Sacaton, Ariz.

Diagnosis by computer is used in connection with the electrocardiogram taken of each patient who participates in the study. With this technique, information about the heart function is recorded directly from the body on magnetic tape and fed to the computer for analysis, as well as for human modification of the data.

The computer compares the electrocardiogram wave-pattern with thousands of others, stored in its “memory,” and within minutes delivers an analysis, reporting any abnormalities that may be present.

The computer not only does this much more rapidly than even a highly trained cardiologist but does it more consistently.

Dr. Thomas A. Burch, Chief of NIAMD’s Clinical Field Studies Unit at Phoenix, is heading the study at Sacaton.

Doesn’t Eliminate Physician

“Diagnosis by computer,” Dr. Burch said, “doesn’t eliminate the physician from the diagnostic process. The computer can perform its seeming magic only because of programs written for it according to instructions and data from a cardiologist. Physical and laboratory tests are only tools and by themselves don’t present a complete picture of the patient’s condition. Only the physician has the experience and judgment to correlate all the aspects of an examination and arrive at a meaningful evaluation of a patient’s condition.”

Dr. Burch is assisted by Drs. Peter Bennett, Leonard J. Comess and Robert E. Henry. Along with their diabetes studies, they are conducting long-range clinical and epidemiological research on arthritis and diseases of the gastrointestinal tract among the Pima Indians.

The NIAMD scientists are working in cooperation with the Instrumentation Field Station of the Heart Disease Control Program, Division of Chronic Diseases, PHS.

As the electrocardiogram (ECG) is taken, the signals are recorded simultaneously on a paper tape and on magnetic tape of the type usually found in home tape recorders. In addition, the patient’s identification number, his weight and height, age and sex and whether or not he is taking certain drugs which might modify the ECG record are recorded on the tape.

Transmitted by Dataphone

The signals on the magnetic tape can then be transmitted by dataphone to the Field Station in Washing­ton, D.C., or if there is no urgency in receiving the interpretation, the reels of magnetic tape containing records from several patients, may be sent by mail.

Since the information is recorded on “analog” magnetic tape (which represents numbers as directly measurable quantities, such as voltages), and the computer uses a “digital” system (representing numbers as digits, using the binary system), the recording is fed into an “analog-to-digital converter” before it goes to the computer itself.

This device samples the ECG waveform 500 times per second, for several seconds, expressing the continuous wave as a series of separate digits. It tags each sample so that the computer can identify the peaks and valleys of the “wave complex” and can measure the amplitude and duration of each kind.

 PARTICULAR

EHS Color Film Scheduled
At 3 Locations Next Week

“Nature Reminisce,” a 28-minute color film will be presented for NIH personnel next week as follows:

- Clinical Center auditorium, Tuesday, March 14 at 11:30 a.m. and 1 p.m.
- Barlow Bldg., Conference Rooms, March 15, 10:00 to 1:00 p.m.
- Westwood Bldg., Conference Room, March 16 at 1:30 and 2:30 p.m.

A presentation at the NIH Employment Health Service, the film helps us make aware of our surroundings and encourages us to appreciate our priceless gift of vision which we so often take for granted.

LaVarne Matthews collects biological compounds as they emerge from a chromatographic column, used to separate individual fractions from solutions containing a number of substances. Dr. Walter Lovenberg at right.—Photo by Ralph Fernandez.
COMPUTER

(Continued from Page 3)

of wave.

After the wave-pattern is expressed in a form it can understand, the computer recognizes the waveforms of all the leads in turn, integrates the values and prints out an interpretation.

If telephone communication is used, the whole process—from answering the data-phone to typing the evaluation—is done so quickly by the computer that by the time the last electrocardiograph elec-

trode is removed from the patient, the interpretation is coming back over the same telephone lines on which the information was sent to Washington.

Electrocardiogram recordings can be sent to the computer from anywhere in the world where there is an ordinary telephone. A portable data acquisition unit, fully transistorized and weighing only 10 pounds has also been devised, so that ECGs may be taken even in the patient's home.

Uni Fin in Telephone

This unit has a special cradle into which the receiver of the patient's own telephone is fitted. The nurse or technician dials a special number, the computer in Washington answers, and the ECG is taken and analyzed in the same manner as those transmitted from hospitals and research units.

