Endicott Appoints 2 NCI Scientists To Key Positions

Dr. Kenneth M. Endicott, NCI Director, last week announced the appointments of Dr. Carl G. Baker as Associate Director for Program, and Dr. C. Gordon Zubrod as Director of Intramural Research.

Dr. Baker, formerly NCI Assistant Director with responsibility for intramural nonclinical research, will work closely with Dr. Endicott in coordinating the major Institute programs and with the Institute's top extramural advisory committees on major problems and policy matters.

Dr. Zubrod, formerly NCI Clinical Director, has been active in research on use of drugs with cancer patients. In his new position he will assume direction of both clinical and epidemiological studies (See APPOINTMENTS, Page 7).

Lindsay Announces Reorganized DRG

Dr. Dale R. Lindsay, Chief of the Division of Research Grants, has announced the recent reorganization of the Division into the Office of the Chief and eight branches.


The new Special Programs Review Branch, formerly the Center Grants Review Office, will review applications for clinical centers and for other types of multidisciplinary and multicategorical programs. It will be under the direction of Dr. Gordon Seger.

Branches Combine

The Research Fellowships Review Branch and the Training Office have been combined as the Career Development Review Branch under Dr. Stephen P. Hutchett, formerly Chief of the Fellowships Branch.

Dr. Fay Hensh, Assistant Chief, DRG, who has headed the Training Office, will now devote full time to his duties as Assistant Chief.

The functions of the former Research Grants Review Branch will be divided between a branch of that name, headed by Dr. J. Palmer (see REORGANIZATION, Page 1).

House Hearings to End This Week: $583 Million Requested for NIH

Dr. Shannon, Institute Directors, and other immediate staff were completing testimony this week before the Subcommittee of the House Committee on Appropriations in support of the NIH budget request for Fiscal Year 1962.

The request is for $583 million, exclusive of $4.6 million for direct construction and $30 million for research facilities construction grants.

The NIH total is part of the Public Health Service request for $1.1 billion, which is included in the Administration's request for $4 billion for the Department of Health, Education, and Welfare.

Rep. John E. Fogarty of Rhode Island is Chairman of the House Subcommittee. The other members are Winfield K. Denton, Indiana; Fred Marshall, Minnesota; Melvin R. Laird, Wisconsin; and Robert H. Michel, Illinois.

Funds Designated

The NIH funds were designated for the following activities:

<table>
<thead>
<tr>
<th>Direct Operations</th>
<th>(Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>314.1</td>
</tr>
<tr>
<td>Biologies Standards</td>
<td>4.1</td>
</tr>
<tr>
<td>Review and approval</td>
<td>9.9</td>
</tr>
<tr>
<td>Training</td>
<td>3.6</td>
</tr>
<tr>
<td>Professional and technical assistance</td>
<td>13.2</td>
</tr>
<tr>
<td>Chemistry contracts</td>
<td>22.5</td>
</tr>
<tr>
<td>Administration</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$386.8</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grants</th>
<th>(Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>88.5</td>
</tr>
<tr>
<td>Fellowships</td>
<td>22.6</td>
</tr>
<tr>
<td>Training</td>
<td>6.2</td>
</tr>
<tr>
<td>Student control</td>
<td>18.0</td>
</tr>
<tr>
<td>Community demonstr</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$175.9</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction</th>
<th>(Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal quarters (Bethesda)</td>
<td>0.3</td>
</tr>
<tr>
<td>NIH central facility</td>
<td>2.8</td>
</tr>
<tr>
<td>General office facility</td>
<td>0.7</td>
</tr>
<tr>
<td>Medical services (Research)</td>
<td>1.3</td>
</tr>
<tr>
<td>Master utilities extension</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$4.4</strong></td>
</tr>
</tbody>
</table>

| Research facilities construction grants | 30.0 |
| **TOTAL**                               | **$211.4** |

Following is a breakdown of the request for appropriations in the NIH budget, exclusive of construction grants:

<table>
<thead>
<tr>
<th>Appropriation</th>
<th>(Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>$117.0</td>
</tr>
<tr>
<td>NIMH</td>
<td>86.3</td>
</tr>
<tr>
<td>NHLI</td>
<td>97.1</td>
</tr>
<tr>
<td>NCRR</td>
<td>13.9</td>
</tr>
<tr>
<td>NIAID</td>
<td>68.7</td>
</tr>
<tr>
<td>NINDR</td>
<td>54.1</td>
</tr>
<tr>
<td>GR &amp; S</td>
<td>56.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$382.0</strong></td>
</tr>
</tbody>
</table>

NOTE: The NIH funds were designated for the following activities:

- **Direct Operations**
  - Research
  - Biologies Standards
  - Review and approval
  - Training
  - Professional and technical assistance
  - Chemistry contracts
  - Administration

