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PUBLIC HEALTH SERVICE

Shelokov Is Named DBS Lab Chief, Succeeds Smadel

Dr. Alexis Shelokov, Chief of the Laboratory of Tropical Virology and Infectious Diseases, National Institute of Allergy and Infectious Diseases, since 1959, has been appointed Chief of the Laboratory of Virology and Rickettsiology, Division of Biologics Standards.



Dr. Shelokov

In his new position Dr. Shelokov will be primarily responsible for a large segment of the Division's research in virology and rickettsiology, including many of the programs formerly directed by the late Dr. Joseph Smadel.

Dr. Shelokov has had broad experience in the field of virology. He was, for many years, an investigator in his own right, prior to his assignment as a Commissioned Officer of the Public Health Service in 1950 to the Laboratory of Infectious Diseases here.

In addition to his broad interests in infectious diseases, his special

(See DR. SHELOKOV, Page 6)

Many Groups Join to Bring Christmas to Patients Here



Santa rehearses with 6-year-old Gabino Salazar, a CC patient, in preparation for Christmas Eve when he will read bedtime stories to all good little children patients. Santa is impersonated by John Gregory of Milwaukee, Wis., also a patient. Gabino's birthday falls on Dec. 24. His parents will be here from Mexico City to help him celebrate.—Photo by Sam Silverman.

NIH employees, in common with all others of the Federal Government, will observe the Christmas-New Year holiday season quietly this year in memory of the late President of the United States. During the 30-day period of mourning, which ends December 22, there will be no office parties on government property

and personnel will not participate in social gatherings of a public nature.

There will be no curtailment, however, of the Yuletide programs and activities planned for the hundreds of patients who are presently confined to the Clinical Center.

An advance copy of the Christmas Season program, to be printed in color and distributed tomorrow to all Clinical Center patients by the CC Patients Activities Section, reveals a full measure of entertainment and recreational activities in keeping with the spirit of the Yuletide.

Festivities Begin Thursday

The pre-Christmas festivities will get under way Thursday (Dec. 19) at 7:30 p. m. in the 14th floor assembly hall with a program featuring the United States Army Chorus and the Wheaton High School Girls Glee Club.

Dr. Clifton K. Himmelsbach, As-

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Martin Cummings To Direct NLM, Effective Jan. 1

Dr. Martin M. Cummings, NIH Associate Director for Research Grants and Chief of the Office of International Research, has been appointed Director of the National Library of Medicine, effective January 1, Surgeon General Luther L. Terry announced recently.

Dr. Cummings succeeds Dr. Frank B. Rogers, who retired September 1.



Dr. Cummings

In making the announcement Dr. Terry said, "I feel that Dr. Cummings' extensive experience as a medical school professor, as well as his recent responsibilities in the international field and in the use of biomedical research grants, will bring to the Library unique skills to maintain the Library's traditions as a national resource and at once provide the farsighted management of the expanded programming so necessary today in medical communications."

NLM Is World's Largest

In his position as Director of NLM, Dr. Cummings will supervise the world's largest biomedical library which serves as the Nation's principal resource for published information in the biological and medical sciences.

Its intramural programs include extensive activities for the loan of original and photoduplicated materials to libraries both in the United States and abroad. Its extramural

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Two Issues Are Combined; See You Next on Jan. 15

As in previous years, this issue of the *NIH Record* combines the pre-Christmas and New Year's issues. The next issue will be published on January 15.

To each of our readers a Merry Christmas and a Happy New Year!

CCNSC Receives and Screens, Monthly, 1,000 Compounds for Antitumor Value

By Junith Van Deusen

The "pickle works" at NCI's Cancer Chemotherapy National Service Center is not in the commercial preservative business, as its nickname might indicate. It is a room containing many rows of chemical compounds that have been tested for antitumor activity.

This area is part of the Chemical and Drug Records Section in CCNSC's Drug Development Branch. Robert B. Ing, Head of the section, keeps a regulative eye on the numerous compounds received and their destinations.

Each month over 1,000 compounds are submitted by universities, commercial firms, and private investigators for possible use in the nationwide cancer chemotherapy research program administered by NCI.

When Mr. Ing's staff receives a

compound, its molecular formula is checked against the formulae of compounds previously tested, to avoid duplication of effort. Of the 1,000 chemicals coming in monthly, about 700 are actually new and pass through this initial screening.

The new chemicals are numbered, weighed, bottled, and labeled with such legends as molecular structure and warnings for safe handling. They are then boxed and shipped out to "screeners."

Since the launching of the program in 1955, approximately 170,

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the NIH Record

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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

REIMBURSEMENT IS TAXABLE

The Commissioner of Internal Revenue has ruled that payments received as reimbursement for expenses incurred incident to travel to first duty station constitute taxable income.

This ruling, effective January 1, 1963, applies to all new appointees who are appointed to positions in the manpower shortage categories as defined in the Federal Personnel Manual, Chapter 571. All those receiving such payments on or after the above date are affected.

The Financial Management Branch will review the claims for reimbursement already submitted by each individual affected to date and determine the taxable income to be included in his gross earnings for the calendar year 1963. No attempt will be made to retroactively withhold taxes on claims paid.

FMB Informs Employees

Without action on his part, each employee affected will receive from FMB a letter advising him of these Internal Revenue ruling, the amount of taxable income involved, and the fact that this amount will be included in his gross earnings on the W-2 Withholding Statement furnished at the end of the year.

All new appointees eligible for payment of these expenses are now being informed of this ruling prior to their entrance on duty. Tax will be withheld from all future claims paid by FMB. Employees will be informed of the amount to be reported as taxable income and the amount of tax withheld.

Inquiries may be directed to the Accounting and Auditing Section, FMB, Ext. 65475.

INCOME TAX DEDUCTIONS

The Civil Service Commission has announced an amendment of its regulations to permit voluntary payroll deductions for State and D.e.C. income taxes from salaries of civilian Federal employees.

During December the NIH payroll office will send voluntary withholding income tax forms to those NIH employees who at present have no state tax deducted. Signature of this authorization by the employee will permit the payroll office to deduct the appropriate State income tax.

Example Given

For example, if an employee working at the NIH in Bethesda, Md., and residing in Virginia signs the voluntary withholding form as residing in the state of Virginia, the payroll office will withhold Virginia State tax from his pay check.

Deductions from designated pay checks will be effective the first pay period of calendar year 1964, or thereafter upon return of the signed form to the payroll office. Employees are advised that they may complete the voluntary withholding tax form at any time.

