on conditions which are relatively so simple must have proceeded the rest in time, in other words, that all contagious microphytes are related by descent to the "common microphyte" of sepsis, and consequently that whatever properties belong to the parent are likely to be represented, more or less modified, in those of the successors. If for exemple, it can be certainly stated that the instrument or agent by which the septic microphyte produces its toxical effect is a ferment in the chemical sense, we are justified in assuming that the morbific action of the microphyte of small-pox is of the same nature; and if it can be shown that the septic fermentation is necessarily brought to an end by the development of an antagonistic chemical action, there is at least ground for the surmise that the mechanism by which the variolous fermentation brings itself to an end may be of the same nature, and and consequently within reach of investigation.

Recent researches relating to the chemical characters and products of the septic decomposition of proteids have shown that the development of microphytes in an albuminous fluid undergoing sepsis at a favourable temperature is a terminable process, reaching its greatest activity a few days after the impregnation of the liquid with septic ferment; and that it is during this period of active vegetation that the liquid acquires its greatest toxical activity. After the culmination of the process the organisms cease to multiply and eventually die. As this takes place long before the whole of the proteid material is used up it cannot be attributed to want of nutriment, and there is good reason for regarding it as the result of the coming into existence of chemical bodies in the liquid, as the result of the breaking up of the proteid molecule, which possess the power of arresting the growth of ferment organisms. The bodies in question belong to the aromatic group, and are represented at an early stage in the septic process by acids of the acetic series in which an atom of hydrogen is replaced (as in phenyl-acetic and phenyl propionic acids) by an aromatic group. The latter of these has been found by experiment to be destructive of the vitality of microphytes in a degree which is 20 times greater than that in which carbolic acid acts, and is such as to bring it into equality in this respect with the most powerful antiseptics known. Under conditions of sepsis slightly different, other analogous series of aromatic compounds are produced which have not yet been subjected to physiological investigation.

Of late years physiologists have become familiar with the fact that chemical bodies belonging to the aromatic group, some of which are specifically identical with the aromatic products of sepsis, take part in the normal exchange of material of the living human or animal body. Their appearance in the urine in unnaturally large amount, when, as in cases of ileus, septic products are absorbed from the accumulated intestinal contents, indicates their relation to sepsis, and affords ground for the inference that they normaliy come into existence as products of a similar disintegration of the proteid molecule. That this is so is confirmed by the observation that the proteid disintegration of tissue which takes place in the animal body, in poisoning by phosphorus, occasions a prevalence of aromatic bodies, as indicated by the discharge of phenyl compounds by the kidneys, similar to that determined by the absorption of septic products.

The property which so many of the aromatic bodies possess of arresting the vitality of ferment organisms must for the present be regarded as purely organoleptic, for we can only define it by reference to the particular effects which the bodies in question produce on particular kinds of living protoplasm. Their