- **Grants**
  - Research
  - Fellowships
  - Training
  - Student control
  - Community demonstration

- **Construction**
  - Animal quarters (Bethesda)
  - NIH central facility
  - General office facility
  - Medical services (Research)
  - Master utilities extension

- **Research facilities construction grants**

**TOTAL** $211.4

Following is a breakdown of the request for appropriations in the NIH budget, exclusive of construction grants:

- **NCI** $117.0
- **NIMH** 86.3
- **NHLI** 97.1
- **NCRR** 13.9
- **NIAID** 68.7
- **NINDR** 54.1
- **GR & S** 56.4
- **Total** $382.0

Smack-and-Scoot Artists Sign Their Deeds With Dents

The Plant Safety Branch, OD, reports that there has been a sharp increase this year in the number of cars damaged while parked on the NIH parking lots.

According to Guard Office records, 20 cars were reported damaged in 1960, while nine such instances were reported so far this year.

The complaint of one NIH employee, expressed in the following recent memo to PSB, points out the seriousness of this problem:

"I have been employed here for five years and during that period I have spent more than $40 a year repairing damages to my cars. These damages occurred between 8:30 a.m. and 5 p.m. during the work week at NIH.

"Recently I purchased another car. Three days after taking possession of said car, it had a crease in the left rear fender. Yesterday, upon my departure, I found a tail light smashed.

"On these occasions and previous occasions in which my cars have been damaged, there has not been any form of communication between the offender and myself.

"NIH is an institution of high caliber and I assume that the personnel employed here are of the same caliber. If they are, why should they not accept responsibility for their mistakes or misdeeds?"

"I am sure that the drivers at NIH are covered by insurance. Therefore, why should they not try to rectify their driving faults?"

PSB calls attention to the fact that failure to report an accident to the Guard Office is a direct violation of NIH Station Rules. Furthermore, the State of Maryland requires that if an unattended vehicle is struck, the offending driver must leave his name and address on the damaged car.

The notation can easily be left on a slip of paper under the windshield wiper, and might well include the date and mention of the damage caused.

FILE COPY.
NIH Reaches 3rd of Participation Goal In First 2 Weeks of Health Campaign

Results of the first two weeks of the annual combined campaign of the Federal Service Joint Crusade and the National Health Agencies, launched here March 15, revealed NIH had attained onethird of its goal of 100 percent participation.

The campaign continues here until April 26.

The report issued March 29 by the Campaign Chairman, Dr. Justin M. Andrews, NIAID Director; and Co-chairman, Dr. Francis A. Arnold, NIDR Director, shows DBS, DGMS, and NIAID as the largest contributors at that time.

In commenting on the report, Dr. Andrews said, "The excellent showing made so far by several segments of our organization, notably DBS, DGMS, and NIAID, is most heartening. I am hopeful that those who have not yet responded to this appeal for help will do so, recognizing the humanitarian goals the NIH shares with the National Health Agencies and the Joint Crusade."

A breakdown of the report follows:

<table>
<thead>
<tr>
<th>Organization &amp; Employees</th>
<th>Percent of Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>J.C.</td>
<td>N.H.A.</td>
</tr>
<tr>
<td>DBS (205)</td>
<td>79 81</td>
</tr>
<tr>
<td>DGMS (103)</td>
<td>71 76</td>
</tr>
<tr>
<td>NIAID (446)</td>
<td>70 66</td>
</tr>
<tr>
<td>DRG (425)</td>
<td>52 54</td>
</tr>
<tr>
<td>NIDR (145)</td>
<td>48 48</td>
</tr>
<tr>
<td>NCI (900)</td>
<td>37 36</td>
</tr>
<tr>
<td>OD-OAM (811)</td>
<td>32 28</td>
</tr>
<tr>
<td>DRS (900)</td>
<td>30 36</td>
</tr>
<tr>
<td>NINDB (375)</td>
<td>25 25</td>
</tr>
<tr>
<td>CC (1,500)</td>
<td>24 25</td>
</tr>
<tr>
<td>NIH (450)</td>
<td>14 14</td>
</tr>
<tr>
<td>NIAID (474)</td>
<td>13 12</td>
</tr>
</tbody>
</table>

Totals (7,255) 32.5 32.9

COSTEP Files Available

Files of students eligible for employment under COSTEP are available for review and selection in Bldg. 10, Rm. 2B-46.

All persons interested in making a selection are urged to do so as soon as possible in order that these students may be notified of their pending appointments before finding employment elsewhere.

Dr. Henry Byebe Named Director of MARU

Dr. Henry K. Byebe, Head of the Parasitic Diseases Service of the Laboratory of Clinical Investigation, NIAID, has been named as Director of the Middle America Research Unit, Panama Canal Zone field station of the NIAID Laboratory of Tropical Virology.

