201 DIFFERENTIATION OF TOXOPLASMA GONDII STRAINS BY ENZYMATIC PROFILING

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Although infection with the parasitic protozoon *Toxoplasma gondii* (Apicomplexa, Coccidia) leads to diseases clinically presenting very different in men, a rapid and reliable differentiation method of parasite strains has not been established so far. Thus, a quick typing system for Toxoplasma strains has to be developed; the API systems[R] which are frequently used for bacterial enumeration may be suitable for this purpose.

Zymogram analysis of highly virulent strains of *Toxop/asma gondii* was performed with the API enzyme research kits[R]. The strains investigated were retraced to five isolates (RH, BK, 928, KB, Alt). For many years nine strains have been maintained by continuous intraperitoneal infection of mice separately in different laboratories in Europe. Moreover, three of these strains were cultivated in-vitro in a serum-free Hep-2 tissue culture. The API research kits[R] was used for a semiquantitative detection of 84 enzymes, including the classes aminopeptidases, glycosidases, esterases, lipases, phosphatases and phosphoamidases. Based on the zymograms, strain similarities were calculated by hierarchical clustering and the influence of different culture conditions was assessed.

This newly developed technique seems to be very suitable for a rapid check of identity of Toxoplasma strains of uncertain origin. Moreover, it allows a quick determination of the enzymatic equipment and its change during different breeding conditions of the parasites.