

the NIH Record

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

November 2, 1965
Vol. XVII, No. 22

NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE

2 NIAID Grantees Win Nobel Prizes In Genetics Study

Two of three French scientists jointly awarded the 1965 Nobel Prize in medicine and physiology are grantees of the National Institute of Allergy and Infectious Diseases.

They are Dr. Jaques Monod and Dr. François Jacob, of the Pasteur Institute, who have been NIAID grantees for four years. Dr. Monod is the principal investigator under the grant.

With Dr. André Lwoff, also of the Pasteur Institute, Drs. Monod and Jacob were honored for research that has cast new light on cellular genetics.

Gene Controls 'Operon'

They have provided evidence that the activity of what they call the "operon"—that is, several linked genes in a segment of the chromosome—is controlled by a single adjacent "operator gene."

The activity of the operator gene is in turn regulated by a "regulator gene" which may be in another chromosome and which acts on the operator gene by way

(See NOBEL PRIZES, Page 8)

Dr. Yolles Announces Plans to Establish A Suicide Prevention Center by NIMH

Plans for the formation of a Center for Suicide Prevention within the National Institute of Mental Health were announced by Dr. Stanley F. Yolles, Institute Director, at a recent Symposium on Suicide sponsored by George Washington University.

The center will be devoted to helping reduce the number of Americans who kill themselves—more than 20,000 in this country last year—by coordinating the Institute's research and activities on the problems of suicide and attempted suicide. Additional suicides are concealed in kindly falsehoods and reports of "accidental" deaths.

Suicide is the tenth leading cause of death in the United States; the



Dr. Yolles

'FDR' Is Principal Speaker at Dedication Here 25 Yrs. Ago; His Address Quoted



This picture, taken Oct. 31, 1940, shows President Franklin D. Roosevelt in front of the Administration Building here as he delivered the address dedicating the then National Institute of Health to the service of the Nation. With the Heart and Dental Institutes added to the Cancer Institute, the NIH in 1948 was renamed the National Institutes of Health. Note radio network coverage signified by array of microphones on the dais.

Oct. 31, Sunday, marked the 25th anniversary of the ceremony dedicating the first buildings of the then National Institute of Health.

President Franklin D. Roosevelt, nearing the end of his second term, was the principal speaker on that day. His address, delivered from the portico of the new Administration Building, was heard by a crowd of 3,000 persons, described by the Washington Post as comprised of "Government and private doctors, Public Health Service employees

and Montgomery County Democrats."

At the beginning of his address the President said, "Nowhere in the world except in the Americas is it possible for any nation to devote a great sector of its effort to life conservation rather than to life destruction."

NIH Praised

A few seconds later he remarked: "The National Institute of Health speaks the universal language of humanitarianism. It has been devoted throughout its long and distinguished history to furthering the health of all mankind, in which service it has recognized no limitations imposed by international boundaries; has recognized no distinctions of race, of creed, or of color."

Later he observed, "These buildings, which we dedicate, represent new and improved housing for an institution which has a long and distinguished background of accomplishment in this task of research."

And nearing the end of his address, the President said:

"For the spacious grounds on

(See DEDICATION, Page 4)

Masland Discusses Joint Research in Poland, Yugoslavia

Cooperative research with Poland and Yugoslavia was discussed with scientists and government officials of those countries by Dr. Richard L. Masland, Director of the National Institute of Neurological Diseases and Blindness, during attendance at the VIIIth International Congress of Neurology in Vienna.



More specifically, he conferred with the Polish and Yugoslavian delegates regarding neurology research supported by Public Law 480 funds.

Foreign Currencies Used

These foreign currencies are derived largely from the sale of surplus U.S. agricultural products abroad. Under PL-480, these funds may be used to support scientific research of mutual interest to the U.S. and a foreign country.

Dr. Masland was in Poland four years ago with other NIH officials to lay the groundwork for research projects using Polish zlotys in the PL-480 account.

Last month he had an opportunity to observe first-hand the progress in a few of the Polish-American research projects being sponsored

(See JOINT RESEARCH, Page 8)

Dr. Law, NCI, to Serve WHO Panel 2nd Term

Dr. Lloyd W. Law, Head, Carcinogenesis Section, Laboratory of Biology, National Cancer Institute, has been invited to serve a second consecutive 5-year term on the World Health Organization's Expert Advisory Panel.

The Panel's objective is to keep the WHO informed on important developments within members' scientific disciplines, particularly in members' own countries.

Dr. Law also has been chosen to serve a 3-year term on the Research Advisory Council of the American Cancer Society.

the NIH Record

Published bi-weekly at Bethesda, Md., by the Public Information Section, Office of Research Information, for the information of employees of the National Institutes of Health, principal research center of the Public Health Service, U.S. Department of Health, Education, and Welfare, and circulated by request to all news media and interested members of the medical- and science-related fields. The NIH Record content is reprintable without permission and its pictures are available on request.

NIH Record Office.....Bldg. 31, Rm. 4B13. Phone: 49-62125

Editor E. Kenneth Stabler
 Associate Editors George J. Mannina and Martha S. Kovacic

Staff Correspondents

Georgiana Brimjoin, NCI; Tony Anastasi, NHI; Mildred Brosky, NIAID; Mary Anne Gates, NIAMD; Bob Callahan, NIDR; Gail Dearing, NIMH; Frances Dearman, NINDB; Bowen Hosford, CC; Faye Peterson, DBS; Linda Jacobson, NIGMS; Beverly Warran, DRFR; Dick Turlington, DRG; Bill Kleven, DRS; Frances Mills, OAM; Dan Rogers, NICHD.

The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policy of the paper and the Department of Health, Education, and Welfare.

NEWS from PERSONNEL

NIH SEMINAR

The Third NIH Seminar on Science and Public Policy was held Oct. 25-28 at the National 4-H Center in Bethesda.

This is one of a series of seminars designed to give senior extramural staff a better understanding of the varied and complex issues, relationships, and influences bearing on scientific programs in the Federal Government.

Primary emphasis has been placed on biomedical research as supported under the PHS mission.

The seminar was chaired by Dr. John F. Sherman, NIH Associate Director for Extramural Programs. Participants included scientist administrators from the extramural programs throughout NIH, as well as key OD and administrative staff.

Informal Exchange Sought

Guest speakers from several Federal, university and private organizations attended the seminar which encouraged informal exchange between audience and speakers.

Dr. George B. Kistiakowsky of Harvard University and Consultant-at-Large to the President's Science Advisory Committee, opened the seminar with a presentation on "Science and Technology in Contemporary Society: National Goals in Perspective."

The following sessions dealt with a variety of issues, such as science policy and planning in a pluralistic society; the Congress, science and formulation of public policy; policy definition and direction in the executive offices; and a number of other areas.

Another seminar is planned for next spring. These seminars are

List of Latest Arrivals Of Visiting Scientists

10/1—Dr. Italo Covelli, Italy, Research in the Clinical Endocrinology Branch. Sponsor: Dr. J. Robbins, NIAMD, Bldg. 10, Rm. 8N315.