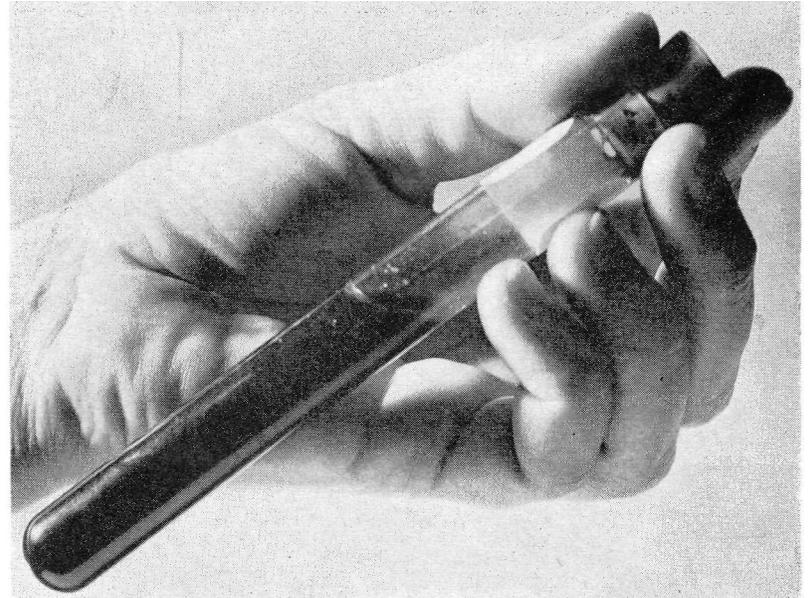
SHORTHAND REFRESHER COURSES

Two shorthand refresher courses will be offered by the Employee Development Section to stenographers and secretaries beginning January 13. They will include training in punctuation, spelling, capitalization and word division.

To be eligible for the Shorthand I course, candidates must pass a test with dictation at 60 words per minute. Candidates for the Shorthand II course must pass a test with dictation at 80 words per minute.

Nominees for the courses should be recommended by their supervisors, and priority will be given to nominations made by I/D Personnel Officers. All nominations must be submitted by December 27.

DBS Seeks Volunteers for The Panel of Typed Donors



CAN YOU SPARE THIS MUCH BLOOD? Employees who give this amount (about one-third of an ounce) become members of the DBS Panel of Typed Donors and receive a card listing blood group, Rh type, and other blood factors.

Any NIH employee who can donate the small amount of blood shown in the accompanying picture is invited to become a member of the Division of Biologics Standards' Panel of Typed Donors. Panel members are called upon periodically to donate small samples of blood to be used in control testing procedures by the DBS Laboratory of Blood and Blood Products.

Each member is given a card listing his blood group, Rh type, and four other factors of his blood. This information will be valuable to the donor if he ever has need of a transfusion or wishes to donate blood in an emergency.

This information will also be helpful to employees who enroll in the new NIH Blood Insurance Program (reported in November 5 issue of the *Record*). The small amount of blood required for the Panel of Typed Donors will not affect the status of donors who may want to provide blood for transfusion.

1,965 Employees Typed

The Panel of Typed Donors was initiated seven years ago by the DBS Laboratory of Blood and Blood Products. In its continuous search for rare types, the laboratory has typed the blood of 1,965 NIH employees during that time.

At present, however, only 480 donors are listed on the panel, and new members are needed to extend the panel and to replace donors who have left NIH.

The panel currently supplies 90 percent of the laboratory's reagent red cells which are used in the control testing of diagnostic reagents. These blood grouping and Rh-typing serums are submitted by licensed manufacturers to DBS for testing before distribution to blood

banks throughout the country.

The participants in this program make an initial donation of 10 ml. (about one-third of an ounce), after which they may be called upon from one to 12 times a year for additional donations. Panel members receive a minimum of \$2 for each of these subsequent donations.

The Panel of Typed Donors program will be carried out on January 10, 17, and 24 in the Clinical Center Blood Bank at its new location in the CC Surgical Wing, instead of in the Employee Health Unit where it has been in the past.

Further information and application blanks are being distributed to each NIH employee.

SMB Issues Fiscal 1963 Report on Procurement

The Procurement Section of the Supply Management Branch, OAM, recently issued its Annual Report on Procurement Management, summarizing procurement operations during Fiscal Year 1963.

The 18-page report is designed to impart some understanding of the varied nature of the procurement function at NIH and progress being made to keep abreast of scientific programs here.

Among the management facets summarized in the report are sections on purchase operations, contracting, standardization, decentralized procurement, and program additions and improvements.

Unique Device Employed To Bypass Natural Site Of Adenoviral Infection

Scientists from the National Institute of Allergy and Infectious Diseases have used enteric-coated, virus-containing capsules to bypass the susceptible upper respiratory region.

By feeding virus in enteric-coated capsules, the scientists selectively infected the intestinal tract of prisoner volunteers with adenoviruses 4 and 7.

The virus-containing capsule bypassed the natural site of adenoviral infection, the upper respiratory region, and did not dissolve until it reached the lower intestinal tract.

Antibody Produced

Deposited in these tissues, the virus multiplied rapidly. Without producing clinical illness, it stimulated the production of antibody capable of protecting against naturally occurring adenoviral disease.

This is a significant development because of the predilection of adenoviral infections to occur in epidemic form during the early winter months among military recruits and young children.

Drs. Robert M. Chanock and Robert J. Huebner, of the Laboratory of Infectious Diseases, and Drs. Robert B. Couch, Thomas R. Cate, David J. Lang, and Vernon Knight, of the Laboratory of Clinical Investigations, NIAID, reported their work in the American Review of Respiratory Diseases.

List of Latest Arrivals Of Visiting Scientists

11/12—Dr. David Givol, Israel, Study of Polypeptide Structures. Sponsor: Dr. Christian B. Anfinsen, NIAMD, Bldg. 10, Rm. 9N321.

11/18—Dr. Yutaka Nagai, Japan, Research on Aspects of Collagen Structure. Sponsor: Dr. K. A. Piez, NIDR, Bldg. 30, Rm. 404.

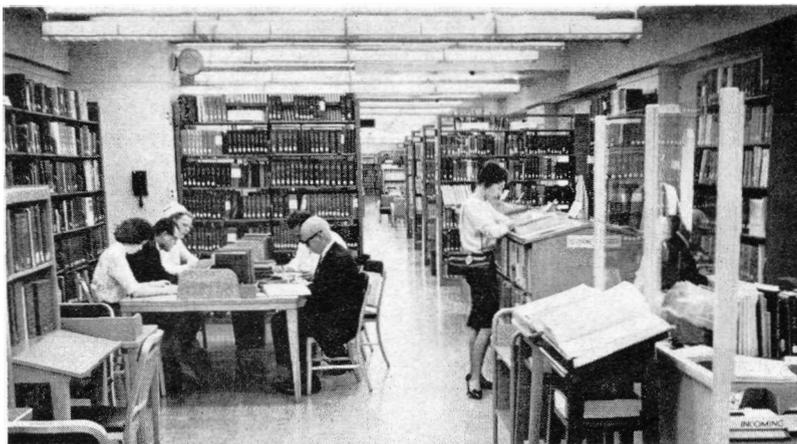
11/29—Dr. Oskar Steinwall, Sweden, Research on Problems Concerning the Blood-Brain-Barrier. Sponsor: Dr. Igor Klatzo, NINDB, Bldg. 10, Rm. 4N246.

