Marston Sees End
In Next Decade to
Childhood Diseases

By the 1970's, all of the "normal"
contemporary childhood diseases should have dis-
appeared in America, Dr. Robert Q. Marston asserted in New York
last week.

Speaking at the annual ceremon­
yes for the presentation of the Al­
bert Lasker Medical Research
Awards on Nov. 21, Dr. Marston
listed numerous research accom­
plishments of the recent past and
said "almost every medical advance
in this country in recent years has
been supported to some degree by
NIH programs."

Dr. Marshall W. Nirenberg,
chief of the Laboratory of Bio­
genetics, NIH, was named co-winner of the 1968 Las­
kser Award for Basic Medical Re­
search, with Dr. H. Gobind Kho­
rana, University of Wisconsin, for
their independent research in in­
terpreting the genetic code.

A second Basic Medical Research
award was given to Dr. William
F. Windle, former chief of the
NINDS Laboratory of Perinatal
Physiology, now with the New
(U.S. DEPARTMENT OF
Health, Education, and Welfare
November 26, 1968
Vol. XX, No. 24
Dr. Gordon M. Tomkins, chief of the Labo­
atory of Molecular Biology, Na­
tional Institute of Arthritis and Meta­
bolism, has been selected as the 40th
National Institutes of Health Lecture
on Wednesday, Dec. 11, at 8:15 p.m.
at the Clinical Center auditorium. Dr.
Tomkins' topic will be "Control of
Gene Activity in Higher Organisms."

Career Study Contrasts
Academic—Nonacademic
Salaries, Advancement

A new study, involving ten thou­
sand doctors of philosophy, science,
and education shows that about
half have consistently stayed in
their employment; the other half
quit. About one fourth entered nonacademic
employment, and the rest have shifted
between the two.

Salaries in academic employment
have spurted, but nonacademic em­
ployment salaries are higher. Phys­
cal scientists, regardless of place
of employment, draw the highest
pay.

Doctors in the humanities, arts,
and professions are at the bottom
in salary scales. Those in the bio­
 sciences and social sciences are at
an intermediate pay level.

Single women with doctorates
have advanced faster than married
women doctors, all the women as
a group have climbed the career
steps more slowly than men.

Cross Section of Pupils
Participate in Study
On Hearing Conservation

More than 5,000 pupils, repre­
senting a cross section of the ele­
mentary school population, took
part in a hearing conservation pro­
gram for detecting children who
need special otological and audi­
ological attention.

The study also indicated the
need for a strong school medical
service that could identify signs
and symptoms of ear disease and
hearing dysfunction in children.

NINDS Supports Program

The program, supported by the
National Institute of Neurological
Diseases and Stroke, was con­
ducted by Dr. Eldon L. Eagles of
NINDS, Dr. Samuel M. Wishnik,
Columbia University, and Dr. Leo
G. Doerfler, Eye and Ear Hos­
pital, Pittsburgh, Pa.

For this study periodic hearing
level determinations and otolaryn­
gological examinations were con­
ducted. Medical histories were also
included.

Emphasis was given to the find­
ings obtained with a group of ap­
(See HEARING, Page 6)

Research on Rabbits Proves Interferon
Stimulation Cures Acute Viral Infection

Solid evidence has been provided that interferon stimulation can cure
an acute viral infection.

Dr. John H. Park, an ophthalmologist at New York Medical College,
and Dr. Samuel Baron of the National Institute of Allergy and Infe­
tious Diseases, have cured rabbits of herpes simplex keratoconjunc­
tivitis—an often fatal eye infec­
tion.

The scientists treated the rabbits
with a synthetic double stranded
ribonucleic acid (RNA) which
stimulates the body's interferon
system to produce greater-than­
normal amounts of antiviral sub­
stance.

No Toxic Reactions

Treatment, begun as late as 3
days after inoculation of the rab­
bit's eye with virus, induced re­
covery from severe and fully es­
tablished keratoconjunctivitis. In
addition, the curative doses pro­
duced no toxic reactions.

These findings strengthen the
hope that interferon inducers may
also be useful in treating viral in­
fections in man. The research was
reported in the Nov. 15 issue of
Science.

The interferon system is a nat­
ural virus-fighting apparatus of
the body, producing an antiviral
substance which limits the spread
of invading viruses.

In many illnesses, however, the
system does not produce enough
interferon to overcome an estab­
lished infection.

Prevents Infections

It has been known for some time
that application of interferon can
prevent a wide range of viral in­
fections, and previous studies have
shown some protective effect when
interferon (in addition to the sup­
ply produced by the body) was
applied after inoculation with virus,
but before onset of disease.

Until recently, however, it was
not possible to obtain enough of
the antiviral substance to use in
treating already established dis­
ease.

The problem was that each spe­
cies of animal responds only to
interferon produced by that spe­
cies, making the production of
useful amounts both difficult and
costly.

(See INTERFERON, Page 6)

Film Seeks to Attract
Young People to Careers
In Dental Research Field

A new 30-minute film, "Labora­
tory of the Body," has been pro­
duced to attract young people to
diversified careers in dental re­
search.

Prints will be available to career
guidance counselors and science
teachers so they may show the
movie to high school seniors and
college freshmen.

Featuring in the film are research
projects at the National Institute
of Dental Research, the University
of Alabama, and the University of
Texas Dental Branch.