10/5—Dr. Jeffrey L. H. O'Riordan, England, Research in the Mineral Metabolism Section. Sponsor: Dr. G. D. Aurbach, NIAMD, Bldg. 10, Rm. 8D06.

10/8—Dr. Stephen Henry Curry, England, Research Training in the Laboratory of Chemical Pharmacology. Sponsor: Dr. B. B. Brodie, NHI, Bldg. 10, Rm. 7N117.

10/14—Dr. Mario Molinaro, Italy, Research in the Laboratory of General and Comparative Biochemistry. Sponsor: Dr. G. L. Cantoni, NIMH, Bldg. 10, Rm. 2D18.



Dr. George B. Kistiakowsky of Harvard, Consultant to the President's Science Advisory Committee, is pictured following his address to the Third NIH Seminar on Science and Public Policy at the National 4-H Center.—Photo by Ralph Fernandez.

arranged by the Personnel Management Branch under the guidance of the Staff Training-Extramural Programs (STEP) Committee.

Congress Votes, LBJ to Sign Pay Raise Of 3.6 Percent Retroactive to Oct. 1

A 3.6 percent pay raise for Federal employees who are in positions under the Classification Act of 1949, as amended, was enacted by the Congress just before adjournment on Friday, Oct. 22. The President is expected to sign this legislation not later than next Monday.

The new General Schedule rates which will apply at NIH beginning Oct. 10—the first pay period after Oct. 1—are as follows:

Grade	Per annum rates and steps									
	1	2	3	4	5	6	7	8	9	10
GS-1	\$3,507	\$3,626	\$3,745	\$3,864	\$3,983	\$4,102	\$4,221	\$4,340	\$4,459	\$4,578
GS-2	3,814	3,943	4,072	4,201	4,330	4,459	4,588	4,717	4,846	4,975
GS-3	4,149	4,289	4,429	4,569	4,709	4,849	4,989	5,129	5,269	5,409
GS-4	4,641	4,797	4,953	5,109	5,265	5,421	5,577	5,733	5,889	6,045
GS-5	5,181	5,352	5,523	5,694	5,865	6,036	6,207	6,378	6,549	6,720
GS-6	5,702	5,894	6,086	6,278	6,470	6,662	6,854	7,046	7,238	7,430
GS-7	6,269	6,476	6,683	6,890	7,097	7,304	7,511	7,718	7,925	8,132
GS-8	6,869	7,097	7,325	7,553	7,781	8,009	8,237	8,465	8,693	8,921
GS-9	7,479	7,733	7,987	8,241	8,495	8,749	9,003	9,257	9,511	9,765
GS-10	8,184	8,464	8,744	9,024	9,304	9,584	9,864	10,144	10,424	10,704
GS-11	8,961	9,267	9,573	9,879	10,185	10,491	10,797	11,103	11,409	11,715
GS-12	10,619	10,987	11,355	11,723	12,091	12,459	12,827	13,195	13,563	13,931
GS-13	12,510	12,945	13,380	13,815	14,250	14,685	15,120	15,555	15,990	16,425
GS-14	14,680	15,188	15,696	16,204	16,712	17,220	17,728	18,236	18,744	19,252
GS-15	17,055	17,645	18,235	18,825	19,415	20,005	20,595	21,185	21,775	22,365
GS-16	19,619	20,297	20,975	21,653	22,331	23,009	23,687	24,365	25,043	
GS-17	22,217	22,994	23,771	24,548	25,325					
GS-18	25,382									

Other aspects of this legislation which are of interest include:

- An increase in uniform allowances from \$100 to \$125 per year.
- Provision for appeal rights on unfavorable determinations of "acceptable level of competence" upon which eligibility for within grade increases depend. The former law denied the right of appeal in these cases.
- Provision for severance pay, to be computed on the basis of age and service, for persons who have been employed continuously for at least 12 months. This provision excludes some categories of employees, such as those serving under a time-limited appointment, alien employees outside the United States and Canal Zone, employees eligible for immediate retirement, those receiving compensation under the Federal Employees Compensation Act, and those who are separated for cause. Details of how this provision will work will be announced after the CSC issues its regulations.

SUICIDE CENTER

(Continued from Page 1)

help—and that the cry can be answered.

Dr. Yolles was one of 12 authorities on suicide who addressed an audience of 1,800 physicians, nurses, clergy and others with an interest in suicide at the symposium on Oct. 14.

A telephone interview with Dr. Yolles concerning his remarks was broadcast later that day by the Mutual Radio Network of New York.

U.S. Rate Noted

Dr. Yolles pointed out that every 24 minutes, on the average, a man, woman, or child in the U.S. commits suicide. The suicide rate for the entire country is 10.5 deaths for each 100,000 persons, he stated. Overall, it is higher for men than women, particularly after the age of 45.

Dr. Yolles warned that college age youngsters are the group with the highest potential risk of suicide. Although the number of adolescent suicides is low compared to the total population, Dr. Yolles said that suicide now is the third leading cause of death among children generally and the second leading cause among college students.

Social Security Official To Discuss Medicare Here Friday, Nov. 5

As a result of the 1965 amendments to the Social Security Act, some NIH employees who are 65 years of age or older may be eligible for Social Security benefits, including Medicare.

To provide information for those desiring it, a representative of the Social Security Administration will be at NIH next Friday (Nov. 5) at meetings scheduled at 11:15 a.m. and 12:30 p.m. in CC auditorium.

At these meetings the Social Security representative will present information and answer questions.

Questions Encouraged

Questions may be submitted in advance by calling Ext. 64851 or by sending them in writing to the Employee Relations and Services Section, Building 1, Rm. 31.

Invitations have been issued to NIH staff members 65 years of age or older, and to those who will reach age 65 by January 1, 1966.

Other NIH employees who have an interest in the program for other reasons may also attend these sessions. Permission to attend should be obtained from supervisors.

CFC Campaign Reports 78.2 Percent Here at End of Third Week

At the end of the third week of the Combined Federal Campaign, NIH employees had pledged or given \$120,909 of the \$154,700 NIH quota. This brought the quota percentage total to 78.2 percent, with participation running slightly behind at 71.9 percent.

Expressing pleasure at the showing of NIH to date, Dr. Donald Harting, NICHD Director and NIH Campaign Chairman, asked employees to make a final push to go over the top.

"I am gratified," he said, "by the generous response, so far, of my fellow NIH employees. However, there is still much to be done if we are to reach our goal. I strongly urge those employees who have not as yet given to contact their keymen immediately with pledges in hand."

Leaders Cited

Some NIH units have already reached or surpassed their goals or are very near the top.

Individual quota leaders are:

NICHD, which went over its quota with 149.3 percent; DRG, over with 111.5 percent; and NIGMS, with 100.7 percent. Others who are very near their goals are NIDR with 99 percent, and OAM with 98.8 percent.