12/2—Dr. Toshiyasu Ishimaru, Japan, Research on Deuterated Benzomorphan. Sponsor: Dr. E. L. May, NIAMD, Bldg. 4, Rm. 110.

12/2—Dr. Ramaswami V. Ravindranathan, India, Application of Organic Chemistry to the Study of Nucleic Acids. Sponsor: Dr. H. Todd Mills, NIAMD, Bldg. 2, Rm. 202.

12/2—Dr. Kevin H. Bell, Australia, Advanced Research in Organic Chemistry. Sponsor: Dr. Ulrich Weiss, NIAMD, Bldg. 2, Rm. B11.

NIH Library, 60 Years Old, Plans to Have Own Building



General reference area of the NIH Library in its present quarters on the fifth floor of the Clinical Center.—Photo by Bob Pumphrey.

During its sixtieth anniversary year now ending, the NIH Library with a staff of 67, circulated approximately 70,000 volumes, photocopied 1,200,000 pages, purchased 5,000 books and 2,500 journal titles, and borrowed 12,000 volumes from other libraries for NIH investigators.

From its central location on the fifth floor of the Clinical Center, the library also supervises the operation of two satellite libraries and a translating service. The latter provides NIH scientists with translations of scientific material published in most of the modern European languages. In addition, the library provides orientation lectures and tours for individuals and groups working at NIH.

As a result of the steadily increasing use of its facilities and services and the need for additional space, the Library Branch, operating under the Division of Research Services, recently underwent an administrative reorganization and is now anticipating a building of its own.

3 Sections Established

In place of six administrative units, the reorganization established three sections in addition to the Office of the Chief. They are the Readers Services, Technical Services, and Bibliographical Services Sections.

The new library building, now in the planning stage, will be located at the south side of the Clinical Center, between Wing D and the auditorium.

The reading areas will be arranged to give the user freer access to the stacks, and the entire library operation will be expedited by the installation of modern equipment.

A measure of the need for additional space is found in the fact that the 76 space allotments for readers in the present library were determined in 1953 on the basis of an anticipated NIH population of 4,500. The number of NIH employees is now more than double

Prosthetic Replacement Of Mitral Valve Found Effective but Imperfect

Hemodynamic studies by National Heart Institute scientists indicate that the Starr-Edwards artificial valve is an effective, although imperfect, substitute for the human mitral valve.

Currently the most successful and most widely used mitral valve prosthesis is the Starr-Edwards ball valve, developed in 1960 at the University of Oregon.

Although many patients owe their lives to this valve, which is used to replace totally the otherwise irreparably damaged natural valve, the often striking clinical improvement in a patient is too often inadequately documented by hemodynamic data.

These data, obtained by heart catheterization, constitute direct measurements of the direction and magnitude of blood flow through the valve (and around an improperly secured valve), and of blood pressure above and below the valve; they are reliable indicators of valvular function.

Data Obtained

In the currently reported studies, NHI scientists obtained complete hemodynamic data from 22 patients prior to prosthetic replacement of their mitral valves, and from 15 of the 18 surviving patients at intervals of two to six months postoperatively.

Postoperatively, two patients were found to have backward flow of blood around the prosthetic valve which was not suspected on clinical examination. In both patients, the defect was repaired by more secure fixation of the valve at a second operation, and the hemodynamic studies were repeated.

The scientists report: "In all patients the postoperative studies revealed striking improvement in the hemodynamic abnormalities present before operation . . ." with normal or near normal intracardiac pressures and output during rest.

In every patient, however, a pressure gradient across the valve was found in simultaneous measurements of left ventricular and left atrial pressures. This gradient increased, as did left atrial pressures, with only moderate exertion.

From these findings, the scientists conclude that the Starr-Edwards valve is an effective substitute for the diseased mitral valve, but that its use results in a hemodynamically significant stenosis or hindrance to blood flow.

These studies were reported at the 36th Scientific Sessions of the American Heart Association in Los Angeles by Drs. A. G. Morrow, W. D. Clark, D. C. Harrison, and Eugene Braunwald, of NHI's Surgery and Cardiology Branches.



This room, with its single table and gas light chandelier, served as the library of the Hygienic Laboratory in Washington, D. C.

that figure.

These present-day activities and plans are in marked contrast to the library's modest beginning in 1903. It was in that year that Dr. Milton J. Rosenau, Director of the Hygienic Laboratory, forerunner of NIH, appointed a part-time librarian to organize a collection of books for use of the research staff at its 25 and E Sts., N. W., location.

In 1930 the Hygienic Laboratory became the National Institute of Health, and in 1939 the library moved to the Bethesda site, where space was provided in the Administration Building for its 22,000-volume collection.

During World War II Dr. Thomas Parran, Surgeon General of the Public Health Service, consolidated the NIH and PHS libraries at NIH under Miss Margaret Doonan, the former PHS librarian. The combined collection totaled 41,000 volumes.

In 1947, when the "Institute" of the NIH title was changed to "In-

(See LIBRARY, Page 8)

NLM Exhibit Traces 2,000 Years of Psychiatric History

By Bill Kleven

Out of a murky background of religion, mythology, astrology, and supernaturalism developed a scientific discipline known today as psychiatry. It is a discipline encompassing that which once belonged to witchcraft and magic, and its beginning had little in common with modern psychology.

The rise of "psychiatric teams" and scientifically equipped mental hospitals from the superstitious and often cruel treatment of the mentally ill in earlier times is a fascinating story told by an exhibit at the National Library of Medicine, open daily from 8:30 a. m. to 10 p. m.

Entitled "2000 Years of Psychiatry," it illustrates some of man's attempts to understand and treat his mental afflictions from the days of Hippocrates to the mid-nineteenth century.

Earliest Practices Described

The earliest practices on record were those of the Stone Age cave men some half million years ago. Medicine doctors then treated certain forms of mental illness by chipping away an area of the skull with crude stone instruments until a hole had been cut to allow the evil spirits to escape.

Such naive theories of demonology persisted for centuries and became one of the largest obstacles to overcome in the understanding of mental illness.

The first major step in this direction came to light in early Greek civilization. Hippocrates (460?-375 B.C.), the father of medicine, left the fold of demonology, insisting that mental disorders had natural causes and needed treatment like other diseases.

Although his work was far from revealing adequate anatomical and physiological knowledge, Hippocrates' emphasis on clinical observations and brain pathology in relation to mental illness was revolutionary.

Greek Influence Strong

His work and that of later Greek physicians strongly influenced the Romans and eventually all of Europe. Around 25 A.D., Celsus prescribed some of the more humane treatments of the time in his treatise, *De Medicina*, which became a standard text book for centuries.

Such Roman physicians as Asclepiades, Aretaeus, and Galen continued to advance the theory that treatment of the mentally ill was within the realm of medicine. Galen's compilation of existing material in the field served as an epilogue to the classic Greco-Roman period in medicine, for with his death in 200 A.D. came the Dark Ages in psychiatric history.

