MEDICINE

Coxsackie Virus Crystals

Scientists at National Institutes of Health obtain pure crystals of Coxsackie virus from muscle tissue, the first such ever made and the second virus to be crystallized.

See Front Cover

➤ PURE CRYSTALS of a virus of the Coxsackie group have been obtained for the first time by Drs. Carl F. T. Mattern and Herman G. du Buy at the National Institute of Allergy and Infectious Diseases, Bethesda, Md.

This is the second animal virus ever obtained in pure crystalline form. The first was the polio virus crystallized by Dr. Wendell Stanley and associates of the University of California. (See SNL, Nov. 12, 1955, p. 310.)

The Coxsackie virus crystals are the first ever obtained from muscle tissue. The polio virus crystals were obtained from tissue culture.

Coxsackie viruses, first discovered in 1948 in Coxsackie, N. Y., are very prevalent in children during warm weather. They cause fever, sore throat, and pain in the neck, arms and legs.

Because the symptoms are like beginning polio and because the viruses are around during the polio season, the illnesses they cause have often been confused with polio and diagnosed as non-paralytic polio. When an outbreak of one of the Coxsackie diseases and a polio outbreak hit the same community at the same time, it may be almost impossible "to unscramble" the cases and tell which was which, one authority points out.

Coxsackie virus sicknesses are not fatal and are usually over in a few days. Some infected persons may not show any symptoms.

Now that pure crystals of the Coxsackie virus can be obtained, scientists see possibilities of separating out the infectious part, or antigen, and perhaps creating a vaccine against it. Tests to determine whether or not a child is immune to the virus may also be developed in the future.

Chemical studies of the virus are now also a future possibility.

The Coxsackie virus crystals are seen in the upper portion of the photograph on the cover of this week's SCIENCE NEWS LETTER. The amorphous material in the lower part of the picture is made of pellets of virus from which the crystals form. The crystals are unstable when dried and disintegrate in air, but remain crystalline if kept in their mother liquor.

The virus crystals were obtained in a series of manipulations starting with the A-10 strain virus grown in suckling mice. It took thousands of mice to get a tiny bit of the crystals, an amount that by weight would be less than two-tenths of a grain. A hundred litters of eight mice each was needed each week for five months to get the tiny bit of virus crystals. In the ten quarts, roughly of starting material, one-third was muscle. Details of the method are reported in *Science* (June 8).

Science News Letter, June 16, 1956

VITAL STATISTICS

5 A.M. Peak Hour For Baby Births

➤ MOTHERS, FATHERS and the doctors who deliver babies are right when they say that early morning is the time babies favor for being born.

The peak hour for baby births is 5 a.m., Dr. Peter D. King of Warren State Hospital, Warren, Pa., finds from a study of the hours of birth of 33,215 babies in five hospitals over periods of one to eight years.

At 5 a.m., there are 48% more births than at the low hour of 7 p.m. There were 1,632 babies born at 5 a.m. and 1,103 born at 7 p.m.

Comparing numbers of births during the day, from 6 a.m. to 6 p.m., with births during the corresponding 12 night hours, as another scientist has done, shows almost as many babies born during the day as during the night, Dr. King reports.

If birth time is charted hourly, however, the morning hours from 3 a.m. to 11 a.m. show larger numbers each hour than the other eight-hour periods, 11 a.m. to 3 p.m. and 11 p.m. to 3 a.m., and 3 p.m. to 11 p.m.

Each of the five hospitals showed the same peak hour for births as the group as a whole did.

Interestingly, Dr. King points out, another scientist has reported that 62% of labors begin between 9 p.m. and 9 a.m. The midpoint of this period is four hours before the midpoint of the peak period of birth, Dr. King found.

The hospitals whose hourly birth records he studied are Edward W. Sparrow Hospital, Lansing, Mich.; St. Lawrence Hospital, Lansing, Mich.; Women's Christian Association Hospital, and Jamestown General Hospital, Jamestown, N. Y., and Warren General Hospital, Warren, Pa.

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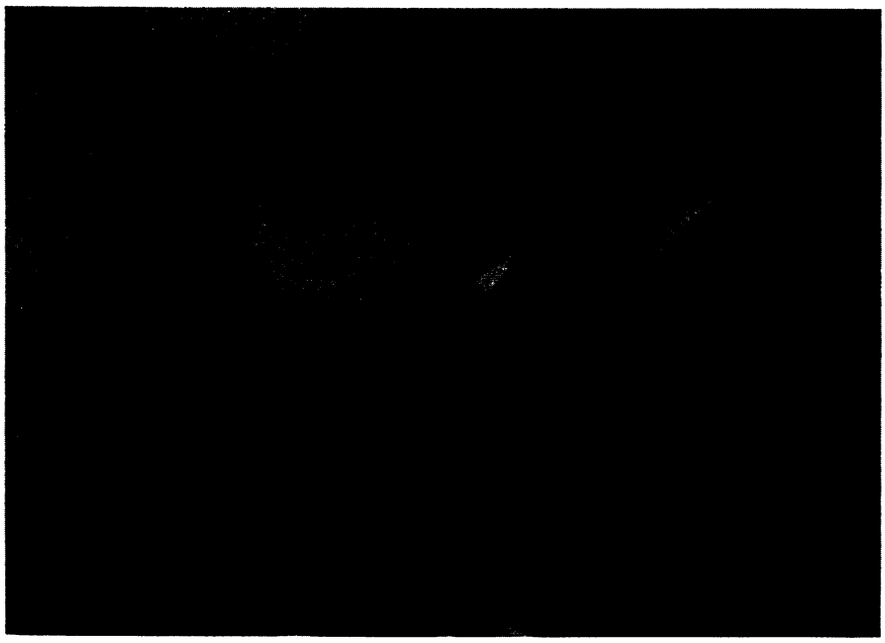

HIGH SCHOOL TEACHER HONORED—For his outstanding leadership in guiding students into careers in engineering and science and for excellent high school teaching, Lon H. Colborn of Pittsburgh's Taylor Allerdice High School was this year awarded an honorary master of science degree from Carnegie Institute of Technology, Pittsburgh. Of 357 students who took a special chemistry course he instituted in 1933, 332 of them have gone on to college. Three were Westinghouse Science Talent Search winners and another 18 received honorable mention in this nationwide search for top young scientists. In the picture, Dr. Colborn, center, is receiving congratulations from Richard King Mellon, financier-philanthropist, while Adm. Lewis L. Strauss, Atomic Energy Commission chairman, watches. Mr. Mellon and Adm. Strauss also received honorary degrees.