In overall NIH employee participation, both NIGMS and NICHD reached 100 percent. Other Institutes and Divisions with high participation include DRFR with 98.4 percent, DRG with 97.3 percent, and NIDR with 91.9 percent.



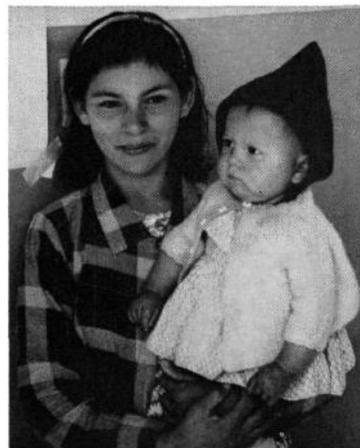
Diane Cain and Carol Gunberg (L to R) raise the "temperature" on the thermometer at Westwood Building, showing NIH progress in the Combined Federal Campaign at end of second week.—Photo by Ralph Fernandez.

OIR Team Examines 9,000 Paraguayans In 3-Month Nutritional Health Survey

By Martha S. Kovacic

A 3-month nutrition survey of Paraguay was completed in August by a 19-member team sent by the National Institutes of Health's Office of International Research at the request of that country.

The American team, composed of staff members, consultants and nutrition personnel under contract to OIR, worked with a team of 37 Paraguayan scientists in studying



A young mother and her child wait to be examined at a survey center. The child had measles. This disease was found in epidemic proportions.

sample populations from all geographic areas.

Returning American team members agree that the Paraguayan people, whom they found to be overwhelmingly friendly, are seeking by every means available to improve themselves and their country, but are confronted by formidable environmental and economic odds.

Dr. Donald M. Watkin, Medical Consultant to OIR and Director of the survey team, reported that although primary malnutrition, rampant elsewhere in Latin America, is a rarity in Paraguay, malnutrition following disease adds to the burden imposed by disease.

He said that hookworm anemia, dental caries and iodine-deficiency goitre were the most common conditions encountered in the survey.

More Research Needed

"From a research standpoint," he added, "the prevalence of congenital malformations including congenital heart disease, the differences in the proportion of rheumatic heart disease in various locations, the high percentage of mental deficiencies including mongolism, and the large number of twins found in the randomly selected population suggest many further avenues for detailed research."

The team, led by Dr. Watkin and Dr. William N. Pearson of Vanderbilt University, who served as Chief of a Biochemical Laboratory established in Asuncion, the nation's capital, surveyed households

in 28 different areas of Paraguay. These were preselected at random from census tracts or from lists of dwellings maintained by the malaria eradication service.

Approximately 9,000 persons of all ages were given physical and clinical cardiovascular examinations. Inhabitants of about 20 percent of the households received more detailed clinical examinations and were interviewed by nutritionists to obtain a record of their food consumption. Nutritionists also visited about 3 percent of the homes to weigh, measure and obtain samples for analysis of the foods consumed.

A subsample of 40 percent of the households was examined by dentists. Altogether, examinations were performed on 7,440 civilians of whom 945 represented special groups—Canadian and European Mennonites, colonists sponsored by the Japanese Emigration Service, and pure-blooded Indians of the Chaco region.

Units Studied

At 7 locations, military and police units numbering 1,129 conscripts were examined in the same manner as the civilians except that their rations were evaluated in a special mess survey and food samples taken for analysis.

At each location the team director and the epidemiologist obtained from local health authorities an appraisal of their most critical problems. The team's food technologists, veterinarians and economists also assessed the state of agriculture and industry and evaluated the contribution that the area was making

(See HEALTH SURVEY, Page 6)



Paraguayan mother and her 3-year-old child report at a survey center. The child had been bitten by a *Triatoma magista*, known as "the kissing bug," the vector of the parasite *Trypanosoma cruzi*. The child shows signs of the acute phase of Chagas' disease.

Pneumonia Vaccine Shows Promise in 1st Human Trials

An experimental vaccine against primary atypical pneumonia, a serious respiratory disease in young adults and children, has shown promise in its first human trials.

Primary atypical pneumonia is caused by *Mycoplasma pneumoniae*, long known as the Eaton agent, a virus-like microbe which accounts for 10 to 50 percent of pneumonia cases among college students, military recruits, and prisoners.

The organism has also been linked to throat and ear infections. It is completely resistant to penicillin but responds to treatment with the broad-spectrum tetracyclines.

Preventive Vaccine Preferred

Many respiratory disease experts believe a preventive vaccine would be more desirable than treatment with drugs, in certain high-risk groups.

The experimental killed vaccine was well tolerated in preliminary studies with 36 human volunteers. Encouraging evidence of its possible protective effect was obtained when 25 out of 30 volunteers (83 percent) showed a significant rise in the level of antibody against the growth of the *Mycoplasma* organism.

The antigenic response was best in 17 out of 19 men (90 percent) who had little or no natural immunity to the organism before vaccination.

In making the vaccine, the research workers used a new culture, or growth medium as a substitute for the allergic reaction-causing horse serum found in standard medium.

Field Trials Planned

How well the vaccine protects humans against naturally occurring or experimentally produced primary atypical pneumonia will be evaluated in future controlled field trials.

This encouraging advance was reported in the Oct. 18 issue of the Journal of the American Medical Association by Drs. K. E. Jensen and L. B. Senterfit, virologists of Chas. Pfizer & Co., Inc., and Drs. R. M. Chanock, C. B. Smith, and R. H. Purcell, of the National Institute of Allergy and Infectious Diseases.

Their continuing research project is part of NIAID's collaborative program to develop vaccines against severe acute respiratory infections, the Nation's most costly illness and the leading cause of time lost from work and school.

'Child Heroes' Are So Normal They Are Not Yet Studied Psychoanalytically

By Lois Jones

Child heroes—youngsters who have saved others from the threat of fire, water, city traffic, and dogs—are so normal they have not been studied psychoanalytically, Miss Anna Freud said during an NICHD-sponsored seminar here Oct. 13.

Thus, the question of what makes these young children risk their own lives to save the lives of others remains unanswered.

The subject of child heroes came up during Miss Freud's discussion of the work of the Hampstead Child-Therapy Clinic in London, of which she is Director.



Miss Freud

An investigator at the Hampstead Clinic has collected data on approximately 70 heroic youngsters—a few as young as 3 or 3½ years of age. But the material, gathered in interviews with the child, his parents, and his school, has not been published because, Miss Freud said, none of the child heroes have sufficient pathology to indicate a need for psychoanalysis, and, hence, the investigator's impressions could not be confirmed with psychoanalytic material.

Other research activities undertaken at the clinic have been more productive of published work.

Clinic Described

Characterized by Miss Freud as a "small, very active, very intense pilot facility," the clinic has a number of different preventive, therapeutic, training, and research activities.

