men as Laveran, Carter, Councilman, Steinberg, Osler and others for their original investigations and untiring efforts to solve this problem, and it is to them, particularly the former, that something like a conclusion has been arrived at that micro-organisms in the blood if not the cause of malaria, have an etiological relation to it, and are beyond doubt a diagnostic mark of its presence in the system.

Laveran's theory has come to be the one generally accepted by the profession as communicated to the Paris Academy of Medicine in 1881 and '82, and afterwards published in 1884.

He found in, as characteristic elements of the blood of persons attacked with malaria, first, crescentic pigmented bodies; second, pigmented bodies in the interior of the red corpuscles which underwent changes in form described as amœboid; third, a pigmented flagellate organism.

The following brief summary of the important facts relating to these organisms I take from a monograph by Osler:—1st. In acute forms of malaria there exists within certain of the red corpuscles amœboid bodies usually pigmented, which undergo a definite evolution, increasing in size, gradually filling the entire corpuscle, and which prior to and during the chill undergo a remarkable segmentation. To this form the term "Plasmodium Malaria" has been given. There are also in some cases free pigmented bodies; occasionally in acute forms flagellate bodies are seen free in the blood, presenting from three to eight long actively moving cilia. According to Councilman these are much more common in blood withdrawn from the spleen. 2nd. In more chronic cases, particularly in the forms of remittent fever which are so apt to be taken for typhoid, the corpuscles do not so often present the intercellular forms, but there are remarkably ovoid rounded and crescentic bodies deeply pigmented. These are in all probability related to and developed from intercellular forms. From certain of these, particularly the ovoid and rounded forms, the flagellate bodies may be seen to develop.

We know these organisms are in the blood. But how they got there, and from whence come they is a question that to my mind is difficult of solution.

Do they exist as an element of the blood and are only developed when persons are exposed to certain influences supposed to be of a malarial character? Or are they, on the other hand, given off from the soil, the result of decomposition of organic matter and taken into the blood directly through the lungs, or are they taken into the stomach through the saliva or otherwise and thence to the intestines, where they undergo changes and enter the circulation through the lymphatics there to develop as has been demonstrated, in the red corpuscles.

I cannot but think that these malarial germs or organisms, or whatever they are, enter the system both by the lungs and stomach, or why do they produce, as they often do, diarrhœa and dysentery in place of the typical intermittent or remittent fevers. My idea is that when this occurs the germs are carried directly into the stomach through the water we drink, or the saliva we swallow, and thus reach the intestines. In proof of which I quote Steinberg, who says "the human intestine has a microscopic fauna and flora almost equal to a city gutter. The mouth with its uniform temperature, free access of oxygen and constant supply of pabulum (the salivary secretion) is an admirable culture apparatus. Hence, therefore, there is constantly going on a struggle for existence among a number of minute parasites, most if not all of which are harmless, and the same may be said of the bacteria which habitually infest the human intestines. Then why should not other species, whose normal habitat is external to the body in swamps or elsewhere, when introduced into the intestines, as they often must be in