organism of a considerable number of bacilli which can be easily absorbed and digested by the tissues.

The researches made in this direction have encountered many difficulties. All experiments made with living bacilli are with cultures treated with chloroform, heat, mineral acids, have given negative results until Dr. Koch conceived the idea of treating the cultures with glycerine. This is indeed the original tuberculin of Dr. Koch.

The facts found in connection with the original tuberculin, clinically as well as in experiments on animals, demonstrated that this tuberculin only immunized against the toxins, that is to say, it conferred an immunity against the substances formed by the tubercle bacilli. It did not fortify the organism against the continuous growth of the bacilli. Now as the two immunities are necessary at the same time (the antitoxic immunity, as in tetanus, and the anti-bacterial immunity, as in typhoid fever and cholera), it remained to discover a second process capable to immunize against the bacilli themselves.

Always guided by the clinical facts of acute miliary tuberculosis, Dr. Koch believed that this second substance (the antibacterial part) is present, along with the first in the ordinary tubercle cultures. Then it only remained to find a process which permitted a common isolation of these two immunizing factors. The new tuberculin which Dr. Koch has finally obtained after ten years of research, fulfills his double indication, that is to say, it confers an antibacterial immunity and, at the same time, immunizes against the toxins.

The process employed by Dr. Koch which permits a realization of the essential conditions of immunization (the ability of the organism to absorb and destroy a large number of bacilli) is very simple, purely mechanical. It consists in a trituration of dried tubercle cultures in a mortar and a separation, by centrifigugation, of an aqueous suspension of the same.

The following are the reasons which induced Dr. Koch to have recourse to mechanical processes:

In the course of his researches to find a method to render bacilli soluble and consequently more assimilable, he formed an opinion that that which opposed this transformation is a substance intimately incorporated in the bacilli and which is composed of two fatty acids. It is to disengage this substance that Dr. Koch had recourse to trituration.

If a desiccated culture of tubercle bacilli is ground in a mortar most of the organisms will be disintegrated and pulverized. Only a few will remain intact. In order to entirely separate the whole, unpulverized bacilli from the powder the