

VIROLOGY

New Family of Viruses

► SIGNS that "a whole new family of virus-like agents" lurks in the human blood stream were reported by Dr. I. William McLean Jr. of Parke, Davis and Company, Detroit, at an International Symposium on Hepatitis held at the Henry Ford Hospital, Detroit.

Members of this family possibly cause hepatitis and other diseases. Hepatitis is a liver infection best known to the layman as jaundice because of the yellow skin that is one symptom.

It has become widespread in recent years and is said to be second only to measles among the most prevalent reportable virus-caused diseases.

Infectious hepatitis, called Virus A, is a contagious, epidemic disease transmitted through contaminated drinking water, food and sewage. It has an average mortality rate of 0.2%.

A second type, called Virus B or serum hepatitis, has a death rate as high as 20% and is transmitted through improperly sterilized needles or other surgical equipment and through administration of blood or serum containing the virus. Since no

effective measures have been set up to test human blood for the hepatitis virus, blood from carriers may be used unknowingly in transfusions.

Dr. McLean and associates have been trying to isolate Virus A. They have been able to produce degenerative changes in an especially maintained culture of human bone marrow cells by adding to the cells normal human blood serum or blood serum from hepatitis patients.

These changes are produced by about 25% of specimens from normal people but almost 100% of infectious hepatitis victims seem to carry the agent in their blood and intestinal wastes.

Whether the effect is due to the hepatitis virus or to any virus has still not been positively determined, but the evidence that the changes are due to a virus is "strongly suggestive," Dr. McLean said.

The technique developed in the study, he added, might apply to other degenerative diseases still the object of intensive research and could be a preliminary step toward a hepatitis test and vaccine.

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GEOPHYSICS

Launch 40 Rockoons

► ABOUT 40 ROCKOONS will be launched from an ice-breaker near Antarctica during the International Geophysical Year (IGY), Dr. Harry Wexler of the U. S. Weather Bureau, Washington, has reported.

Rockoons are balloon-borne rockets fired about 15 miles above the earth's surface to zoom to 60 miles in the atmosphere. Dr. Wexler, chief scientist of the IGY Antarctic program, said the rockoons will be used to observe cosmic ray intensity, the air glow caused by aurora, and electrical currents in the atmosphere.

The launchings, he said, will be coordinated with similar firings being made in the Northern Hemisphere. Dr. Wexler reported the plans at a week-long IGY Antarctic orientation program held at the Seabee base, Davisville, R. I.

Some 70 scientists who will man the U. S. stations on the White Continent during the IGY were together there for probably the only time in one group.

The briefings allowed the scientists, all of whom will be working and living at isolated snow-bound stations, to get acquainted with each other and to learn of the conditions under which they will be living for the next 18 months. Most of those scheduled to sail to Antarctica during the next two months will return after 18 months of duty, to be replaced by a second contingent of scientists who will sail next fall.

The stations they will man are Little America, Byrd, Pole, Weddell, Knox and Adare.

The United States has been given the responsibility of running the IGY Antarctic Weather Central for the 11 other nations also establishing bases there. Weather observations will be collected and re-broadcast internationally.

The International Geophysical Year is a world-wide probe of the earth and its atmosphere scheduled to start next July 1.

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MARINE BIOLOGY

Electronic Fish Counter Spots Salmon in Alaska

► AN ELECTRONIC FISH COUNTER, the first of its kind, has been installed at Egegik Weir in a river flowing into Bristol Bay near King Salmon, Alaska, by fish biologists of the U. S. Fish and Wildlife Service.

It is the first electronic fish counter to be used in the field. Other attempts have been made under laboratory conditions.

"The electronic counts are being checked against visual counts. The fish detector to date has proved to be 98% accurate," biologist Harry Rietze of the U. S. Fish and Wildlife Service, who heads the project, reported. "The only 'joker' is that when two fish go through at the same time, there is no way of telling there are two fish."

The fish detector is operated on the principle of a "resistant bridge." Since a fish

has less electrical resistance than water, thus carrying the current better than water, it gives a signal on a wheatstone bridge circuit. This is amplified and recorded on a paper chart.

The first model of the detector was designed and built by biologist Charles Voltz of the U. S. Fish and Wildlife Service electronics laboratory in Seattle, Wash.

Egegik Weir was the location chosen for the experiment because there are large runs of fish about the same size and same kind. As yet, no mechanical method has been developed to tell the kinds and sizes of fish.

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