

of tuberculosis is due to experiments on the lower animals. All the advances previously made, before the infectious nature of the disease had been proved, were limited to pathologic anatomy. He gives a history of the early progress in the direction of experimental studies, showing how, through the early work of Klencke, Willemin, Klebs, and others, the infectious nature of tuberculosis was demonstrated, but it was not until the epoch-making work of Koch, in 1882, on the etiology of the disease, that it was generally accepted by the profession and the public. His later work, in 1890, demonstrating the value of tuberculin in diagnosis, which has been of inestimable utility in the control of the disease and also in its treatment, is all due to experiments on animals. Far-reaching as the new knowledge of tuberculosis is in the saving of life, it is not entirely easy to estimate it, as so many factors are involved. The death rate has fallen notably during the last forty years, in some countries only slightly faster since the discovery of the tubercle bacillus; but in others the diminution has been most remarkable since 1882. In New York City there has been a reduction of 40 per cent. in the deaths from consumption; in Prussia, fully 50 per cent. The results, however, depend largely on the thoroughness and efficiency with which the preventive measures are carried out. The experience of the past has justified the hope that ultimate control of the disease will finally be attained by knowledge acquired by the same means, and will probably depend not only on more thorough and comprehensive application of the facts already learned, which are the basis of all preventive measures so far, but also on the discovery of some specific method of immunization or treatment, which can only be brought about by continued and painstaking studies on animals. It has taught us already much as to the different types of the tubercle bacillus and their virulence, and the many ways in which this micro-organism invades the human system and destroys it. In his experience, animal experimentation has directly aided his practice and shown him that the production of artificial immunity is not altogether so unattainable as was formerly supposed. Those who, through ignorance or false sentiment, are working to have legal prohibition of this most valuable method of study for the prevention of disease, have little realization of or care for the amount of human suffering that exists, and are apparently willing that it should continue indefinitely so long as it does not affect themselves, or they do not come in contact with it.