



MAGNIFIED VIRUS PARTICLES — *Lysine polypeptides, synthesized in University of Wisconsin laboratories, have been used to clump or agglutinate virus particles, as shown here, thus inhibiting growth and respiration. They affect certain viruses and bacteria much as antibodies that create immunity.*

BIOCHEMISTRY

Synthesize Polypeptides

► **SUBSTANCES KNOWN** as lysine polypeptides and related compounds, which affect some viruses and bacteria in much the same way as the antibodies that create immunity, have been synthesized by scientists at the University of Wisconsin.

That these polypeptides would act in much the same manner upon viruses and bacteria as immune serum was reported by Prof. Mark A. Stahmann, Maurice Green and associates of the department of biochemistry.

While the polypeptides themselves are at present probably too toxic to be used against disease germs in humans, they may eventually help give medicine new weapons against bacterial and virus infections.

The scientists found that the lysine polypeptides forced virus particles and bacteria to clump together. Growth and respiration were inhibited. This agglutination, as it is known, is exactly what happens to bacteria and viruses when they are attacked by natural body defense agents.

The similarity between the action of natural antibodies and synthetic polypeptides is sufficient to warrant some hope that eventually chemical structures that may in part duplicate the action of antibodies can be synthesized in the laboratory, Dr. Stahmann says.

Among the microorganisms against which the scientists found the lysine polypeptides to be effective are the influenza virus, fowl

bronchitis virus, Newcastle disease virus, tobacco mosaic virus, a bacteriophage or virus attacking bacteria and the bacillus that causes anthrax.

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MEDICINE

X-Rays and War Gas For Hodgkin's Disease

► **X-RAYS AND** two drugs, triethylene melamine and the war gas, nitrogen mustard, are "usually the most effective" treatments for Hodgkin's disease, Dr. Ovid O. Meyer of the University of Wisconsin Medical School, Madison, declared at the meeting of the American Medical Association in New York.

Hodgkin's disease affects the lymph glands and spleen. Its cause is unknown although it was first recorded over 100 years ago. It is incurable, but there are records of patients living 10, 15 and 20 years with the disease.

In most cases, Dr. Meyer said, X-ray treatments are best for Hodgkin's disease, although when the disease is extensive and involves the entire system, nitrogen mustard or triethylene melamine, called TEM for short, may be best. TEM is easier on the patient since it is less likely to cause nausea and vomiting than the nitrogen mustard.

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GENERAL SCIENCE

Other Mountains Harder To Climb Than Everest

► **SINCE MT. Everest** was conquered by a British climbing party on the eve of Queen Elizabeth's coronation, other mountain scalers in the future probably will turn toward some of the "more difficult" mountains, Dr. Sterling B. Hendricks, chemist of the Bureau of Plant Industry, has predicted. Dr. Hendricks is one of the expert mountain climbers in the U. S.

These mountains, the so-called 8,000-meter mountains of which Everest is the highest, still offer the pioneering alpinist at least 24 peaks upon which no human foot has yet been set. The 8,000-meter (26,000 feet) mountains number 26. Of them, only Mt. Everest and Mt. Anapurna, Nepal, have been scaled.

An American climbing party currently is girding for an assault against the second-highest mountain in the world, Mt. K-2, otherwise called Mt. Godwin Austen. Situated on the Pakistan-India border, K-2 pokes its peak 28,250 feet into the sky.

Dr. Hendricks said climbers will not need oxygen equipment when assailing many other mountains in the 8,000-meter class. The mountains will not be as high, and the air will not be as thin.

A member of the third party ever to ascend Alaska's Mt. McKinley, Dr. Hendricks listed these mountains as among those yet unconquered: Mt. Kanchenjunga, Nepal; Mt. Nanga Parbat, Pakistan; and the Mustagh Tower, India. The Peruvian Andes also boast vicious, unclimbed peaks.

Pakistan's Mt. Nanga Parbat is "particularly difficult," he said. One expedition was completely wiped out by an avalanche, and another expedition was seriously crippled.

This summer, Dr. Hendricks plans to attempt Mt. Waddington in British Columbia. One of the most impressive in that country's coastal range, Mt. Waddington has been climbed four times. Dr. Hendricks wants to climb it because "it's difficult."

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