As the Director of MARU, he will succeed Dr. Alexis Shelokov, Chief of the Laboratory of Tropical Virology, when Dr. Shelokov returns here in July.

Dr. and Mrs. Byebe left last week for Panama.

The Middle America Research Unit is jointly supported by NIH and the Walter Reed Army Institute of Research.
Tryptsin Fragmentation
Of Bovine Fibrinogen
Gives Structural Clues

Presented at the 5th Annual Meeting of the Federation of American Societies for Experimental Biology, April 1961.

Chemical “diagnosis” of fibrinogen by a protein-digesting enzyme tryptsin, is yielding important information about fibrinogen’s physicochemical structure and molecular sites susceptible to chemical activity, reports Dr. Elemer Mihalyi of the National Heart Institute Laboratory of Cellular Physiology and Metabolism. Their studies are part of a program of basic research aimed at assembling and elucidating the molecular composition and structure of various proteins and correlating this molecular architecture with physiological function.

Fibrinogen, a plasma protein, is essential for blood coagulation: it is converted to fibrin in the presence of thrombin, whose molecules then link together in long chains to form the blood clot. From the known amino acid composition of fibrinogen, the NIH scientists had previously calculated the total number of chemical bonds within the molecule that are susceptible to breakdown by various enzymes and their reagents.

Changes Measured

In the currently reported studies, essential steps in the enzymatic breakdown of fibrinogen by tryptsin were examined by measuring changes in viscosity and in the amount of alkali required to maintain a constant pH (an index of the number of bonds split), and by optical rotation and sedimentation in the ultracentrifuge. The studies showed that tryptsin rapidly splits the fibrinogen molecule into three large, nearly spherical fragments, each having a molecular weight of 100,000. Initial fragmentation, which required the rupture of 70 peptide bonds, was followed by a period of slow degradation into products of low molecular weight and accompanied by the liberation of non-protein nitrogen.

Studies Indicate Cytoplasm Ribosomes
May Be Site of Poliovirus Replication

Presented at the 5th Annual Meeting of the Federation of American Societies for Experimental Biology, April 1961.

Increasing attention has been given lately to the problem of how the manufacturing parts of cells receive the information they need for the synthesis of specific cell substances. For example, ribosomes were added to cells as the sites containing the information for at least a good part of the specific protein synthesis, but where do the ribosomes come from?

Information about the replication of a specific substance, poliovirus, has been obtained using a combination of high resolution autoradiography and fluorescent antibody data. The data relevant to both the problem of the replication of this virus, and the general problem of the relationship between nuclear acids and protein synthesis. By using a high ratio of virus to cells, one can estimate that most, if not all, of the cells are infected at about the same time.

Experiments Performed

Experiments were performed where the ribonucleic acid precursors, tetratractidine or tryptophan, were added to cells in various stages of infection. Radioautograms of these cells were prepared and examined. It was found that within one hour after infection there was a new migration in the metabolic activity of ribonucleic acid in the nucleolus. This is the subcellular structure that has been suggested as the site of specific ribonucleoprotein formation for specific protein synthesis. The increased nucleolar RNA metabolism continues for three hours after infection, but begins to decline by four hours. After five hours, nucleolar RNA metabolism has almost stopped.

By somewhat different approaches, it was found that the RNA that was formed in the nucleolus at one hour after infection soon finds its way into the cytoplasm, and may be converted into virus particles responsible for specific protein synthesis. This finding is in agreement with the current notion that the nucleolus is the site of specific ribonucleoprotein formation for specific protein synthesis. The increased nucleolar RNA metabolism continues for three hours after infection, but begins to decline by four hours. After five hours, nucleolar RNA metabolism has almost stopped.

Blood; whereas plasmin is a plasmin component believed essential for maintaining blood fluidity.

The scientists found that the clotting of fibrinogen, with tryptsin was not affected by the action of plasmin on fibrinogen, and that the clotting of fibrinogen with plasmin did not occur. Further studies of this limited reaction, complicated by clotting, may lead to increased understanding of events initiating fibrin formation in the body.

Selective Method Of Immunization
Seen Advisable

Remarks by Dr. Joseph E. Sneller, Chief, Laboratory of Virology and Bacteriology, Division of Biologies Standards, in discussion of a paper by Dr. Geoffrey Edsall at the Symposium on Worldwide Medicine at Yale University School of Medicine, March 1961.

Dr. Edsall has given an excellent summary of the future role of immunization in health. The future of immunization lies in epidemiology not in immunology; by this I mean that the epidemiologic approach and it alone, will provide us with the necessary information to plan intelligent immunization programs which may fill the needs of persons in a given geographic region.