The movie was sponsored by the
American Dental Association,
American Association of Dental
Schools, and the International As­
sociation for Dental Research. It
was supported by an NIDR grant.

The film premiered at the 109th
annual session of the ADA in
Miami Beach.
The Record

Published biweekly at Bethesda, Md., by the Publications and Reports Branch, Office of Information, for the information of employees of the National Institutes of Health, principal research agency of the Department of Health, Education, and Welfare, and circulated by request to interested writers and to investigators in the field of biomedical and related research. The content is reprintable without permission. Pictures are reprinted on request.

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

NIH Record Office Bldg. 36, Rm. 1C-18. Phone: 49-62125

Editor Frances W. Davis
Assistant Editor Fay LeViero

Staff Correspondents
Tony Anastasi, DBS; Ben Attis, NINDS; Lloyd Blevins, NICHD; Thomas Bowers, CC; George Bragaw, NIH; Katie Broberg, NIAMD; Lawrence Chamblee and Florence Foelak, BHIM; Jan Clagett, FIC; Sue Hannon, NIDR; Walter Jacob, OAM; Sheila Jacobs, NCI; Elizabeth Y. James, DEHS; Betty Kuster, DCRT; Ann R. Lindsay, NLM; Art McIntire, NIMH; Marian Oakleaf, DRG; Faye Peterson, DBS; Jane Shure, NIAID; Wanda Wardell, NIGMS; Beverly Warran, DBR.

NEWS from PERSONNEL

SNOW DAYS
At this time of year hazardous weather conditions may result in early dismissals of NIH employees or the temporary closing of portions of NIH.

When there is a need for early dismissal, employees who can be spared will be dismissed on a zone basis at 15-minute intervals.

The various zones are defined in Policy and Procedure Memoranda, Personnel No. 4, revised Oct. 7, 1968.

Members of carpools will depart according to the zone of the vehicle operator.

Excludes 'Essential' Employees
Because of such responsibilities as patient care and experimental research, NIH cannot completely close. Consequently, Institute/Division Directors designate those activities which must continue regardless of weather conditions.

Neither early dismissals nor the temporary closing of NIH apply to employees considered "essential." Such employees are to report for work despite radio and television announcements to the contrary.

If an employee is not certain whether he is "essential," he should check with his supervisor.

HEALTH BENEFITS COVERAGE
Employees planning to marry should consider possible health benefit alternatives for including their spouses under the program.

A change in marital status entitles eligible employees to: (1) newly enroll in the program, (2) change from self only to a family

NIH Television, Radio Program Schedule

Television
NIH REPORTS
Dr. Gerald D. LaVeek, Director, NICHD
WRC, Channel 4—Saturday
Nov. 30—4:25 p.m.
Preempted—AFL Football
Dec. 7
Radio
DISCUSSION: NIH
Dr. Milo D. Leavitt, Jr., Director, John E. Fogarty International Center for Advanced Study in the Health Sciences
WGMS, AM-570—FM Stereo
103.5—Monday, Nov. 29—about 9:15 p.m.
Blair L. Sadler
NIAMD
Dr. Alfred M. Sadler
WGMS, AM-570—FM Stereo
103.5—Friday, Dec. 6—about 9:15 p.m.
Both interviews take place during intermission, Library of Congress Chamber Music Series.

enrollment, or (3) change plans or options.

The change in registration may be made as early as 31 days before the marriage but no later than 60 days after.

Employees with questions concerning their right to change health benefits enrollment should consult their I/D Personnel Office.

The death rate for diseases of the heart (the leading cause of death) decreased from 371.3 per 100,000 population in 1966 to an estimated 356.2 in 1967.

Award-Winning Exhibit On Blood Transfusion To Be Shown at CC

An almost forgotten chapter in American medical history was reconstructed at the 21st Annual Meeting of the American Association of Blood Banks held recently in Washington.

Dr. Paul J. Schmidt, chief, Clinical Center Blood Bank, and Dr. William Kuhns of Bellevue Hospital Center, presented an exhibit that traced the history of blood transfusions in the United States during the 19th century.

The exhibit was awarded first prize, a blue ribbon and scroll, by the association.

Nobelist Honored
The meeting commemorated the 100th anniversary of the birth of Dr. Karl Landsteiner, the 1930 Nobel prize winner. He was named laureate for his discovery of blood groups in the early part of the twentieth century.

Displayed at the exhibit were original articles and illustrations on American blood transfusion methods that were practiced as far back as 1795.

Included among the documents were newspaper editorials on blood transfusions, written 100 years ago, and reflecting the opinions of the times.

The exhibit will be shown to NIH employees during Blood Bank Open House on Dec. 6 in the Clinical Center lobby. Included with this historical display will be antique blood transfusion instruments from the Medical Museum of the AFIP.

NIH Employees Engaged In Transportation Vote On Bargaining Agent

NIH employees engaged in transportation activities are voting today to establish whether or not the Washington Area Metal Trades Council will be their exclusive bargaining agency.

These employees also have the alternative to vote for no union.

The bargaining unit includes transportation workers in the following NIH organizations: Office of Administrative Management—Supply Management Branch; Property and Services Section; Office Services Branch, Transportation Section; Division of Research Services—Biomedical Engineering and Instrumentation Branch; Laboratory Aids Branch; Plant Engineering Branch, Maintenance Engineering Section, and Planning and Control Section.

