

REGULATION

Flu drug claims withdrawn

At the insistence of the Food and Drug Administration, E. I. du Pont de Nemours & Co. backed away from previous claims that one of its drugs, Symmetrel, will prevent persons from contracting Hong Kong flu.

In a letter to the nation's doctors, the company admitted that human trials of Symmetrel have yet to be conducted, but are planned. "However, it will be many months before definitive results can be obtained," Du Pont wrote.

By then it may be too late to do any good this year. Public health officials expect the Hong Kong flu, a new strain of A-2 virus, to strike parts of the United States this winter on a fairly large scale. Experts doubt that existing anti-flu drugs, including Symmetrel, can fight the new virus.

In its warning letter, Du Pont also cautioned physicians against use of Symmetrel in patients with central nervous system diseases, including geriatric patients and epileptics or others with a history of seizures. The drug still has FDA approval as a preventive for A-2 viruses other than the Hong Kong strain.

VACCINE

Effective against German measles

Three thousand school boys in Taiwan and 2,000 children in Danbury, Conn., have proved that a new vaccine against rubella, or German measles, is safe and effective. Food and Drug Administration approval for marketing is expected next year.

Dr. J. Thomas Grayston of the University of Washington began trials in Taiwan when a measles epidemic developed last January. He gave attenuated rubella virus vaccine to more than 3,000 boys and a placebo (actually polio vaccine) to 2,000 controls. The rubella vaccine proved 95 percent effective. Dr. Harvey Liebhaver of Yale University reports similar success in studies in Connecticut.

Though no side effects appeared in the children, adult women tested developed temporary arthritis-like swelling of joints after being inoculated. Once marketed, the vaccine probably will not be recommended for adults.

As a result of the last U.S. rubella epidemic, in 1964, an estimated 30,000 deformed infants were born to women who had the disease during pregnancy. Scientists hope to prevent such catastrophes in the future by inoculating children, thereby wiping out the pool of infection which spreads to adults.

Since 1963 when a vaccine against regular, seven-day measles became available, the number of reported cases has dropped 95 percent.

VIRUSES

Industrial dye spurs research

A bright red industrial dye opens a hopeful new door to antiviral research on diseases from flu to encephalitis.

Dr. Arthur P. Grollman and associates at Albert Einstein College of Medicine in the Bronx, N.Y., report in

the October PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES that aurintricarboxylate prevents viral RNA (ribonucleic acid) from attaching to the ribosomes of healthy cells but does not interfere with attachment of native RNA.

Ribosomes are cells' protein-making factories. When a virus hooks onto a ribosome, it takes over its production line, forcing it to manufacture new viruses instead of healthy proteins.

Dr. Grollman doubts that the dye itself will ever become an antiviral drug. Rather, he expects a useful drug to develop from manipulations of the dye's molecular structure.

Another antiviral substance currently under study is interferon, a natural molecule that the body produces after a viral attack. Scientists hope to find a usable interferon-inducing drug which could be given prophylactically so that interferon would be ready and waiting to wipe out viruses as soon as they strike.

DRUG THERAPY

Hodgkin's disease slowed

Two-year studies show that an investigational new drug known as BCNU (bis-chlorethyl nitrosourea) is effective in advanced cases of Hodgkin's disease. Some patients with this cancer of lymph nodes have been free of disease for 18 months.

According to Dr. C. Gordon Zubrod of the National Cancer Institute in Bethesda, Md., BCNU is a promising agent when used in combination with other known anti-cancer drugs, including vincristine and prednisone.

Different drugs, he says, affect cancer cells at different stages in their four-phase life cycle—hence the value of combination drug therapy. BCNU appears to destroy cells at about the time they are going through the S phase, during which DNA is synthesized.

PHYSIOLOGY

Protein factory slowed by fever

When a rabbit has a fever, the speed with which its body makes new proteins drops significantly.

To test the recently stated hypothesis that high temperatures depress protein synthesis, Dr. Irving Gray of Georgetown University in Washington, D.C., used two groups of rabbits. The body temperature of control animals was maintained at a normal 100 degrees F. Test animals were covered with thermostatically controlled plastic blankets to induce a temperature of 106 degrees.

Levels of an enzyme known as phosphoenolpyruvate carboxykinase (PEPCK) served as an index of protein synthesis. After 46 hours, Dr. Gray sacrificed the animals and measured activity of PEPCK in liver mitochondria. The feverish animals showed a 55 percent decrease.

Measurements of other biochemical activities, including rate of glucose metabolism and adrenal cortical response, indicated that they played no role in reduced protein synthesis and further confirmed the fact that temperature is the important element. The activity of PEPCK in feverish animals was low because the high temperature affected protein synthesis.