

MEDICINE

Develop New Cancer Serum That May Aid Diagnosis

Serum Is Prepared From Blood of Rabbits Injected With Aluminum Cream Containing Cancer Tissue

A SERUM that may aid diagnosis of cancer and may even have value for treatment of the malignant disease has been developed by Prof. William H. Welker and Dr. Lawrence S. Mann, of the University of Illinois College of Medicine.

Announcement of the serum is made to the medical profession in the *American Journal of Cancer* (July).

The serum gave positive reactions with the blood of cancer patients in a high percentage of cases. In cancer of the stomach the percentage was 57%. In cancer of the womb the percentage was 87%, or seven positive reactions in eight cases tested.

No cures nor attempt to cure cancer are mentioned in the technical report which describes the preparation of the serum. Prof. Welker, in a communication to Science Service, expressed the hope that the report would not have the "cruel" effect of raising false hopes in laymen who might expect more of the serum than can be guaranteed on the basis of present knowledge about it.

Blood tests with the serum were made by stratifying diluted human blood serum, from either normal persons or cancer patients, over the rabbit cancer anti-serum. A white ring developing at the zone of contact after a period of one hour indicated a positive reaction.

The serum is prepared from the

blood of rabbits injected with aluminum cream (aluminum hydroxides) containing ground and specially treated cancer tissue. This has the effect of mobilizing in the rabbits' blood the defensive troops called antibodies.

The particular accomplishment in preparation of the serum, which has been attempted many times before, was to cause mobilization of antibodies specifically capable of dealing with the protein of cancer tissue.

The difficulty in the past in preparing such a specific antiserum for cancer protein has been that when cancer cells were injected into rabbits, not only cancer-fighting antibodies but also antibodies for handling foreign blood were mobilized. This was because of the difficulty of separating cancer proteins from the blood proteins. As a result, the reaction of the serum with the blood of cancer patients might be a reaction with the blood and not just with the cancer proteins, if any were present in the blood. Consequently the previously prepared serums could not be used successfully in cancer diagnosis tests. The serum prepared by the Chicago scientists is specific for cancer protein, their tests show. It reacts only with cancer tissue or with the blood of cancer patients. It does not react with the normal tissues nor the blood from normal patients.

Science News Letter, July 20, 1940



POWERFUL

The tiny U-shaped piece is a new magnetic alloy developed at the Bell Telephone Laboratories, which is composed of vanadium, iron and cobalt, which will hold more permanent magnetism than any other commercial material. It can be machined, drawn and rolled. It is heat treated to develop its magnetic qualities, making it possible to weld pole pieces to the magnet and heat-treat both together.

the cream, went out into the fields near the National Institute of Health at Bethesda, Md., and pulled out poison ivy plants by the roots, plucked the leaves, and rubbed them over their skins. Neither volunteer suffered any ivy poisoning from this.

Dr. Schwartz and associates have no doubt the cream will be equally successful in protecting others against poison ivy if it is made and used according to directions.

It must be rubbed all over the face, hands, arms or any other part of the body likely to come in contact with poison ivy. After four hours, when the worker stops for lunch, it should be washed off with soap and water. Then after lunch, before going out into the fields or woods again, the cream should again be thoroughly applied all over the exposed skin, and again washed off at the end of the afternoon.

The reason for washing it off and reapplying it at the end of four hours is to make sure the skin is all covered and so protected against the poison ivy. Some of the cream is likely to rub off by the end of four hours and especially during the lunch hour.

In making the cream, and any drug-

MEDICINE

Anti-Poison Ivy Cream Made By U. S. Public Health Service

A VANISHING cream that gives protection against poison ivy has been developed by Dr. Louis Schwartz, Dr. Leon H. Warren and Frederick H. Goldman of the U. S. Public Health Service and the National Institute of Health. The formula for the cream, which is made by mixing either sodium perborate or potassium periodate with vanishing cream, will appear in a forth-

coming issue of the *Public Health Reports*.

Tests on nine volunteers showed that the cream protects against both the poison ivy extract, which is at least 30 times as powerful as any poison ivy leaf, and against the leaves and stems of the plant itself. Two of the nine volunteers, one the most susceptible and one medium susceptible to poison ivy, after rubbing on