Soldiers Immunized

It may be possible, but it certainly is not logical or practical, to attempt to immunize all people against all pathogens. The older members of the groups here today (and I am one of them) will recall that only a few types of the pneumococcus are responsible for most of the cases of lobar pneumonia. Heffron showed several decades ago that types I to VIII accounted for 81 percent of the cases while the remaining seventy types covered only 19 percent. MacLeod and his colleagues demonstrated that pneumococcal pneumonia could be reduced in army camps by immunizing the inhabitants with specific polysaccharides from only a few types, provided that these corresponded with those circulating in the camp.

I might have chosen adenoviruses instead of pneumococci to illustrate (See Immunization, Page 6)

From this it stops functioning, as does DNA metabolism, and the cells begin to die.

The study was reported by Dr. Hilton B. Levy of the National Institutes of Health.
Norepinephrine Suggested as Modulator Of Sympathetic Synaptic Transmission

Presented at the 45th Annual Meeting of the Federation of American Societies for Experimental Biology, April 1961.

Norepinephrine, one of the hormones released from the adrenal glands in response to stress, exercise, or other factors calling for stepped-up metabolic activity, also functions as a neurotransmitter. It plays a key role at sympathetic nerve terminals and as such is often involved in the sympathetic transmission of nerve impulses.

Transmission Intensified

The NHI scientists studied the physiological role of norepinephrine in sympathetic ganglia of the autonomic nervous system, whose two opposing divisions (sympathetic and parasympathetic) together regulate bodily functions beyond conscious control. They found that norepinephrine enhanced the transmission of nerve impulses across the ganglionic synapses, which are nearly devoid of norepinephrine. Conversely, synthesis and transmission were markedly depressed by high ganglionic levels of free norepinephrine.

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Effects Determined

In a second series of experiments, the scientists determined the effects of norepinephrine on sympathetic transmission. They first administered a drug that blocked the action of norepinephrine-acetylcholine mechanism at the ganglionic level. This drug impaired norepinephrine storage, and the free amine was rapidly destroyed. Then they used reserpine to deplete the ganglia of norepinephrine. The free amine was checked by passive diffusion, and the ganglia were again depleted of norepinephrine. Transmission was again enhanced.

The studies indicate that norepinephrine as well as acetylcholine may act as chemical messengers in the sympathetic ganglia. Both are apparently released by preganglionic nerve impulses, but acetylcholine acts as the transmitter across the nerve junctions, while norepinephrine, in some unknown way, modulates or "damps" its action. This might well be an important mechanism for buffering synaptic transmission and maintaining normal amounts of norepinephrine in the sympathetic ganglia.

NHI Investigators Study Dynamic Turnover Rate Of Rat Mitochondria

Presented at the 45th Annual Meeting of the Federation of American Societies for Experimental Biology, April 1961.

Mitochondria are the principal power plants of the cell. Here foodstuffs are converted into energy which is stored as molecules of adenosine triphosphate (ATP). These molecules serve as energy sources for all parts and functions of the cell. This conversion is an extremely complicated process involving many steps and requiring many enzymes, or biological catalysts. In this minute cellular component, since cellular activity is so obviously dependent on mitochondrial function, any changes in mitochondria could seriously affect the cell. Profound structural and biochemical changes in mitochondria have been previously observed in senescent animals. This investigation is part of a program to examine the cause of the morphological change, its metabolic consequence and effect on the total functional capacity of the cell. The authors (Drs. M. J. Fletcher and D. R. Sanadi of the National Heart Institute) have tried to learn whether the mitochondria in a cell are really old or whether they are being continually broken down and replaced by new mitochondria as happens to happen with proteins.

The studies reported here reveal that half of the rat liver mitochondria are lost and resynthesized as units every 10.3 days. The investigators found no important differences in the half-lives of mitochondria from normal and adult rat livers. The experimental procedure is described in the accompanying article (See MITOCHONDRIA, Page 6).

Large fluctuations in central sympathetic output within carefully prescribed limits. If this or similar mechanisms operate throughout the autonomic nervous system, the ganglia might thus exercise a considerable degree of autonomy; and the control of autonomic nervous system activity might be considerably more decentralized than is usually supposed.

