

due to substances derived from the leucocytes. As the matter stands to-day, it may be said that practically all pathologists are agreed on the great importance of phagocytosis in the reaction of the organism against infective disease. Metschnikoff on his part is constrained to admit that there is an extracellular as well as an intracellular activity brought into play. The points in debate now seem to be the relative importance of this intra—and extracellular activity and various questions in regard to the details of the process by which immunity is brought about.

The process of immunity has been aptly compared to a combat, the micro-organisms damaging the tissues by means of toxic products of their metabolism, the invaded organism in its turn endeavoring to protect itself against the microbe by the elaboration of various defensive mechanisms. If we consider but for a moment the character of the vital processes of the invader, and the invaded, we can readily understand that the phenomena of infection and the reaction against infection must of necessity be highly complicated. From all we know of metabolism we may infer with some probability that the mechanism of defense consists in the production of protective substances, which entering the blood stream are in consequence carried to the remotest parts of the body. These protective substances can be demonstrated in the blood and are undoubtedly the result of some vital process on the part of the infected organism, though where they are formed is not as yet known with certainty. Farther, it seems to be generally admitted that Ehrlich's view is correct, that before bacterial intoxication can take place the toxin must enter into a chemical combination with some cellular element of the body. It is important to note in this connection that the chemical affinities in question vary considerably, certain toxins having a special predilection for attacking certain cells, while other cells will escape. Thus, the tetanus toxin and that of rabies have a marked tendency to attack the central nervous system: the diphtheria toxin attacks the peripheral nerves: the scarlatina toxin is apt to attack the secreting cells of the kidney, and so on. In order to emphasize this important peculiarity which the toxin has of turning to some class of cell, Wright has suggested the term "tropine" as a suitable designation for bodies of this kind. Adopting this terminology, we may call the protective substances elaborated in the organism to combat these deleterious substances "antitropines". Several types of antitropines are known at the present day, some capable of neutralizing the effects of bacterial tropines, others, the tropines of highly-organized plants, still others,