



New York University News Bureau

Washington Square, New York, N. Y. 10003

Contact: Herbert Kadison
NYU Medical Center
679-3200, Ext. 2328

For Release: TUESDAY, MARCH 23, 1971, AFTER 12 NOON

Immunization against serum hepatitis has been achieved by scientists at the New York University Medical Center.

The progress in the studies which led to active immunization against serum hepatitis is considered to be a significant accomplishment toward the development of a vaccine for the control of the disease much as poliomyelitis has been controlled by vaccines.

Dr. Saul Krugman, professor and chairman of the department of pediatrics at the New York University Medical Center, disclosed the immunization findings of his research group in a special Honors Program lecture at the NYU Medical Center (Alumni Hall, 550 First Avenue, NYC) on Tuesday, March 23, at 12 noon. His co-workers in the group, which has been studying hepatitis since 1956, are Dr. Joan P. Giles, research associate professor of pediatrics at the NYU School of Medicine, and Dr. Jack Hammond, director of the Willowbrook State School on Staten Island.

During studies conducted by the researchers, Dr. Krugman said, recent observations indicated that the boiling for one minute of serum made from the MS-2 (serum hepatitis) strain of virus destroyed the infectivity of the substance without affecting its antigenicity--the ability to stimulate production of antibodies against the disease in the body.

The studies described in Dr. Krugman's report indicate that viral hepatitis, Type B or serum hepatitis (MS-2 strain) was prevented by active and passive immunization. Active immunization was induced by the inoculation of a boiled (inactivated) preparation of MS-2 serum in distilled water; two inoculations were more

effective than one. However, one inoculation gave enough protection to prevent some cases and to modify others. The individuals who received two injections of the boiled serum were not only protected against hepatitis but they also developed antibodies against the disease.

Dr. Krugman also described a procedure employed to develop passive immunity to serum hepatitis. Using a special lot of Hepatitis B Immune Gamma Globulin supplied by Dr. Alfred M. Prince of the New York Blood Center he demonstrated that this preparation was extraordinarily effective in preventing serum hepatitis. In this study, 15 susceptible individuals were exposed to infectious serum; four hours later five were inoculated with standard Gamma Globulin and the remaining ten were given the special Hepatitis B Gamma Globulin. All ten who received the special Hepatitis B Gamma Globulin (HBISG) were protected against hepatitis. In contrast, Dr. Krugman said, the standard Gamma Globulin did not protect three of the five children who received it.

While these studies were conducted with a comparatively small number of participants and further testing is necessary, the results are significant, said Dr. Krugman, when one looks at other data.

"The absence of hepatitis in all four susceptible individuals who received two inoculations of boiled MS-2 serum and its absence in five out of ten who received one inoculation is impressive when compared with a 96 to 100 per cent attack rate when susceptible individuals were exposed to infectious MS-2 serum in the past," he stated.

The study of hepatitis has been carried on in a special unit at the Willowbrook State School where hepatitis has always been endemic among the patient population. While hepatitis in children is an extremely mild and non-disabling disease, in adults it is extremely debilitating and of long duration. The incidence of the disease has steadily climbed in the world population and in the past few years

has come increasingly to the fore because of its prevalence among drug addicts who contract the disease from infected needles.

The rise in the presence of the disease presents a problem in the matter of blood transfusions. The need for whole blood has increased dramatically due to the greater use of operative procedures such as open heart surgery where one patient may need as many as 10 to 12 pints of whole blood. Too often, blood obtained from commercial blood banks is contaminated with hepatitis virus and a significant percentage of open heart patients contract the disease after surgery.

"These studies on active and passive immunization for the prevention of viral hepatitis, type B (serum hepatitis), represent the culmination of 15 years of effort by the New York University Medical Center group," said Dr. Krugman. "These findings were built on a broad base of knowledge stemming from contributions by many investigators in the field of hepatitis research. It started with studies by Findlay, MacCallum, Håvens, Paul Neefe and Stokes in the 1940's. It was followed by Murray in the early 1950's and by our group in the late 1950's and 1960's. More recently in the late 1960's the crucial breakthrough of the discovery of Australia antigen and its association with viral hepatitis by Blumberg and associates and its specific association with serum hepatitis by Prince was followed by an explosion on knowledge about the morphology, biophysical and biochemical properties and specificity of the antigen. The subsequent development of sensitive tests for the detection of antigen and antibody provided the technology for the continued pursuit of our studies on the natural history and prevention of viral hepatitis."

NOTE TO EDITORS AND WRITERS: DR. KRUGMAN WILL BE AVAILABLE TO MEET WITH MEMBERS OF THE PRESS IMMEDIATELY AFTER THE LECTURE. IF YOU WILL IDENTIFY YOURSELF TO HERBERT KADISON, NYU MEDICAL CENTER DIRECTOR OF PUBLIC RELATIONS, AT THE ENTRANCE TO THE LECTURE ROOM PRIOR TO THE LECTURE HE WILL INFORM YOU AS TO THE LOCATION OF THE PRESS CONFERENCE.