Any medical heart signal represented by a changing line on the electrocardiogram can be converted to an electrical signal and analyzed by computers.

At present, in addition to its facilities for electrocardiogram analysis, the PHS is operating a program for computer-analysis of spirograms (recordings of chest movements in breathing used to diagnose emphysema and other lung diseases). Programs for analysis of electroencephalograms (brain waves), plethysmograms (volume measurements of organs), and phonocardiograms (sound recordings of heart beats) are under development.

Automatic data-processing of routine physical and laboratory tests, such as the electrocardiogram, has many advantages over conventional methods, because of its speed, accuracy, reproducibility and low cost. It frees the physician from routine tasks and paperwork, enabling him to devote more time to the patient.

Such time-saving techniques are particularly important in screening or epidemiological studies on large numbers of subjects, such as the NIAMD study of diabetes in Pima Indians, and the NIAMD supported University Group Diabetes Program (UGDP).

This is a long-range prospective study on complications of diabetes at 12 medical centers and served as a model for part of the Pima study. Both programs involve collecting data on many different tests and examinations which are reported periodically.

The UGDP has been following 1,000 patients for 7 years and the Pima study, after 5 years, includes 4,000 Indians and will involve a total of nearly 10,000 before it is completed. Both studies include such a mass of data that computers are essential for efficient analysis.

Dr. Whedon Cited for Space Medicine Study

Dr. S. P. Vinograd, Director of Space Medicine, National Aeronautics and Space Administration, has cited Dr. G. Donald Whedon, Director of the National Institute of Arthritis and Metabolic Diseases, along with other scientists for their contributions to Gemini 7 space flight medical studies.

Dr. Vinograd, reviewing advances in space medicine in the publication, U. S. Medicine, in one of a series of 1969 year-end summaries of medical activities by Federal agencies, described the importance of the medical data derived from Gemini 7 to the 1968 space medical effort.

Gemini 7 "was the first mission in the history of manned space flight, which was dedicated to a medical flight," said Dr. Vinograd in his review.

Dr. Whedon Heads Study

Dr. Whedon served as principal investigator for the mineral balance study, which required complete intake and output measurement of calcium, phosphorus, nitrogen, sodium chloride, potassium, and magnesium in the Gemini 7 astronauts. Urinary output of hydroxyproline, a major amino acid constituent of bone matrix, and various hormones were also measured. The protocol for the study included a 10-day pre-flight and 4-day post-flight control period at Cape Kennedy, as well as the 14-day inflight experimental period.

Dr. Whedon's co-investigators were Dr. Leo Luttwak, Cornell University Medical School, former staff member of NIAMD; Dr. William H. Stetzer, University of Rochester; Dr. Paul Lachance, NASA Manned Spacecraft Center (Houston); and Jeanne Reid, Clinical Center metabolic dietitian for NIAMD.

Winston C. Mani Given DEHS Personnel Post

Winston C. Mani, Personnel Officer of NIH-DB/NICHD since 1965, has been appointed Personnel Officer of the new NIH Division of Environmental Health Sciences, effective March 1.

The Division, located at the Research Triangle Park, North Carolina, is concerned with the biological effects of chemicals and other substances in the environment.

At the present time the Division employs 50 personnel, but it is expected to reach 1,000 as its program develops.

Mr. Mani has been with the Government for over 20 years and joined the Public Health Service in 1955. Before coming to NIH, he was with the Office of Personnel and the Division of Indian Health, and served in Alaska and Montana.
NEW CAMERA
(Continued from Page 1)
a stroke or to a brain tumor.
The camera can also be used to evaluate a patient suspected of having a form of high blood pressure resulting from blockage of one or more arteries which supply the kidneys.
The flow or lack of flow of the radioisotope tracer through the kidneys can be seen in "isotope movies." A blockage can be corrected through surgery.

The scintillation camera was introduced commercially in 1963 and has now proven its usefulness as a clinical diagnostic tool, Dr. Davidson said. The CC's camera is a new model with improved electronics and greater flexibility of operation.

