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THE ETIOLOGY OF SYPHILIS.*

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THE investigation as to the etiology of syphilis has recently made two notable advances,—the demonstration by Metschnikoff and Roux, in 1903, that apes are subject to inoculation with the syphilis virus, and the discovery by Schaudinn and Hoffmann, in 1905, of the *spirochæta pallida* as the probable cause of this infectious disease.

The work of Klebs, in 1879; Martineau and Hamonic, in 1882; and Sperk, in 1886 and 1888; and also the experiments of Maurice and Charles Nicolle, proved the occasional transmissibility of human syphilis to the macac species of monkey, but their results, though interesting and important, were too imperfect and irregular to be of much assistance in the study of the pathology of the disease, and it remained for Metschnikoff and Roux to demonstrate conclusively that the higher or anthropoid apes are subject to syphilitic inoculation, the disease manifesting itself in the form of primary lesions which, after an interval of time, are followed by adenitis and a distinctive papular eruption.

Metschnikoff and Roux selected the chimpanzee for their experiments and this species proved to be readily susceptible to inoculation with the virus of syphilis, and to react in a constant and characteristic manner.

The first ape inoculated was a female chimpanzee about two years old. The virus was taken from two sources, (1) serous fluid was taken from a chancre and inoculated on the prepuce of the clitoris; and (2) material from a mucous patch was inoculated on the border of the eyebrow. Five days after the first inoculation, a second one was made with virus from a chancre.

The original scarifications soon healed and no visible lesions appeared until the twenty-sixth day after the first inoculations. At this time, a small vesicle which later increased in size and became indurated in character was noted on the prepuce. The fully developed lesion was examined by Fournier, duCastel, Hollopeau and Marc See, who pronounced it a hard chancre. It had been noted at the time of inoculation that the lymphatic glands of the groin and elsewhere were not readily palpable, but with the appearance of the local lesion the lymphatic glands

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