

he has isolated the germ and made photographs of it.

Dr. Odin states that it is not a bacterium, such as causes typhoid fever and the majority of germ diseases, but a minute form of animal life called a protozoon. It belongs to the same order as the parasite which causes malaria.

In beginning his researches, Dr. Odin argued that cancer was a germ disease because it spreads rapidly to various parts of the body. He argued that only a germ propagating in the blood could produce the results which are commonly seen in cancer.

Dr. Odin made the announcement of his discovery of the germ before the Society of Biology. He will make a fuller report on the subject before the Congress of Comparative Pathology in Paris. He has yet to make known the composition of the re-agent which he uses to stir the germ to activity in blood specimens and of the serum which he hopes will cure the disease.

In his brief report to the Society of Biology, which is the only official report he has yet made, Dr. Odin says:

"In a communication to the Society of Biology on June 22 last I stated the results of my earlier researches on the blood of cancerous persons. I then said that cancer was a disease that gradually spreads through the blood, and I stated that if it was caused by a microbe it would be found in the blood. Experiments at that time seemed to show that I was right. I had then examined one hundred and fifty specimens of blood from different persons, among them seventy-nine cases of epithelioma (cancer of the skin). These showed the invariable presence of growths having the form of amoeba and showing the characteristic amoeboid movements.

"The further study of this question now enables me to present to you further information on the form of the organism which I first observed.

"I took the blood of a cancerous person, and placed a specimen of it on a microscopic slide. I observed the presence of a great number of little forms having the shape of horse chestnuts with their shells on. These forms appeared sometimes fixed on the red corpuscles of the blood, and

sometimes in a free state in the blood serum. What struck me most when I first examined them under the microscope were the movements they made. Each of the knobs on the chestnut-like form seemed to correspond to a kernel. There were a large number of kernels in each microbe. The chestnut-like shapes were larger than those of the red corpuscles. These curious forms were constantly turning over and moving from one spot to another.

"When I placed on the microscope slide a chemical re-agent which I had prepared I observed after a certain time that a number of red corpuscles seemed to have increased, while the chestnut-like form remained the same. The explanation was that the germs had detached themselves from the red corpuscles. At the end of a few minutes I saw the germs beginning to move more rapidly, then increase in size and finally send out protoplasmic feelers in the manner of an amoeba.

"As the microbes were growing they took certain forms with a remarkable regularity. These forms were like leaves with 4, 5 or 6 leaflets, or like tennis racquets, or like crosses, or like the letter 'H,' with unequal legs.

"In addition to these forms I discovered spherical forms resembling the bodies which Dr. Laveran has described as causing malaria. These spherical bodies which I observed presented a number of arms, or flagella. I observed 4, 6, 9 and 14 arms in different cases. At certain moments these arms would detach themselves from the spherical body and move through the preparation with a snake-like motion. Sometimes, indeed, one end of the arm would swell up like the head of a serpent. Each of the arms possessed power of movement by itself, independent of the spherical body.

"I am satisfied now that in cancer we have to deal with an organism that attaches itself to the red corpuscles, but may also be found in a free state in the plasma of the blood. We are in presence of a protozoon of the family of haematozoa. This parasite I propose to call *Hemamoeba neoformans* (blood amoeba, which forms new tissue).

"It follows from what I have just said that analysis of the human blood containing the bodies described above would en-