In the well-baby clinic, some 70 infants are under intensive observation and guidance from birth until school age, while in the therapy clinic proper, approximately 80 children are seen 5 days a week in intensive psychoanalysis.

A group comprised of toddlers and their mothers meet at the clinic weekly; a play nursery group for children under 3 years of age meets twice weekly; while a nursery school for normal children observes and guides children from 3 years of age until they enter school.

Currently a monograph is being prepared based on the clinic's work with blind children of nursery school age. The problem under investigation here is the role of vision in personality development; a problem complicated by the fact that, according to Miss Freud, "every blind child has a traumatized mother, a mother in shock."

Among these mothers, who sometimes have to face long periods of uncertainty in which they do not know whether or not their child will ever see, are many who have a tendency to withdraw from the

Anna Freud Receives Award At White House Ceremony

Miss Anna Freud, British psychoanalyst and daughter of Sigmund Freud, received the first Dolley Madison Award for Outstanding Service to Children, in a White House Ceremony on Oct. 12.

Miss Freud, who was visiting Washington to help observe the 150th Anniversary of Hillcrest Children's Center, a treatment center for emotionally disturbed children, has made many contributions to psychoanalysis and to the study of human development generally.

Her contributions to ego psychology in the thirties not only advanced the development of psychoanalysis but also paved the way for its integration with other developmental psychologies.

child, to give up.

Just beginning at the clinic is a study designed to apply the diagnostic skills of the clinic to the study of the mentally retarded. "We want to know," Miss Freud indicated, "what repercussions an intellectual defect has on the personality."

The clinic, which has had some activities supported by NIH funds, has developed a unique research resource in its "Index Department."

The Index Department, characterized by Miss Freud as the clinic's "theoretical conscience," has subject index files of 100 cases. The subject index has made it possible to classify analytic material under analytically meaningful categories, thus enabling the clinic staff to have access to a great deal of material they would not have otherwise.

Index Value Cited

However, the primary value of the index, Miss Freud pointed out, is to teach students training at the clinic to discipline their thinking.

To prevent inappropriate use of the categories, a case is not subject-indexed until it has been under study for a year, and the work of the Index Department is closely guided by a committee.

Equally valuable to the training of the clinic's 15 or 16 full-time students is the Concepts Department. This department guides and develops the theoretical and clinical concepts used in the clinic's work.

Home Study Program Seeking Volunteers to Tutor Area Children

An independent group of volunteer tutors, many of whom are NIH personnel, are giving an hour or two a week under the Home Study Program to help children who are still working hard to bridge the gap between the previously segregated schools of this area and the integrated schools of today.

Tutoring sessions are held in the homes of these children, by invitation of their parents. The volunteer "parent helpers" assist the children with their studies, providing the same intellectual stimulation and encouragement they would give their own children.

At the present time several hundred volunteers are tutoring children in all subjects from the elementary school level through senior high. But more are needed.

Any NIH employee wishing to volunteer for the program may call: Mrs. Margaret Burger, 365-2218, for the Kengar project, between Kensington and Garrett Park; Miss Catherine Forman, 656-3567, for the Cabin John project, Carver Rd. and Seven Locks Rd.; Mrs. Georgia Mueller, 589-9314, for the Linden project, Silver Spring; and Mrs. Priscilla Wimpless, 365-8261, for the Scotland project, Seven Locks Rd. between Bradley Blvd. and Lux Lane.

Also Mrs. Miriam Raff, 588-1292, for the Ritchie Ave. project, Takoma Park, Montgomery County, or Mrs. Abby Mandel, 589-6862, for Colby and Cherry Ave. projects, Takoma Park, Prince Georges County.

DEDICATION

(Continued from Page 1)

which these buildings stand we are indebted to Mr. and Mrs. Luke I. Wilson, who wrote me in 1935 asking if part of their estate at Bethesda, Md., could be used to the benefit of the people of this Nation.

"I would tell her now as she sits

John De Verno Named To DRFR Position

Dr. Thomas J. Kennedy Jr., Chief of the Division of Research Facilities and Resources, recently announced the appointment of John De Verno as Executive Officer for the Division. He succeeds Gordon Klovdahl who was appointed Executive Officer for the National Institute of General Medical Sciences.

Mr. De Verno comes to DRFR from the National Cancer Institute where he served as Grants and Contracts Administrator.

In his new position Mr. De Verno will be responsible for business management activities and will participate in the development and execution of the Division's programs. DRFR administers programs that provide broad support for the Nation's biomedical research institutions.

Service Begun in '42

Mr. De Verno began his Government service career in 1942 in the Department of the Navy, serving in positions which included that of Administrative Assistant and Management Analyst in the Bureau of Yard and Docks.

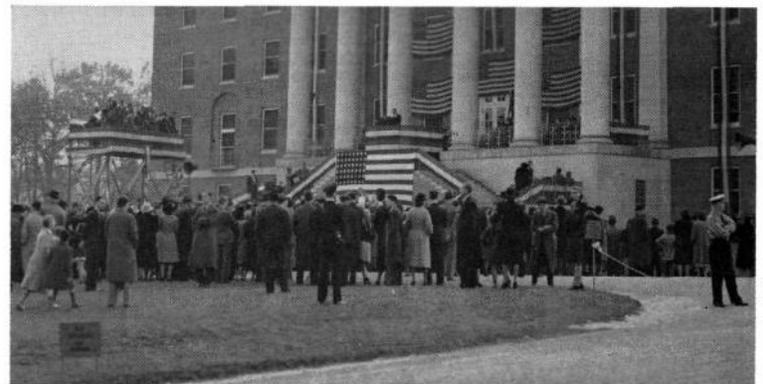
In 1960 he transferred to the PHS, joining the Management Policy Branch of NIH. From 1963 to 1964, he was Management Appraisal Officer in the Division of Community Health, Bureau of State Services.

A native of New York City, he received his B.S. in business administration from New York University and is doing graduate study in public administration at George Washington University.

beside me that in their compassion for suffering, their hope for human action to alleviate it, she and her husband symbolize the aspirations of millions of Americans for a cause such as this."



Mr. De Verno



The crowd gathers in front of Building 1 prior to the address of President Roosevelt dedicating the NIH, Oct. 31, 1940. The raised platform at left is said to have been constructed for the benefit of newsreel cameramen.

Dr. Bowery Is Appointed DRFR Assistant Chief, Effective Yesterday

Dr. Thomas G. Bowery has been named Assistant Chief of the Division of Research Facilities and Resources by Dr. Thomas J. Kennedy Jr., Division Chief. Prior to his appointment, effective yesterday, Dr. Bowery was Extramural Operations and Procedures Officer in the Office of the Director, NIH.



Dr. Bowery

In his new position he will assist in administering Division programs. DRFR provides a focal point in NIH for the administration and management of large-scale extramural programs to support health-related research.

Born in Avalon, Pa., Dr. Bowery received his B.S. degree from Michigan State University, East Lansing, and his M.S. and Ph.D. degrees from Rutgers University in New Jersey.

