

have to continue the use of the bacilli themselves to produce immunity, the involution form will be preferable to the young, vigorous micro-organisms, as there will be less danger of their reproducing themselves and overcoming the animal economy before they produce immunity.

As stated in his "Investigations on the Experimental Illness Caused by the Inoculation of Degreased Tubercle Bacilli,"¹ Cantacuzene, experimenting on guinea pigs, only used dead bacilli of bovine origin, as they prove more fatal than those of human origin. The bacillary bodies were isolated from their environment and completely cleansed and degreased. This was accomplished by paper filtration and prolonged washing in normal salt solution, drying in a vacuum, and then submitting to the successive action of methyl-alcohol and benzine in a Soxhlet apparatus in continuous circulation.

The general symptoms and cellular reactions after the inoculations both of fatal and non-fatal doses were most carefully noted both macroscopically and microscopically in the various organs, tissues, and fluids, including the blood.

Additional experiments were made by submitting the degreased bodies to the action of Gram's iodo-ioduretted solution before inoculation.

His conclusions in brief are:

1. Dead tubercle bacilli completely degreased are toxic. A sufficient dose is followed by speedy death.
2. In non-fatal doses the inoculation is followed by an illness from which the animal recovers completely in about three months.
3. The inoculated animal reacts typically to tuberculin for several weeks.
4. Degreased bodies of tubercle bacilli treated by Gram's solution lose their toxicity.
5. We can hasten enormously the resorption of the degreased bodies and of the tuberculous neo-formations by daily injections of

¹*Annales de l'Institut Pasteur* of Paris for November 21st, 1905.