Reply to “Noncarbapenemase OXA-48 Variants (OXA-163 and OXA-405) Falsely Detected as Carbapenemases by the β Carba Test”

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OXA-163 and OXA-405 have been described by Poirel et al. (1) and Dortet et al. (2, 3), respectively, as “the first class D β -lactamase compromising both extended-spectrum cephalosporin and carbapenem activities” and as having “clavulanic acid-inhibited activity toward expanded-spectrum activity without significant imipenem activity,” which would imply that neither enzyme is completely devoid of carbapenemase activity. This is in agreement with the enzymatic analysis of OXA-163, for which carbapenemase activity was detected, with an 820-fold decrease in catalytic efficiency for imipenem but only a 4-fold decrease for meropenem and doripenem compared to OXA-48 (4). While, to our knowledge, no catalytic efficiency data are available for OXA-405, no difference was observed between the specific carbapenemase activities of OXA-405 and OXA-163 (2), suggesting that OXA-405 also has some, however low, carbapenemase activity.

As for the possible relevance of detecting very low carbapenemase producers, the main benefit may be at the epidemiological level in light of the recent spread of OXA-163 producers in hospitals in Argentina and Egypt, and their occurrence could be of particular concern if, associated with other mechanisms, they developed clinically significant carbapenem resistance (5). Moreover, the interest in detecting OXA-163 has been stressed by others (5, 6) and an immunochromatographic assay (OXA-163/48 Duo 65 K-SeT test) was specifically developed for the detection of OXA-163/48-like enzymes (6).

Colorimetric and chromogenic tests have been developed to detect carbapenemase producers rapidly and easily (and possibly at low cost), especially in *Enterobacteriaceae*, whatever the enzyme. They are first-line tests that are useful in guiding the implementation of strategies to control the spread of these organisms, not least because some of them are highly resistant to antibiotics. They have to be complemented with identification of the enzymes, which can be done more or less rapidly, depending on financial resources and technical facilities. We realize that the implementation of infection control measures is costly, but implementation of preventive measures (while waiting for confirmatory carbapenemase identification) is presumably less expensive than the management of an epidemic, which would include, among other tasks, patient cohorting and contact tracing. It might be more worrying if the β CARBA test did not detect all weak carbapenemase producers, a possibility that cannot be ruled out since only one OXA-163 producer and one OXA-405 producer were included in our study (7).

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This is a response to a letter by Dortet and Naas (<https://doi.org/10.1128/JCM.02086-16>).

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