Also, Office of Center—Administrative Branch; NCI—General Laboratories and Clinics, and NICHD—Children’s Diagnostic and Study Branch.

NIH Employees Visiting Blood Bank Open House Eligible for U.S. Bond

Getting the drop on NIH employees is Angie Watson and Mrs. Janice Watson, daughter and wife of Dr. Stanley E. Watson, CC. The card-dropping practice was held to familiarize Mrs. Watson with her duties as a voluntar at the Blood Bank Open House Dec. 6. Employees who attend that day will fill out cards to be eligible for a $25 U. S. Savings Bond.

YOU might be the winner of a $25 U. S. Savings Bond. Every NIH employee who visits the Blood Bank Open House, to be held at the Clinical Center on Dec. 6, is eligible.

A bond will be awarded to three fortunate contestants whose registration cards are selected at a drawing the following week.

The cards will be chosen at random by Dr. Jack Masur, CC Director, or Dr. Paul J. Schmidt, chief, CC Blood Bank. The NIH Recreation and Welfare Association has donated the bonds.

Dr. Schmidt, in commenting on Blood Bank Open House, said, "We are very proud of the work that goes on here at the Blood Bank, and we want everyone to see what we do. . . ."

Post Office States Rules For NIH Registered Mail
Notice has been received from the U. S. Post Office Department that they have, on several occasions, received a number of registered articles which were not prepared in accordance with regulations.

As a reminder to all Institutes and Divisions, any person wishing to send mail registered, certified, or insured must dispatch it through the main mail facility in Building 31, for proper preparation; i.e., stamping the service desired, assigning a number, and recording that number.

THE NIH RECORD

November 26, 1968
Revised Quota for CFC Raises Final Percentage Pledged at NIH to 92.4

Lowering the NIH-Combined Federal Campaign quota from $207,722 to $198,375, just as the campaign was drawing to a close, raised the final percentage of quota pledged to 92.4, according to Dr. Seymour J. Kreshover, Director of the National Institute of Dental Research, and this year’s campaign chairman.

The previously announced percentage, 88.2, was based on the quota originally assigned.

8 Exceed 100 Percent

On the basis of the revised quota, eight of the NIH participating units went over 100 percent, and five others exceeded 90 percent of their individual quotas.

The National Institute of Mental Health, which has intramural research laboratories and staff in the Clinical Center, Building 15K (Child Research Branch), and the new NINDS-NIMH Research Building at NIH, went “over the top” of its CFC goal this year.

The NIMH goal was $23,500, with $24,065 contributed, or 102 percent. The intramural NIMH staff gave $6,700 or nearly 28 percent of the Institute’s total.

Nathan Sloat, Director of the Office of Program Liaison at NIMH, was chairman of the NIMH campaign.

CFC Collections to Nov. 1

<table>
<thead>
<tr>
<th>Unit</th>
<th>Amount Collected</th>
<th>Percent Pledged of Goal</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEHS</td>
<td>$81,111.00</td>
<td>146.1%</td>
<td>86.5%</td>
</tr>
<tr>
<td>NIGMS</td>
<td>$5,087.75</td>
<td>100.2%</td>
<td>91.3%</td>
</tr>
<tr>
<td>NIDR</td>
<td>$7,631.55</td>
<td>118.2%</td>
<td>105.0%</td>
</tr>
<tr>
<td>BFM</td>
<td>$10,095.04</td>
<td>125.3%</td>
<td>96.6%</td>
</tr>
<tr>
<td>DRG</td>
<td>$12,965.09</td>
<td>100.9%</td>
<td>96.8%</td>
</tr>
<tr>
<td>DRB</td>
<td>$19,357.81</td>
<td>98.9%</td>
<td>93.9%</td>
</tr>
<tr>
<td>NLM</td>
<td>$5,762.02</td>
<td>102.9%</td>
<td>80.0%</td>
</tr>
<tr>
<td>OAG</td>
<td>$6,272.10</td>
<td>106.3%</td>
<td>89.9%</td>
</tr>
<tr>
<td>NIAID</td>
<td>$11,504.08</td>
<td>74.7%</td>
<td>78.5%</td>
</tr>
<tr>
<td>NIH</td>
<td>$13,999.09</td>
<td>73.7%</td>
<td>78.5%</td>
</tr>
<tr>
<td>DRS</td>
<td>$1,384.00</td>
<td>97.3%</td>
<td>96.6%</td>
</tr>
<tr>
<td>NCID</td>
<td>$6,383.35</td>
<td>96.8%</td>
<td>82.7%</td>
</tr>
<tr>
<td>NAID</td>
<td>$8,561.88</td>
<td>95.4%</td>
<td>82.2%</td>
</tr>
<tr>
<td>DRFR</td>
<td>$2,732.50</td>
<td>91.8%</td>
<td>102.2%</td>
</tr>
<tr>
<td>NIH</td>
<td>$3,549.09</td>
<td>95.0%</td>
<td>89.9%</td>
</tr>
<tr>
<td>DBS</td>
<td>$4,445.09</td>
<td>84.6%</td>
<td>96.8%</td>
</tr>
<tr>
<td>NCI</td>
<td>$22,681.62</td>
<td>84.6%</td>
<td>70.3%</td>
</tr>
<tr>
<td>DCRT</td>
<td>$5,177.00</td>
<td>78.8%</td>
<td>88.6%</td>
</tr>
<tr>
<td>CC</td>
<td>$14,584.98</td>
<td>65.6%</td>
<td>92.0%</td>
</tr>
<tr>
<td>NINDS</td>
<td>$3,946.38</td>
<td>65.6%</td>
<td>64.7%</td>
</tr>
<tr>
<td>NIH</td>
<td>$183,302.73</td>
<td>92.4%</td>
<td>85.9%</td>
</tr>
</tbody>
</table>

NIH Stamp Club Meeting Includes Slides, Auction

The NIH Stamp Club, sponsored by the Recreation and Welfare Association, will meet on Thursdays, Dec. 5, at 7:30 p.m., in Conference Room 6, Bldg. 31.

