

***TOXOPLASMA GONDII* - KOSMOPOLITYCZNY PASOŻYT O MAŁYM ZRÓŻNICOWANIU GENETYCZNYM**

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1. Miejsce *T. gondii* w świecie organizmów żywych. 2. Rozprzestrzenienie *T. gondii* - czystość zarażenia u różnych żywicieli i w różnych rejonach świata. 3. Bioróżnorodność gatunkowa *T. gondii*. 4. Zróżnicowanie genetyczne *T. gondii*. 5. Podsumowanie

Toxoplasma gondii - cosmopolitan parasite expressing low genetic diversity

Abstract: *T. gondii* is the causative agent of the most common parasitic infections in a wide variety of vertebrate hosts, including humans. One third of the human adult population in the world (between 10 and 85%) depending on geographical location is chronically infected with this parasite. The life cycle of *T. gondii* is complex, involving mitotic division in intermediate hosts and meiotic division in definite hosts (members of cat family) but sexual recombination between different strains of the parasite is exceptional in natural population. Strains of *T. gondii* can be grouped only into three clonal lineages (I, II, III), and it is not related to geographical or host specificity. Recent genetic studies identified a remarkably limited number of *T. gondii* genotypes in nature. In spite of the clonal population structure, several studies indicate that these three lineages of *T. gondii* are not separate species. One of these lineages (type I) is highly virulent in outbred laboratory mice, whereas long — term infections are characteristic for type II and III strains. Type I strains have been observed in human congenital and ocular toxoplasmosis, suggesting that this lineage may be more pathogenic for humans as well. Increasing frequency of type II found in animal products is probably strongly related to high percentage of seropositive patients.

1. Localization of *T. gondii* among the living organisms. 2. Distribution of *T. gondii* - the frequency of infections in a variety of hosts in different regions of the world. 3. Biodiversity of *T. gondii* species. 4. Genetic diversity. 5. Summary

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Wpłynęło w październiku 2003 r.