

N.I.H.

record

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PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

CONGRESS ADDS TWO INSTITUTES TO NIH

NCI REPRESENTED AT PARIS CONGRESS

NIH was well represented at the 5th International Cancer Congress held in Paris, France, July 16 to 22. Fourteen members of the National Cancer Institute were present. Leading scientists from more than 40 countries, including 206 from the United States, attended the meeting.

Among those from NCI were Dr. John R. Heller, Director, and Dr. Austin V. Deibert, Chief of the Cancer Control Branch.

Papers presented at the Congress, and the NCI members who read them, were as follows: "Morbidity from Cancer in the United States," Dr. H. F. Dorn; "Studies on the Effect in Vitro of X-Radiation on the Biological Activity of the Agent of Chicken Tumor I (Rous Sarcoma)," Dr. E. Lorenz; "Basic Science Aspects of Cancer Chemotherapy," Dr. M. J. Shear; "Morphology of Mammary Tumors in Mice with and without the Agent," Dr. Thelma Dunn; "Malignant Lymphoma in the Dog," Dr. W. Eyestone; "Steroid Hormones and Tumor Growth" and "Dietary Trace Factors Concerned in Hormonally Induced Tissue Growth," Dr. R. Hertz; "Teratomas of the Testis: Origin, Morphogenesis, and Metastasis," Dr. A. Symeonidis (Special Research Fellow); and "The Lesions Induced by Intramural Injection of 20-Methylcholanthrene to Sites in the Glandular Stomach of the Rat," Dr. H. L. Stewart.

Dr. G. H. Algire showed two films illustrating his technique for viewing tumors through a window in the skin of a mouse.

NIH WELCOMES NEW LIBRARIAN



Mr. Scott Adams, appointed NIH Librarian on August 1, is no stranger to the complexities of the modern medical library. Before coming to NIH, he served for several years as Assistant to the Director of the Army Medical Library.

Mr. Adams' first job as NIH Librarian will be to develop the library as a center of scientific information. "In 1950," says Mr. Adams, "the emphasis has shifted from the acquisition, cataloging, and maintenance to making fully available the contents of the collection."

With this in mind, Mr. Adams plans to establish apparatus for exhaustive documentation, bibliographies, indexes, and abstract services. "The scientific library," says Mr. Adams, "should be as much a research tool as any item of laboratory equipment."

NIARMD AND NINDB

A National Institute on Arthritis, Rheumatism, and Metabolic Diseases and a National Institute on Neurological Diseases and Blindness were authorized August 17 by Act of Congress.

Dr. Leonard A. Scheele, Surgeon General, is permitted by the Act (Public Law 692) to establish the new Institutes whenever necessary. He may modify any Institute established by law. Funds for establishing the new Institutes must yet be appropriated.

"In the meantime," Dr. Scheele points out, "some research into basic problems related to rheumatoid and neurologic diseases, now under way at NIH, will go forward, and metabolic studies will receive special attention at the Clinical Center, to be opened in 1952."

The Institutes Bill also provided that salaries of \$10,000 to \$15,000 may be paid to 30 additional employees of PHS, professional and research; that all advisory councils responsible for recommending PHS grants shall consist of the Surgeon General as chairman ex officio, six professional and six lay members, and ex officio representatives of the Armed Forces and the Veterans Administration; and that authority to grant funds for training and research construction shall be extended to all Institutes.

In addition, the present \$750,000 ceiling on the dental research budget is repealed; the Surgeon General may establish an advisory council without a corresponding Institute; and the two new statutory councils, in addition to their advisory functions, will review only research grants.

Intermediate Hosts for Schistosomes

Because of the war in the Pacific, recent progress against schistosomiasis, a disease widespread throughout the Far East, assumes an added significance. It was recently announced that workers of the laboratory of Tropical Diseases, MI, had discovered an inexpensive molluscicide that was highly effective in practical tests against snails that transmit the pathogenic schistosomes, or blood flukes. Sodium pentachlorophenate, the new agent, rapidly destroyed all the snails and their eggs within a "critical area" and beyond.

The story of this achievement may well begin with the work of Dr. Elmer G. Berry, MI scientist primarily concerned with raising snails that serve as intermediate hosts in the life cycle of various helminths. In the Section on Helminthic Diseases, headed by Dr. Eloise B. Cram, about 30 species of snails, most of which carry schistosomes, are cultivated in more than 250 aquariums.

