



Check-Points Health's rapid "superbug" screening assay demonstrates high accuracy in Belgian multicenter evaluation

Wageningen, The Netherlands, March 16, 2015 – Check-Points Health B.V. today announced new data from a Belgian clinical multicenter study¹ demonstrating that its Check-Direct CPE assay is 100% sensitive in identifying patients colonized with so called "superbugs". Such rapidly emerging bacteria, named carbapenemase-producing *Enterobacteriaceae* or CPE, threaten to seriously undermine modern medicine by causing nearly untreatable infections.

"Screening hospitalized patients who are at high risk of CPE carriage and subsequently keeping carriers isolated from non-carriers has proved to be essential in preventing spread of CPE within healthcare facilities", said study author Prof. Youri Glupczynski M.D., Ph.D., Head of the Belgian National Reference Laboratory for Antibiotic Resistance Monitoring in Gram-negative Bacteria, Catholic University of Louvain (UCL), Mont-Godinne.

"With the Check-Direct CPE alone we were able to detect all cases that had been identified by selective culture with confirmation of resistance mechanisms by PCR", Prof. Glupczynski continued. "What sets Check-Direct CPE apart is that an accurate molecular result is available directly from patient samples in a matter of hours rather than days, as is the case by conventional microbiological methods. For hospitals early rapid detection of CPE may allow to improve the control of cross-transmission by implementing reinforced hand hygiene and contact precautions. It could also help optimize the use of hospital resources, such as isolation rooms and dedicated nursing staff."

This study also reported that a number of patients were tested positive by Check-Direct CPE only. While the causes may be several, the authors point out that five patients had a history of CPE colonization. In addition, six patients, who the Check-Direct CPE assay identified as positive for OXA-48 type CPE, were admitted to a hospital with an ongoing major OXA-48 outbreak.

"The increase of sensitivity achieved with Check-Direct CPE for the detection of OXA-48 asymptomatic carriers is particularly interesting because the recognition of this often poorly expressed carbapenemase is notoriously difficult by conventional phenotypic methods. OXA-48 is by far the most common CPE type in Belgium, France and the Netherlands and is increasingly reported in many other European countries as well", Prof. Glupczynski noted.

The multicenter study, titled "Multicentre evaluation of Check-Direct CPE assay for direct screening of carbapenemase-producing *Enterobacteriaceae* from rectal swabs", was performed between November 2013 and April 2014 across four acute care hospitals in Belgium and coordinated by the Belgian National Reference Laboratory for CPE. A total of 394 patients were enrolled and included patients who were hospitalized in high-risk wards (intensive care or geriatric unit) as well as re-admitted previously known CPE carriers.

About Check-Points Health B.V.

Check-Points Health is a privately held developer and manufacturer of *in vitro* diagnostic assays based in Wageningen, the Netherlands. Founded in 2008 as a part of Check-Points B.V., Check-Points Health aims to improve the control and prevention of antibiotic resistance in Gram-negative bacteria – such as carbapenemases, ESBLs and AmpCs – through combining its unique know-how of this field with its molecular detection technologies. The CE-IVD marked products range from a proprietary microarray system for comprehensive identification of resistance genes to assays for rapid screening in as fast as 2 hours based on real-time PCR.

For further information, please visit: www.check-points.com

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1. Huang T-D et al. Multicentre evaluation of Check-Direct CPE assay for direct screening of carbapenemase-producing *Enterobacteriaceae* from rectal swabs. *J Antimicrob Chemother*. Published online ahead of print 29 January 2015.

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