

## PUBLIC HEALTH

# Develop New Polio Vaccine

New strains of live polio virus vaccine have been developed that hold promise as effective oral vaccines for use in the United States.

NEW STRAINS of live polio viruses appear more beneficial than those used in the live polio vaccine fed to millions of Russians during 1959.

Dr. Albert Sabin of the University of Cincinnati, developer of the live virus polio vaccine recently tested on a mass scale in Iron Curtain countries, reported his success to date with new strains of live virus to colleagues attending the Gustav Stern symposium on viruses in New York. These new strains, which include polio viruses types I, II and III, were taken from healthy children, Dr. Sabin told SCIENCE SERVICE. He referred to them as "cold mutants," or 25-degree Centigrade (77-degree Fahrenheit) mutants.

Experiments with these new strains showed that when doses of these strains were injected into the spinal cord of rhesus monkeys, the animals did not become paralyzed. The monkeys developed neither paralytogenic symptoms nor lesions, the virologist said.

Some monkeys that have been used to test the presently developed live virus vaccine did develop lesions, which, in turn, influenced the U. S. Public Health Service in its decisions to request further testing before recommending use of the oral vaccine in this country.

If Dr. Sabin's new strains will multiply in the intestinal tract of humans, which is essential for the development of immunity, they may replace the strains used in the present Sabin oral vaccine. Tests to determine the ability of these new strains to multiply and create immunity will begin soon, Dr. Sabin said.

He will visit Russia in March. There, Dr. Sabin reported, the Russians are now using the year-old oral polio vaccine developed in Cincinnati. Every person between the ages of two months and 20 years in the Soviet Union, Hungary and Czechoslovakia is receiving the vaccine in either syrup or candy form.

Russian scientists last summer developed a medical bonbon that contains the three types of Sabin live polio virus. The oral vaccine continues to be used in Russia on a wide scale to eradicate polio, Dr. Sabin said.

Three U. S. pharmaceutical firms, Pfizer's laboratories in England, Pittman-Moore of Indianapolis and Wyeth of Philadelphia, are now developing the Sabin vaccine.

These oral vaccines will be tested and ready to submit to the U. S. PHS for licensing by the end of this year, Dr. Sabin predicted.

Other oral polio vaccines have also been developed in the U. S. by Dr. Herald Cox of Lederle Laboratories, Pearl River, N. Y., and Dr. Hillary Koprowski of the Wistar Institute, Philadelphia.

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## Protein Protects Body

AN AGENT produced by the human body that appears to be capable of knocking out the common cold and many respiratory infections was described by a London researcher.

The agent is called interferon by its discoverer Dr. Alick Isaacs of the National Institute for Medical Research. He described his latest findings to more than 150 top virologists attending the international symposium on virology.

Dr. Isaacs foresees the day when local infections such as colds that settle in the head, eyes or throat, could be swabbed or sprayed with interferon, he told SCIENCE SERVICE. The agent, a protein slightly smaller than an antibody, can be produced in monkey kidney cells for human use.

Interferon is produced by disease-causing viruses. It is manufactured by many different animal cells that have been invaded by a virus. The virus-infected cells protect themselves with interferon particles, but confer resistance on other cells.

Dr. Isaacs has found that interferon can be produced from inactivated influenza viruses, fowl plague and Newcastle disease, measles and poliomyelitis. Production of this infection-fighting agent can be assumed to be a property of all viruses, he said. However, interferon produced by viruses that cause tumor growth does not inhibit the growth of the tumor, he found.

Interferon from one virus is active against any other viruses but is much more active in animal cells from the same species. Interferon from cow cells is less active on chicken body cells than on cow cells.

An application of interferon is apparently effective against infections that have already started in the body. Interferon can inhibit viruses without harming body cells, the researcher said.

Science News Letter, February 6, 1960

## ZOOLOGY

### Sea Otter Pup Receives Tender Loving Care

THE LUCKY sea otter pup probably receives more tender, loving care from its mother than do most mammals.

Like other marine mammals, the sea otter has only one offspring at a time, but unlike the others, the mother gives her young constant attention until it is nearly a year old, reported Karl W. Kenyon of the U. S. Fish and Wildlife Service.

She carries her pup on her chest while she swims on her back. The pup nurses, sleeps and receives almost constant preening from its mother's forepaws.

The mother leaves her pup only for minute-long food dives, Mr. Kenyon said in a report published by the Smithsonian Institution.

Science News Letter, February 6, 1960



**BEHAVIOR OF ATOMS**—The small glass balls moving on the vibrating plate show how large numbers of atoms can move and interact in solid, liquid and gaseous states. The apparatus was developed by Robert Cormia (left) and David Turnbull (right) of General Electric Research Laboratory, Schenectady, N. Y.