One approach in Dr. Berry's work is the recognition of species related to known intermediate hosts. Other members of the unit determine whether the related species are susceptible to infection with helminths. In order to cultivate the snails, the habitat must be thoroughly studied and effectively reproduced in the laboratory. A delicate balance must be maintained between snail and parasite, in order to preserve the life of the host.

Dr. Cram has concentrated upon the study of relationships between strains of schistosomes in various regions. She has shown, for example, that schistosomes found in the western hemisphere will not grow in Egyptian snails, but will grow in those of western Africa.



Dr. Berry measures the flow of a stream near Los Peña, Puerto Rico, to determine how much molluscicide to use in testing.

Mrs. M. O. Nolan undertook the screening of various chemicals in the search for an inexpensive molluscicide that would kill 100 percent of the test snails in 24 hours, using ten parts per million. More than 700 compounds were screened, and 11 met the criterion for effectiveness.

Dr. Berry recently tested the 11 compounds in Puerto Rico. Six were highly effective, and one of those, sodium pentachlorophenate, met all the criteria for practicality. Further studies are needed, however, to determine how long the treatment is effective and whether toxic for mammals.

Schistosomiasis is found in Africa, Egypt, the West Indies, South America, Japan, Formosa, China, the Philippines, and other areas. It has been reported in Korea, but whether contracted or brought there is in question. Though the disease is not endemic in the continental United States, two species of snails have been found capable of transmitting the parasites--one of them from areas as nearby as Rosslyn, Va.

REGIONAL DIRECTORS

MEET AT NIH

The Regional Directors of the Federal Security Agency spent August 9 at NIH, during their Annual Meeting to discuss intra-agency program operations.

Convening on August 8, the Directors met on four successive days. All ten were present at NIH, where they assembled at Top Cottage.

Surgeon General Leonard A. Scheele, first speaker of the day, discussed the growing significance of PHS in times of national emergency. Dr. Dyer, NIH Director, presented next the history of PHS research and of NIH.

Talks and demonstrations by NIH scientists followed. Dr. S. M. Rosenthal, EBMI, demonstrated the effectiveness of saline solution in the treatment of shock. Dr. Willard A. Wright of MI discussed the development of new molluscicides effective against schistosome vectors. And Dr. Murray J. Shear, NCI, discussed the integration of scientific disciplines in cancer research.

The final demonstration, by Dr. Heinz Specht of EBMI, vividly illustrated the effects of high altitude on blood and kidney function. Dr. Specht presented the demonstration in an altitude chamber at a simulated height of 30,000 feet.

At the luncheon meeting, Dr. Norman Topping, Associate Director of NIH, spoke on new trends and emphasis in NIH research programs, and each Institute director spoke briefly on the program of his Institute. Other talks were given by Dr. J. W. Mountin and Dr. Jack Masur.

Later in the afternoon, the FSA Regional Directors visited the Isotope Laboratory, conducted by Drs. Howard L. Andrews and Clinton C. Powell of EBMI.

The following FSA Regional Directors were present at the meetings: Mr. Fay Hunter, Mr. Heber Harper, Mr. Jim Bond, Mr. James Doarn, Mr. Richard Lyle, Dr. Seward Miller, Mr. Kimball Johnson, Dr. E. R. Coffey, Mr. Joseph O'Connor, and Mr. Lawrence Bresnahan.

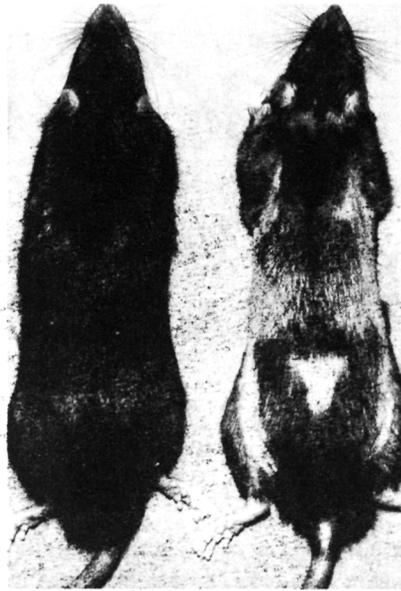
COPPER DEFICIENCY AND GRAY HAIR IN RATS

In recent studies at the Experimental Biology and Medicine Institute, NIH, it has been shown that diet may be important in the prevention of gray hair in animals. Extending the knowledge that a lack of copper can cause graying in rats, Dr. James Hundley and Mr. Robert B. Ing, Laboratory of Biochemistry and Nutrition, present evidence that enough copper deficiency to cause graying might occur in an animal diet sufficient for normal growth and blood formation.