These findings also suggest the possibility that some forms of hyperpertension might be due to a defect in this norepinephrine buffering system, or drugs that selectively interact with the norepinephrine-acetylcholine mechanism at ganglia might be effective means of treatment. These studies were carried out by Drs. Erminio Costa, A. M. Reza, Ronald Kuntzman, Sidney Spector, and B. B. Brodie, of the NHI Laboratory of Chemical Pharmacology.
This is the first of a series of picture stories on NIH field stations planned for publication in the NIH Record. It depicts buildings, staff, and activities of the National Institute of Allergy and Infectious Diseases' Section on Epidemiology, located at Columbia, S. C. A part of the NIAID's Laboratory of Parasite Chemotherapy, the section works closely with the laboratories here and with the NIAID Section on Cytology in Chamblee, Ga., on inter-related aspects of malaria research. Left to right, top row: the Williams Building at the Carolina State Hospital, where the NIH laboratory occupies the ground floor in the right wing; and the staff of the Section of Epidemiology. Middle row: technicians working in the laboratories pick Anopheles albimanus pupae to put in mosquito cages for breeding, isolate hookworm larvae from charcoal culture with the Baermann apparatus, and remove a baby chick from a cage containing malaria-infected mosquitoes; a scientist applies blood serum to an electrophoresis apparatus to check for the effect of helminth infections on blood proteins. Bottom row: a medical biologist removes ovaries from a caterpillar to transfer them to slides for tissue culture; a tube of virus material is placed in a high speed centrifuge; and Dr. Geoffrey M. Jeffery and Dr. Martin D. Young (recently transferred to Bethesda) examine charts showing results of tests with a new hookworm drug.
IMMUNIZATION
(Continued from Page 5)

my point on selection of appropriate antigens on the basis of epidemiologically proved need. However, I chose the old work because I wished to emphasize that the problem is not new. Had I spoken of adenovirus I would have mentioned these types.

At the present time, many of those in preventive medicine look with dismay at the long lists of arboviruses, ECHO viruses, Resviruses, and foresce gismo viruses, and other groups of viruses just around the corner. They ask themselves, how could the commercial houses ever produce enough vaccines to immunize any appreciable number of people against such a mob of agents? They also ask themselves, how long would it be before they ostracized their physicians as primitive witch doctors who still practiced pin-sticking voodooism?

Questions to Be Asked

Those interested in immunization must answer many questions related to the development and use of vaccines in the coming years. Some of these questions will be considered here: (1) Can a single vaccine achieve by incorporating multiple antigens into a single vaccine? (2) More intelligent use of the booster phenomenon? (3) Development of usable vaccines against the newly recognized agents as well as against some of our old enemies? (4) Development of simpler and less annoying methods for administering vaccines? (5) Development of acceptable methods for getting better immunization with less antigenic mass—in other words, adjuvants; and finally, a problem as important as any of those mentioned—the development of a psychological approach that will enable the vaccinee to reach large portion of the population which refuses to accept immunization even when it is readily available.

The distressing aspect of these tasks is not their difficult nature—it is rather, that as each task is completed, the immunologist buries himself in the day-to-day work and leaves the medical colleague deeper in the clatter of his own accomplishments. Pity the health officer of the future who will be burdened with the host of viruses his dispensary discloses.

It was with this last point in mind that I made my opening remark; the future, indeed the salient, of immunization lies in the selection of a limited number of antigens capable of protecting a particular segment of the population against those infectious diseases which are important to it. Adequate epidemiologic information may enable the health officer to use a rifle instead of a shotgun,

Mouse Immunity Studied for Cancer Implications

Presented at the 45th Annual Meeting of the Federation of American Societies for Experimental Biology, April 1961.

Drs. Edward J. Breyere and Morris K. Barrett of the National Cancer Institute's Laboratory of Biology have demonstrated a significant change in the conditions under which transplanted mouse tumors will "take." They have shown that female mice, after bearing offspring, will tolerate a transplanted tumor they ordinarily would reject. Such tolerance is effective only for a tumor from the strain of mice that sired the offspring.

Among inbred mice, a number of genes govern susceptibility and resistance to transplantation of tissue from members of one strain to those of another. Only when the strongest of these genes is alike in two strains is a transplant usually successful. Otherwise, the recipient may be immune, i.e., not susceptible, to the transplant, and rejects it by a mechanism known as an "immune response."

Survival of skin grafts is prolonged in female mice that have borne offspring, if the graft is from mice of the strain that sired the offspring. Such grafts are eventually rejected, but the ones shown here had survived three times as long as interstrain grafts, ordinarily do. These mice are from experiments designed to measure the extent of increased tolerance now reported by Drs. Breyere and Barrett.

The effect of bearing offspring was demonstrated by transplanting a tumor from C3H mice to BALB/c females. The strongest transplantation tolerance is not alike in these strains.

The tumor grew in and killed almost 60 percent of BALB/c females that had offspring by C3H males. The tumor did not "take" in BALB/c virgins. Nor did it take in more than one percent of BALB/c females whose litters were sired by BALB/c males or by males of a third strain, DRA/2.

The results indicate that the immune response in females that had borne offspring was modified in a specific way. This finding is of particular interest in light of the growing importance of research on the role of immunity in resistance to cancer. The study was reported at the meeting of the American Association for Cancer Research.