With the notable exception of Alexander Trallianus in the sixth

century, most of the medical men returned to a form of demonology slightly modified to conform to current theological demands. Sin and demons were the cause of madness, and incantations, amulets, and exorcism were the cures.

During the early middle ages some of the more easily manageable patients were treated with kindness, but this was the exception rather than the rule. Flogging, starving, chains, and other torturous means were the predominant methods used to drive out the devils.

In the late 1400's the plight of the mentally ill became even worse



Established under the guidance of Benjamin Franklin in 1756, the Pennsylvania Hospital was the first institution in this country to set aside wards for care of the mentally ill. This engraving, part of the exhibit now on display at the National Library of Medicine, shows the hospital in 1857.—NLM Photo.

when demoniacal possession became the accepted theological belief. Thousands of people were burned as a result of the witch mania that swept across Europe and some of the American colonies during the following two centuries.

But men greater than their times began fearlessly to denounce the demoniacal origin of mental disease. Johann Weyer was one of the first to specialize in mental disorders and has been called the "Father of Psychiatry." His condemnation of demonology and his progressive views on mental illness were expressed in his classic, *De praestigis daemonum*, written 400 years ago, in 1563. Unfortunately for those of the time, however, his work was banned by the Church.

So-called "asylums" began to be established specifically for the mentally ill, the first being the famed St. Mary of Bethlehem Asylum in London in 1547. Its name soon be-

NIH-UGF Drive Exceeds 98 Percent of Quota; Chairman Thanks All

Dr. Frederick L. Stone, Chairman of the NIH-UGF Campaign, in announcing the close of the 1963 drive, reported that collections of pledges and cash totaled \$91,773 or 98.3 percent of the NIH quota.

"This amount was considerably in excess of last year's collections," he said, noting that under Dr. Clinton C. Powell's leadership in 1962, the NIH campaign had likewise considerably exceeded its highest previous record.

In expressing his thanks to all campaign workers and contributors, Dr. Stone said, "NIH can be proud of its willingness to carry with other members of the local community, some of the social burdens that we, as free men and women under a democratic form of government, have learned to share in accordance with our ability."

Dr. Colvin Gibson Named NIAID Branch Chief

Dr. Justin M. Andrews, Director of the National Institute of Allergy and Infectious Diseases, has announced the appointment of Dr. Colvin L. Gibson as Chief of the Research Grants Branch of the Extramural Programs, effective November 22.

At the present time Dr. Gibson is a Scientist Director in the PHS Commissioned Corps. He began his career with NIH in 1948 as a senior assistant sanitarian assigned to a 4-year field research project in Guatemala.

In 1952 he returned to the United States as a scientist in the Memphis, Tenn., field station of the Laboratory of Tropical Diseases.

Other Positions Cited

Other positions he has held in NIAID include Special Assistant to the Chief of Extramural Programs, Special Assistant to the Associate Director, Chief of the Virus Reagents Program, Chief of the Research Reference Reagents Branch, and Scientific Communications Officer.

A native of Detroit, he received both his A.B. and A.M. from the University of Michigan in 1940 and 1941 and was awarded his Ph.D. in Zoology from that university in 1951. He was a Fellow at the university while a candidate for both his master's and doctor's degrees.

Memberships Listed

Dr. Gibson is a member of the American Microscopical Society, the American Society of Parasitologists, the American Society of Tropical Medicine and Hygiene, and Sigma Xi.

He is a parasitologist whose published research has dealt chiefly with toxoplasmosis and the filarial diseases, especially onchocerciasis.

Medicine-History Group To Meet Here Jan. 10

Dr. John B. de C. M. Saunders, Provost of the University of California Medical Center, will present an illustrated lecture to the Washington Society for the History of Medicine on Friday, January 10, at 8:45 p.m. in Wilson Hall.

Dr. Saunders' topic will be "A Critique of the Biological Contributions of Leonardo da Vinci." Visitors are welcome.

aroused to the need for proper treatment of the mentally ill.



Dr. Gibson

COMPOUNDS

(Continued from Page 1)

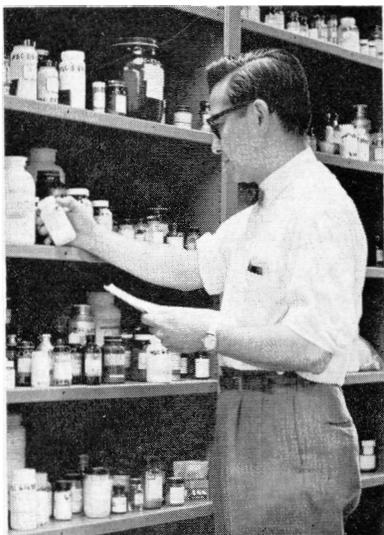
000 substances had been screened by the end of 1962.

The screening laboratories, under contract with CCNSC, test the drugs against various tumors in mice, rats, and hamsters to determine the extent of their usefulness against cancer.

Compounds showing promise on these tests are put through pre-clinical pharmacology to ascertain toxicity, dosage, and kind and degree of side effects. The few cleared by the pharmacologists have finally reached the stage of clinical trial.

Eventually the sample finds its way to the shelves and drawers of the "pickle works" where it is classified and stored.

The counterparts of some samples on the shelves have been used in the clinical phase of the program, perhaps to become one of



Robert B. Ing, Head of the Chemical and Drug Records Section of CCNSC's Drug Development Branch, refers to one of the thousands of chemical compounds tested for antitumor activity and stored for possible use in the nationwide cancer chemotherapy research program administered by NCI. —Photo by Jerry Hecht.

the truly significant drugs for cancer treatment.

The other samples in storage have not shown sufficient antitumor activity but may be found useful with later investigations in other fields.

The section's new, expanded storage area in the nearby Auburn Building is already filling with the samples received daily. However, Mr. Ing realizes the continuing need for screening drugs which point to cancer treatment with a reasonable scientific basis, and observes, "Fortunately, with the new techniques and new procedures in synthesis of chemical compounds, there will always be new compounds."

NIMH Monograph Cites Latest Findings On Addiction and Community Treatment

Drug addiction is described as "largely a psychiatric problem" by Dr. Luther L. Terry, Surgeon General of the Public Health Service, in the foreword of a new mental health monograph, "Narcotic Drug Addiction," recently published by the National Institute of Mental Health.

The Public Health Service has fostered the idea that the addict is a patient and not a criminal, Dr. Terry said. The Service has pioneered not only in medical care and rehabilitation but also in research. Now the public health approach to addiction, involving prevention, treatment and social rehabilitation, is being introduced into communities.

Community Efforts Listed

The 22-page pamphlet, written by Herbert Yahraes with the assistance of a number of leading drug addiction experts, lists some of the important new community efforts to treat addiction. Most of these projects emphasize long-term supervision of the patient, including a strict program of aftercare.

The pamphlet sums up the latest findings on the subject of drug addiction and points out that while the number of addicts seems to be leveling off, the cost of maintaining the habit—up to \$75 a day—creates a tremendous sociological problem.