Develops Research Lab

From 1951 to 1952, Dr. Bowery was Research Assistant Professor at the University of Florida where he developed a research laboratory for the study of pesticide residue problems.

In 1953 he joined North Carolina State College in Raleigh as Research Professor in the Department of Chemistry and Director of the Pesticide Residue Laboratories. There he coordinated and directed the programs in pesticide residue research for the North Carolina Agricultural Experiment Station.

In October 1962 Dr. Bowery was named to the NIH Grants Associate Program. The following year he was appointed to the Office of

Progress of Laboratory Research on Leukemia Is Conference Topic

About 150 scientists from 12 foreign countries and the U.S. discussed progress of laboratory research on leukemia in animals and its possible application to human research at a recent conference on murine leukemia.

The conference, held in Philadelphia, Pa., Oct. 13-15, was co-sponsored by the National Cancer Institute and the Albert Einstein Medical Center.

The scientists gave special emphasis to current research on leukemia induced in laboratory animals by viruses, X-rays, and chemicals. Some of the work reported is in progress under NCI's Virus-Leukemia Program for which Congress appropriated a total of \$25 million for Fiscal Years 1965 and 1966.

Dr. Gross Awarded Medal

During the conference, the Albert Einstein Centennial Medal was presented to Dr. Ludwik Gross of the Veterans Administration for his "contributions to medicine and mankind."

Participating in the conference were scientists from East Germany, West Germany, Russia, Czechoslovakia, France, England, Sweden, Canada, Japan, Australia, Israel, Italy, and the U.S.

the Director, NIH, as Special Assistant to the Associate Director for Research Grants, and in June 1964 was named Extramural Operations and Procedures Officer.

Dr. Bowery is a member of the American Association for the Advancement of Science, the American Chemical Society, the American Society for Public Administration, the Entomological Society of America, the New York Academy of Sciences, and Sigma Xi.

Genetic Study of Xavante Indians Leads Researchers Deep in Brazilian Jungles

By Dana Neimark

"Time may be running out for the anthropologist and the population geneticist," according to Dr. Jerry D. Niswander of the National Institute of Dental Research's Human Genetics Branch.

At a recent NIDR seminar, Dr. Niswander reported on genetic observations of a group of Xavante Indians living in Mato Grosso, a state in central Brazil.

This study, the second in a series of investigations on American Indians living in relatively undis-

Alegre, Brazil; and P.C. Junqueira, Instituto de Hematologia Artur de Siqueira Calavante, Rio de Janeiro, Brazil, in addition to Dr. Niswander.

The scientists reached the isolated Xavante tribes by airplane, piloted by a missionary.

Armed with trade goods, knives, scissors, and fish hooks, the party was able to barter with the chief for cooperation of the tribe. They obtained information on blood types, general physical status, oral health, anthropological measurements, and antibody levels.

Investigators 'Rough It'

The investigators lived in the villages and slept in hammocks. "Our life was far from luxurious," recalled Dr. Niswander. "Since the Xavante sleep pattern is erratic, we found ourselves bleary-eyed for the first week or so."

At one point in their investigation, the scientists observed an unusual callous-like projection on the shoulders of most of the adult males.

Thinking that they had come upon some unusual genetic phenomenon, the group was amused to find that the projection was an ordinary callous caused by a palm log weighing over 150 pounds. The log is carried in a tribal relay race.

Dental Disease Rare

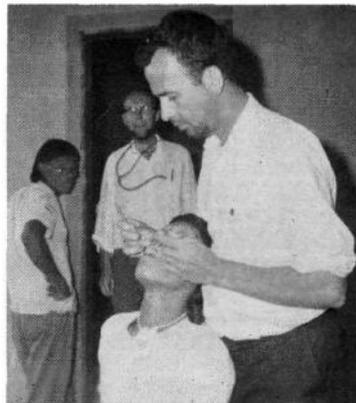
The investigators observed very little dental disease among the Xavante tribesmen. They had relatively slow pulse rates and low blood pressure rates compared to those of Western Caucasians. Most of the tribe members had 20:20 vision or better.

According to Dr. Niswander, these people had practically no malocclusion (faulty tooth alignment) and relatively little periodontal (gum) disease.

There were several individuals who had enlarged parotid glands. This condition, he said, has been observed among other groups of primitive peoples.

Although this data is still preliminary, Dr. Niswander pointed out that it has potential significance in helping scientists understand the impact of civilization on health.

"Government programs are advanced as much through people and their efforts as through the language of laws and Federal regulations." — President Lyndon B. Johnson.



Dr. Niswander conducts examinations in a mission building at Sao Marcus. Dr. James V. Neel, Project Director, in background.

turbed hunting and gathering societies, is a cooperative project under the direction of the Department of Human Genetics of the University of Michigan. The study is supported by a grant from the National Institute of General Medical Sciences.

"Opportunities to study these primitive groups undisturbed by modern civilization are rapidly disappearing as communication and transportation gradually change their lives," Dr. Niswander pointed out.

"Since man has lived for more than 99 percent of his existence in small hunting and gathering societies," he noted, "these primitive Indian communities provide an excellent source for learning about the forces which have been most significant in shaping modern man."

Biological Data Sought

These studies, Dr. Niswander explained, seek information on the biologic relationships of various Indian groups, so that scientists may be able to identify factors that have influenced natural selection and predict the disease patterns which may emerge as primitive groups make the transition to modern civilization.

The investigators included Drs. James V. Neel, Project Director, and E. D. Weinstein, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Mich.; F. M. Salzano, Instituto de Ciencias Naturais, Universidade do Rio Grande do Sul, Porto

Bibliography of Medical Translations Is Available

The National Library of Medicine recently announced that the Bibliography of Medical Translations, originally issued as a quarterly, is now available on a semi-monthly basis beginning with the issue of July 30, 1965.

Sources Noted

The Bibliography, a listing of translations of foreign biomedical monographs, periodicals, and reports from government or non-government sources, both domestic and foreign, is sponsored by the NLM under a cooperative agreement with the Clearinghouse for Scientific and Technical Information (CFSTI) of the U.S. Department of Commerce.

Accelerated publication of the

Bibliography is in direct response to the growing demand by scientists, physicians, and other biomedical workers for speedier access to foreign scientific literature from Eastern and Western European countries and the Orient.

Citations in the Bibliography are selected by CFSTI from its semi-monthly journal, Technical Translations.

Alphabetical Listings

Entries pertinent to biomedicine are arranged alphabetically by author or title under subject headings representing such fields as the biological and medical sciences, behavioral and social sciences, chemistry, earth sciences and oceanography, nuclear science and technology, and physics.

Dr. Puck Warns of Revolution in Biology, Suggests Changes in Medical Curricula

By Linda Jacobson

Biologists can learn a lesson from the revolution in the physical sciences that occurred earlier in this century. This is the opinion of Dr. Theodore T. Puck, Chairman of the Department of Biophysics at the University of Colorado Medical Center.