Dr. Breyere, a former postdoctoral fellow at the Institute, is now an associate professor, Department of Biology, American University, Washington, D. C.

Experience Is Reported On Chemical Treatment Of Choriocarcinoma

Presented at the 45th Annual Meeting of the Federation of American Societies for Experimental Biology, April 1961.

Physicians from the National Cancer Institute described today their past five years' experience with the chemical treatment of a highly malignant form of cancer which develops in the womb of pregnant women. They reported before the American Association for Cancer Research meeting at Atlantic City that thirty of sixty-three treated patients with this type of tumor, called choriocarcinoma, are now free of evidence of disease. Several of them have had no evidence of recurrence for up to five years since their treatment was completed. In all of these patients the tumor had spread outside the uterus into other parts of the body, most frequently to the lungs.

Two Drugs Used

Treatment in all cases consisted of intensive courses of a folic-acid antagonist, called Methotrexate. In fourteen women treatment also included brief courses of a recently developed plant derivative called vincleukoblastine.

These medications have very severe side-effects, but the doctors described their methods for insuring the Surrey of the therapies. The patients were selected from among untreated patients with extreme slow even somewhat hazardous effects.

Response Is Unique

Complete return to good health for periods of five years following chemotherapy for a malignant tumor has not been previously observed. This unusually favorable response of this rare form of cancer may be due to the fact that it originates from the baby's cells and can therefore be more easily expelled from the mother's body. This sometimes happens without treatment in the early stages of the disease but only extremely rarely after the tumor has spread.

These results were reported by Dr. Roy Hertz, Chief, and Dr. John Lewis, Jr., and Dr. Mortimer B. Lipsett, all of the National Cancer Institute's Endocrinology Branch.

In the NIH Record of March 14, page 6, under the heading "Catecholamines Studied for Metabolic Action," the reported findings were erroneously attributed to Dr. H. Well-Malherbe and were said to have been published in the Journal of Neurochemistry. The correct attribution follows:

The findings were reported by Dr. Julius Axelrod, NIMH, to the Ciba Symposium on Adrenergic Mechanisms, London, and by Dr. L. G. Whitby, Rockefeller Traveling Fellow; Dr. G. Hertting, Visiting Scientist; and Dr. Axelrod in Nature.

The Record regrets the error.

MITOCHONDRIA
(Continued from Page 4)

In growing animals. Methionine and acetate are building blocks of many mitochondrial components, and when they are synthesized from radioactive elements and incorporated into the components and thus into mitochondria, they can be traced to reveal information about activities and, in this case, the lifespans of mitochondrial components.

After maximum incorporation had occurred, the rates of loss of the four labeled components were measured. All components declined at about the same rate, an average half-life of 10.3 days, which suggests that rat liver mitochondria are labile and are turning over as an entity. The half-lives of liver mitochondria in adult (12 months old) and neonate (22 to 24 months old) rats were essentially the same.

The observed mitochondrial turnover rate cannot be attributed to the rapid turnover of a small fraction of the total number of cells since, if this were the case, turnover of deoxyribonucleic acid (DNA) would be equally rapid. The DNA turnover in liver is known to be extremely slow even in growing animals.
**Seminar on Investments Scheduled for April**

A two-session Advanced Seminar on Investments will be held here April 19 and 26, at 7:30 to 9:30 p.m., in the Clinical Center auditorium. The seminar is sponsored by R&W.

Conducted by Boyd B. Sibert, an associate of Ferris & Company, the first session of the seminar will cover determination of investment objectives and the construction and management of the investment portfolio.

In the second session, Mr. Sibert will discuss the nature and source of information available for analysis, analyzing individual securities, and the elements in the purchase and sale of securities.

Those interested in attending the seminar should call the R&W office, Ext. 5597.

**SYMPOSIUM LEADERS MEET AT NIH**

Dr. Francis A. Arnold, Jr., Director, NIDR; David E. Price, Deputy Director, NIH; and Dr. Peter Olch, NCI, Ext. 2442.

Pictured prior to the opening here last week of the first Symposium on Genetics Related to Dental Health are, seated, left to right: Drs. F. O. Pedersen, Dean, Royal Dental School, Copenhagen, Denmark; Francis A. Arnold, Jr., Director, NIDR; David E. Price, Deputy Director, NIH; and Einar Holm, Professor, Royal Dental School, Aarhus, Denmark. Standing: Drs. Lon W. Morrey, Editor, Journal of the American Dental Association, and Hans Grahnen, Associate Professor, Royal Dental School, Malmo, Sweden.

**Medical History Society Elects Officers April 20**

The second meeting of the newly formed NIH medical historical society will be held in Wilson Hall, April 20 at 8 p.m.

The agenda will include election of officers, the presentation of a constitution for ratification, and choice of a name for the organization.

