

Novodiag[®] CarbaR+, the most extensive test panel for the rapid screening of the most clinically relevant carbapenemases and colistin resistance

A complete evaluation by the Nottingham University Hospitals, NHS Trust,
Clinical Microbiology, Queen's Medical Centre

The Novodiag[®] Solution (Mobidiag UK) is an innovative cartridge-based molecular diagnostic solution allowing fully automated detection of infectious diseases and antibiotic resistances. Nottingham University Hospital (NUH) has recently completed the evaluation of the Novodiag[®] system and associated CarbaR+ test panel. "We became interested in the Novodiag[®] CarbaR+ test panel because of the large range of targets it detects", says Su Sewaa, Deputy Service Manager of NUH QMC. CarbaR+ detects more than 200 variants of the most common carbapenemase producing organisms (CPO) and colistin-resistance markers. These bacteria may cause multiple antibiotics to perform inefficiently, which in turn can lead to serious infections (particularly in healthcare settings), so rapid detection of these genes is vital. "Standard diagnostic methods in many clinical laboratories are time consuming and are limited in the range of Carbapenemase genes they detect", adds Shova Sharma, Associate Practitioner and Experimental Lead of the evaluation and continues that "there is a demand in diagnostic laboratories for highly-sensitive, specific and rapid diagnostic systems for better management



of risks associated with CPOs".

The evaluation NUH conducted showed that Novodiag[®] CarbaR+ is very effective for the detection of carbapenemase genes. Sensitivity of markers KPC, IMP, OXA-23, OXA-24, OXA-48/181 and VIM was 100% and specificity of markers NDM, IMP, OXA-24, OXA-48/181, OXA-58 and VIM was 100%. "We found out that Novodiag[®] CarbaR+ includes a wider range of Carbapenemase markers compared to a diagnostic assay currently used by us", says Shova. Novodiag[®] CarbaR+ is also the only test available to detect OXA-51

in the presence of ISAbal1 promoter. "This makes the test clinically even more relevant", says Su.

"The evaluation proved to us that the Novodiag[®] Solution is easy to use. It requires minimal user training and minimal hands on time, which eliminates possible human errors" states Shova. "We also appreciated that different test panels can be utilized at the same time meaning the system is not locked down to one specific analysis at a time", Shova says, adding that they were very pleased with the service from Mobidiag:

"Mobidiag personnel were easy to reach and we were advised clearly and accurately in timely manner".

Shova sums up the evaluation: "Novodiag[®] CarbaR+ has potential to improve diagnostic efficacy within a busy diagnostic laboratory." She adds that the future pipeline of Novodiag[®] Solution test panels is also attractive for NUH. Novodiag[®] Solution panels for *Clostridium difficile* and faecal bacterial screening are already available and Mobidiag is presently developing a comprehensive faecal parasite panel and a CSF meningitis screening panel.

NUH Clinical Microbiology will be publishing poster of the evaluation in October 2019 at EMMD in the Netherlands.

Mobidiag offers solutions answering needs for fast, reliable and cost-efficient diagnostics solutions for detection of most relevant bacteria, viruses, parasites and antibiotic resistances for all laboratories requirements, no matter their size, throughput and centralised/decentralised organisation. For more information visit www.mobidiag.com.

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