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A lateral flow immunoassay for the rapid identification of CTX-M-producing Enterobacterales

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Supplemental tables 3

21 Table S1: Retrospective evaluation of NG-Test MULTI on well characterized isolates

| β -lactamase content | CTX-M group ^a | Species | No. of isolates | NG-Test CTX-M Multi |
|----------------------------|--------------------------|----------------------|-----------------|----------------------|
| CTX-M-1 | 1 | <i>C. freundii</i> | 1 | P |
| CTX-M-1 | 1 | <i>C. koseri</i> | 1 | P |
| CTX-M-1 | 1 | <i>E. coli</i> | 2 | P |
| CTX-M-1 + TEM-1 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-10 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-101 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-15 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-15 | 1 | <i>K. oxytoca</i> | 1 | P |
| CTX-M-15 | 1 | <i>K. pneumoniae</i> | 1 | P* |
| CTX-M-15 + SHV-27 | 1 | <i>K. pneumoniae</i> | 1 | P |
| CTX-M-15 + TEM-1 | 1 | <i>C. freundii</i> | 1 | P |
| CTX-M-15 + TEM-1 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-15 + TEM-1 | 1 | <i>K. oxytoca</i> | 1 | P |
| CTX-M-15 + TEM-1 | 1 | <i>M. morgani</i> | 1 | P |
| CTX-M-15 + TEM-1 | 1 | <i>P. mirabilis</i> | 1 | P |
| CTX-M-15 + TEM-1 + SHV-11 | 1 | <i>E. cloacae</i> | 2 | P |
| CTX-M-15 + TEM-1 + SHV-12 | 1 | <i>E. cloacae</i> | 1 | P |
| CTX-M-15 + TEM-1 + SHV-28 | 1 | <i>C. freundii</i> | 1 | P[#] |
| CTX-M-182 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-3 + TEM-1 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-3 + TEM-1 + SHV-11 | 1 | <i>K. pneumoniae</i> | 1 | P |
| CTX-M-32 + TEM-1 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-37 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-55 | 1 | <i>E. coli</i> | 2 | P |
| CTX-M-57 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-71 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-71 | 1 | <i>P. mirabilis</i> | 1 | P |
| CTX-M-82 | 1 | <i>E. coli</i> | 1 | P |
| CTX-M-127 | 1 | <i>K. pneumoniae</i> | 1 | P |
| CTX-M-2 + TEM-1 | 2 | <i>E. coli</i> | 1 | P |
| CTX-M-2 + TEM-1 + OKP6 | 2 | <i>K. pneumoniae</i> | 1 | P |
| CTX-M-100 | 25 | <i>E. coli</i> | 1 | P |
| CTX-M-94 | 25 | <i>E. coli</i> | 1 | P |
| CTX-M-8 | 8 | <i>E. coli</i> | 1 | P |
| CTX-M-8 + TEM-1 + SHV-28 | 8 | <i>K. pneumoniae</i> | 1 | P[#] |
| CTX-M-13 | 9 | <i>E. coli</i> | 1 | P |
| CTX-M-14 + TEM-1 | 9 | <i>E. coli</i> | 3 | P |
| CTX-M-17 | 9 | <i>E. coli</i> | 1 | P |
| CTX-M-18 | 9 | <i>K. pneumoniae</i> | 1 | P[#] |
| CTX-M-19 | 9 | <i>K. pneumoniae</i> | 1 | P |

| | | | | |
|----------------|---|----------------------|---|----------|
| CTX-M-24 | 9 | <i>E. coli</i> | 1 | P |
| CTX-M-27 | 9 | <i>E. coli</i> | 2 | P |
| CTX-M-65 | 9 | <i>E. coli</i> | 1 | P |
| CTX-M-9 | 9 | <i>E. cloacae</i> | 1 | P |
| CTX-M-93 | 9 | <i>E. coli</i> | 1 | P |
| SHV-12 | x | <i>E. coli</i> | 1 | N |
| SHV-12 + TEM-1 | x | <i>K. oxytoca</i> | 1 | N |
| SHV-12 + TEM-1 | x | <i>C. freundii</i> | 1 | N |
| SHV-28 + TEM-3 | x | <i>K. pneumoniae</i> | 1 | N |
| SHV-2a | x | <i>E. coli</i> | 1 | N |
| SHV-2a | x | <i>K. pneumoniae</i> | 1 | N |
| TEM-24 | x | <i>K. aerogenes</i> | 2 | N |
| TEM-3 | x | <i>E. coli</i> | 1 | N |
| TEM-3 | x | <i>E. cloacae</i> | 1 | N |
| TEM-52 | x | <i>E. coli</i> | 1 | N |
| TEM-52 + TEM-1 | x | <i>P. mirabilis</i> | 1 | N |
| VEB-1 | x | <i>E. cloacae</i> | 1 | N |

