NIH RESEARCH TO BE TELEVISED NOV. 21

WTTG WILL SHOW

MI LAB STUDIES

Schistosomiasis research at the Laboratory of Tropical Diseases, Microbiological Institute, will be illustrated in the "Hopkins Science Review," a 30-minute television program over Channel 5, Tuesday, November 21, at 8:30 p.m.

Dr. Willard Wright, Dr. Eloise Cram, and others from the Laboratory of Tropical Diseases will participate. They will describe the laboratory's work leading to discovery of chemicals effective against snails that carry the causal agent of schistosomiasis, a widespread tropical disease and potential health problem in this country. The narrator, Mr. Lynn Poole of Johns Hopkins University, will interview the NIH scientists.

In addition to interviews and demonstrations, a short sequence of motion picture footage will present general views of NIH, including a panorama from the tower of the Naval hospital. The motion picture camera then enters Building 5. It shows the aquariums containing tropical snails that carry the disease-producing parasites; domestic snails capable of carrying them; and the laboratory where the chemicals were screened. Views of field studies in Puerto Rico, where Dr. Elmer Berry of the Laboratory tested the chemicals, will be presented.

The "Hopkins Science Review," known as the 'front page of science for the layman,' recently began its fourth season over the DuMont Network. The program is sponsored by the Johns Hopkins University. Other shows in which NIH will participate are planned.

THE PATHOLOGIST IN CIVIL DEFENSE

Provision of laboratory services for bomb casualties, and defense against biologic warfare, may be required of the pathologist in wartime. This was emphasized by Dr. Victor H. Haas, Director of the Microbiological Institute, at a meeting of the College of American Pathologists, Chicago, October 16.

During wartime, Dr. Haas stated, the pathologist will have the same functions in civil defense as he has in peacetime, but there will be modifications in scope and detail.

Bomb casualties and enemy attack with disease organisms would necessitate expansion of blood bank facilities, development of auxiliary technical staff, inventory of auxiliary laboratories, rationing of laboratory services, and establishment of biologic warfare detection centers.

Intensified research must provide methods and knowledge to meet civil defense problems.

SCIENTISTS CONFERENCE ON CANCER TESTS

Fundamental research to determine the subtle biologic and chemical changes associated with early cancer was emphasized at the first Conference on Cancer Diagnostic Tests, Chicago, October 14. Sponsored by the NCI Control Branch, the meeting attracted 150 research workers. Dr. J. R. Heller, Director of NCI, gave an introductory talk.

Scientists agreed that blood proteins from cancer patients differ from the normal, but that differences observed so far are not cancer specific. Dr. Lester Ellerbrook, University of Washington, after modifying procedures of Dr. Charles Huggins, University of Chicago, reported 93 percent positive reactions in a group with metastatic cancer, 86 to 88 percent positives in a non-metastatic cancer group--but high percentages of false positives among controls.

Dr. Jesse Greenstein, NCI, was chairman of a panel on enzymes.

TV preview: Dr. Elmer G. Berry, MI, inspects snail aquaria.
No. 34 in a Series

Environmental Cancer Studies

<table>
<thead>
<tr>
<th>Skin Cancers per 100,000 Population</th>
<th>City</th>
<th>Average Annual Sunlight as Percentage of Total Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>Dallas</td>
<td>60-80%</td>
</tr>
<tr>
<td>129</td>
<td>New Orleans</td>
<td>62-64%</td>
</tr>
<tr>
<td>37</td>
<td>Pittsburgh</td>
<td>50-57%</td>
</tr>
<tr>
<td>24</td>
<td>Detroit</td>
<td>40-25%</td>
</tr>
</tbody>
</table>

Relation of skin cancers to intensity of sunlight.

For nearly a hundred years, industry has inadvertently performed experiments in carcinogenesis, the results of which are known as occupational cancers. To learn lessons about cancer that industry can teach is the primary purpose of two NCI departments headed by Dr. W. C. Hueper—the Cancer-igentic Studies Section, and the Cancerigenic Research Laboratory at Georgetown University Medical School.

The causal agents of occupational and other environmental cancers may be chemical or physical in nature. They include tar, pitch, soot, petroleum derivatives, benzol, dye intermediates, arsenicals, chromates, beryllium, nickel, asbestos, ultraviolet rays (as in overexposure to sunlight), X-rays, and radioactive materials.