These workers kept black rats on a diet sufficient in calories and vitamins to produce normal growth. Although the diet contained copper in all its ingredients, some rats began to show gray hair within 10 days and marked graying five or six weeks later.

The patterns of graying varied, and in positive cases the hair also thinned and developed an unkempt dull surface. The rats did not revert spontaneously toward their normal coat color.

Testing many chemical substances, Dr. Hundley found that small dietary supplements of copper sulfate largely prevented graying. In rats treated after gray hair developed, black hair began to reappear in about five days, and in most cases the change was complete within three months.



Control rat with normal black coat and experimental rat showing gray and thin patches

"We have no way of knowing," said Dr. Hundley, "whether these experiments bear any relation to gray hair in man. We have shown primarily that copper is necessary to maintain normal hair growth and color in black rats. It is highly improbable that the average American diet is deficient enough in copper to cause the usual graying during the aging process."

"It is possible, however, that a grossly inadequate diet might affect the hair. This remains to be determined by careful clinical studies."

Calendar of Events

Sept. 15	Dental Study Section*	10:00 a.m.	Room 1057, Bldg. T-6, Bethesda, Md.
Sept. 16	Surgery Study Section*	10:00 a.m.	Room 1057, Bldg. T-6, Bethesda, Md.
Sept. 16	Tropical Medicine Study Section*	9:30 a.m.	Room 2025, Bldg. T-6, Bethesda, Md.
Sept. 16	Arthritis and Rheumatism Study Section*	9:30 a.m.	Mayflower Hotel, Washington, D. C.

*Closed Meeting. This list will be continued in the next NIH RECORD.

Here and There

New Horizons

NIH will miss Dr. Isaac Berenblum, who has left this country to take a new position as head of the Biological Department of the Weizmann Institute of Science, Rehovoth, Israel. Dr. Berenblum served for two years as a Special Research Fellow in the Chemotherapy Section, NCI. An international authority on the mechanism of carcinogenesis, he is the author of a book entitled "Science vs. Cancer" and numerous research papers.

Southward Bound

The August heat has not deterred members of NIH from journeying under tropic suns. Dr. Elmer G. Berry of the Laboratory of Tropical Diseases, MI, left August 17 for Liberia, where he will serve for a year or more as acting director of the Liberian Institute.

To attend the 5th International Congress of Microbiology, Dr. C. W. Emmons, Laboratory of Infectious Diseases, MI, left for Rio de Janeiro, Brazil, August 13, and Dr. Margaret Pittman, Laboratory of Biologics Control, MI, left on August 14. Dr. Pittman will also visit Uruguay, Argentina, Chile, and Panama.

On August 14 Dr. Willard H. Wright, Chief of the Laboratory of Tropical Diseases, MI, left for Atlanta, Ga., and Miami, Fla. In Atlanta he led a discussion on trichinosis, and in Miami he presented a paper, "Tropical Diseases of Veterinary Public Health Importance."

Other Travel

But not all NIH travelers this month headed south. Dr. Victor H. Haas, Director of MI, left for Seattle, Wash., August 15, to attend the annual meetings of the International Northwestern Conference on Diseases of Nature Communicable to Man.

From August 21 through 23, Dr. Willie W. Smith, Laboratory of Physical Biology, EBMI, visited the Brookhaven National Laboratory, Upton, Long Island, N. Y. She spoke on the influence of metabolic activity on radiation effects.

Staff and Distaff

For one reason or another, almost everyone at NIH has had occasion to talk to Miss Mary D. Bertha, Chief of Employee Relations. Room 115, Building 1, is a clearinghouse for queries such as "Do you have tickets to Kiss Me Kate?" (they don't) and "Where can I go on vacation?" (Canada is the most popular place this year.)