The guest speaker will be Dr. Jerry Stannard of the Institute of the History of Medicine, Johns Hopkins University. He will discuss "The Development of Greek Pharmacology."

Further information may be obtained from Morris Leikind, NIND, Ext. 3547, or Dr. Peter Olch, NCI, Ext. 2442.

**Dr. Young Is Appointed NIAID Asst Lab Chief**

Dr. Martin D. Young was appointed Assistant Chief of the Laboratory of Parasite Chemotherapy, NIAID, effective April 3.

Prior to the new assignment, Dr. Young was Head of the Section on Epidemiology, LPC field station at Columbia, S.C. He will continue research here on malaria and other parasitic diseases.

**George L. Payne Heads Recently Established Analysis Section in OD**

George L. Payne, Program Analyst for Research Management and Education in the Office of Program Planning, OD, has been appointed Chief of the Office's recently established Program Analysis and Special Studies Section.

The new section will be responsible for the coordination and interpretation of summary data concerning NIH activities with special reference to current and pending program developments. It will serve in a staff and advisory capacity to the NIH Director and his immediate staff and will provide liaison for the Office of the Director with the program analysts and statistical staffs of the several Institutes and Divisions.

"It ought to be made clear," Mr. Payne said, "that, in respect to NIH data, this section will be a consumer organization. We're not planning to go into the business of growing and harvesting program data, but we do intend to become loyal customers of those who are." To Conduct Studies

The section will conduct special studies and carry out ad hoc assignments relating to program problems and policy questions. It will also keep in touch with other Federal and non-Federal research-support and training activities as they may affect NIH programs and direction of effort.

Before coming to NIH in January 1959 as a Special Consultant in the Office of Research Planning, Mr. Payne was a consultant to the President's Committee for Scientists and Engineers.

During World War II, Mr. Payne, a former British subject born in Amsterdam, was in charge of the cryptographic department of the British Embassy in Washington. From 1947 to 1956 he served there as Attaché, writing a weekly commentary interpreting American political and socio-economic events for the British cabinet and Foreign Office.

Mr. Payne is the author of a book, Britain's Scientific and Technological Manpower, published last year in this country and in England.

**Field Station Transfers**

The Section on Cytology, field station of the Laboratory of Parasite Chemotherapy, NIAID, has moved from Memphis, Tenn., to the Communicable Disease Center, Bldg. 30, Chamblee, Ga.

The Section is headed by Dr. Don E. Eyles. Mail should be addressed to P. O. Box 156, Chamblee.
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plus U.S. agricultural commodities. The funds are retained in these countries, to be used by the U.S. under provisions of the Act and pursuant to negotiations between the countries involved.

The International Health Research Act (P.L. 86-610) authorizes the support of programs for the collection and dissemination of scientific and technological information and coordinated research projects against disease.

The program will be carried out here as a direct extension of the intramural research programs.

7 Countries Participate

It is anticipated that the currencies will be available in Burma, Egypt, India, Israel, Pakistan, Poland, and Yugoslavia, and will, according to Dr. Shannon's statement, "contribute to the solution of health and medical problems characteristic of that particular country."

The statement continues, "In large part, the efforts are to correct problems of infectious disease, problems related to nutrition, and problems which can be best investigated utilizing large and diverse populations of different countries as the research subject."

Studies in epidemiology will cover disease patterns in relation to population characteristics, in order to delineate the causation and etiology of prevalent diseases.

Diseases endemic in certain areas, which may be transported to other areas, will also be investigated.

New Drugs Sought

In addition, the funds will contribute toward the search for new biological and botanical sources of potential disease-fighting drugs.

A total of $3,767,000 was appropriated to NIH for Fiscal Year 1961 for the purchase of P.L. 480 funds. Prior to the inception of individual negotiations under this agreement, it was necessary to conduct discussions at the governmental level with each country.

Currently, NIH scientists are negotiating in Israel and Yugoslavia for research agreements in those countries.

Dr. Thomas D. Dublin, NIH, is working out arrangements in Israel for a study of the geographic pathology of cardiovascular disease in a stable, isolated community. In the same way, Dr. Sidney Udolf, NIH, is collaborating in the establishment of research aimed at increasing the usefulness of heavy oxygen (O2) as a tool in medical studies.

Dr. Harold F. Dorn, NIH, is in charge of negotiations with Yugoslavia for an epidemiological study of heart disease in rural and industrial populations. Centralized health

4 U. S. Universities Receive International Center Grants

A program for International Centers for Medical Research and Training (ICMRT) has been established at four U.S. universities in cooperation with foreign medical institutions.

