

### Supplementary file – 3

**Table S3.** Antimicrobial resistance and virulence profiles of the isolates under study.

| ISOLATE<br>(No) | LOCATION | SPECIES ID                  | RESISTANCE PROFILE |  | MAR INDEX | VIRULENCE PROFILE |       |        |     |     | V. INDEX |        |
|-----------------|----------|-----------------------------|--------------------|--|-----------|-------------------|-------|--------|-----|-----|----------|--------|
|                 |          |                             | I                  | R  |           | LIP               | Dnase | BF (h) | GEL | LEC | PT       |        |
| 1a              | BA       | <i>Morganella morganii</i>  | AMC 30*            | CTX 30, CPT 30, AMP 10*, CN 10, DO 30*, ENR 5                | 0.57      | -                 | +     | 48     | -   | -   | -        | γ 0.29 |
| 5a              | BA       | <i>E. coli</i>              | CTX 30, CPT 30     | AMP 10, DO 30  | 0.18      | +                 | +     | -      | -   | -   | -        | α 0.43 |
| 5b              | BA       | <i>E. coli</i>              | CPT 30             | CTX 30, AMP 10, DO 30  | 0.27      | +                 | -     | 48     | -   | -   | -        | α 0.43 |
| 5c              | BA       | <i>E. coli</i>              | CPT 30             | CTX 30, AMP 10, DO 30, AMC 30                                | 0.36      | +                 | -     | 48     | -   | -   | -        | α 0.43 |
| 5d              | BA       | <i>E. coli</i>              | -                  | CTX 30, CPT 30, AMP 10, DO 30                                | 0.36      | -                 | +     | -      | -   | -   | -        | α 0.29 |
| 10a             | BA       | <i>Citrobacter freundii</i> | -                  | CTX 30, CPT 30, AMP 10*, CN 10, CIP 5, DO 30, ENR 5, AMC 30* | 0.67      | -                 | +     | 24     | -   | -   | -        | α 0.43 |
| 10b             | BA       | <i>Citrobacter freundii</i> | DO 30              | CTX 30, CPT 30, AMP 10*, CN 10, CIP 5, ENR 5, AMC 30*        | 0.56      | -                 | +     | 24     | -   | -   | -        | α 0.43 |
| 10d             | BA       | <i>Citrobacter freundii</i> | DO 30              | CTX 30, CPT 30, AMP 10*, CN 10, CIP 5, ENR 5, AMC 30*        | 0.56      | +                 | +     | 24     | -   | -   | -        | α 0.57 |
| 13a             | BA       | <i>E. coli</i>              | CIP 5, ENR 5       | CTX 30, CPT 30, AMP 10, CN 10, DO 30, AMC 30                 | 0.55      | +                 | -     | -      | -   | -   | -        | β 0.29 |
| 17a             | BA       | <i>E. coli</i>              | -                  | CTX 30, CPT 30, AMP 10, CIP 5, ENR 5, AMC 30                 | 0.55      | +                 | -     | -      | -   | -   | -        | α 0.29 |
| 24a             | BA       | <i>E. coli</i>              | CIP 5              | CTX 30, CPT 30, AMP 10, CN 10, DO 30, ENR 5, AMC 30          | 0.64      | +                 | -     | -      | -   | -   | -        | α 0.29 |
| 26a             | BA       | <i>Proteus mirabilis</i>    | -                  | CTX 30, CPT 30, AMP 10, CN 10, F 100*, DO 30*                | 0.44      | +                 | +     | -      | +   | -   | +        | γ 0.57 |
| 26b             | BA       | <i>Proteus mirabilis</i>    | -                  | CTX 30, CPT 30, AMP 10, CN 10, F 100*, DO 30*                | 0.44      | +                 | +     | -      | +   | -   | +        | γ 0.57 |

\*Intrinsic resistance; positive (+); negative (-); hours (h); cefotaxime (CTX); ceftaroline (CPT); ampicillin (AMP); amoxicillin/clavulanate (AMC); gentamicin (CN); doxycycline (DO); enrofloxacin (ENR); ciprofloxacin (CIP); nitrofurantoin (F); meropenem (MEM); intermediate (I); resistant (R); multiple antimicrobial resistance index (MAR INDEX); virulence index (V. INDEX) lipase (LIP); Deoxyribonuclease (DNase); biofilm (BF); gelatinase (GEL); lecithinase (LEC); protease (PT); haemolysins (HEM); alpha (α); gamma (γ); beta (β).