Diagnostic Method Explained
Camera rays emitted by a radioisotope in the patient's body enter the camera's detector through as many as 4,000 parallel holes in a lead plate. These cause faint flashes of light in an 11\% lead plate, which have been studied to produce a silhouette of an organ, a tumor, or a blood pool containing the radioactive tracer.

Either a Polaroid camera or a time-lapse 35-mm camera takes time exposures of points of light to produce a silhouette of an organ, a tumor, or a blood pool containing the radioactive tracer.

Devices such as the NIH-developed Tetramax will continue to be used. This instrument uses four relatively small radiation detectors. They sweep back and forth on all four sides of the patient's head to produce silhouettes of various brain abnormalities.

The scintillation camera, by contrast, has no moving parts and its detector can be positioned to examine a patient in any convenient posture.

Camera's Value Illustrated
For example, the camera was recently used to show the site of a leak of spinal fluid from a patient who had received a gunshot wound in the head. The place of leakage could only be shown while the patient's head was bent forward. A radioactive substance injected into the spinal fluid was used.

The maneuverability of the camera has also been of value in examining patients suspected of having blood clots in the arteries leading to the lungs.

These patients are often too ill to be placed into horizontal position for scans. With the scintillation camera, this examination can be rapidly performed in any position tolerated by the patient.

Dr. Ashburn said that as recently as one year ago it took up to an hour to obtain a single view of the liver. Now it takes 90 seconds to obtain a similar image, and the

Nearly 9,000 Copies of the NICHD's 'Sudden Death in Infants' Distributed

Beverly Stern (left) and Vi Clark, NICHD Information Office, try to keep pace with requests pouring in for copies of "Sudden Death in Infants." Published last year, it is the first definitive treatment of sudden infant death which takes the lives of 10,000 to 25,000 American babies each year.—Photo by Tom Joy.

Beverly Stern (left) and Vi Clark, NICHD Information Office, try to keep pace with requests pouring in for copies of "Sudden Death in Infants." Published last year, it is the first definitive treatment of sudden infant death which takes the lives of 10,000 to 25,000 American babies each year.—Photo by Tom Joy.

Nye Tours 10 Campuses To Enroll Students as CC Normal Volunteers

Delbert L. Nye, Chief of the Normal Volunteer Patient Program at the Clinical Center, is touring colleges in 6 states to interview prospective student volunteers.

Based on last year's experiences, about 65 students will agree to spend next summer at the CC, aiding in medical research. NIH investigators study these healthy "patients" to compare them with ill ones.

Mr. Nye will have visited 10 colleges by the end of March. The students express high interest in the CC's Career Development Program for Volunteers.

When not under study, they work under the direction of scientists in various specialties, 4 or more hours a day. Mr. Nye points out that this experience permits the students to learn a great deal and helps them decide whether they are really interested in such specialties for lifetime careers.

The late-winter tour is part of a year-round effort to interest students and healthy adults in serving humanity by enrolling as normal volunteers at the CC.

Polaroid picture is ready 10 seconds later. The increased speed is due both to the sensitivity of the camera and to improvements in the tracer used.

Mrs. Stewart Appointed Executive Secretary of DRG Study Section

Ileen E. Stewart has joined the Division of Research Grants as Executive Secretary for both the Advisory Committee on Scientific Publications and the History of the Life Sciences Study Section.

Working with these groups she will engage in the scientific review of applications for research grants in the two fields.

Each grant application made to NIH from non-Federal scientists is first reviewed for scientific merit by one of 55 such study sections. A second review is made by one of the several National Advisory Councils, composed equally of leaders from appropriate fields of science and public affairs, before final approval by the Surgeon General, Public Health Service.

Previous Positions Listed

Employed by the National Science Foundation since 1959, Mrs. Stewart was Assistant Program Director, a science liaison officer, and, most recently, Associate Director in the Office of Science Information Service.

She worked with professional societies, national scientific organizations, publishers, and Federal agencies to coordinate efforts in science information in all disciplines.

From 1951 through 1959 she was editor of the American Institutes of Biological Sciences' journal and monographic publications.