Dr. Puck's lecture, delivered here on Oct. 14, is one of a series begun last year under the sponsorship of the National Institute of General Medical Sciences to acquaint scientist administrators with recent trends and concepts in the biomedical sciences.

Dr. Puck pointed out that by the end of the 19th century physicists had made great strides. They considered their concepts on the nature of the universe and its laws of operation to be well established scientific principles.

However, discoveries during the next two decades leading to the development of quantum mechanics resulted in new concepts that completely revised the then existing concepts of physical laws on the nature of the universe.

New Concepts Unwelcome

This revolution, according to Dr. Puck, brought about a psychological upheaval, and it was many years before hostilities to the new concepts were overcome. Many scientists preferred to confine their activities to areas where they could use the old concepts and to train their students in the old ways.

Dr. Puck warned that a revolution, similar to that which occurred in physics, is presently taking place in biology. This revolution began with the development of molecular biology and caused a complete transformation of our understanding of life processes.

In the speaker's opinion, training in medical schools is still oriented in the "pre-molecular biology era." The majority of American medical schools, he said, place too much emphasis on gross and microscopic anatomy—what he termed the "non-living" aspects of structures—and not enough emphasis on cellular and subcellular biology.

Training Change Needed

He emphasized that tragedy such as that caused by thalidomide points up our ignorance in certain areas. We should train students to study the mechanisms of drug metabolism, Dr. Puck said, rather than merely do gross observations on experimental animals and patients fed a particular drug.

Dr. Puck believes that changes in medical school curricula could improve research training and prevent needless human wastage.

He stressed the importance of calculus and probability theory in biomedical research, and questioned how a student, without a knowledge of calculus, could fully understand,

Graduate Program Moves to New Quarters in Bldg. 12A

The offices of the NIH Graduate Program have moved from Building 31, Rm. B1B38 to new office space in Building 12A, Rm. 3033.

The Foundation Bookstore and Group Hospitalization for Visiting Fellows are in the same room in the new building. Office hours are from 9 a.m. to 4 p.m., Monday through Friday. The telephone extension is 66371.

for example, the processes going on in hematopoietic tissue, in which cells are undergoing mitosis at one rate, being changed into red blood cells at another rate, and entering the bloodstream at a third rate.

Dr. Puck's laboratory is presently engaged in a study of the rate of turnover and renewal of cells in bone marrow, spleen, and thymus, since no definitive data on this subject exists.

Dr. Puck also stated his belief that all scientists must have some understanding of human values and the impact of science on human society, since their present knowledge of control of the genetic quality of humans has a potential far beyond that of the atomic bomb. Scientists, he feels, cannot relegate man's conscience to the humanist.

During a discussion period following the lecture, the danger of

Dr. James Pratt Named To DRG Branch Post

Dr. James W. Pratt, Research Grants Officer of the Diabetes and Arthritis Branch, Division of Chronic Diseases, Bureau of State Services, has been appointed Assistant Chief for Special Programs, Research Grants Review Branch, Division of Research Grants.

A former member of the NIH staff, Dr. Pratt was with the National Institute of Arthritis and Metabolic Disorders from 1949 until 1964.

Serves in Chemistry Lab

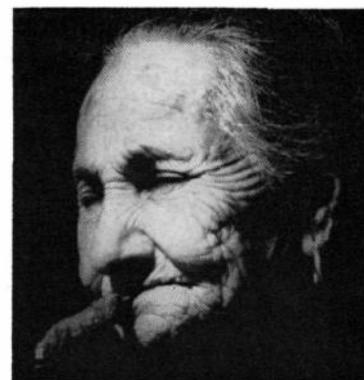
He served as an investigator in the Laboratory of Chemistry until 1959, when he accepted a position in the Extramural Programs. He was Chief, Research Grants Branch, when he left NIH for the Bureau of State Services.

He received the A.B. and M.S. degrees from Boston College, and the Ph.D. degree from Georgetown University.

Dr. Pratt's research interests are the chemistry of rare sugars, including deoxy sugars; and the structure and conformational analysis of non-reducing anhydrides.

He is a member of the American Chemical Society, American Diabetes Association, and the American Association for the Advancement of Science.

producing "phenomenologists" who do not feel responsible for the implications of their research was mentioned. Dr. Puck agreed that every scientist must realize that he is developing tremendous powers over life and has an important responsibility to society.



This 97-year-old Paraguayan grandmother smokes several cigars daily, which are made from home-grown tobacco. Despite her years, she has exceptional vision.

HEALTH SURVEY

(Continued from Page 3)

to the overall national economy.

A final report on the survey will be delivered to Paraguayan authorities in December. Its objective, Dr. Watkin said, is "to help provide guidance to Paraguay in formulating long-range plans in developing its human as well as natural and industrial resources, to improve the health of its people and the economy of the nation."

NIH Members Listed

NIH members of the team included Dr. Carl J. Witkop of the National Institute of Dental Research and Miss Emma Reh of the Nutrition Section of OIR.

Other Americans on the team were Dr. Charlotte Ferencz, Dr. Luis L. Mosovich, Dr. Stuart L. Fischman, Miss Teena Decker, Melvin Fox, Gary Lubin and Victor Zalma, all from the State University of New York at Buffalo; Dr. William R. Elsea, Erie County (N. Y.) Health Department; and Dr. Edward G. High, Meharry Medical College, Nashville.

Also Dr. Paul H. Weswig, Oregon State University, Corvallis; Lt. Col. Eugene M. Baker, MSC, and Lt. Col. Robert W. Sheehy, VC, Army Medical Research and Nutrition Laboratory, Denver; Miss Ruth E. Kocher, New York State Health Department, Buffalo; and Dr. Clinton O. Chichester and Miss Nancy King of the University of California at Davis.

Buffalo Group Largest

The OIR Nutrition Section pointed out that the University of Buffalo, which has an AID grant to assist the medical school at Ascension, contributed the largest contingent of scientists to the team of any survey conducted by the Nutrition Section.

The knowledge and experience gained by these members, it was said, should be beneficial to the Buffalo staff in developing programs at the school in Paraguay.



John P. Wiley, Director for the AID, signing for Ambassador William P. Snow, the Grant-in-Aid document transferring laboratory equipment and supplies to the Paraguayan Government, following completion of field studies in the nutritional health survey. Standing (left) Dr. Dionisio Gonzalez Torres, Minister of Public Health and Social Welfare, Paraguay, and Dr. Donald M. Watkin, Director of the U.S. survey team.

Pictures by Morel's X-Ray Device Called Excellent by Roentgen Society Members

Joseph M. Morel, research technologist of the NIH Clinical Center's Diagnostic X-ray Department, received recognition at the recent annual meeting of the American Roentgen Society in Washington.

Mr. Morel became the first technologist ever to sponsor an exhibit in the society's medical exhibition hall. His exhibit was a model of a tomographic device that he invented and a demonstration of X-ray films obtained with it.