A 35-mm slide show, “Stamps on Stamps,” will be projected on screen. This will be followed by an auction of philatelic material.

For further information on the club’s activities call Robert Chandler, Ext. 68120.

Danny Thomas Appointed To NCI Advisory Council

Danny Thomas, entertainer and television producer, has been named to the National Advisory Cancer Council by Dr. Robert Q. Marston, Director of NIH.

Mr. Thomas is the founder of the St. Jude Children’s Research Hospital, Memphis, Tenn., and is a member of its national Board of Governors. The hospital is a nonprofit research institution for the study of childhood cancer and other diseases and for basic research in the life sciences.

Two years ago, Mr. Thomas received the American Medical Association’s Layman Award, the highest it can bestow on a nonmedical man, and awarded only six times in the last 20 years.

Revised Quota for CFC Raises Final Percentage Pledged at NIH to 92.4

NHI Director Calls ‘Supply and Demand’ A Major Heart Transplantation Issue

One of the major issues in cardiac transplantation is the problem of supply and demand, according to Dr. Theodore Cooper, Director of the National Heart Institute.

Dr. Cooper discussed this problem at a cardiac transplantation symposium of the American Heart Association Meeting in Bal Harbor, Fla., Nov. 21-24.

Other members of the discussion group were Drs. Eugene Braunwald of San Diego, Cal., Grady L. Hallman, Houston, Tex., Richard R. Lower, Richmond, Va., and G. V. J. Nossel, Victoria, Australia.

Kills 200,000

Acquired heart disease kills about 200,000 Americans between the ages of 15 and 64 each year.

"The 80,000 patients who die before they reach the hospital emphasize the great need for prevention," said Dr. Cooper.

"Of the 120,000 who reach the hospital, about 40,000 might be restored to the community through currently available methods of therapy. The remaining 80,000 cardiac patients require some form of therapy which has either been unavailable or not applied in the past.

Some Need Total Replacement

"In the case of 10,000, perhaps, 50,000 patients, all heart chambers are so heavily involved in the disease process that the patients require total heart replacement, either by a mechanical heart or by a transplanted one," Dr. Cooper explained.

Dr. Cooper's assessment of the potential "supply" of donor hearts indicates impressive progress in logistics and preservation. Surveys have suggested that 70 percent of the people asked are willing to donate their bodies for medical research and therapy.

The total pool of potential donors—that is, those aged 15-64 dying from causes other than heart disease or cancer—is only 260,000. If 70 percent of these were willing to donate their bodies, the pool of hearts available for transplantation would be 182,000.

Not all would be suitable donors, however, since this group also includes people who die from infectious, blood disorders, and degenerative diseases.

"Past heart donors have come largely from victims of trauma or of spontaneous brain hemorrhage," Dr. Cooper added. "If this continues to be the case, the supply of potential donors dwindles to about 63,000 per year, thus increasing the "supply" problem by three-fold.

Matching' Presents Problem

"Moreover, matching even 182,000 reputedly willing donors with the possible 50,000 needy recipients would require solutions to present serious problems in organ preservation and transportation, as well as the development of extremely efficient matching systems functioning throughout the country."

The number of people who need a transplant, Dr. Cooper explained, depends in part upon the availability of other treatment resources.

Many of the patients who presently die might be saved by improved methods of therapy less drastic than total heart replacement, provided that such methods could be developed and widely applied.

"Those people whose atria, right ventricle, and great vessels are still functioning adequately might be salvaged by temporary or permanent left-ventricular assist devices," Dr. Cooper said.

"As the cardiopulmonary bypass machines and the cardiac pacemakers have shown, such temporary devices on a short- or a long-term basis can be life saving.

"In addition, the average cost of the application or insertion of such assist devices would probably be somewhat less than the estimated cost of $50,000 for total replacement, whether it be by total artificial heart or by heart transplant."

These implantable artificial assist devices will undoubtedly be available in the future, said Dr. Cooper.

He concluded with: "A great deal of work is yet to be done in determining and developing the best power source, in creating and testing the best materials, in constructing and miniaturizing the best pumping mechanism.

"But the problems have been defined and the answers can be found if we have effective leadership and imaginative and diligent investigation."
The National Library of Medicine's NATIONAL

When the National Medical Audiovisual Center merged with the National Library of Medicine in 1967, the world's largest medical audiovisual collection became a part of the world's largest medical library.

The NMAC, now headed by Dr. James Lieberman, Director of NMAC and associate director of NLM, was founded in Atlanta in 1942 as part of the Malaria Control in War Areas Program.

