

**P0560**

**Paper Poster Session**

**Diagnostic parasitology**

### **Evaluation of the VIKIA Malaria Ag Pf/Pan malaria rapid diagnostic test in a non-endemic setting**

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**Background:** Malaria rapid Diagnostic tests (RDT) are a useful tool in endemic and non-endemic countries where they could be used as helpful in case of microscopist inexperience. This study aims to compare the new VIKIA Malaria Ag Pf/Pan RDT with PCR-corrected microscopy results and the BinaxNOW® Malaria RDT to diagnose *falciparum* and non-*falciparum* imported malaria cases.

**Material/methods:** The performance of this RDT was assessed on fresh samples obtained in returned international travelers. The samples were examined by light microscopy on Giemsa stained slides, and with two RDTs detecting aldolase as pan antigen, and HRP2: VIKIA Malaria Ag Pf/Pan® test and the BinaxNOW® Malaria. Discordant results and non-*falciparum* species were confirmed by real-time PCR. Sensitivity and specificity were used to evaluate test performance.

**Results:** 415 samples were included with 50 negative samples, and 365 positive samples distributed as 260 *Plasmodium falciparum*, 56 *P. ovale*, 25 *P. malariae*, and 24 *P. vivax*. The two tested RDTs had the same sensitivity of 96.2% (250/260; 95% CI, 93.8 to 98.5%) for *P. falciparum* detection. The overall sensitivity of VIKIA Malaria Ag Pf/Pan® was 76.4% (279/365; 95% CI, 72.0 to 80.8%) to diagnose malaria compared to 57.5% (210/365; 95% CI, 52.4 to 62.6%) for BinaxNOW® Malaria. The sensitivity of VIKIA Malaria Ag Pf/Pan® was higher than BinaxNOW® Malaria to detect aldolase in *P. vivax* samples (96%, 23/24 versus 71%, 17/24), *P. ovale* samples (57%; 32/56 versus 32%; 18/56), and *P. malariae* samples (76%; 19/25 versus 32%; 8/25). No false positive result was observed in negative samples neither for aldolase or PfHRP2 detection (specificity of 100%).

**Conclusions:** The VIKIA Malaria Ag Pf/Pan® performs similarly well as other RDT for *P. falciparum* malaria diagnosis and better than BinaxNOW® Malaria for non-*falciparum* diagnosis which is a concern in France. This test could be a good tool for the diagnosis of malaria in non-endemic areas.