A tomograph produces X-ray photographs of selected planes or organs of the body and blurs out other areas in front of and behind the area of interest. Mr. Morel's device was described in a previous issue of the *NIH Record* (March 23, 1965).

Device Described

It is a rotating chair attached to a mobile base. An X-ray technologist can produce tomographic results by rotating the chair in which the patient is seated, through a 10° to 20° arc during an X-ray exposure.

Physicians at the convention described as "excellent" and "unusual" Mr. Morel's panoramic X-ray views of the jaw. The photographs show the jaw from temple to temple, with each part in focus and not obscured by other parts of the head.

The method used for producing these panoramic views is called "curved surface radiography." It is a relatively new technique.

Dr. Betty Hathaway, Chief of the Diagnostic X-ray Department, believes that the new device also offers much promise for curved



Joseph M. Morel shows how a patient would be positioned to obtain a clear cross-section picture of the brain by new tomography equipment he devised.—Photo by Jerry Hecht.

surface radiography of other body organs and structures, such as the brain, mediastinum, the petrous bones in the skull, and the pelvis.

Postoperative Procedure Aids Cataract Surgery

A former National Institute of Neurological Diseases and Blindness Clinical Associate, Dr. David Paton, recently reported the success of a new postoperative procedure to improve methods of preventing glaucoma, inflammations, and other eye disorders which sometimes result from unresorbed lens material following extracapsular cataract extraction.

The procedure, which consists of aspirating the lens substance through a 22-gauge needle while irrigating the eye with a saline solution, is performed during the first week or two following the operation, before complications have arisen.

Prior Technique Noted

When a cataract cannot be removed with the lens still inside its capsule (intracapsular extraction), the surgeon removes what lens material he can and closes the wound, hoping the remaining fragments will be gradually absorbed.

In the past, the wound was reopened and the lens remnants re-

moved by lavage only if the eye developed secondary glaucoma or severe inflammation.

In the present study, however, if it appeared that the unabsorbed lens substance was of such quantity that it might cause undesirable effects, the patient was returned to the operating room within the first two weeks after surgery.

Needle Inserted

Here, a 22-gauge needle on a syringe filled with sterile saline solution was inserted opposite the original wound.

By repeated aspiration and lavage via the syringe, all the residual lens material could be removed.

The original surgical incision was left undisturbed and no additional sutures were required. Chief merits of the technique are its atraumatic nature and the assurance of obtaining a clear pupillary space.

The investigation was reported by Dr. Paton, now with The Wilmer Ophthalmological Institute, Baltimore, Md., in the *American Journal of Ophthalmology*.

Simple Instrument, Easily Made From Materials in Any Hospital, Monitors Patients' Blood Pressure

By Bowen Hosford

Two NIH Clinical Center anesthesiologists, Dr. Lee H. Cooperman and Dr. Philip E. G. Mann, have simplified an instrument for monitoring blood pressure during operations so that it can be made from materials available in any hospital.

The two physicians hope the instrument will be useful in hospitals where elaborate electronic equipment is not installed. It could also prove to be of particular value in underdeveloped countries.

Main parts of the device are an arterial needle, a stopcock, a length of plastic tubing, and a simple wooden tongue blade.

Instrument Explained

One end of the plastic tubing is filled with a saline solution; the other end contains air. Blood from the patient's arm artery pushes against the saline solution, and the solution pushes against the air.

The air acts as a spring, expanding and contracting with variations in the patient's blood pressure, and allowing the saline solution to move back and forth in the tube. The physician can read the changes in pressure from calibrations marked on the tongue blade. Periodic flushing is easily done.

Device Is Accurate

Similar devices by others have been described in medical literature. At least one such device, more complicated than the one developed by Drs. Cooperman and Mann, has been used extensively for patients.

The adaptation by the CC physicians is small, inexpensive, and easily sterilized. It has been tested against electronic equipment, and found to be accurate. Electronic equipment is, however, more sensi-

tive and furnishes a record on paper, which the simple device cannot do.

Dr. Andrew Warshaw, Clinical Associate in the NIAMD Gastroenterology Section, uses the new blood pressure instrument when operating on animals. He finds its advantage to be that it is so small, without external lines, that it fits neatly in the sterile field.

Alternate Choice Provided

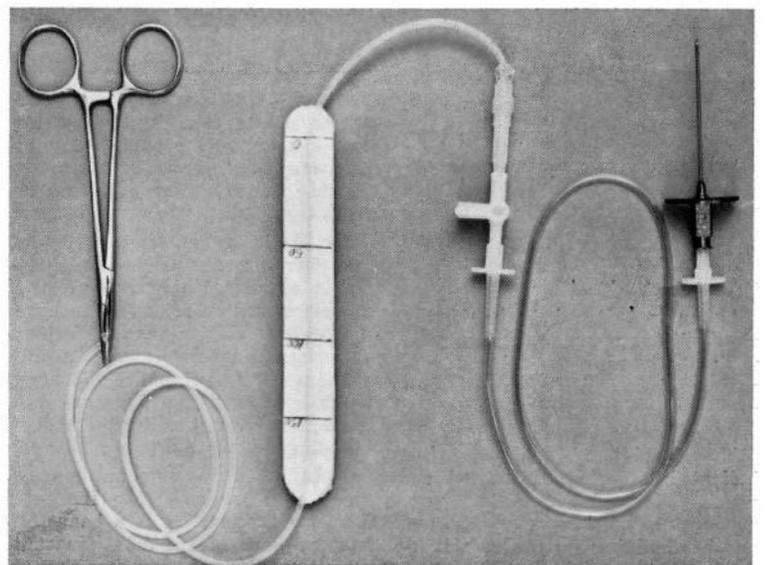
Electronic equipment remains the method of choice for monitoring blood pressure. Many hospitals, however, do not have this equipment, and the simple device may prove a good alternative choice for radical cancer and emergency chest surgery.

Dr. Cooperman and Dr. Mann think other present methods of monitoring blood pressure may be too cumbersome in some such cases.

This is especially so when access to the patient is limited, when he is in shock, and during the use by the surgeon of lowered temperature or lowered blood pressure in the patient. It is in these situations that the small device may be invaluable.

Gives Pressure Reading

The instrument may also be left attached to the patient during the postoperative period, furnishing a constant reading, at a glance, of the patient's blood pressure during this critical time.



This device for monitoring the patient's blood pressure during an operation can be made quickly from materials found in any hospital. It was developed by two CC anesthesiologists, Drs. Cooperman and Mann. Calibrations for reading the blood pressure are marked on a simple wooden tongue blade.

JOINT RESEARCH

(Continued from Page 1)

sored by his Institute.

