the assumption that lineage III represents a "recent" recombinant of lineages I and II. These results suggest that while sexual reproduction occurs rarely, it is sufficient to uncouple genes from each other and thus cannot be neglected. Additionally, a new cougar isolate possessed multiple unique polymorphisms. Consequently, the genetic distance between this isolate and the nearest lineage was larger than that between, at least, one pair of the lineages, suggesting that it represents an additional lineage. A final analysis of these patterns will be presented.

827 SURVIVAL AND INFECTIVITY OF CYSTS OF THE ME-49 *TOXOPLASMA GONDII* STRAIN IN ARTIFICIALLY INFECTED BOVINE MILK AND HOME MADE CHEESE. Mayrbaurl-Borges M, Hiramoto RM, Galisteo Jr AJ, Meireles LR, Cardoso RPA, Macre MS, and Andrade Jr HF. Lab. Protozoology, Instituto de Medicina Tropical de São Paulo, São Paulo, Brazil.

Toxoplasma gondii is transmitted by ingestion of oocysts, in raw vegetables or water; and cysts, in undercooked products from animal origin, like meat and milk. Bovine milk was found to be contaminated with *T. gondii* due to bad hygiene and oocyst contamination, but the secretion in mammary gland could also results in cyst secretion in milk which could resist to the cheese production process, usually performed in small farms of isolated rural areas. We study the survival and infectivity of cysts of ME-49 strain of *T. gondii*, in bovine milk and home-made cheese. Milk was contaminated with cysts and stored at 4°C up to 20 days, both as milk or home made cheese, and used to orally infect groups of C57Bl/6j mice (12 cysts/mouse), Contaminated milk induced a high mortality, 8/8 at 0 storage day and 4/8 at 5 and 10 days of storage at 4° C, when compared to PBS stored cysts in the same periods(6/8 day 0, 0/8 at day 10). Infectivity, detected by serology and histology, was maintained also at 20 days of storage in milk(4/4), but PBS stored cysts showed a progressive loss at higher times(3/4 at 10 days and 2/4 at 20 days). The cysts in cheese induces mortality in occasional mice in early times(1/8 at 0 and 1/8 at 5 days), but maintains infectivity immediately after cheese preparation(9/11), after 5 days (8/8) and 10(4/4) days of storage, only abolished after 20 days of storage (0/4). Those data showed that *T. gondii* cysts survival was improved in milk, probably due better gastric survival of bradyzoites, and only minimally affected by home made cheese production. The refrigerator storage of those products maintains their infectivity by 20 days in milk and 10 days in home made cheese, suggesting that the contamination of milk and cheese with *T. gondii* must be studied as a possible source of human infection.

828 EVALUATION OF NOVEL MONOCLONAL ANTIBODIES FOR USE IN *TOXOPLASMA GONDII* ANTIGEN CAPTURE ASSAY. Grushka D, Serhir B, Carey K, Ward GE, MacLean JD, and Ward BJ. National Center of Parasite Serology, McGill University, Montreal, QC, Canada; Department of Microbiology and Molecular Genetics, University of Vermont, Burlington, VT; and McGill Tropical Diseases Center, Montreal, QC, Canada.

Toxoplasma gondii is one of the most common parasitic infections of man. Although several commercial tests exist for toxoplasma serodiagnosis, the unambiguous diagnosis of many clinically important toxoplasma infections remains problematic. This is particularly true in establishing the timing of infection in pregnant women and demonstrating reactivation of disease in immunocompromised hosts. The systemic nature of toxoplasmosis raises the possibility that the detection of circulating tachyzoite antigens may be of use in these situations. To date, experience with antigen detection techniques in human toxoplasma infections is limited. We have developed a series of antigen capture EIAs using a panel of novel monoclonal antibodies (MAb) directed against a range of tachyzoite antigens (45.15, 17.9, A3.2, C8.4, B3-90). After optimization using a pool of these MAbs to capture and negative serum spiked with whole tachyzoite lysate antigen, we were able to detect circulating antigen in 12/19 (63%) patients with symptomatic toxoplasmosis. Using single MAbs to capture, we observed that most of the reactivity in the pool was accounted for by clone 45.15 (70 kDa inner membrane complex protein) with lesser contributions from clones 17.9 (31 kDa antigen from dense granules) and C8.4 (57 kDa surface/external antigen). Although early reports suggest that toxoplasma antigen levels in serum are transient, the magnitude and kinetics of antigenemia with the specific toxoplasma products recognized by our panel of MAbs remain to be determined. Our assays will be further refined and applied to defined toxoplasma sera from otherwise healthy and immunocompromised subjects to determine the clinical utility of detecting the targeted toxoplasma antigens.