Mrs. Stewart spent 1949 through 1951 at the Dwight Institute for Human Genetics in Minneapolis as a research associate. She earned the B.S. degree in zoology and botany from the University of Manitoba, Canada, in 1943, and the M.S. degree in parasitology from the University of Minnesota in 1949. She taught and conducted research at both institutions.
New Color Film on Laboratory Careers Will Be Shown at the CC on March 9

The rewarding careers that are available in clinical laboratory medicine are portrayed in a 28-minute color film to be shown in the Clinical Center auditorium, Thursday, March 9, at 11:30 a.m. and 12 noon.

The showings were arranged by Dr. George Z. Williams, Chief of the CC's Clinical Pathology Department. Dr. Williams is a member of the National Committee for Careers in Medical Technology, which sponsored the production of this film.

Dramatizes Lab Work

Dr. Williams said the film dramatizes the role of the laboratory team in tracking down the cause and the presence of disease. He said careers are open to persons of many educational levels, from the high school graduate who may become a laboratory assistant, to the college graduate who may become a medical technologist, to the physician who may become a pathologist.

The film is titled "In a Medical Laboratory," and was jointly financed by the USPHS and the American Cancer Society. It was premiered in Washington, D.C., in January and was introduced at that time by Senator Lister Hill, architect of health legislation.

Miss Feld Answers Questions

At the Clinical Center, it will be introduced by Minna Feld, ASCP, MT, of the CC Clinical Pathology Department. Miss Feld will be available after the 28-minute showing to answer questions from those who are interested in clinical laboratory careers.

Dr. Kammerer Appointed To NHI Advisory Council

Gladys M. Kammerer, Ph.D., a University of Florida specialist in public administration and American Government, has been appointed to the National Advisory Heart Council.

The appointment of Dr. Kammerer extends through September, 1970. The St. Louis-born educator joins 14 other members of the Council which advises the Surgeon General on programs of the National Heart Institute.

Dr. Kammerer is President-Elect of the Southern Political Science Association. She is Professor of Political Science and Director of the Public Administration Clearing Service at Florida.

Background Cited

The author of four books and numerous other publications in the political field, Dr. Kammerer received her Ph.D. from the University of Chicago in 1946 following degrees taken at the University of Wisconsin (M.A.) and Washington University of St. Louis (A.B.).

She has previously served on distinguished committees or councils of such national organizations as the National Civil Service League, the American Association of University Women, the American Association of University Professors, the American Council on Education and the American Society of Public Administration.

The next council meetings are scheduled for March 16, 17 and 18, 1971, and his M.D. degree from the Harvard Medical School in 1945.

He was Chairman of the Metabolic Study Section, NIH, in 1954 and, in 1957, was a medical consultant to the U.S. Navy.

History of Medicine Soc. To Hold Meeting March 16

NIH personnel are invited to attend a meeting of the Washington Society for the History of Medicine, Thursday, March 16, in the Billings auditorium, National Library of Medicine.

The program includes discussions by Wyndham D. Miles, Ph.D., on "John Gage: (1830-1849), Pioneer in the Use of Refrigeration," and by Mark Ozer, M.D., on "Jean-Baptiste Ducommun: (1716-1881), Pioneer in the Localization of Brain Function."

The Billings auditorium (A Level) is most easily found by entering the side door of the Library.
Dr. Harry F. Roberts, At NIH Since '62, Dies Unexpectedly at 44

Dr. Harry F. Roberts, Health Scientist Administrator of the Grants Review Branch, Division of Regional Medical Programs, died of an apparent heart attack Tuesday, Feb. 14, at Holy Cross Hospital in Silver Spring. He was 44.

Dr. Roberts came to the DFG Grants Associates Program in 1962 from the University of Wisconsin where he had been a Postdoctoral Fellow in the Department of Biochemistry from 1960 to 1962.

After a year with DFG he joined the Research Grants Branch, NCI, and was later appointed Executive Secretary of the Bacteriology and Mycology B Study Section, DFG. In June 1966 Dr. Roberts joined the Grants Review Branch, DRG, where he participated in the development of policy and procedures for review of applications for Regional Medical Program grants.

Ph.D. From Florida U.

He received a B.S. degree from the University of Georgia in 1952 and a Ph.D. degree in nutritional biochemistry from the University of Florida in 1956.