Of special interest because they closely parallel work being done here at NIH, were two projects in Warsaw. A broad-based study of the clinical and laboratory characteristics of muscle disease, under the direction of Dr. Hausmanowa-Petrusewicz, of the Medical Academy of Warsaw, draws cases from many areas of Poland, and closely relates to the work of Dr. W. King Engel, Chief of the Medical Neurology Branch of NINDB.

Dr. Masland also visited the National Institute of the Mother and Child in Warsaw to discuss progress of studies in birth defects, which supplement and parallel the work of the Collaborative Perinatal Project of the NINDB.

Although Institute officials are pleased with the progress of PL-480 projects in Poland, there are, nevertheless, problems to be overcome.

Scientists Brought Here

The distance between the Polish and American investigators makes it extremely difficult to establish and maintain a truly collaborative relationship, which is the true aim of the PL-480 project. This difficulty has been partly overcome by bringing Polish scientists to the United States for short training periods.

Following his visits in Poland, Dr. Masland went to Belgrade, Yugoslavia, and to the small town of Kotor on the Adriatic coast, where it is hoped an international brain research laboratory may be established using locally available marine forms.

A small hydrographic laboratory in Kotor might be renovated by Montenegro, one of the six republics which make up the federation of Yugoslavia.

The proposed project is sponsored by the Institute for Biological Research, organized by staff from the University of Belgrade with the support of the Republic of Serbia and the Federal Research Council.

Kotor Location Ideal

Kotor is believed to be ideally situated to draw scientists from various European countries as well as from Asia and the West. It is a picturesque village of 4,000 people, situated at the base of a fiord.

The Republic of Montenegro has indicated a desire to convert the nearby villa of Frens to apartments for visiting scientists and another building for use as a laboratory.

Although Yugoslavia has been slower than some other countries to take advantage of PL-480 funds, Dr. Masland received the clear im-



A citizen of Kotor, Yugoslavia, prepares to board the boat that will search the Adriatic Sea for marine specimens for biological research.

NIAMD's Chemistry Lab Establishes New Section

Dr. G. Donald Whedon, Director of the National Institute of Arthritis and Metabolic Diseases, has announced the establishment of a new Section on Biochemical Mechanisms in NIAMD's Laboratory of Chemistry and the appointment of Dr. Louis A. Cohen as Section Chief.

This section will investigate the chemistry and mechanisms of action of enzymes, coenzymes and small molecules of metabolic significance.

Other Studies Listed

Current studies include the biochemical pathways for conservation of energy, the mode of enzymatic activation of molecular oxygen and the mapping of enzyme surfaces in solution.

After receiving a Ph.D. in organic chemistry from the Massachusetts Institute of Technology in 1952, Dr. Cohen conducted research and taught at Yale University Medical School for two years. He joined NIAMD in 1954.

pression that it is a national policy to create centers of scientific excellence and to provide the staff and equipment necessary to attract visiting scientists of high calibre from the West.

Dr. Avdo Humo, Vice President and Secretary for Science in Yugoslavia, expressed his earnest desire for his country's scientists to have a working relation with American scientists. He believes that a full exchange of personnel between Yugoslavia and the West is important in strengthening the understanding among the two countries.

Asked about his personal impressions of Yugoslavia, the Institute Director replied, "It is a beautiful country—one of the most pleasant environments you can imagine. I was pleased to feel that at least within the scientific community there is a great interest in closer relations with the USA."

NOBEL PRIZES

(Continued from Page 1)

of a "repressor" macromolecule.

The mechanism works like this. A "structural gene" of the operon directs the production of an enzyme. The enzyme acts on certain substrates (compounds transformed by enzymes) to create certain substances.

The substances prompt the regulator gene to exert its regulatory action. The regulator gene acts by way of the repressor upon the operator gene, and the operator gene upon the operon. As a result, there is feedback control of the operon.

Interference with this mechanism by the action of substances introduced into or produced in the cell results in uncontrolled enzyme activity.

Implications Noted

Studies of Drs. Monod and Jacob have been confined mainly to *in vitro* systems derived from the bacteria *Escherichia coli*. But other studies have indicated that there is a universal genetic code; that is, that all living organisms have similar genetic mechanisms. Therefore, the genetic mechanism found to operate in the bacterial cell may apply as well to the mammalian cell.

The concept of the cell's genetic mechanism advanced by Drs. Monod and Jacob may lead to a greater understanding of cancer. It may also have important implications for studies of the role of viruses in cancer. Here, Dr. Lwoff has made a major contribution in his demonstration of the action of a virus in the cell it invades.

When a virus enters a cell, it may impose the genetic material it contains for its own replication upon the genetic material of the cell. The regulatory mechanism of the genes may operate to keep the virus in a passive state.

But when the mechanism breaks down due to interference, the virus is activated, destroys the cell, and begins to multiply—in the process that some experts believe causes

Donor Day Observance, Nov. 19, to Honor 17

Seventeen NIH employees who have donated blood regularly for 10 years will receive certificates and expressions of appreciation at a ceremony to be held in the Clinical Center's Blood Bank on Nov. 19, the 1965 Blood Donor Day.

In announcing the ceremony, Dr. Paul J. Schmidt, Blood Bank Chief, pointed to evidence of how the NIH blood insurance program is paying off in blood returned to employees and their families. Seventy-eight employees have benefited since Blood Donor Day a year ago.

Each of the 10-year donors has given between one and three gallons. Dr. Schmidt noted that donors can give such large amounts because the body replenishes its blood supply rapidly.

Ten-year donors to be honored include Donald Lee Barber, Ida Louise Bartgis, William L. Beane, Paul V. DePorte, Derrell R. Freese, Frederick J. Gutter, Dr. Wade H. Marshall, Ernest G. McDaniel, Dr. Robert E. Greenfield Jr., Dr. Alan H. Mehler, and Dr. Arthur T. Ness.

One Case Cited

Also John W. Owens Jr., Dr. Elbert A. Peterson, Dr. Norman E. Sharpless, Helen K. Small, Dr. R. Gerald Suskind, and Charles K. Turner.

One of the 78 employees who benefited is Larry Northcutt, Head of the Clinical Center unit for Plant Engineering Branch, Division of Research Services.

On Sept. 13, Mr. Northcutt's 14-year-old daughter, Linda, underwent an operation in Baltimore.

"It was gratifying for me to see on the hospital bill that a \$70 charge for blood transfusions had been canceled because of the NIH insurance program," Mr. Northcutt said.

Mr. Northcutt had donated blood to the CC Blood Bank. However, all NIH employees and their families are eligible, whether they have donated or not, so long as NIH contributions total more than 2,000 pints a year.

cancer.

The work of the Nobel laureates illustrates how vitally basic research supports disease-related research. It illustrates, too, how research on the cell and its molecular structure can remove artificial boundaries between the biomedical sciences. Knowledge such as this gained from work in one field can nourish other fields.

Dr. Monod is a biochemist; Dr. Jacob, a geneticist; Dr. Lwoff, a microbiologist. The corporate work of the Nobel laureates epitomizes that performed by a complex research community such as NIH.