A novel assay predicting maternal-fetal cytomegalovirus transmission (Yissum)

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A valid predictive marker for non-transmitters

Categories	CMV infection, Diagnostics, Biomarkers
Development Stage	Proof of concept

Highlights

- Fetal infection with Cytomegalovirus (CMV) is the most common intrauterine infection in the developed world.
- As only 40% of women infected with primary CMV transmit the virus to the fetus, a reliable predictive assay is essential.
- The inability to predict transmission results in numerous blood tests during pregnancy, amniocentesis sampling and unnecessary pregnancy terminations.
- Our assay is based on the results obtained by cytokine screening.
- A correlation was found between maternal CMV-specific T cells response and fetal transmission.

Our Innovation

- A simple, reliable and non-invasive assay that can predict CMV maternal-fetal transmission.

Key Features

- 100% negative predictive value.
- Positive predicting value of 75%.
- Valid predictive marker for non-transmitters.

Development Milestones

- Cytokines secretion was measured upon stimulation of whole blood from 36 pregnant women with primary CMV infection. Statistical analysis of the CMV-specific T cells response showed a significant correlation with transmission.

The Opportunity

- CMV infection is the most common congenital infection in the developed world, occurs in as many as 2.2% of live births, and is associated with significant long term morbidity and high public expenses. A reliable assay predicting transmission may reduce delivery of affected newborns.

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