It came into existence during World War II when emergency training efforts proved that visual teaching media were efficient tools for instructing military and civilian personnel in new, sometimes highly specialized, jobs.

With the formation of the Communicable Disease Center in 1947, the audiovisual programs became a branch of the CDC. Later, the branch was designated the Public Health Service Audiovisual Facility until it became a component of NLM.

The NMAC has pioneered in production, acquisition, and distribution of audiovisual material to the health professions and students of the health sciences throughout the world.

All types of biomedical audiovisual material—including TV programs, motion pictures, slides, exhibits, and audiotapes—

During FY 1968, more than 93,000 audiovisuals were shipped from NMAC to 50 states of the United States and more than 73 other nations. Included in the Distribution Collection are 16 mm color or black and white prints, television film recordings, filmstrips, and audiotapes.

Animated photography is done with special camera and rotating table which allow partial automation of the time-consuming photographic process.

Editing of the motion picture becomes a major step in the combination of sound and visual image for the final product. Here, too, foreign adaptations are made in French and Spanish.

Staff artists support all activities of NMAC. Here they work on drawings for a horizontal filmstrip.
MEDICAL AUDIOVISUAL CENTER

are produced in Atlanta.

These materials and those acquired from other sources are distributed by the NMAC.

It has also been responsible for innovations in the use of electronics media for teaching medicine and the allied professions. Another contribution to education has been its assistance in the development of a Graduate Degree Program in Biomedical Communications.

The NMAC provides a wide range of services. On May 27, 1967, it inaugurated the first community-wide Medical Television System in the Nation. The system links NMAC with 15 affiliated institutions in the Atlanta metropolitan area.

The system is now being operated by the Emory University School of Medicine on behalf of the Georgia Regional Medical Program, to which it was recently transferred.

The NMAC has detailed Joseph Staton, Health Services Director, to help provide guidance and expertise during the transition period.

Other facets of the NMAC's activities are: serving as an international clearinghouse for biomedical information; producing catalogs and special film listings in the health sciences, and holding the National Archives of Medical Motion Pictures.

Color transparencies are produced and copied with sophisticated equipment adapted for special medical needs. Slides are copied and placed in cardboard folders with semi-automated equipment before distribution as a teaching tool or illustration for a publication.

Dr. James Lieberman, Director of NMAC and associate director of NLM.

The National Archives of Medical Motion Pictures houses rare films dating from the early 20th century. Although not available for loan, they may be used as reference resources for the professions at the NMAC Annex.

The NMAC sponsored Community Medical Television reaches a number of affiliated institutions on a closed circuit 2500 Megahertzian bandwidth. Telecasts are beamed at medical and biomedical audiences.

A collection of still photographs, built up during the 25 years of NMAC’s existence, serves as the foundation for reference on many medical and biomedical subjects. Stills are made available to members of the medical/health professions for teaching, for publication with manuscripts, or for reference.

Television director's booth, video engineer and sound man prepare for a television program which will later be distributed to medical schools stations across the United States.
approximately 1,200 children who were available for a continuous 5-year study. Of this group, 29.6 percent showed evidence of definite otoscopic abnormality indicating ear disease.

An additional 9.3 percent showed unsatisfactory visibility of ear drum a sufficient number of times so that its condition could not be categorized.

The findings proved that about 39 percent of the children needed medical attention at some time during the 5-year period.

Tests Demonstrate Need

Also, the changes in hearing sensitivity noted in the annual tests demonstrated the importance, at an early date, of establishing accurate hearing levels for each child.

These tests would aid in measuring subsequent changes in hearing sensitivity considered indicative of a need for medical attention.

A report on the study was published in a special issue of The Laryngoscope. Copies of the report are available from the NINDS Information Office.

STUDY

The study, "Careers of Ph.D.'s: Academic Versus Nonacademic," was developed by the National Academy of Sciences-National Research Council under contract with NIH. Persons who obtained their doctorates at U.S. universities in 1935, 1940, 1945, 1950, 1955, and 1960 were surveyed.

In the academic group, the rise from instructor to full professor was fastest for the physical scientists, intermediate for the bio-scientists and social scientists, and slowest for the nonscientists.

Log Noted

Women bioscientists lag 2 to 4 years behind men bioscientists in moving up from instructor to full professor, but in the social sciences the lag is as much as a decade.

The report shows that Federal support for predoctoral graduate students grew dramatically from less than 5 percent of total support before World War II to nearly 25 percent after World War II.

Postdoctoral fellowships for men and women increased somewhat from the prewar (1938-48) to the postwar graduation group (1955-60). But the percentage having such fellowships was higher for women than for men both prewar and postwar.

The report is the second in a series. A third report will concentrate on mobility, primarily geographic. The principal investigator for the series is Dr. Lindsey R. Harmon, Office of Scientific Personnel, NAS-NRC.


INTERFERON

Scientists in many laboratories have begun to work with several synthetic and natural substances—among them a plastic, pyran copolymer; a mold product, statolon; as well as working with ribonucleic acids.

These stimulate the body to produce increased quantities of interferon, which in turn directs antiviral substance manufacture.

RNA now appears the most promising of these inducers because, as a natural component of the body's cells, it may produce less toxic reaction.

In the current experiments, the scientists used a synthetic, double stranded RNA, polynucleic acid: cytidilic acid (known as PI:C), which, in initial experiments, had been shown to cause no irritation to the rabbit's eyes.