Dr. Hueper, Dr. H. J. Cahnmann, and their assistants investigate the geographic distribution of these cancers, their causes, mode of development, and symptoms. Primary objectives are the development of preventive, diagnostic, and therapeutic measures.

The two NCI sections are helping to plan and support environmental cancer surveys conducted by the health departments of six states. In these surveys, attempts are made to learn the incidence of environmental cancers in various population groups, to relate the disease occurrence to known or suspected carcinogens, and to discover unsuspected causal agents. Such epidemiologic studies are extended by consultative services to the Bureau of Mines and to various industrial organizations.

At the Research Laboratory, known and suspected carcinogens are studied, with emphasis on cellular and tissue changes preceding manifest cancer. Using polarographic, spectrographic, and electrophoretic methods, all agents are tested on various species of animals, and special attention is given to metallic carcinogens in the form of fine dusts and gases. Investigation of this mode of exposure is especially important in view of the mounting incidence of cancer of the lung.

Studies are also being done on fractions of shale oil and on synthetic oils produced from coal.

NCI SPONSORS MEETINGS

The third annual conference of the Coordinators of Cancer Teaching in Medical Schools, and the first annual conference of their counterparts in dental schools, were held jointly in Chicago, Oct. 12-13. The meetings were sponsored by the NCI Control Branch. More than 150 persons participated.

Here and There

Travel

Dr. William H. Sebrell, Jr., Director of NIH, is in St. Louis, Mo., attending the annual meeting of the American Public Health Association, October 30–November 3. Incidentally, the correct pronunciation is See'-brel.

Dr. Norman Topping, Associate Director, NIH, attended the annual convention of the National Society for Crippled Children and Adults, Inc., held October 26-28 in Chicago, Ill. He spoke on the importance of research in building happy, useful lives.

Dr. Francis A. Arnold, Associate Director in Charge of Research, NIDR, is spending a few days attending two dental meetings in Atlantic City. At the annual meeting of the American College of Dentists, held yesterday, Dr. Arnold served as chairman of the Committee on Preventive Service. At the annual meeting of the American Dental Association, October 31-November 2, he will be chairman of the Program Committee and of the Committee on Research.

Local Fluoridation

NIH employees may soon benefit from the discovery of Dr. H. T. Dean, NIDR Director, that fluorides added to drinking water reduce tooth decay. The Montgomery County (Maryland) Civic Federation has recommended to the Washington Suburban Sanitary Commission that fluorides be added to the water supply. Dr. R. H. Riley, Maryland State Health Officer, and the Southern Maryland Dental Association endorse the proposal.

Library Publication

The NIH library announces that its monthly publication, Recent Additions to the Library, is now available for distribution. If you wish to receive it regularly, leave your name and room number at the library desk.
'PHANTOM HEART' TO BE SHOWN IN D. C. AREA

Thirteen portable exhibits of the 'Phantom Heart' have been prepared by the National Heart Institute, in cooperation with the Heart Disease Control Branch, Division of Chronic Disease, PHS. Ten of the exhibits have been sent to PHS Regional Directors for display before interested groups.

Developed by Dr. Bert R. Boone, NHI, the Phantom Heart shows the cardiovascular silhouette and its motions as seen on the fluoroscopic screen. The original model was designed as an aid in illustrating the principles of electrokymography, a method of recording the motions of the heart and great vessels.

Because it simulates heart motions in a simple manner, the Phantom Heart has acquired wide interest and application, particularly in public health programs. During the first week in November, NIH employees may view the exhibit at Peoples Drug Store, Colesville Road, Silver Spring, Md., or at National Press Pharmacy, 13th and F Sts. NW., Washington, D.C.

NIH AIDS IN CREATING MOBILE BLOOD LAB

An NIH research grant has aided in the development of a new mobile laboratory that will completely process human blood for medical use. In a matter of hours, blood is taken from donors and separated into its major components. This is an important step in efforts to decentralize the national blood program.

The new, rapid methods of processing whole blood were developed at Harvard University by Dr. Edwin J. Cohn and a group of investigators from university, hospital, state, and industrial laboratories. Their work was supported by public and private agencies.

