

EV0899

ePoster Viewing

Molecular virology

**A newly developed Dengue-IgA rapid test shows higher levels of sensitivity for early detection of Dengue infection**

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**Background:** During dengue outbreak, timely and quick diagnosis is essential for early disease intervention and patient management.

Dengue can be diagnosed by virus isolation, by serology, or by molecular methods. MP Diagnostics ASSURE<sup>®</sup> Dengue IgA Rapid Test (Dengue IgA RT) is one of these methods that can be utilized for the rapid detection of anti-dengue IgA in patients' biological samples. The objective of the current study was to evaluate the performance of ASSURE Dengue IgA RT using a panel of well characterized clinical samples.

**Methods:** The sensitivity of the MP Biomedicals Asia Pacific ASSURE Dengue IgA RT based on Reverse flow technique was evaluated on a panel of serum/plasma samples collected from 109 Dengue RNA RT-PCR confirmed Pakistani patients with different viral serotypes and compared its performance with Dengue NS1, IgM and IgG ELISAs.

**Results:** The ASSURE Dengue IgA RT showed 69.72% (76/109) diagnostic sensitivity in confirmed dengue cases (n=109). When the results of ASSURE Dengue IgA RT compared with Dengue Capture antibodies ELISA (IgM and IgG) and NS1 ELISA (Bio-Rad and Panbio) ASSURE Den-IgA RT showed higher detection of dengue positive cases; 51.38% by Den Capture IgM ELISA, 65.14% by Den Capture IgG ELISA and 56.88% by NS1 ELISA.

**Conclusions:** Dengue confirmed serotyped positive samples were collected at the early stage of infection (3-4 days) before the full sero-conversion and the ASSURE Den-IgA RT showing higher levels of sensitivity compared to Den-IgM ELISA. The ASSURE Den-IgA RT deserves further prospective evaluation using sample collected at early and late phases of infection