

MEDICINE

New Blood Factor

Finding of patient with stomach cancer whose blood was incompatible with that of over 900 donors, may give new approach to problem of cancer origin.

➤ BECAUSE the blood of more than 900 donors was incompatible with that of the patient, scientists may have a new approach to discovering the origin of cancer.

The patient in this case was a 66-year-old woman with stomach cancer. In preparing her for operation, her blood was typed and studied so that she could be given a transfusion to help her through the shock of the surgery. In the course of this ordinarily routine preparation, the incompatibility of her blood with that of over 900 other persons was found.

The reason for the incompatibility is a new factor in blood, called the Jarrell factor. It is one of three new blood factors announced by Dr. Philip Levine, director of the Rh Testing Laboratory of the Ortho Research Foundation, Raritan, N. J., at the New York Academy of Sciences.

The Jarrell factor is a dominant hereditary factor present in the blood of all individuals examined except the patient. It bears the patient's name because her case led to its discovery, although she does not

have this factor in her blood.

She has an antibody to the Jarrell factor which is what makes her blood incompatible with blood from other donors tested. She might have developed this antibody as a result of transfusion with Jarrell blood, but she had not ever had any transfusion. She might have developed it during pregnancy as a result of Jarrell factor blood in her baby inherited from its father. But her last baby, born 32 years ago, was normal and did not have any sickness such as would have developed if its blood had been incompatible with the mother's.

The patient's cancer was considered the only possible source of the antibody to the Jarrell factor. Tests showed that cells from the cancer could absorb or remove the Jarrell antibody, but no other antibody, from the patient's blood serum.

The patient's parents did not have the Jarrell antibody, either. So apparently one single gene, or hereditary unit, mutated in the patient. The mutation was responsible for development of the Jarrell antibody and

also, Dr. Levine thinks, for the development of the cancer.

She had in her cancer cells a factor everyone else has in their red blood cells but which she does not have in her red blood cells. The cancer immunized her to this factor, causing development of antibody to the Jarrell blood factor.

The case was brought to Dr. Levine's attention by Dr. Oliver B. Bobbitt, assistant professor of clinical pathology at the University of Virginia Hospital where the patient had gone for removal of the cancer.

Science News Letter, March 24, 1951

ASTRONOMY

New Star Appears In Archer Star Group

➤ A NOVA or exploding star has blazed forth in the southern sky, in the constellation of Sagittarius, the archer. Dr. G. Haro, assistant director of Mexico's National Astrophysical Observatory at Tonanzintla, Puebla, on March 7 discovered this "new star," the first to shine forth in 1951. His find has just been reported to Harvard Observatory.

The nova is of the ninth magnitude, and thus a small telescope would be needed to spot it. It is a morning star and so should be looked for in the early morning hours.

It is so far south that in the northern part of the United States it must be picked up close to the horizon; in the far north it probably will not be seen at all because of the haze. Observers in the south are more fortunate; there the exploding star will be fairly high in the morning sky.

Last April Sr. Haro found a faint nova in the constellation of Hydra, the water monster. In August he spotted a bright one, of 7.5 magnitude, in the constellation of Scorpio.

The newest "new star" is near the ecliptic, path the sun follows among the stars, close to the border between Sagittarius and Ophiuchus, the serpent holder.

Science News Letter, March 24, 1951

BACTERIOLOGY

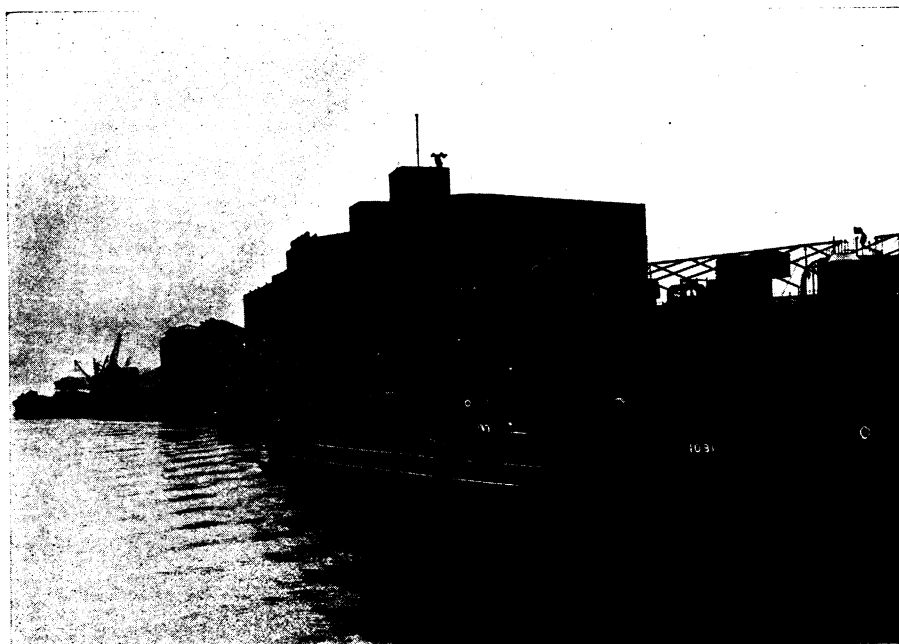
Spring Plowing Odor Due to Organism

➤ THAT spring-like odor of freshly plowed soil is due to the same kind of organisms that produce streptomycin and other antibiotic drugs so useful in combating disease.

Dr. Selman A. Waksman, the discoverer of streptomycin, can demonstrate the pleasant smell of these microscopic organisms, called actinomycetes, by letting visitors to his Rutgers University laboratories sniff the cultures from which the antibiotics are obtained.

The organisms, which some scientists classify among the bacteria and others among the molds, keep the soil free of dangerous disease-causing invaders by producing their antibiotic substances.

Science News Letter, March 24, 1951



TO FIGHT EPIDEMICS—An epidemic control laboratory is installed on this LSI and will be used to battle epidemics in Korea. It is one of the most complete and compact disease research units ever assembled, including white mice and rabbits. In charge of the work with Korean natives is Lieut. Gerald A. Martin, MC, USN, who was brought up in Korea where his father taught medicine at Seoul University.