

In the Lobose Protoplasts, more than in any other Rhizopods, the sarcoid mass of the body exhibits a tendency to differentiate an exterior, usually more consistent layer of protoplasm, which, though actually continuous with the interior, ordinarily more fluent protoplasm, seems like an investing membrane, preventing the escape of the latter. For convenience, the two portions of protoplasm, differently related in position, have been appropriately termed the Endosarc and the Ectosarc (Gr *endon*, within; *ektos*, outside; *sarz*, flesh).

The ectosarc appears as the exterior clear protoplasm; the endosarc as the interior granular protoplasm, though high powers of the microscope generally reveal an infinitely fine granular constitution also to the former.

Dr. Wallich regards the endosarc and ectosarc as temporarily distinct portions of the sarcoid, mutually convertible into one another. The ectosarc becomes differentiated from the endosarc by contact with the outside medium in which the animal lives, and from time to time reverts again to the condition of the more fluent endosarc within.

From this view, as intimated by Dr. Wallich himself, the ectosarc is due to a temporary and partial coagulation of the endosarc coming into contact with the water in which the animal lives, and again reverts to the condition of the more fluent endosarc as it retreats to the mass of the latter within the body. The process reminds one of the cooling of a molten mass of metal at the sides of a crucible, and the melting-away again of the crust as it is stirred from the sides into the remainder of the molten mass within.

In the movements of the sarcoid mass of the body, as exemplified in an Amœba, a temporary increase of the ectosarc may occur in one or more positions, accompanied with a proportionate flow or drain of hyaline protoplasm from the contiguous endosarc. A reduction in thickness of the ectosarc follows an absorption of the clear protoplasm among the more visible granular constituents of the endosarc.

The pseudopods of the Lobosa commence as projections of the clear ectosarc, and may continue as such in their extension unless unusually prolonged or thick. In the latter cases they are accompanied to a variable extent with an influx of the endosarc. They are mostly digitiform or finger-like processes, or, in other words, are cylindrical, with rounded ends, variable in number and length, often simple, frequently more or less ramose, but almost never anastomosing. Sometimes they are pointed, and