The booklet also describes the kind of people who turn to narcotics—docile, noncompetitive, but at the same time impulsive, unstable, unable to plan ahead. It tells how the physician spots an addict, describes new methods of treatment and discusses the relationship between addiction and crime.

It outlines treatment procedures

in the two PHS narcotics hospitals at Lexington, Ky., and Fort Worth, Tex., reports on the high rate of relapse among addicts, and describes how new State-community centers are tackling the problem.

In the preface of the pamphlet, Dr. Robert H. Felix, NIMH Director, said, "If drug addiction is to be controlled in our society, a great deal more biological, clinical, and social research must be done on this problem.

"There is much we do not know about the nature of addiction . . . There are many clinical and social answers . . . we do not have. I believe that some of the missing answers to this grave problem must and will be found and developed within our communities.

Publication Increases Knowledge

"This can come about only as sound knowledge becomes widespread and as the effects of the problem of drug addiction are honestly faced. This publication will play a significant role in imparting such sound information about drug addiction and the problems it creates for the addict, his family, and his community."

"Narcotic Drug Addiction," PHS Publication No. 1021, is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., for 25 cents a copy. Single free copies are available from the Publications and Reports Section, National Institute of Mental Health, Bethesda, Md., 20014.

New Committee Named to Aid NIGMS Branch

Dr. Clinton C. Powell, Director of the National Institute of General Medical Sciences, has announced the establishment of a 9-member Clinical Research Training Committee to advise the Research Training Grants Branch.

The new committee, composed of non-federal scientists, will give recognition and special emphasis to the need for research training programs in selected clinical sciences.

In making the announcement, Dr. Powell said, "Programs designed to teach the new techniques and other advances of modern basic sciences to research-minded clinicians may be an answer to an urgent problem—the need for more investigators in the clinical sciences with broad competencies to permit the fullest use of present-day research advances."

The Clinical Research Training Committee will advise and make recommendations on support of research training opportunities in

anesthesiology, surgery, diagnostic radiology, and related basic science areas, usually at the post-residency level, at various private and public non-profit institutions.

Members of the committee are:

Dr. Edward D. Churchill (Chairman), Professor (Emeritus) of Surgery, School of Medicine, Harvard University; Dr. Frank L. Gerbode, Clinical Professor of Surgery, School of Medicine, Stanford University; Dr. J. Deryl Hart, Professor of Surgery, Duke University; Dr. John G. McAfee, Associate Professor of Radiology, Johns Hopkins School of Medicine; and Dr. Earl R. Miller, Professor and Vice Chairman, Department of Radiology, University of California.

Also Dr. S. H. Ngai, Associate Professor of Anesthesiology, College of Physicians and Surgeons, Columbia University; Dr. Henry L. Price, Wellcome Professor of Anesthesiology, University of Pennsylvania School of Medicine; Dr. John

NIAID Scientist Reports On Duration, Specificity Of Rhinovirus Protection

Dr. William F. Fleet, Jr., of the Laboratory of Clinical Investigations, National Institute of Allergy and Infectious Diseases, and member of a team of clinicians making inquiry into non-antibody related resistance to rhinovirus infection, presented the results of studies on the duration and specificity of this protection at a recent NIAID Grand Rounds.



Dr. Fleet

Volunteers free of antibody to two rhinoviruses—NIH 353 and NIH 1734—were inoculated initially with one or the other of these serotypes. This primary challenge regularly resulted in common colds and profuse virus shedding.

Two weeks after this primary challenge, when most of the volunteers had ceased shedding virus and before antibody response had occurred, homologous rechallenge of a group of these men resulted in complete absence of illness and less virus shedding than in the primary challenge.

Illness Is Reduced

Two other groups of men were rechallenged with the heterologous virus at either two weeks or five weeks after the primary challenge. Illness was absent in the 2-week rechallenge group and significantly reduced in the 5-week group. Virus shedding decreased both times.

Sixteen weeks after primary challenge, a number of men previously rechallenged at either two or five weeks were given a third challenge. Although many of the men had serum antibody against the challenge virus, the illness in this group was similar to that seen at primary challenge.

Dr. Fleet and his associates, Drs. R. B. Couch, T. R. Cate, and V. Knight, concluded that a prior rhinovirus infection confers a temporary protection against re-infection with the same or a serologically different rhinovirus. This protection is potent two weeks after primary infection, weaker at five weeks, and probably absent at 16 weeks.

Various explanations for this phenomenon are being explored; i.e., local temperature, pH, oxygen tension, and interferon. o

D. Reeves, Jr., Chairman of the Department of Radiology, J. Hillis Miller Health Center, University of Florida; and Dr. Leroy D. Vandam, Clinical Professor of Anesthesiology, Harvard Medical School,

DR. CUMMINGS

(Continued from Page 1)

programs provide support through contracts for the preparation of new scientific publications and translations.

The Library was first founded as the Library of the Army Surgeon General's office in 1836 and was established as the National Library of Medicine under Public Health Service administration in 1956. It contains more than 1,000,000 volumes and hundreds of thousands of additional biomedical documents.

The Library publishes the Index Medicus, the international guide to the literature of the medical sciences. Its indexing procedures currently are being computerized in a new system called MEDLARS (Medical Literature Analysis and Retrieval System).

Heads University Department

Dr. Cummings had been Associate Director of NIH since 1963 and Chief of the Office of International Research since 1961. He came to that position from the University of Oklahoma Medical School where he had been Chairman and Professor of the Department of Microbiology since 1959.

Dr. Cummings was born in Camden, N.J. in 1920. He received a B.S. degree from Bucknell University in 1941 and his M.D. from Duke University in 1944. His special interests were chest diseases, including particularly tuberculosis and sarcoidosis.

He was commissioned in the Public Health Service in 1946 and served in assignments at Grasslands Hospital, Valhalla, N.Y.; the Michigan State Department of Health; the State Serum Institute, Copenhagen, Denmark; and as Director, Tuberculosis Evaluation Laboratory, Communicable Disease Center, Atlanta, Ga.

Other Posts Listed

In 1949 he was named Director, Tuberculosis Section, and Director, Tuberculosis Research Laboratory, Veterans Administration Hospital, Atlanta, and in 1953 was appointed Director, Research Service, Veterans Administration Central Office, Washington, D.C.

In addition to his faculty experience at the University of Oregon, Dr. Cummings was an Associate Professor in Bacteriology at Emory University, Atlanta, and a special lecturer in microbiology at George Washington University School of Medicine.

In special assignments he has been Chairman of the Committee on Medical Research, National Tuberculosis Association; VA representative on the National Research Council and on the National Advisory Health Council; and has maintained his position as Chairman of the Panel on Sarcoidosis,

Policy of Mourning Stated By Public Health Service

In a memorandum dated November 29 Acting Surgeon General David E. Price stated the policy of the Public Health Service during the period of national mourning for the late John F. Kennedy, President of the United States.