22 P, positive result; N, negative result

23 # Invalid result at the first attempt and detected as positive with a modified protocol

24 ^a1, CTX-M-1 group; 2, CTX-M-2 group; 8, CTX-M-8 group; 9, CTX-M-9 group; 25, CTX-M-25 group

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26 Table S2: Retrospective evaluation of NG-Test MULTI on *K. oxytoca* isolates

| isolate # | Reference | Main acquired β -lactamase content | NG-Test CTX-M Multi |
|-----------|-----------|--|---------------------|
| 1 | R8J10 | NDM-1 | N |
| 2 | R13E1 | GES-7 | N |
| 3 | O53G7 | CMY-2 | N |
| 4 | O60J4 | OXA-48 | N |
| 5 | O61I8 | OXA-48 + VIM-1 | N |
| 6 | 230C9 | OXA-48 | N |
| 7 | 230C10 | OXA-48 | N |
| 8 | 232E1- | OXA-48+ CTX-M-15 | P |
| 9 | 232F7 | OXA-48 | N |
| 10 | 233F2 | VIM-1 | N |
| 11 | 234C3 | VIM-1 | N |
| 12 | 235E9- | DHA-1 | N |
| 13 | 237F6 | OXA-48 + VIM-1+ CTX-M-15 | P |
| 14 | 243J9 | NDM-1 | N |
| 15 | B5R10 | NDM-1 | N |
| 16 | 34F& | NDM-1+ CTX-M-15 | P |
| 17 | O50H3 | VIM-1+ CTX-M-15 | P |
| 18 | 10C8 | CMY-2 | N |
| 19 | 2011-5 | TEM-1 | N |
| 20 | 2011-48 | TEM-1 | N |
| 21 | 2011-88 | TEM-1 | N |

27 P, positive result; N, negative result

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29 Table S3: Retrospective evaluation of NG-Test MULTI on *Kluyvera* spp isolates
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| Isolate # | Species | Identifier | Main acquired β - lactamase content | NG-Test CTX Multi |
|-----------|------------------------|------------|--|-------------------|
| 1 | <i>K. cryocrescens</i> | CIP7952 | None | P* |
| 2 | <i>K. ascorbata</i> | KJ8 | PER-2 | N |
| 3 | <i>K. ascorbata</i> | KJ68 | PER-2 | p* |
| 4 | <i>K. ascorbata</i> | CIP8295 | None | p* |
| 5 | <i>K. ascorbata</i> | CIP7953 | None | p* |
| 6 | <i>K. cryocrescens</i> | CIP8296 | None | p* |
| 7 | <i>K. cryocrescens</i> | CIP7954 | None | p* |
| 8 | <i>K. ascorbata</i> | Bud | None | p* |
| 9 | <i>K. ascorbata</i> | FL-1 | None | N |
| 10 | <i>K. ascorbata</i> | FL-2 | None | p* |
| 12 | <i>K. cochlae</i> | S3/1 49T | None | N |
| 13 | <i>K. cochlae</i> | S3/1 913 | None | N |
| 14 | <i>K. cochlae</i> | S3/1 859 | None | N |
| 15 | <i>Kluyvera</i> | spp1 | None | N |
| 11 | <i>K. georgiana</i> | O12H4 | None | N |
| 16 | <i>K. ascorbata</i> | O23C8 | None | P |
| 17 | <i>K. ascorbata</i> | O38I1 | None | p* |
| 18 | <i>K. ascorbata</i> | 18-276 | None | N |
| 19 | <i>K. ascorbata</i> | 20-142 | None | N |
| 20 | <i>K. ascorbata</i> | 20-141 | None | N |
| 21 | <i>K. ascorbata</i> | 20-147 | None | N |
| 22 | <i>K. ascorbata</i> | 20-10 | None | N |
| 23 | <i>K. ascorbata</i> | 20-9 | None | N |
| 24 | <i>K. ascorbata</i> | 20-46 | None | N |
| 25 | <i>K. ascorbata</i> | 20-58 | None | N |
| 26 | <i>K. ascorbata</i> | 20-60 | None | N |
| 27 | <i>K. ascorbata</i> | 20-69 | None | N |
| 28 | <i>K. ascorbata</i> | 20-71 | None | N |

31 **P**, positive result; p*, weak positive result; N, negative result

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