Before becoming a Postdoctoral Fellow at the University of Wisconsin, he was a dairy specialist with the Agricultural Extension Service in Florida and worked in private industry.

Dr. Roberts is survived by his wife, Marie, and two sons, Harry Jr. and Gary, and three daughters, Harriet Sue, Deborah and Deanna Krieg.

NCI POSTS

(Continued from Page 1)

R&W Golf Association Plans Play at Reston April 18-September 21

The R&W Golf Association of NIH is inviting all golfers to participate in the second season of its Intramural League. Interested employees should contact Bea Graber, Ext. 69567, by March 31.

Opportunity to play every week will be provided for members at Reston, Va., beginning April 18 through Sept. 21.

Arrangements for team play are being made by Andrew Price, DRS, who was elected President of the Golf League at a meeting held Feb. 17. Arthur Broering, DRFR, was elected Secretary-Treasurer.

Golfers may join as individuals or as part of a team. Any group joining as a team, of less than 12 individuals, may have additional players assigned.

This will be a handicapped mixed league with regular matches scheduled during the week.

Each team will play once a week. This gives individuals a chance to play once a week or less if they prefer. Members must be willing to take one or two hours of annual leave whenever they are scheduled to play.

There is a $1 charge for 1967 membership in the Golf League, in addition to required membership in R&W which sponsors the league.

Dr. Bayley, Member of NICHD Com. on Aging, Honored by the APA

Dr. Nancy Bayley, a member of the NICHD Aging and Training Review Committee, recently received a Distinguished Scientific Contribution Award for her investigations of mental and physical growth in children and adults.

At the 1966 Annual Meeting of the American Psychological Association, Dr. Bayley was given a $1,000 cash award and a citation reading, in part: “For the enter-prise, pertinacity, and insight with which she has studied human growth ... she has rigorously recorded her subject's physical, intellectual, and social development from birth to middle life.”

In 1928, Dr. Bayley joined the research staff of the University of California, Berkeley. As a Research Associate in California University's Institute of Child Welfare she initiated a study of growth in newborn infants which she has continued off and on to the present. She left California in 1954 to become Chief of the NIMH Section on Child Development in the Laboratory of Psychology. She held that position until returning as a research psychologist to the University of California in 1964.

Since that time she has continued measuring and collecting data on the physical and mental development of her original 60 subjects recording information on their lives from birth to 36 years of age.

Dr. Bayley's interest in the intellectual aspects of aging and the maintenance of mental ability in adults led to her membership on the NICHD Review Committee. She is also a Fellow of both the American Psychological Association and American Association for the Advancement of Science; and a member of a number of other scientific organizations.
Nutrition Handbook by Dr. Burton Translated For Latin American Use

The Pan American Health Organization has selected for translation into Spanish a nutrition textbook written by Dr. Benjamin T. Burton, Associate Director for Program Analysis and Scientific Communication, National Institute of Arthritis and Metabolic Diseases.

The "Handbook of Nutrition" was selected for translation from among 20 clinical nutrition textbooks written in the United States and England and is being printed for distribution to universities and medical schools in Latin America, and for public health use there.

Book Widely Used

Dr. Burton's book presents the basic biochemical and physiological principles of nutrition. It also serves as a clinical text for the physician, nutritionist and diettist, with particular attention to the therapeutic and preventive aspects of nutrition in the management of specific diseases.

Dr. Burton wrote the original text prior to joining the NIH in 1960. Three years ago it was translated into Arabic by a publishing firm in Cairo, Egypt.

LeMUNYAN

(Continued from Page 1)

Ultrasound Microscope Previewed At NIGMS-Sponsored Science Seminar

By Robert A. White

The ultrasound microscope, a sophisticated new instrument employing ultra high frequency sound waves of maximum resolution to give a closed circuit television view of tissues and organs, eventually can provide the physician with a new, distinct, and safer set of eyes in diagnosing disease.

That was the principal theme stressed by Dr. John E. Jacobs, Professor of Electrical Engineering and Executive Director of the Biomedical Engineering Center at Northwestern University, in a Science Seminar sponsored by the National Institute of General Medical Sciences for its staff on Feb. 16.

