

## **Interferon-gamma and T-bet expression in a patient with toxoplasmic lymphadenopathy.**

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### **Source**

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### **Abstract**

Infection with *Toxoplasma gondii* (TG) presents in some individuals as a self-limited disease with a predominant lymphadenopathy characterized by prominent B-cell activation. As this is in contrast to the in vitro based concept of a T(h)1-immune response against TG, we investigated native lymphoid tissue and peripheral blood of a patient with serologic evidence of toxoplasmosis to verify which cells show T(h)1-response features. High-level expression of T-bet in monocytoid B-cells, in germinal center B-cells, and in a lesser amount in T cells could be demonstrated by immunohistochemistry. In vitro stimulation of lymph node cells with either TG, staphylococcus enterotoxin B, or phorbol 12-myristate 13-acetate/ionomycin revealed an interferon-gamma expression in T-bet(+) B cells only in the patient and not in controls. Similar results were found for T-bet(+) T cells which were also present in controls. CD4(+) peripheral blood cells stimulated with TG antigens showed a TG-specific but attenuated T(h)1-reactivity in the patient associated with a reduced expression of IL-2 when compared with controls. We conclude that the pathogenesis and course of toxoplasmic lymphadenopathy is based on a T(h)1-cell defect, which becomes compensated by the B cells mounting a T(h)1-like immune response.