The memo said in part: "During the official period of mourning there shall be no social or entertainment activities held in facilities of the Public Health Service. Nor will any personnel appear in an official capacity in social gatherings of a public nature. This is not intended to preclude gatherings of employees for carol singing and similar activities during the holiday season provided that appropriate decorum is observed."

DR. SHELOKOV

(Continued from Page 1)

interests have been the enteroviruses, respiratory viruses, and arboviruses, all of which are of particular interest and importance to DBS.

Dr. Shelokov received his early education in China, where he was born. He graduated from Stanford University in 1943 and in 1948 received his M.D. at Stanford.

He interned at Massachusetts Memorial Hospitals in Boston and was Chief Resident in Charge of Infectious Diseases at Haynes Memorial Hospital in 1949.

Serves as Consultant

Among his special assignments, Dr. Shelokov served as consultant during the poliomyelitis epidemic in Uruguay in 1955, and was a member of the U.S. study group on epidemic Asian influenza in Argentina and Uruguay in 1957.

He was scientific tour leader with the first U.S.-U.S.S.R. Medical Exchange Mission on poliomyelitis in 1956, and in 1961 was a member of the U. S. delegation on virus diseases to the U.S.S.R.

Dr. Shelokov is a member of the American Society of Immunologists, the Society for Experimental Biology and Medicine, the American Society of Tropical Medicine and Hygiene, the American Epidemiological Society, and the Infectious Disease Society of America.

He received the Order of Rodolfo Robles of the Republic of Guatemala in 1959.

National Research Council, National Academy of Sciences.

He is the author of more than 75 scientific papers, textbooks and special publications on sarcoidosis, tuberculosis and other infectious diseases.

CHRISTMAS

(Continued from Page 1)

sociate Director of the Clinical Center, will deliver Christmas greetings, and Chaplain LeRoy Kerney and Father John N. McFee will give the invocation and benediction, respectively. Patients and their guests are invited to this event.

The next day, Friday, there will be an open-house Christmas party in the 14th floor assembly hall, from 2 to 4:30 p. m. for CC patients and staff, to which the patients are requested to invite their doctors, relatives and friends.

The same evening, at 7:30, the Scottish Rite Masons of Washington will present a variety show in the assembly hall.

Children to Be Guests

Saturday afternoon at 3 o'clock the Clifton Park Citizens Association will be host at a Christmas party for all children patients in the 14th floor solarium. Old Saint Nick will be there in person.

In addition to the regular Christmas services on Sunday, there will be a Christmas Eve Protestant carol and worship service at 6:30 p.m. in the chapel and Catholic carol services at 11:45 p. m., to be followed by midnight mass. There will also be two masses in the chapel Christmas morning.

On Sunday, carol singers from nearby communities will also visit all nursing units, beginning at 7:30 p.m.

On Tuesday, the day before Christmas, Santa Claus will pay Christmas Eve visits to the bedsides of children patients, beginning at 6:45 p. m. Starting at 7:30 there will again be caroling throughout the nursing units.

Patients Receive Gifts

On Christmas morning every patient in the Clinical Center will receive a token Christmas present. These gifts were prepared by the CC Gray Service Volunteers and will be distributed by the nursing staff.

On Friday, two days after Christmas, the Veterans of Foreign Wars from College Park, Md., will give a two-hour New Year's party for the children patients beginning at 6:30 p. m. in the 14th floor solarium.

On New Year's Eve there will be a community sing, with dancing and games, in the solarium from 7:30 to 9 p. m., and on New Year's Day, from 2:30 to 5 p. m., the Sugar Bowl game will be televised in color on an enlarged screen in the 14th floor assembly hall.

Marriage entitles a woman to the protection of a stalwart man who steadies the step ladder for her while she paints the kitchen ceiling.—The Washington Post.

Dr. Thomas Dublin Cited For Medical Research in Israel Through NIH

Cited for work which has "recently advanced medical research in Israel through the National Institutes of Health," Dr. Thomas D. Dublin of the National Institute of



Dr. Dublin

day.

Dr. Dublin, Chief of NIAMD's Epidemiology and Biometry Branch, was to be honored for his role as a co-principal investigator in a long-range study of cardiovascular disease in Israel.

Dr. Dublin is the chief NIH representative on the team of cooperating scientists drawn from the staffs of the Hadassah Medical Organization, the Israeli Ministry of Health and the National Heart Institute, which is conducting these investigations.

Although Dr. Dublin is on the NIAMD staff, his services on this project have been loaned to the NHI which is the U.S. sponsor of this international research undertaking.

Counterpart Funds Used

The study receives support under a Public Law 480 research agreement, and makes use of local counterpart funds remaining in Israel from the sale of surplus U.S. agricultural commodities.

Started in 1961, this cardiovascular study is the first joint research project of its kind ever undertaken in Israel. Its activation required approximately one and one-half years of preliminary planning and negotiations by the cooperating units.

Commenting on the study, Dr. Dublin expressed the view that because of its unique population makeup, Israel affords unusual opportunities for research on cardiovascular disorders of importance to the United States and the world at large.

Of special significance to this study, the frequencies of heart disease among various groups in the Israelia population show striking variations.

For example, the prevalence of these disorders among Jewish immigrants from Europe and the West coincides with that of their former countries. In contrast, native-born Israelis or Jewish immigrants from the Middle East and

(See DR. DUBLIN, Page 8)

NIAMD Study Suggests Surface Sugar Role in Lymphocytes' Circulation

National Institute of Arthritis and Metabolic Diseases scientists have obtained evidence suggesting that the integrity of complex sugars on the surfaces of lymphocytes is essential for the circulation of this cell type.

Lymphocytes circulate through the body by a unique route. They emerge from lymphoid tissue and pass into the blood stream via lymphatic vessels. They then selectively emerge from the blood stream in lymphoid tissue and repeat the cycle.

It is known that intravenously administered lymphocytes, transfused from animals that are closely related genetically, will "home" to the spleen or lymph nodes in the recipient animal.

However, exactly why lymphocytes and no other cell type selectively, leave the circulation and re-enter lymphoid tissue has remained an open question.

Although several unique properties of lymphocytes are probably operative in the selective circulation of these cells, a recent study by NIAMD scientists raises the possibility that a critical factor in this process may be the integrity of the sugar components on the lymphocytes' surface.

In Vitro Tests Conducted

The investigators found that *in vitro* incubation of P³²-labeled thoracic duct lymphocytes with a bacterial glycosidase enzyme preparation prevented the concentration of these lymphocytes in the spleens of recipient rats after intravenous injection.

Separate injections of untreated lymphocytes and of the enzyme did not affect the usual concentration of lymphocytes in the spleen.

Motility and vital-dye uptake studies indicated that the enzyme-treated lymphocytes were living at the time they were injected.

Significantly, the suppressive effect of the incubation with glycosidase preparation on "homing" of the lymphocytes was specifically inhibited by the presence of the sugars, L-fucose and N-acetyl-D-galactosamine in the preincubation mixture, but not by several other closely related sugars.

