CERTAIN ASPECTS OF THE CHEMISTRY OF INFECTIOUS DISEASES

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The discovery of microorganisms as the causative agents in infectious diseases introduced a new problem of relating the specific characteristics of a disease to the nature and behavior of the particular type of organism responsible for the pathological condition. It seemed reasonable to expect that the infecting agent would change the normal course of certain physical and chemical processes essential to the regular functions of the healthy state of the animal. A knowledge of the mechanism of the cycle of events involved would lead to a rational basis of treating the disease to eliminate the difficulties and reestablish normal conditions. Obviously, it was of prime importance to learn as much as possible about microorganisms and their pathogenicity before a comprehensive study of their rôle in disease would be instructive and profitable. Just how the infecting agent causes a specific disease, what changes occur, where these changes are initiated, the nature of the resulting products and their influence on the physical and chemical process underlying the normal cellular activity of the animal; are questions which must be answered before chemotherapy can be highly effective in relieving man of the many ills that now reduce his efficiency, limit his usefulness and endanger his life.

All these questions involve difficult problems. The infecting agents are themselves complex organisms, whose metabolic processes are poorly understood. The animal organism is much more complex and its