

DENTISTRY

May Transmit Tooth Decay

► MICROBES that store carbohydrates may cause tooth decay and transmit it from one person to another.

Preliminary research is underway at the Forsyth Dental Infirmary in Boston, based on a report from the National Institutes of Health, Bethesda, Md., that hamsters could transmit tooth decay.

Dr. Ronald J. Gibbons, research associate at Forsyth and the Harvard School of Dental Medicine, told the annual meeting of the International Association for Dental Research in Boston that he and his associates will work experimentally with hamsters from the NIH strain.

Dr. Gibbons said investigations suggest that certain microbes found on the surfaces of the teeth are able to store a portion of the sugar taken in while a person is eating.

"These microorganisms are then able to convert this stored carbohydrate into decay-producing acids during the period of time between meals," he reported.

A comparison of the bacteria present on tooth surfaces between patients with tooth decay and those free from decay

showed almost twice as many bacteria capable of storing sugars in the patients with dental caries.

Dr. Gibbons and his group believe these carbohydrate-storing microbes are important to the study of tooth decay causes and may pass the caries from one individual to another. Working with Dr. Gibbons on the project are Drs. Sigmund S. Socransky and John B. Macdonald of Forsyth and Harvard.

• Science News Letter, 79:214 April 8, 1961

Cancer Cases Found

Fourteen unsuspected cases of cancer, discovered by a painless examination of the cells of tissue lining the mouth and upper throat, were reported to the International Association for Dental Research meeting in Boston by Dr. Henry C. Sandler, of the Veterans Administration Hospital, Brooklyn, N. Y.

Two of three persons affected by mouth cancer die of the disease within five years. However, the probability of curing early cancer is around 90%.

• Science News Letter, 79:214 April 8, 1961

MEDICINE

Tumor Immunity Sought

► TUMOR IMMUNITY, a long-sought aim in cancer research, is the ultimate goal of a study reported at the American Cancer Society's 1961 science writers' seminar in St. Petersburg, Fla.

Dr. Arthur E. Bogden of the Biochemical Research Foundation, Newark, Del., told the writers that his research group, by means of tumor extract, was trying "to stimulate natural defense mechanisms, so that the body will be induced to fight the spread of cancer within itself."

Autoimmunity has already been induced in noncancerous tissues, so the possibility of sensitizing an individual to his own cancerous tumors is gaining support.

Dr. Bogden and his associates worked with rats, ten percent of which could resist tumor implants.

"We found that we could determine in advance," the biochemist said, "whether a

rat would be susceptible or resistant to an ascites tumor-implant, by first mixing some of its red blood cells with the serum from animals which had resisted a tumor-implant."

If the animal's red blood cells were clumped by the anti-serum, the investigators observed, it would die from an implant. But if they were not clumped, the rat would be capable of resisting the implant.

The studies indicate that the rat, as well as rat tumors, contain antigens that control the transplantation of both normal and cancerous tissues.

Dr. Lawrence Levine of Brandeis University, Waltham, Mass., reported studies with his associates that demonstrated the antigen-producing qualities of DNA, or deoxyribonucleic acid, the carrier of genetic information in cells and many viruses.

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GENERAL SCIENCE

Science Fair Awards

► FOUR ADDITIONAL national agencies are cooperating with the National Science Fair-International, conducted by SCIENCE SERVICE, to increase the recognition and opportunities that may be earned by finalists selected to attend the annual event.

At the 12th National Science Fair-International to be held in Kansas City, Mo., May 10-13, the American Heart Association will award a citation plaque and

an all-expense trip to exhibit at the association's annual convention in Miami Beach in October.

The National Aeronautics and Space Administration will designate six students and their teachers to receive expense-paid trips to NASA research facilities where they will be guests for two days.

The Optical Society of America will award a citation plaque and \$125 to a

winner and a plaque and \$75 to a runner-up.

A Pathologist-Medical Technologist award will be presented by the Inter-Society Committee for Pathology Information and the National Committee for Careers in Medical Technology. A certificate of merit and a summer job at the American Registry of Pathology of the Armed Forces Institute of Pathology in Washington, D. C., with travel expenses paid, will be awarded to one finalist.

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16 New Fairs Affiliated

► THE EFFECTIVENESS and wide appeal of the science fair movement is reflected in the continued growth of the National Science Fair-International which now includes 16 newly affiliated regional and area fairs, bringing the total to 205 fairs.

Each of these fairs may select two outstanding exhibitors to be sent as finalists to the 12th National Science Fair-International which will be conducted by SCIENCE SERVICE May 10-13 in Kansas City, Mo. The official party is expected to include well over 1,000 since fair directors, educators and news representatives will accompany the finalists.

Four science fairs from Oklahoma and two from Texas are among those who will participate for the first time in the international event.

The new affiliates also include one fair each from Colorado, Indiana, Kansas, Louisiana, Maryland, Nevada, New Jersey, New York, Virginia and Wisconsin.

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GERMAN ATOM PLANT—The first German atom power plant has been opened near Frankfurt on the Main. The reactor as well as the action primary circuit is built into the cylinder.