

and of fats may be perfect, but that particular force which separates and disintegrates them into their ultimate terms of absorption no longer exists, and these food substances become inert. According to Kejanitzin, the distasteful effect of the sterilized air breathed, continues even after the animals have again been placed in a normal atmosphere. This author explains, that in breathing ordinary air the microbes inhaled are absorbed by the leucocytes, which separate the ferments which these microbes contain and spread them throughout the organism, where they regulate oxidation and prevent the accumulation of leucomains and other toxic principles.

It is a path abounding in beautiful discoveries that science has opened. It is found that the malignant ferments, producers of illness and death, are in reality only an accident in nature. If there exists those that are responsible for the shortening of some lives, on the other hand their very kin are they that since the creation of the universe have perpetuated species, and finally, the evolution of the higher organisms is corollary to that of the infinitely small. Although there are injurious germs whose secretions disturb the vital harmony and cause a disturbance of the physiological phenomena, yet by way of retaliation or compensation there are a much greater number of those whose secretions are of a direct benefit. It is true that, as yet, we know but a small proportion of these, but the list is growing and continues to grow as time passes. Let us salute *en passant*, the noble germs, creators of fine wines, of good ciders, of fragrant vinegars, and of savory beers.

If we have entered somewhat fully into the above considerations, it is because the ferments that are found in milk originate both in the organic cell and in the bacterial cell; the former, being necessarily in the milk because they are contained in the organism and in the gland cells which give rise to the milk; the latter, being accidental, but at the same time always found in the milk, since they are secretions of the bacteria which exists everywhere and consequently gain entrance into the milk, many of them even before it leaves the galactiferous ducts. These bacterial ferments were thoroughly studied long before the cellular ferments, and since the observations and work of Duclaux are known intimately: They are for us less interesting than the others, and to them, the cellular ferments, we would more particularly devote our attention.

The clear ideas which we at present possess regarding the soluble ferments of milk, have taken a long time to come to light. While the first work on the digestive ferments of the