

P0120

Paper Poster Session I

Clinical and diagnostic parasitology

The new DiaQ-Lamp methods (Diasorin) for diagnosis of toxoplasmosis

V. Meroni<sup>1</sup>, F. Genco<sup>2</sup>, G. Soalanca<sup>2</sup>

<sup>1</sup>Dipartimento Medicina Interna e Terapia Medica University of Pavia SC Microbiologia e Virologia Fondazione IRCCS Policlinico San Matteo Pavia, Pavia, Italy

<sup>2</sup>SC Microbiologia e Virologia Fondazione IRCCS Policlinico San Matteo, pavia, Italy

**Objectives** Molecular assays have been of paramount importance for the diagnosis of toxoplasmosis in pregnant women and immunocompromised patients. Today detection of *Toxoplasma gondii* DNA in amniotic fluid (AF), aqueous humor (AH), cerebrospinal fluid (CSF) using real-time PCR assays is a standard approach. The Diasorin Q LAMP (loop mediated isothermal amplification - Diasorin Saluggia Italy) offers all the benefits of isothermal LAMP technology with the addition of real time fluorescent and multiplexed amplification. Furthermore extraction and Q-LAMP assays are completely automatized and performed on the Lison IAM platform. Aim of the study was to evaluate the performance of the new Q Lamp assay (lam toxo) on clinical sample (AF, CSF) and European quality controls for molecular diagnosis (QCMD – Glasgow United Kingdom)

**Methods** Forty seven amniotic fluids from pregnant women with suspected or confirmed Toxoplasma infection, 2 CSF and 1 AH sample from immunocompromised patients with suspected reactivation of toxoplasmic infection were stored frozen at -80°C until use. Ten samples of QCMD 2014 were also tested. All these lyophilized samples were reconstituted and stored according to the manufacturer's instructions. All samples were previously evaluated in triplicate with the tests in use in the laboratory: for the extraction NucliSENS easyMAG (BioMerieux Marcy l'Etoile France) and the real-time TOXOPLASMA g ELITE MGB Kit (Elitech group SpA Torino Italia) for DNA amplification performed on a 7300 Real-Time PCR System (Applied Biosystems Foster City USA) each test was performed according to the manufacturer's instructions.

**Results** All the 47 amniotic fluid gave negative results with the Q-LAMP assay as was recorded with real time PCR. No newborn was infected at the end of one year follow up. The 2 CSF from immunocompromised patients were positive with both tests and the patients improved after therapy with Pyrimethamine sulphadiazine. The HA sample was negative also with Q-Lamp and the patients had a Cytomegalovirus chorioretinitis. All the QCMD sample gave the same results with real time PCR and QLamp: all amniotic fluids sample were positive also at the lowest concentration (4+/-2 Toxoplasmas/ml) and all the plasma samples but two scored negative.

**Conclusion** These preliminary data show the good diagnostic accuracy of the new QLAMP that seems to be a valid alternative to the classic Real time PCR tests as Q LAMP is fully automated, less time consuming, less expensive and useful in routine practice with small samples numbers.