Dr. Jacobs, who also serves as the Institute's principal consultant in biomedical engineering, was the first of five lecturers in the spring seminar series which runs through July 27.

Research Begins in '30s

The use of television scanning techniques to provide a high-speed display of the ultrasonic field dates back to the 1930s, Dr. Jacobs pointed out. New and sophisticated refinements of the original techniques are now being used in medical research.

Employing principles similar to those in closed circuit television, Dr. Jacobs used films from his ultrasound cameras to show in general good detail:

- The throbbing, excited heart of a laboratory animal and the clearly-defined flow of blood through the aorta.
- The ribs and soft tissues of a live, intact cat.
- The blood vessels and actual flow of blood through the hand, forearm and finger of a research assistant.

Refinement of such ultrasound techniques, explained Dr. Jacobs, potentially may eliminate the need for eyes or other contrast media used in today's conventional radiological techniques.

Specialized Uses Noted

He added that the ultrasound camera already has many specialized uses in experimental animal studies relating to cardiovascular disease including blood and fluid flow, blood vessel size, and the gross structure of various internal organs.

One of the most intriguing future applications, emphasized Dr. Jacobs, is the ultrason microscope.

The major problem in perfecting such a microscope, he explained, has been the difficult task of generating ultrasound resolutions to provide a clear enough picture of organs and tissues for accurate diagnosis.

Television scanning of biological systems uses the principle of piezoelectricity. Piezoelectricity is based on the fact that certain crystallized substances, especially quartzes,

To Begin on March 16

The National Institute of Child Health and Human Development will initiate a regular Scientific Seminars Program on March 16.

Seminars will feature intramural investigators and non-NIH scientists concerned with research related to childhood and human development. The seminars will be open and scheduled on selected Thursdays each month either in the Clinical Center or the NICHD Gerontological Branch in Baltimore.

Dr. Tyler Begins Series

Dr. Albert Tyler, Professor of Biology, California Institute of Technology, will begin the series on March 16 in Room 11N-309, at 1:30 p.m. His topic will be "DNA, RNA, and Protein in the Initiation of Embryonic Development."

On Thursday, March 23, the featured scientist will be Dr. Thomas Argyris, Professor of Zoology, Syracuse University. Dr. Argyris will discuss "Enzyme Induction and the Control of Organ Growth."

All seminar programs will be listed in the NIH Calendar of Events for easy reference by NIH staff interested in attending.

NIRENBERG

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mont, Calif.

Mr. Robbins' interest in founding the Lectureship came in part from his career as a metallurgical engineer as well as from his interest in creative research as President of the Bliss and Laughlin Steel Company.

Each year Pomona brings distinguished chemists to the small liberal arts school for extensive lectures on current research.

The Lectureship began in 1962 with Nobel Laureate Melvin Calvin. Subsequent lecturers have been Nobel winners Peter Debye, Francis Crick, Linus Pauling and David Green.

Dr. Nirenberg's previous awards include the National Medal of Science, Molecular Biology Award, National Academy of Sciences, the Paul Lewis Award, the HEW Medal, the NIH Lecture, the Research Corporation Award, the Hillebrand Award, the Harrison Howe Award, and the Modern Medicine Award.

Other Lectures Listed

Remaining lectures, subjects and dates of appearances:

March 21—Dr. Bernard A. Beek, Department of Pharmacology, University of Iowa, "The Use of Model Diseases in Toxicology."

April 27—Dr. Ian E. Bush, Senior Scientist, Worcester (Mass.) Foundation for Experimental Biology, "Automation of Biochemical Analysis."

May 26—Dr. G. David Novelli, Principal Biochemist, Biology Division, Oak Ridge National Laboratory, "Macromolecular Separations."

June 27—Dr. Eliot Stellar, Professor of Physiological Psychology, Department of Anatomy, University of Pennsylvania Medical School, "Hunger in Man; Comparative and Physiological Studies."

All the lecturers except Dr. Stellar are Institute grantees.

Dr. Abraham Dury, Associate Chief for Scientific Programs, and Barbara Garry, Grants Specialist, both of the Institute's Research Grants Branch, planned and organized the NIGMS Seminar Series.