when removed from the vessels the leucocytes showed their wonted amœboid activity. In order to explain these facts, Disselhorst maintained that the assistance of the vessel-wall was indispensable for the passage of the leucocytes, and that the diapedesis was prevented by the action of the quinine upon the wall. In his arguments no account is taken of the chemiotaxic property of the leucocytes, which was not at that time an accepted fact.

If this function be admitted—and there no longer seems any doubt of its existence—the effect of the quinine may be referred to as a negative chemiotaxis of the leucocytes, which, while retaining their mobility, do not move toward the part moistened with it, but are able, while still within the vessels, to detect the presence of the obnoxious substance. This negative chemiotaxis explains the inaction of the phagocytes in the infectious diseases above cited, as it is a well-known fact that their microbes are not englobed by the leucocytes when brought in contact with them.

From the foregoing we must conclude, then, that the "essential originating factor, the *primum movens*, of inflammation, consists in a phagocytic reaction on the part of the animal organism. All other phenomena are merely accessory to this process, and may be regarded as a means to facilitate the access of the phagocytes to the injured part." (Park.)

To conclude this discussion, I cannot better sum up the whole matter than by quoting a short paragraph direct from Metchnikoff himself, in which he says, "The study of inflammation from the point of view of comparative pathology proves, first of all, that this phenomenon is essentially reactive in its nature. The organism, threatened by some injurious agency, protects itself by the means at its disposal. Since, as we have seen, even the lowest organisms, instead of passively submitting to the attacks of morbid agents, struggle against them, why should not the more highly developed organisms, such as man and mammals, act in the same manner? We must conclude, then, that the invaded organism fights against the injurious cause; but in what way? As the evolution of inflammation shows, it is this phenomenon itself which is both the most general and the most active means of defence among the animal kingdom."

The Question Drawer.

Address all correspondence connected with this Department to DR. R. E. SPARKS, Kingston, Ont., Can. Matter for publication should be in the hands of the Editor not later than the 10th of each month, and must have the writers' names attached, not necessarily for publication, but as a guarantee of good faith.

14. *Q.*—A lady appears with pulp dead in left lateral incisor; tooth perfectly sound. Explained that she had a violent toothache soon after having been driving on a very cold day; knew of no other cause. Could that cause it?