

HASSL, A., Ch. HARMER, and H. ASPÖCK (Klinisches Institut f. Hygiene, Univ. ., A-1095 Wien). Advances in the Propagation of *Toxoplasma gondii* in Tissue Culture

Within the framework of a research project on propagation and cultivation of *Toxoplasma gondii* in tissue cultures we have developed a simple technique which allows the production of large quantities of *Toxoplasma* trophozoites for various antigen preparations to be used in serological tests: 2×10^6 trophozoites of *Toxoplasma gondii* are incubated together with 5×10^5 HEp-2 cells in 5 ml of a serum-free tissue culture medium (Ventrex PC-1) in 25 cm² flasks. After an incubation period of 120 h 2×10^5 uninfected HEp-2 cells are added. Harvesting of almost pure *Toxoplasma* trophozoites by a simple replacement of the culture medium has proved to be optimal after 48, 72, 120, 144 and 192 hours. The cumulative yield reaches about 1.65×10^8 trophozoites; thus, each parasite which has invaded multiplies about 330 times during these eight days of one cycle. Five to six subsequent cycles may be performed until the majority of the parasites apparently lose their infectivity. - This propagation technique has been tested successfully with four highly virulent *Toxoplasma* strains. Thus, propagation of *Toxoplasma gondii* in tissue culture represents a reasonable alternative to the usual method of multiplying the parasites in the mouse peritoneal cavity.

Keywords: *Toxoplasma gondii*, Propagation in vitro