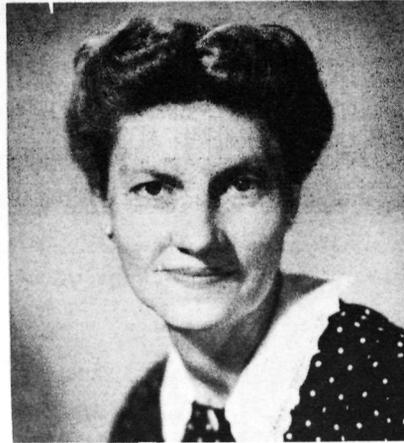
Miss Bertha handles these and other questions in stride. She is also responsible for entrance interviews with new employees (orienting them to NIH), for exit interviews with old employees, and for straightening out problems of Government regulation for puzzled staff members.

All these problems, however, she considers auxiliary to her main responsibility. What this responsibility is, Miss Bertha finds difficult to define--but by and large she feels it her business to keep NIH people happy both on and off the job.

"A typical problem?" says Miss Bertha. "Well, take the case of a secretary whose supervisor has failed to give her a job matching her abilities. If she's a secretary, with a secretary's rating, she's proud not only of her rating but of her ability to handle a secretary's duties. She shouldn't be doing lesser work. On the other hand, a suitable job may not be available in her shop."

In such a case, the secretary will come to Miss Bertha (perhaps calmly, perhaps in tears); and Miss Bertha will go to the secretary's supervisor, because the secretary usually finds it difficult to do so. "The supervisor may be unaware that there's trouble in his shop, and frequently just calling his attention to the matter may amount to a solution. In other cases, we may have to effect a job transfer, and still less frequently an employee may resign."

Such matters as these are far less difficult to handle than off-the-job problems. Miss Bertha herself does what she can to relieve an employee's burdens. Frequently this means visiting his home, getting the facts, summing up needs.... She is then ready to approach local community officials for medical or financial aid.



Miss Mary Bertha

Such personal matters as these, says Miss Bertha, are minor in terms of paper work, but major in terms of a person's life. For herself, these problems are sometimes disturbing enough to minimize her own. "I have no problems at the end of a day," she says; "I just go home and dig in my garden."

INJURY SCORE

JULY 1950

Department	No. of Injuries	Hours Lost	Injury Rate*
NCI	11	122	27.3
EBMI	3	3	1.3
MI	5	132	70.7
NHI	2	2	2.6
NIDR	1	1	4.2
NIMH	1	1	1.1
DRGF	2	2	1.9
OD-Bldgs.	25	128	52.0
OD-LAB.	5	5	4.9
OD-Others	2	2	0.8
Total	57	398	22.6

* Hours lost per 100 employees.

CONFERENCE ON AGING BASES HOPE ON SCIENCE

Medical science, in bringing infectious diseases under control, has helped more people live longer. In so doing, however, it has helped pose for society a new and urgent problem--to find new usefulness for the growing ranks of the aged. Prospects that the chronic diseases will ultimately yield to medical research emphasize the problem.

But scientists attending the Conference on Aging, held August 13-15 at the Shoreham Hotel, declared that with adequate support they could help conquer this problem too. Insofar as infirmity of the aged complicates matters, science offers hope.

Attention of the Section on Research focused on the failing capacities that accompany aging--debilitation, mental decline, and the slower responses of older people that prevent their continuing useful activities. These changes, stated conference delegates, have created grave problems of social and economic adjustment.

There are instances, though, of vigorous and healthy oldsters doing as much or more than persons many years their junior, scientists pointed out. If medical research could preserve the health and vigor of all older people, today's problems of aging could be appreciably reduced.

Aside from the chronic diseases that predominate in old age, are the changes that accompany aging and sap vitality pathologic? About this, the scientists would like to know more. They believe that additional research would provide new knowledge through which the usefulness of early adulthood could be prolonged.

At NIH, a major portion of the research concerns problems that affect especially the older age groups. These fundamental studies, in cancer, arteriosclerosis, hypertension, rheumatoid and mental diseases, and other disorders, are casting light on the aging process itself.

Scientists at the Conference felt that, in addition, there is general need for direct approaches in gerontology--more studies of the healthy organism aging with time.