PI:C Application Tested

After infecting the eyes with herpes simplex virus, they tested topical application of the PI:C injection into the anterior chamber of the eyes, and injection directly into the bloodstream.

Rapid healing occurred in all rabbits when treatment started as late as 3 days after virus inoculation.

In rabbits inoculated with virus, but not treated with the PI:C (controls), most animals were blinded by the infection, and about one-third of the rabbits suffered central nervous system infection and died.

These findings must be extended to other virus infections, the scientists report, to establish conclusively the therapeutic role of interferon. But such demonstrations seem possible, they say, because herpes simplex virus has been shown to be only moderately sensitive to the antiviral action of interferon in rabbit cells.

Herpes virus infections of the human eye may also be treated with PI:C, the scientists suggest. Already the RNA has been shown highly active in inducing viral resistance in human cells in the test tube.

In the interferon therapy experiments, rabbit eyes infected with Herpes simplex virus (top photo), but not treated, developed severe conjunctivitis, with congested blood vessels almost obscuring white of eye. At lower left of eye, pus secretion is evident. In the lower photo, an eye treated for 7 days with interferon has almost returned to normal appearance.

In rabbits when treatment started as late as 3 days after virus inoculation, rapid healing occurred in all rabbits when treatment started as late as 3 days after virus inoculation.

In rabbits inoculated with virus, but not treated with the PI:C (controls), most animals were blinded by the infection, and about one-third of the rabbits suffered central nervous system infection and died.

These findings must be extended to other virus infections, the scientists report, to establish conclusively the therapeutic role of interferon. But such demonstrations seem possible, they say, because herpes simplex virus has been shown to be only moderately sensitive to the antiviral action of interferon in rabbit cells.

Patricia Breen, secretary to DRS engineer Gerald Cohen, Biomedical Engineering and Instrumentation Branch, wears the lovely two-orchid corsage presented to her by Radio Station WASH when she was chosen secretary of the day.
York University Medical Center's Institute of Rehabilitation Medicine, for basic discoveries in developing treatment of brain-damaged infants.

Dr. John H. Gibbons, Jr., Jefferson Medical College, Philadelphia, was awarded the Lasker Award for Clinical Research.

The $10,000 Lasker Award which Dr. Nirenberg shares with Dr. Korana is the fourth important American prize he has received this year. He also shared the Nobel Prize in Physiology with Drs. Korana and Robert W. Holley of the Salk Institute. Dr. Nirenberg will go to Stockholm to receive the Nobel Prize in 1960.

Awards Presented Annually

The Lasker Awards are presented annually by the Albert and Mary Lasker Foundation and are highly prized. The luncheon at which they are announced is an important event attended by outstanding scientists, administrators and leaders in public affairs.

Dr. Marston noted that since he assumed office as NIH Director in September, "Institute by Institute to me told of me of progress."

The first area of progress, exemplified by Dr. Nirenberg's research, is in better understanding of the nature of life processes, he said.

The second is in reports of "very promising leads," including effective chemotherapy in some cancers, documentation of risk factors in cardiovascular diseases, progress toward elimination of dental caries within 10 years, advances in development of artificial kidneys, and better control of virus diseases by new vaccines and induction of interferon.

The third area of progress, Dr. Marston said, is in "making available the fruits of research to the patient without undue delay."

Testing of L-dopa Cited

He mentioned administration to persons suffering from Parkinson's disease of the drug, L-dopa, to be tested in about 20 institutions for efficacy and safety by the NINDS with the guidance of an expert task force.

Dr. Marston observed that the testing of L-dopa in patients "would probably not have been possible without a vast amount of basic scientific work on monkeys related to nerve impulse transmission."

Progress toward control of German measles was also cited by Dr. Marston as an example of NIH capability to utilize resources rapidly for general benefit, noting the "quite encouraging results" of recent tests of the experimental vaccine.

Dr. Wallace Prescott Rowe has been named chief of the Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases.

A member of the NIAID scientific staff since 1952, Dr. Rowe succeeds Dr. Robert J. Huebner, who recently joined the staff of the National Cancer Institute.

Dr. Rowe will continue his duties as head of the Laboratory's viral oncology section, which uses laboratory animal model systems to develop means of detecting and characterizing the tumorogenic viruses, to study their natural history and to learn the mechanisms of tumor development.

The Laboratory also contains a section on cellular viremia, where investigations center on biological, biochemical, and biophysical research into viruses and viral diseases, and antiviral substances and defense mechanisms.

Help Identify Adenoviruses

Dr. Rowe was a member of the NIAID laboratory team which first identified and characterized the virus group now known as adenoviruses.

His demonstration of these new viral agents in human adenoids by an original method revealed a number of previously unsuspected viruses in human tissue.

Dr. Rowe's studies in recent years have centered on viruses which cause cancer in laboratory animals, and on hybrid viruses formed by oncogenic (tumor-causing) and nononcogenic viruses.

bella vaccine.

"We feel fairly confident that by 1970, when the next German measles epidemic is expected," Dr. Marston said, "a safe and effective vaccine will be available.

"Think for a moment of the implications of this advance," he continued. "Almost everyone in this room had as a child the normal childhood diseases—measles, German measles, whooping cough—and perhaps scarlet fever, rheumatic fever, diphtheria and poliomyelitis. In the 1970's all of these childhood diseases should have disappeared in America."

