



#### KEY WORDS

- ✓ *Toxoplasma gondii*
- ✓ HIV
- ✓ AIDS
- ✓ Toxoplasmosis
- ✓ Real-Time PCR

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## Evaluation of the Diagnosis Toxoplasmosis's by Real-Time PCR in Peripheral Blood Samples in HIV/AIDS Patients

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#### THESIS ABSTRACT

Toxoplasmosis caused by *Toxoplasma gondii* is one of the important causes of morbidity and mortality in immunosuppressed people. Serological tests used in the diagnosis of toxoplasmosis in immunocompetent people are not reliable because there is no antibody response in individuals with HIV (Human Immunodeficiency Virus) and should be confirmed by molecular tests. In our study, it was aimed to verify the applicability of a molecular-based test that can help diagnose toxoplasmosis coinfection by using a Real-time Polymerase Chain Reaction test (qPCR) for false negativities that may occur due to a low antibody response in this patient group. Of the 137 samples studied with Real-time PCR, in two samples (1.45%) *T. gondii* DNA was detected and these two patients were found to be seronegative for toxoplasmosis.

In this study, very high positivity rates were not expected due to the fact that there were very few patients with CD4+ T lymphocyte count <200 cells/μl, all patients were using antiretroviral therapy and had no symptoms in terms of toxoplasmosis. But despite the fact that one of the two patients who tested positive used prophylactic treatment in addition to antiretroviral therapy, the fact that *T. gondii* DNA was detected and both patients were seronegative for toxoplasmosis emphasizes the importance of molecular tests.

#### APPLICATION AREAS OF THE THESIS RESULTS

We think that serological test used in the diagnosis of toxoplasmosis should be completed and evaluated together with molecular tests, as they are insufficient due to low antibody response in individuals living with HIV.

#### ACADEMIC ACTIVITIES

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