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 Biologies Standards. 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 interest in infectious diseases, his special

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

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 memory of the late President of the 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.

CCNSC's Drug Development

Branch. Robert B. Ing, Head of the

December 17, 1963
Vol. XV, No. 25

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National Institutes of Health
Public Health Service

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.

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 biomedical 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

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!
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 the 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. 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 State or State income tax withheld from their payroll check. Dedications from designated payees will be effective the first pay period of calendar year 1964, or thereafter upon return of the signed form to the payroll office.

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 payees will be effective the first pay period of calendar year 1964, or thereafter upon return of the signed form to the payroll office.

Shorthand Refresher Courses

Two shorthand refresher courses will be offered by the Employee Development Section to stenographers and secretaries beginning January 10, 17, and 24 in the Clinical Center Blood Bank at its new location. 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 quietly. 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 problem of adenoviral infections to occur in epidemic form during the early winter months among military recruits and young children.

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

11/18—Dr. 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.

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

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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.

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 irrepairably 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, NIH 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 hemodynamic data 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 atrial 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 NIH's Surgery and Cardiology Branches.
Out of a murky background of religion, mythology, astrology, and supernaturalm development a scientific discipline known today as psychiatry. It is a history 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 swept away 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 hydraulic illness and environmental 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 20 A.D., Galen prescribed some of the more humane treatments of the time in his treatise, De Medicina, which became a standard textbook for centuries.

Such Roman physicians as Asclepiades, Areteaus, and Galen continued to advance the theory that treatment of the mentally ill was within the realm of medicine. Galen’s compilation of existing materials 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 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 praestigiiis 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 at London in 1547. Its name soon became contracted to “Bedlam.”

Similar hospitals or modified penal institutions appeared in other countries, including the Pennsylvania Hospital at Philadelphia under the guidance of Benjamin Franklin in 1756.

Gradually a more scientific and humane approach arose, and in 1793 the chains of the shackled patients in Paris’ Bicêtre Hospital were removed by Philippe Pinel. Suspected by many as being an anti-revolutionist, Pinel continued his good work and eventually established some ten new mental hospitals to place France in the forefront of modern psychiatry.

In the meantime a Quaker named William Tuke took leading reform movements in England and established the York Retreat, which became a model for several mental hospitals in the United States.

Later, through the zealous campaigns of Dorothea Dix in the mid-1800’s, public interest was finally aroused to the need for proper treatment of the mentally ill,
NIHM 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 monograph, “Narcotic Drug Addiction.”

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 preclinical 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 the truly significant drugs for cancer treatment.

The other samples in storage are expected to be retested later as the need arises, perhaps to become 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.

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 fields.

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 the 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 new 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. Edward 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. Harley L. Price, Wellcome Professor of Anesthesiology, University of Pennsylvania School of Medicine; and Dr. John Reeves, Jr., Chairman of the Department of Radiology, J. Hillis Miller Health Center, University of Florida; Dr. Leroy D. Vandam, Clinical Professor of Anesthesiology, Harvard Medical School.

NIH AID 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.

Volunteers free of antibody to two rhinoviruses—NIH 333 and NIH 1734—were inoculated initially with one or the other of these serotypes. This primary challenge resulted in common colds and profuse virus shedding.

Volunteers were challenged 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. R. Couch, T. R. Cate, and V. Knight, concluded that a prior rhinovirus infection confers a temporary protection against re-infection with 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.
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 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 of 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 1955 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, tuberculosis and other infectious diseases.

Policy of Mourning Stated by Public Health Service

In a memorandum dated November 26, Acting Surgeon General David Inouye took 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 on the facilities of the Public Health Service. Nor will any personnel appear in an official capacity in social gatherings of a public nature. This is to prevent 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)

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 the Baynes 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)

The next day, Friday, there will be an open-house Christmas party in the 14th floor assembly hall, from 3 p.m. to 5 p.m. for patients and staff, to which the patients are invited 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 assembly hall. St. 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 bedside 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 Christmas gift. 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 5 p.m. in the 14th floor solarium.

On New Year’s Eve there will be an open house, with dancing and games, in the solarium from 7:30 to 9 p.m. Starting at 7:30 there will again be caroling throughout the nursing units.

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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 Israeli population show striking variations.

For example, the prevalence of these disorders among Jewish immigrants from Europe and the West coincides with that of other former countries. In contrast, native-born Israelis or Jewish immigrants from the Middle East...
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, transplanted 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 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 these cells in the spleens of recipient rats after intravenous injection.

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 "homeing" 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 "homeing" phenomenon is dependent, at least in part, upon the recognition of these heterosaccharides by complementary sites in the cell receptor.

**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. A formal 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. 64638.

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.

**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.

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

**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 Air Corps.

A native of Kansas City, Kan., 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.
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 and assigned to the D.C. Metropolitan Area.

The regular schedule covers all trades, crafts, and manual labor positions other than those located in the laboratories and clinics. 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 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**

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**Laundry Wage Schedule**

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Library (Continued from Page 4)

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.

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 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, NIH, is conducting studies 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 accompanied by 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.

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 participants. 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 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.