Since there is reason to suspect that the two effective sugars are components of heterosaccharides (complex sugar molecules) found on the lymphocyte surface, the experiments raise the possibility that the "homing" phenomenon is dependent, at least in part, upon the recognition of these heterosaccharides by complementary sites in lymphoid tissue.

A report of this work by Dr. O. Bertram M. Gesner of NIAMD's

NHI Lab Will Pay Donors To Blood Assay Project

In order to standardize the assay of a newly determined protein in blood, Dr. E. C. LeRoy of the Experimental Therapeutics Branch, National Heart Institute, is seeking the cooperation of individuals over age 40 with no major illness who would like to donate 50cc blood samples.

NIH personnel interested in participating in the project may call Dr. LeRoy, Ext. 62044, to arrange appointments. His laboratory is located in Rm. 7N260, Bldg. 10. Volunteers will be paid \$2.50 for each sample drawn, Dr. LeRoy said. He pointed out that participants cannot eat any food the morning their blood samples are drawn.



James B. Davis, Chief of the Supply Management Branch (left), looks on as R. J. Colton, Head of the Research Contracts Section, presents a Superior Performance Award to his secretary, Mary F. Newkirk, "for her rare combination of attributes—persuasion, patience and perseverance."—Photo by Jerry Hecht.

MacNamee Is Appointed To DRG Study Section

Dr. James K. MacNamee has been appointed Executive Secretary of the Pathology B Study Section, Division of Research Grants. He takes the place of Dr. D. T. Chalkley, who has served as Executive Secretary of both Pathology Study Sections since June of 1961. Dr. Chalkley will now devote full time to the Pathology A Study Section.

Dr. MacNamee, a veterinary pathologist, comes to the Division from the sixth U.S. Army Medical Laboratory at Fort Baker, Calif.

Educated at Auburn University, he has held faculty posts there, at Southwestern Louisiana Institute, and at the University of Georgia.

Arthritis and Rheumatism Branch and Dr. Victor Ginsburg of the Institute's Laboratory of Biochemistry and Metabolism was presented at the recent meeting of the American Rheumatism Association.

R&W Sponsors Contest For New Official Seal, Offers \$75 in Prizes

A contest for the design of an official seal for the Recreation and Welfare Association of NIH will be sponsored by R&W. Prizes up to \$75 will be awarded in the contest, open to any NIH employee or member of his immediate family.

An official seal, symbolizing the spirit of the association and of NIH, is needed not only for documents and stationary but also for the R&W brochure and Smoke Signals, its monthly information flyer.

Indian Is Symbol

For years R&W has used as its symbol an Indian holding a bunsen burner. This apparently stemmed from the terming of NIH as the "reservation," hence the title Smoke Signals for the information flyer. With the growth of NIH and the incorporation of R&W, a more formal seal, similar in character to the one adopted by the NIH Federal Credit Union last year, is felt to be appropriate.

Sketches should be sent to the R&W Office, Bldg. 31, Rm. 1A18, no later than December 31. Questions concerning the contest and background information about R&W should be directed to John Reeder, Ext. 64653.

Final selection of the winning entry will be made by the R&W Executive Council. All sketches become the property of R&W and cannot be returned.

Four Are Appointed to Two Advisory Councils

Surgeon General Luther L. Terry of the Public Health Service recently announced the appointment of four new members to serve 4-year terms on two National Advisory Councils.

Appointed to the National Advisory Arthritis and Metabolic Diseases Council were Dr. Frank H. Tyler, Professor of Medicine, University of Utah; and Dr. William D. Robinson, Chairman of the Department of Internal Medicine, University of Michigan Medical School at Ann Arbor.

Named to the National Advisory Heart Council were Dr. Julius H. Comroe, Professor of Physiology and Director of the Cardiovascular Research Institute, University of California Medical Center; and Dr. John B. Hickam, Professor and Chairman, Department of Medicine, Indiana University Medical Center.

All appointments are effective through September 1967.

Today's accent may be on youth, but the stress is still on parents.—Ties, the Southern Railway System magazine.

Dr. George T. Brooks Joins NICHD Branch

Dr. George T. Brooks, a graduate of the NIH Grants Associates Program, has been appointed a Training Consultant in the Extramural Management Branch of the National Institute of Child Health and Human Development, effective December 21.



Dr. Brooks

In his new post Dr. Brooks will assist in administering the training and fellowship activities of the Institute.

Before coming to NIH and entering the Grants Associates Program, Dr. Brooks worked with the Regional Insect Control Project of the Agency for International Development for 11 years.

During this period he served in Lebanon, Iran, Pakistan, Nepal and several African countries.

Teaches at University

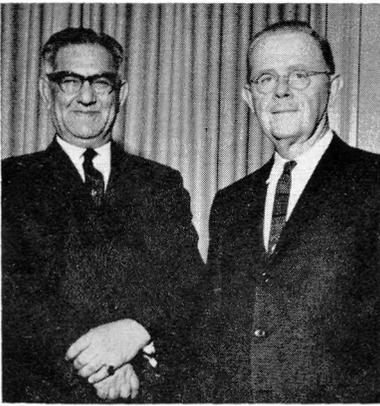
Dr. Brooks was an Associate Professor of Biology and Acting Head of the Department of Biology at Texas Southern University, Houston, before his tour of duty with AID. During World War II he served in the Army Air Corps.

A native of Kansas City, Kans., Dr. Brooks attended the University of Kansas, majoring in entomology, and received his A.B., M.A., and Ph.D. degrees from that institution following World War II.

He is a member of Sigma Xi, Phi Sigma, the Entomological Society of America and the American Association for the Advancement of Science.



Jeanne Delauter, Budget and Fiscal Clerk, NIGMS, receives a cash award and certificate from Dr. Clinton C. Powell, Institute Director (left), in the presence of her superior, Donald Beauchamp, NIGMS Budget Officer. Mrs. Delauter was commended for her "exceptional capabilities in performing assignments beyond the scope of the normal requirements of her position, for an extended period of time" when she was the sole employee of the Budget Office.—Photo by Ed Hubbard.



Dr. M. K. Alfridi, Honorary Consultant in Malariaology to the Health Division of the Government of Pakistan (left), is pictured with Dr. Justin M. Andrews, Director of NIAID, just before speaking at a recent meeting of the Tropical Medicine Society of Washington in Wilson Hall on the "Status of World Wide Malaria Eradication." Dr. Alfridi is a consultant and co-investigator with Dr. G. Robert Coatney, Chief, and Dr. Peter Conratos, of the Laboratory of Parasite Chemotherapy, NIAID, in the projected trials in Pakistan of the new long-acting anti-malarial CI501.—Photo by Sam Silverman.

LIBRARY

(Continued from Page 3)

stitutes" because of a greatly expanded research program, the library was placed under the Scientific Reports Branch, OD.

In that year the library, with a staff of 15, loaned 40,000 books and journals, answered 6,000 reference questions, and borrowed 4,400 volumes from area libraries.

In 1950 Scott Adams was appointed NIH librarian, and at his request the library needs were surveyed and recommendations submitted for policy and organizational changes.

