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ePoster Viewing
Diagnostic bacteriology – non-culture based, including molecular and MALDI-TOF

Evaluation of the novel DiaSorin LIAISON® Campylobacter antigen assay to the established culture method for stool diagnosis of Campylobacter

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Background: *Campylobacter* species are commensal organisms widely recognized as the most common cause of bacterial food-borne diarrheal disease worldwide. The epidemiological data suggest that *C. jejuni* and *C. coli*, are the most frequently isolated pathogens in human gastroenteritis. The gold standard for detection of *Campylobacter* remains the culture with sensitivity down to 60% according to the literature. Furthermore, bacterial isolation requires 48 hours of incubation under microaerophilic conditions at 42°C. New diagnostic tools, such as campylobacter antigen detection by chemiluminescence technology (CLIA), facilitate rapid identification of this gastrointestinal pathogen, improving the laboratory efficiency. DiaSorin LIAISON® a fully-automated random-access platform based on CLIA was evaluated for the detection of human gastrointestinal infections caused by *Campylobacter species*.

Material/methods: Prospective study conducted in a tertiary hospital**.** Samples out of the daily routine were performed in parallel by the LIAISON® as chemiluminescent (CLIA) *in vitro* diagnostic system as well as by BD™ Camplyobacter bloodfree selective medium with standard conditions. A total of 437 samples were used and performed according to manufacturer's instructions.

Results: The LIAISON® demonstrates a high agreement with the standard culture method with a concordance of 97.3%. The test shows a sensitivity and specificity of 100% and 97,1% respectively on CLIA. We obtained a 2.7% of discordant results. The use of the fully automated LIAISON® system reduced the time to give results by 70% compared to standard methods.

Conclusions: DiaSorin's fully automated random access platform LIAISON® provides a rapid and enclosed sample processing. This antigen assay shows a higher sensitivity than culture as well as a reduction of the time to first result. The culture needs 48h of incubation while the LIAISON® delivers

results within 45 min. and submits the results online. The quick results would allow taking clinical and therapeutical decisions shortly.