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Abstracts

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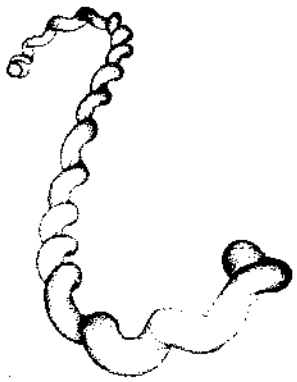

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EXPERIMENTAL INFECTION OF RABBITS WITH *L. interrogans* SEROVAR Hardjo

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By improving diagnostic methods for detecting leptospirosis, especially new laboratory diagnostic methods, a knowledge is provided on the nature and consequences of this infection and its importance both in veterinary and human medicine. New tests and procedures have been introduced in diagnostics of all the contagious diseases, including leptospirosis. The aim of this examination was to test different laboratory methods and evaluate their accuracy. In this experiment eleven rabbits were artificially infected by scarification with the live culture of L. Hardjo. The blood samples and sera were taken every second day, starting from day 21 post infection and then once a week for the following 5 weeks. The blood sera was examined for the presence of specific antibodies against L. Hardjo applying the methods of microscopic agglutination (MA) and ELISA. The blood samples were examined using the method of cultivation on agar according to Johnson supplemented with 200 µg/ml 5- fluorouracil (5-FU). L. Hardjo genome was examined by polymerase chain reaction (PCR). A pair of primers, separated from the basic structure of *Leptospira interrogans* rrs (16S) was used. The specific antibodies in rabbits against L. Hardjo were detected in 67 sera samples (36.6%). The first positive finding of specific antibodies was recorded on day 9 post infection and remained until day 17. ELISA test detected positive results in 67 samples and 18 suspected samples. The earliest positive results were recorded on day 15. The number of positive findings increased and reached its maximum on day 42. From the total of 183 blood samples, L. Hardjo was isolated in 33 (18.3%) samples, earliest on day 3, and the largest percent was recorded on day 17 post infection. Using PCR positive L. Hardjo genome was detected in 67 (56.30%) samples out 119. Positive finding was recorded already on the first day, and the highest percentage of positive findings was recorded on day 19 post infection. When the method of cultivation and PCR method were compared up to 21 days after infection for the period from infection until the application of dihydrostreptomycin a high level of linear correlation ($r = 0.810$) at the significance 0.01

was detected. After dihydrostreptomycin was administered 21 days upon infection, by the method of cultivation L. Hardjo was not isolated from the blood samples of rabbits. However, using PCR method L. Hardjo was detected in 23 samples.