Dr. Marston declared the United States' lead in medical science "is not accidental" but is "a consequence of visionary, spirited and tireless efforts."

"We have a grave responsibility to foster the present apparatus for research and education in science," he said. "If we continue to build now—and we cannot afford to fail in this—we can look forward to accelerated payoffs in the decade ahead."

Approximately 170 people met with President Johnson in the East Room of the White House on Thursday, Nov. 4, to commemorate the 20th anniversary of the National Heart Institute.

DHEW Secretary Wilbur J. Cohen introduced Rep. Claude D. Pepper and Sen. Listor Hill, who fought for legislation that subsequently became the National Heart Act. It was this Act that called for the establishment of NHI.

Secretary Cohen then introduced Mrs. Mary Lasker who was instrumental in mobilizing public support for this legislation.

NHI Directors, Heart Council members, and top-level NIH staff members were also introduced.

Secretary Cohen then cited the growth of the Heart Institute programs since it received its first appropriation in 1950.

Dr. Robert Q. Marston, NIH Director, briefly reviewed some of the major research areas in which Heart Institute scientists and grantees have made important contributions.

Dr. Robert W. Berliner, Director of NIH Laboratories and Clinics, cited examples of research progress in hypertension, congenital heart disease, and angina pectoris.

He referred to Heart Institute intramural research in which findings of intramural scientists culminated in methods for treating hypertensive heart disease and the acute heart attack—claims over half of the more than one-half million Americans.

He also mentioned NIH programs, such as the Artificial Heart Program, aimed at improving all phases of diagnosis, treatment, and patient care for victims of acute heart attacks.

Memorabilia Given President

Secretary Cohen presented the President with a booklet which gives a history of the Institute, and an album of color photographs depicting the growth of NHI appropriations and programs.

President Johnson praised the efforts of the legislators and the American people whose concerted action made possible the creation of NHI.

He singled out for praise, former President Harry S. Truman who signed the legislation dealing with the NHI, Rep. Pepper and Sen. Hill who saw this legislation safely through the Congress, and Mrs. Mary Lasker who "lobbied" on behalf of the National Heart Act and other health and welfare legislation.

The President cited challenges faced by NHI in the year to come, and charged all those present with the task of increasing public awareness of cardiovascular diseases.
William McGraw, NHI, Retires After 15 Years

William McGraw, Sr., will retire at the end of this month after 15 years with the National Heart Institute. He is being honored today at a party given by friends and co-workers.

Known to nearly everyone in Building 31, the Westwood Building, and wherever his messenger rounds carry him, Mr. McGraw always has a pocket full of small change, 6-cent stamps and a copy of the daily newspaper for friends along his route.

Is Boxing, Baseball Fan

A history buff, Mr. McGraw can entertain for hours, telling stories about Wyatt Earp or the showdown at OK Corral. He is also a veritable encyclopedia where boxing and baseball are concerned.

Mr. McGraw came to the Heart Institute in 1953 as a laboratory animal caretaker while he was still farming near Cedar Grove, Md. In 1954 he retired from farming and became a messenger and later a clerk in the Heart Institute.

Born in Middleburg, Va., in 1898, Mr. McGraw spent most of his youth on a farm near Rockville. As a young man, he moved to San Diego where he worked for United Cigar Stores and married Mabel Vincent in 1923. In 1927 he moved back to Maryland and began farming.

Mr. McGraw now plans to retire to his home in Damascus, Md., and continue with his hobbies of following the Senators and studying the history of the Old West.

Institute's Name Changed

Under legislation recently enacted (PL 90-639), the name of the National Institute of Neurological Diseases and Blindness has been changed to the National Institute of Neurological Diseases and Stroke.

NIAID Announces Expanded Pneumococcal Pneumonia Vaccine Development Program

In a day when *antibiotic* and *penicillin* are very much household words, there are still an estimated 25,000 to 50,000 deaths a year from bacterial pneumonia.

In an effort to eliminate this needless scourge of the elderly and the chronically-ill, the National Institute of Allergy and Infectious Diseases announced an expanded pneumococcal pneumonia vaccine development program at a press briefing held here last week.

As a part of the expanded effort, Dr. Dorland J. Davis, NIAID Director, recently announced the award of contracts covering studies to determine the incidence of pneumonia in high-risk groups, the prevalence of various types of pneumonia, and the production and evaluation of new vaccines.

**Socks Polyvalent Vaccine**

Ultimate goal of the pneumococcal pneumonia vaccine program is development of a polyvalent vaccine, a single preparation effective against a number of the pneumonia-causing bacteria.

Initially, however, 12 separate vaccines will be prepared, tested in animals for safety and efficacy and then in human volunteers. Widespread clinical trials will follow.

Dr. Edwin M. Lerner II, NIAID coordinator for the pneumonia vaccine effort, reported that widespread surveillance programs will record the 1968-69 incidence of pneumonia.

He anticipated that initial batches of vaccine should be ready for safety testing within the next year, and predicted early clinical trials in selected high-risk population groups by the fall of 1969, with field trials possible a year or two later.

Dr. Robert Austrian, University of Pennsylvania School of Medicine (left), and Dr. Edwin M. Lerner II, NIAID, were participants at a press briefing held last week at NIH.