Translation Unit Added

The following year the Translating Unit was placed under the library's jurisdiction, where it remains. Its monthly publication, Recent Translations, is available from the Translating Unit, Bldg. 10, Rm. 11-N-112.

The Russian Scientific Translation Program, which during Mr. Adams' tenure was added to the library's services, was later transferred to the National Library of Medicine.

In October 1956 the Library Section was transferred to the Division of Research Services, and in April of that year the section was elevated to branch status.

In 1960 Dr. Ralph R. Shaw, of the Graduate School of Library Service, Rutgers University, conducted a survey of the NIH Library. His findings reevaluated the library's policies and procedures and outlined future growth and development of its services.

New Hourly Rates Become Effective for Regular, Laundry Schedules on Dec. 8

New rates of pay went into effect December 8 for NIH employees paid from regular and laundry pay schedules applicable to the D. C. Metropolitan Area.

The regular schedule covers all trades, crafts, and manual labor positions other than those located in laundries and printing plants. The average pay increase is 10 cents per hour, although the increases vary from seven to 15 cents throughout the grade structure.

The new laundry pay schedule shows an average of 10 cents per hour for positions in grade 9 and above. Pay rates for the first eight grades have been left unchanged, since these rates were adjusted last

August to accommodate the schedule to the federal minimum wage rate of \$1.25 per hour which went into effect in September 1963.

The new schedules are shown below:

REGULAR WAGE SCHEDULE

WB Grade	Hourly Step 1	Rates of Pay Step 2	Step 3
1	1.51	1.59	1.67
2	1.72	1.81	1.90
3	1.92	2.02	2.12
4	2.13	2.24	2.35
5	2.33	2.45	2.57
6	2.44	2.57	2.70
7	2.56	2.69	2.82
8	2.66	2.80	2.94
9	2.77	2.92	3.07
10	2.89	3.04	3.19
11	3.03	3.19	3.35
12	3.17	3.34	3.51
13	3.33	3.50	3.68
14	3.47	3.65	3.83
15	3.61	3.80	3.99
16	3.75	3.95	4.15
17	3.90	4.10	4.31
18	4.05	4.26	4.47
19	4.19	4.41	4.63
20	4.33	4.56	4.79
21	4.47	4.71	4.95

Blood Insurance Program Wins Prompt Response

Just four days after distribution of the Blood Insurance Policy to all employees, the Clinical Center Blood Bank reported receipt of 190 signed applications for donations. In the same period 20 persons donated blood and 50 others made phone inquiries about the program.

The new blood plan, made possible through an arrangement between NIH and the American Red Cross, enables NIH donors, their dependents, parents, and parents-in-law to receive free blood at any hospital in this country.

To validate the program, however, NIH employees must donate at least 2,000 pints of blood annually for use of research patients in the Clinical Center.

As a result of the Shaw report the photocopy service, inaugurated in October 1960, was expanded. It now consists of two Xerox photocopiers and a Xerox copyflo continuous printer. The latter prints dry copy from 35 mm. microfilm at the rate of 20 linear feet per minute. It is currently operated on a 72-hour service basis, from request to copy-in-the-mail.

The first of the satellite libraries—the Engineering Library—was established in 1960 and was at first located in the Research Facilities Planning Branch of DRS.

The two others, later established, are the Laboratory of Perinatal Physiology, of NINDB, in San Juan, Puerto Rico, and the Mental Health Study Center, of NIMH, at Adelphi, Md. The Engineering Library was transferred back to the NIH Library in August.

On February 1 of this year, Jess A. Martin, formerly librarian of the Health Center Library, Ohio State University, was appointed Acting Chief of the Library Branch, and the administrative reorganization now in effect was adopted last June. Mr. Martin was named Branch Chief November 22

LAUNDRY WAGE SCHEDULE

WB Grade	Hourly Step 1	Rates of Pay Step 2	Step 3
1	1.25	1.32	1.39
2	1.30	1.37	1.44
3	1.35	1.42	1.49
4	1.40	1.47	1.54
5	1.44	1.52	1.60
6	1.54	1.62	1.70
7	1.63	1.72	1.81
8	1.73	1.82a	1.91
9	2.00	2.10a	2.21
10	2.27	2.39a	2.51
11	2.54	2.69a	2.80
12	2.80	2.95a	3.10
13	3.07	3.23a	3.39
14	3.34	3.52a	3.70
15	3.61	3.80a	3.99
16	3.75	3.95a	4.15
17	3.90	4.10a	4.31
18	4.05	4.26	4.47
19	4.19	4.41a	4.63
20	4.33	4.56a	4.79
21	4.47	4.71a	4.95

DR. DUBLIN

(Continued from Page 6)

North Africa appear to be less susceptible to heart disease.

This study is attempting to measure as precisely as possible, both the prevalence and incidence of heart disease in the different ethnic segments of the population of Israel. It also seeks to determine which factors or combination of factors (constitutional, dietary, or psychosocial way of life) may be responsible for susceptibility or resistance to heart disease.

Carefully controlled conditions guide the accumulation of data sought in the study. About 10,000 Israeli male civil servants over the age of 40 are volunteer partici-

Study of Brain Activity Reveals Sleep Changes Pattern of Discharge

A National Institute of Mental Health scientist has found that the effect of sleep on the discharge of brain cells in animals is a change in the pattern of discharge rather than a decrease in total activity.

In spite of the medical significance of sleep and its disorders, an inadequate understanding has existed of the way in which the activity of the nervous system is different during sleep as compared to the waking state.

By employing techniques which allow the recording of activity from single nerve cells in the brains of cats and monkeys during natural sleep and waking, Dr. Edward V. Evarts, of the Laboratory of Clinical Science, NIMH, is conducting studies directed toward finding out precisely how the activity of the brain changes with sleep.

Interneurons Involved

Recent results indicate that sleep may involve selective inactivity of certain types of nerve cells, called interneurons, with consequent disorganization of the activity of many of the remaining brain cells.

These results, according to Dr. Evarts, make it appear likely that sleep is associated with inactivity of certain specialized types of nerve cells and hyperactivity of others, rather than involving a generalized reduction of activity in the brain.

On the basis of these experiments, Dr. Evarts plans to further characterize the various types of brain cells according to whether they have increased or decreased activity during sleep, and finally, to determine what sorts of biochemical changes cells undergo during their inactivity throughout sleep.

Dr. Evarts reported his findings at the International Symposium on Sleep in Lyon, France.

pants. These volunteers are currently being examined in four special centers established for this purpose.

The second or follow-up phase of this long-range study will get under way in January 1964. Concurrently, analyses will be made of the vast volume of data now emerging from the examinations and other study procedures which the examinees undergo.

A Commissioned Officer in the Public Health Service, Dr. Dublin is internationally recognized as an authority in the fields of medical ecology and epidemiology. His current research activities are directed toward investigations of constitutional (including genetic) and environmental factors influencing resistance or susceptibility to metabolic diseases or disorders.