This refrigerated, 32-foot trailer-truck, shown in Boston this month, is the first of a series of rolling laboratories that will go to donors and process their blood on the spot.

NIH Spotlight

James E. Phillips

In this changing world, it seems unusual to find a man who was born in Montgomery County, who married and settled within 20 miles of Bethesda, and who for 30 years has served the same master -- the National Institutes of Health.

Such a man is James E. Phillips, better known as Jim. Back in 1920 he started at NIH as a messenger. He is now Administrative Assistant of the Laboratory Aides Branch and head 'trouble shooter' among 104 or so people who aid the scientists in their work.

The Branch prepares media for the cultivation of micro-organisms, manufactures scientific instruments, sterilizes glass, and procures and breeds animals.

Jim Phillips provides NIH labs with laboratory assistants wherever needed. For instance, two assistants in MI might be sick, leaving no one to feed the animals or keep the experiments in operation. Jim will shift two workers from a section that can spare them, and the work moves along, uninterrupted.

Mr. Phillips also supervises the animal section in Building T-10, where most of the animals used at NIH are raised.

When asked how he feels after working at NIH for 30 years, Mr. Phillips said, "NIH means a great deal to me. I have met many fine people and have made many friends."

NEW FLUORIDATION METHOD DISCOVERED

Sodium fluosilicate, when added to the drinking water of rats, gave evidence that it would be as effective in preventing human tooth decay as the more expensive sodium fluoride, which has been the chemical of choice in community water fluoridation studies. The finding is described in Public Health Reports, September 15, by Dr. F. J. McClure, National Institute of Dental Research.

Dr. McClure's results with growing rats, if true for humans, as seems likely, mean a saving of two-thirds of the present cost of fluoridation.

In comparable studies, the same amounts of fluorine, ash, calcium, and phosphorus were deposited in the teeth and bones -- an indication that the two chemicals would have the same dental effect. Sodium fluosilicate did not cause mottling of the rats' teeth, as seen in excessive fluoridation. Nor did it alter the rats' rate of growth.

"If sodium fluosilicate can be substituted for sodium fluoride," said Dr. McClure, "more towns and cities will be able to afford fluoridation of their water supply. This would mean at least partial 'decay prevention' for millions of Americans."

The fact that fluorine can reduce tooth decay was discovered 12 years ago by Dr. H. T. Dean, NIDR.

NIH INJURIES, JULY-SEPTEMBER, TOTAL 155

NIH Record

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Wilson Hall closely resembled the set of a motion picture studio a few weeks ago. Spotlights, reflectors, and five cameras were focused on a group of 'actors' gathered about a model of the Clinical Center. Cast: Surgeon General Scheele, Deputy Surgeon General Dearing, Drs. R. E. Dyer, W. H. Sebrell, Jr., Norman Topping, Jack Masur, and NIH Institute Directors. Scene: a Clinical Center planning conference, re-enacted. Later, cameras followed as the group visited the Clinical Center grounds to view construction progress.

These scenes will be included in an NIH color-film history of the growth of the Clinical Center. The first scenes were made several years ago at an early planning session, when Dr. Thomas Parran was Surgeon General. Since then, the Kodachrome film has grown with the new research hospital.

Camera crews from the Color Reproduction Section and the Photographic Research Section have filmed construction progress every few weeks. Only when the Clinical Center is finished will the movie be complete.

The purpose of the latest scenes is to record not only a typical conference and new personnel, but also the stage of Clinical Center development at the time of Dr. Dyer's retirement.

The reconstruction of the conference scene was no simple matter. The model of the Clinical Center was moved from the main hall of Building 1 to Wilson Hall; camera equipment was installed, as well as power lines; and camera and lighting angles were planned and diagrammed by the production staff.

The camera crew reports that Dr. Dyer and the other Public Health Service officials were excellent actors; no mishaps occurred.

These scenes may be used in an NIH orientation film, as well as in the Clinical Center historical film document. Other members of the cast included Drs. D. E. Price, V. H. Haas, J. R. Heller, C. J. Van Slyke, H. T. Dean, R. H. Felix, and Mr. A. F. Siepert.

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