In a possible saving of $50 to $100 million per year in hospitalization and Medicare costs.

Current NIAID contracts for the pneumococcal vaccine production and surveillance total approximately $500,000.

The pneumococcal pneumonia vaccine undertaking is a part of NIAID's Vaccine Development Program, established in 1962 to develop experimental vaccines against acute respiratory diseases and German measles through contracts with pharmaceutical companies, universities medical centers, and private research groups.

**Contract Awarded**

A contract was recently awarded to Eli Lilly Company, Indianapolis, Ind., for the production of experimental vaccines against 12 types of pneumococci.

Field trials of whole bacteria pneumococcal vaccine in persons 50 years old and older, reported in 1947, indicated a 90 percent reduction of infection and the presence of bacteria in the blood.

Another vaccine, consisting of purified pneumococcal capsular polysaccharides, developed during World War II and shown to be highly effective, was abandoned with the advent of potent antibiotic drugs which were expected to control such infections.

**Engineering Unit Starts Season With Gift to Patient Welfare Fund**

For the fourth consecutive year, the Clinical Center Engineering Unit, Plant Engineering Branch of the Division of Research Services, has made the first "Davis Plan" contribution of the Christmas season to the NIH Patient Welfare Fund.

With 56 employees in the Unit contributing $250.29—the largest ever—a poster extending Christmas greetings to all and a list of contributors' signatures were placed on a bulletin board.

Under the "Davis Plan," money normally spent for Christmas cards is contributed to an office pool and donated to the Patient Welfare Fund.

**New Serological Tests Sought**

Dr. Thomas Grayston of the University of Washington will conduct a surveillance program of some 100,000 pneumonia patients in Seattle area hospitals and at the Puget Sound Group Health Clinic. Dr. Grayston's group also is working to develop new serological tests to aid in the diagnosis of pneumonia.

Plans also are underway to include the Navajo Indian Health Area in Arizona and New Mexico, since pneumonia is a major cause of illness and death in the Indian populations.

With the increase in the segment of our population over age 50, the need for a pneumococcal vaccine has become more apparent.

It is anticipated that an effective vaccine administered to appropriate high-risk groups should drastically reduce the incidence and deaths from pneumonia, and effect a possible saving of $50 to $100 million per year in hospitalization and Medicare costs.

**Current NIAID contracts for the pneumococcal vaccine production and surveillance total approximately $500,000.**

**The pneumococcal pneumonia vaccine undertaking is a part of NIAID's Vaccine Development Program, established in 1962 to develop experimental vaccines against acute respiratory diseases and German measles through contracts with pharmaceutical companies, universities medical centers, and private research groups.**

**Contract Awarded**

A contract was recently awarded to Eli Lilly Company, Indianapolis, Ind., for the production of experimental vaccines against 12 types of pneumococci.

**Field trials of whole bacteria pneumococcal vaccine in persons 50 years old and older, reported in 1947, indicated a 90 percent reduction of infection and the presence of bacteria in the blood.**

Another vaccine, consisting of purified pneumococcal capsular polysaccharides, developed during World War II and shown to be highly effective, was abandoned with the advent of potent antibiotic drugs which were expected to control such infections.

**Engineering Unit Starts Season With Gift to Patient Welfare Fund**

For the fourth consecutive year, the Clinical Center Engineering Unit, Plant Engineering Branch of the Division of Research Services, has made the first "Davis Plan" contribution of the Christmas season to the NIH Patient Welfare Fund.

With 56 employees in the Unit contributing $250.29—the largest ever—a poster extending Christmas greetings to all and a list of contributors' signatures were placed on a bulletin board.

Under the "Davis Plan," money normally spent for Christmas cards is contributed to an office pool and donated to the Patient Welfare Fund.

**New Serological Tests Sought**

Dr. Thomas Grayston of the University of Washington will conduct a surveillance program of some 100,000 pneumonia patients in Seattle area hospitals and at the Puget Sound Group Health Clinic. Dr. Grayston's group also is working to develop new serological tests to aid in the diagnosis of pneumonia.

Plans also are underway to include the Navajo Indian Health Area in Arizona and New Mexico, since pneumonia is a major cause of illness and death in the Indian populations.

With the increase in the segment of our population over age 50, the need for a pneumococcal vaccine has become more apparent.

It is anticipated that an effective vaccine administered to appropriate high-risk groups should drastically reduce the incidence and deaths from pneumonia, and effect a possible saving of $50 to $100 million per year in hospitalization and Medicare costs.

**Current NIAID contracts for the pneumococcal vaccine production and surveillance total approximately $500,000.**

**The pneumococcal pneumonia vaccine undertaking is a part of NIAID's Vaccine Development Program, established in 1962 to develop experimental vaccines against acute respiratory diseases and German measles through contracts with pharmaceutical companies, universities medical centers, and private research groups.**

**Contract Awarded**

A contract was recently awarded to Eli Lilly Company, Indianapolis, Ind., for the production of experimental vaccines against 12 types of pneumococci.

**Field trials of whole bacteria pneumococcal vaccine in persons 50 years old and older, reported in 1947, indicated a 90 percent reduction of infection and the presence of bacteria in the blood.**

Another vaccine, consisting of purified pneumococcal capsular polysaccharides, developed during World War II and shown to be highly effective, was abandoned with the advent of potent antibiotic drugs which were expected to control such infections.