

MEDICINE

Extract To Check Defects

Gamma globulin, substance from blood plasma, given to mothers who contract German measles, may protect the unborn from feeble-mindedness and blindness.

► **BABIES** may be saved from being born feeble-minded, deaf, blinded by cataracts or with damaged hearts by a substance in the blood, Dr. Charles A. Janeway of Harvard Medical School declared at the opening of the regional blood center in Rochester, N. Y., first unit in the American Red Cross National Blood Program.

The substance is called a gamma globulin. One gamma globulin separated from blood plasma is already being used to reduce the severity of an attack of regular measles in children.

The gamma globulin that might prevent congenital cataracts, deafness, heart disease and brain damage is for German measles. This usually mild and unimportant disease, it has recently been discovered, can damage the unborn child if it attacks the mother during the early months of pregnancy. Some medical authorities have even suggested abortions in such cases to prevent the birth of a defective child. Dr. Janeway hopes the gamma globulin he is investigating could be given to the mother to protect the unborn child.

Advances in the fight against tuberculosis, cancer, heart disease and allergic disorders such as hay fever are other possibilities Dr. Janeway foresees from further research on other substances derived from blood. He is now using a blood derivative, or fraction, from animal blood to study experimental allergy in laboratory animals in order to learn more about the basic mechanism of these disorders. And another scientist is studying the tuberculosis germ by growing it in the clot made by the fibrinogen fraction of blood.

These fractions of blood are obtained as byproducts in the blood program. The primary object of the program is to make whole blood available without cost to victims of accidents, disease and injury anywhere in the nation. After three weeks, whole blood can no longer be used for transfusions. But its plasma can be removed and used or separated into the various fractions for study and treatment of disease.

Scientists feel sure that they have only begun to discover the disease-fighting

possibilities of these blood fractions. They have been handicapped, so far by lack of blood for such study. They and the sponsors of the National Blood Program look forward to the day when there will be enough blood centers throughout the nation so that more can be spared from the primary life-saving job for medical research.

Science News Letter, January 24, 1948

ENTOMOLOGY

DDT-Resistant Houseflies May Be Developing

► **HOUSEFLIES** which can survive the usual standard doses of DDT may be developing, the U. S. Department of Agriculture hinted in a report on DDT-resistant fly strains bred in the laboratory.

Only known flies which resist DDT and several other standard chemical killers are a strain developed at the Bureau of Entomology and Plant Quarantine laboratory in Orlando, Fla.

"It has been reported, however, that houseflies are becoming more difficult to kill with recommended applications of DDT in several parts of the United States and in some foreign countries," the Department of Agriculture acknowledged.

The hardy flies in the Florida laboratory are now in the 35th generation. As early as the third generation, it became necessary to use stronger doses of DDT to kill these flies. Ability to resist DDT is passed on to the flies' offspring, the experiments disclosed.

Bright side of the experiments is the conclusion that DDT has not lost its killing power. Entomologists believe that the ability to survive DDT of the new strain of flies may be more due to hardy, robust flies that might ordinarily require more than the usual dose of the insecticide. But if wild fly strains develop as much or even more DDT resistance as the laboratory insects have, future fly-fighting may be more complicated.

Not only DDT but also chlordane and chlorinated camphene, newly-developed chemical insecticides, and older standbys

including certain thiocyanate compounds, rotenone and pyrethrum, have failed to kill the hardy flies in the laboratory strain.

The 35 generations of flies in the laboratory would require four years in nature. Historic examples of insects developing resistance to standard chemical weapons used against them usually have required about two decades to appear.

Science News Letter, January 24, 1948

BOTANY

Moss That Shines in Dark Photographed in Own Light

► **COLOR** slides of one of the rarest plants in the world, a moss that seems to shine in the dark, were shown before the Sullivant Moss Society, an affiliated organization of the American Association for the Advancement of Science, by Prof. Charles J. Lyon of Dartmouth College. He found an abundance of the moss in a barn cellar at Groton, N. H., and was able to photograph it by its own light.

The moss is not really luminescent, but has an array of cells shaped like tiny automobile headlights. These catch and reflect the weak light entering its dim, damp abode, giving an effect that is startling to one not prepared for the sight.

Science News Letter, January 24, 1948



SHINING MOSS — The picture shows a luminous green layer of moss on the soil, believed to have been photographed for the first time in color by Dr. Charles J. Lyon, professor of botany at Dartmouth College, taken in the pocket between the lumber pile and the base of the stone foundation wall, all under a barn.