

the only one in our country used for food, and the question resolves itself into a discussion as to whether bovine tuberculosis is transmissible to mankind through the meat and milk of tuberculous animals.

Lænnec, in 1814, first taught the unity of tuberculosis. He was opposed by Virchow whose authority carried practically every one with him. In 1865, Villemin first showed that the disease could be transmitted from one animal to another by inoculation and reached the necessary conclusion that wherever seen it had the same origin and the same cause. In spite of this, opposition to his views was kept up until the announcement by Koch of the discovery of tubercle bacillus in 1882. Koch showed that for all animals examined there was only one cause for the disease, namely, the tubercle bacillus. Following this the profession and the public in general was practically in unison in the belief that bovine tuberculosis was dangerous to human health. In 1896, Dr. Theobald Smith showed that there were certain differences between the tubercle bacilli found in man and those found in cattle. He did not, however, draw sweeping conclusions from this and still taught the close relationship of the two. In 1901, Koch having repeated these experiments, announced at the London Congress of Tuberculosis conclusions which were contrary to all opinions held up to that time, and he aroused a storm of opposition. He held that the disease as seen in animals was entirely different from that of mankind, and that it is impossible to transmit the human disease to cattle. On the other hand, he held that if human beings were ever infected from cattle it was a very rare occurrence, so rare indeed that it could practically be left out of consideration in formulating methods for the prevention and eradication of the disease.

**STUDY OF TUBERCLE BACILLI.** Study of cultures of the tubercle bacillus isolated from various types of tuberculosis in man and in animals has not yet shown differences which enable us readily to determine the origin of a given culture. The most marked and constant difference is the greater pathogenic power shown by the bovine bacillus for all experimental animals which have been used, with the possible exception of swine, which in my experience have proved so very susceptible to both races that it is hard to draw a distinction between them. Koch, however, includes swine among the animals which show a much greater susceptibility to bovine cultures than to those from human sources. The list of animals for which this greater susceptibility has been shown is a long one, including horses, cows, asses, goats, sheep, dogs, cats, rabbits, guinea pigs, and our nearest relative, the monkey. The result is the same by every method of inoculation tried. It would then be a most remarkable and anomalous circumstance for