Dr. John M. Andrews, Director of the National Institute of Allergy and Infectious Diseases, recently announced that NIH research grants totaling $1.4 million during the current fiscal year were made to the University of California Hooper Foundation, Johns Hopkins University, Tulane University, and the University of Maryland to initiate the program authorized by P.L. 86-610. The law seeks to "advance international status of the health sciences through cooperative enterprises."

The grants provide continuing support, for five years, with full-scale programs reviewed every three years and periodically thereafter to evaluate progress, problems, and prospects prior to commitment of support for an additional five-year period.

This program is being administered by NIAID for the five other Institutes and the Division of General Medical Sciences which received funds in FY 1961 to support activities implementing the International Health Research Act.

The National Advisory Allergy and Infectious Diseases Council has been delegated the responsibility of advising for the other Councils in awarding grant funds.

An advisory committee has been established to develop program policy and to provide preliminary review of grant applications and continuing program evaluation. The Committee on International Centers, under the chairmanship of Dr. Colvin MacLeod of New York University, was selected to represent international health research interests on a global basis.

The U.S. universities and their overseas affiliates are:

- The University of California (Hooper Foundation) and the University of California Institute of Medical Research at Kula Lumpur; Tulane University and University del Valle, Cali, Colombia; Johns Hopkins University and Institute of Hygiene, Calcutta, India; University of Maryland and the Institute of Hygiene, Lahore, Pakistan.

Library Week Observed

National Library Week, April 16-22, will be observed at NIH with a program in the Patients' Library. One of the highlights, a panel discussion on the status of the library, will be held on April 19 in the C14th floor assembly hall, open to staff and the public.

The grants will facilitate such a study.

Philip Jannus, who has been working with NIH, conducted the fiscal and administrative negotiations.

Funds are allocated to a project on a "no-year" basis—that is, for the duration of the project.

Discussions have already been carried out with the governments of Poland, Egypt, India, and Pakistan, and are scheduled for Indonesia and Brazil.

Funds requested for the Bureau of Medical Services under this appropriation will be directed toward communicable diseases, environmental health, and behavioral studies.

The National Library of Medicine programs are intended for transmission of research publications in medical and related sciences and for the preparation of "critical review" papers, medical dictionaries, bibliographies, and other guides designed to improve the ability of American medical scientists to communicate with scientists in other countries.

NCI Technicians' Group Broadens Membership

The Technicians' Study Group of the National Cancer Institute, originally composed of members of the Laboratory of Pathology and the Pathologic Anatomy Branch, has now opened membership to all NCI technicians and has invited technicians from other Institutes to attend its monthly meetings.

Organized in 1955, the group seeks a closer liaison among workers in laboratories throughout NIH by discussions of research projects and techniques.

This year the group has heard lectures by Dr. Walter Newton, Chief, Laboratory of Germ Free Animal Research, NIAID; Dr. Frank Johnson, Armed Forces Institute of Pathology; and Dr. Howard Bond, Cancer Chemotherapy National Service Center, NCI. Future meetings are planned to include discussions of tissue fixation, handling of radiotopes, and standardization of vaccines and biologies.

Meetings are scheduled for the first Thursday of each month in Wilson Hall, Bldg. 1, at 12:30 p.m.

Information about the Study Group may be obtained by contacting one of the officers: W. J. Faulkner, President; John Folan, Vice President; Jewel Ards, Secretary; Ray Sheets, Treasurer; or E. J. Soban, Delegate-at-large, all of NCI's Laboratory of Pathology.

Bozicevich Retirement Effective This Month

John Bozicevich, research parasitologist on the staff of the Laboratory of Clinical Investigation, NAIAD, is retiring this month after 30 years in the Public Health Service.

His entire Civil Service career has been spent with NIH, except for a few early years at the Department of Agriculture.

Mr. Bozicevich

Lucile Furman, NIMH, Dies in Washington

Lucile Furman, information specialist in the NIMH Information Office and a staff correspondent of the Record, died at the Washington Hospital Center on April 1.

Before coming to NIH in 1956, Miss Furman was a member of the editorial staff of the National Education Association Journal.

She had also served as a writer for the Women's Bureau of the Labor Department and was a national publicity director of the American Association of University Women.

For six years prior to World War II, Lucile was a partner with her sister, Bess Furman Armstrong, in a free-lance writing firm, Furman Features. Mrs. Armstrong is a former Washington reporter for the New York Times and was recently appointed side to the Assistant for Public Affairs of the Secretary of Health, Education, and Welfare.

A native of Danbury, Neb., Miss Furman made her home with her sister at 3435 34th Place, N.W.

Besides her sister, she is survived by two brothers, Mr. Donald F. Furman of McCook, Neb., and Charles Furman of Danbury; a niece, Ruth E. Armstrong, of the home address; and a nephew, Robert F. Armstrong, of Arlington, Va.

On behalf of NIH, the Record extends sympathy to Miss Furman's family and many friends.