Table S3. cont.

| ISOLATE<br>(No) | LOCATION | SPECIES ID                   | RESISTANCE PROFILE |   | MAR INDEX |       | VIRULENCE PROFILE |     |     |    | V. INDEX |          |      |
|-----------------|----------|------------------------------|--------------------|---|-----------|-------|-------------------|-----|-----|----|----------|----------|------|
|                 |          |                              | I                  | R   | LIP       | Dnase | BF (h)            | GEL | LEC | PT | HEM      |          |      |
| 27a             | BA       | <i>E. coli</i>               | ENR 5, AMC 30      | CTX 30, CPT 30, AMP 10  | 0.27      | +     | -                 | 48  | -   | -  | +        | $\alpha$ | 0.57 |
| 28a             | BA       | <i>E. coli</i>               | AMC 30             | CTX 30, CPT 30, AMP 10,<br>DO 30                                  | 0.36      | +     | -                 | -   | -   | -  | +        | $\gamma$ | 0.29 |
| 31b             | BA       | <i>Escherichia vulneris</i>  | ENR 5              | CTX 30, CPT 30, AMP 10  | 0.27      | +     | -                 | -   | -   | -  | +        | $\gamma$ | 0.29 |
| 33a.2.          | BA       | <i>E. coli</i>               | ENR 5              | CTX 30, CPT 30, AMP 10  | 0.27      | +     | -                 | -   | -   | -  | +        | $\gamma$ | 0.29 |
| 33b             | BA       | <i>E. coli</i>               | ENR 5              | CTX 30, CPT 30, AMP 10  | 0.27      | +     | -                 | -   | -   | -  | +        | $\gamma$ | 0.29 |
| 37a             | BA       | <i>Klebsiella pneumoniae</i> | CIP 5              | CTX 30, CPT 30, AMP 10*,<br>CN 10, F 100, DO 30, ENR 5,<br>AMC 30 | 0.70      | +     | +                 | -   | +   | -  | -        | $\beta$  | 0.57 |
| 38a             | BA       | <i>E. coli</i>               | -                  | CTX 30, CPT 30, AMP 10,<br>ENR 5                                  | 0.36      | +     | -                 | -   | -   | -  | +        | $\gamma$ | 0.29 |
| 39c             | BA       | <i>E. coli</i>               | AMC 30             | CTX 30, CPT 30, AMP 10,<br>CN 10, DO 30, ENR 5                    | 0.55      | +     | -                 | 48  | -   | -  | +        | $\alpha$ | 0.57 |
| 39d             | BA       | <i>Enterobacter cloacae</i>  | CIP 5              | CTX 30, CPT 30, AMP 10*,<br>ENR 5, AMC 30*                        | 0.33      | +     | -                 | 48  | -   | -  | -        | $\gamma$ | 0.29 |
| 44a             | BA       | <i>E. coli</i>               | AMC 30             | CTX 30, CPT 30, AMP 10  | 0.27      | +     | -                 | 24  | +   | -  | -        | $\alpha$ | 0.57 |
| 46a             | BA       | <i>E. coli</i>               | CIP 5              | CTX 30, CPT 30, AMP 10,<br>DO 30, ENR 5                           | 0.45      | +     | -                 | -   | -   | -  | -        | $\alpha$ | 0.29 |
| 46c             | BA       | <i>Escherichia vulneris</i>  | ENR 5              | CTX 30, CPT 30, AMP 10  | 0.27      | +     | -                 | -   | -   | -  | -        | $\alpha$ | 0.29 |
| 48a             | BA       | <i>E. coli</i>               | CIP 5              | CTX 30, CPT 30, AMP 10,<br>ENR 5                                  | 0.36      | +     | -                 | 24  | -   | -  | -        | $\alpha$ | 0.43 |
| 49a             | BA       | <i>E. coli</i>               | CIP 5, AMC 30      | CTX 30, CPT 30, AMP 10,<br>ENR 5                                  | 0.36      | +     | -                 | 24  | +   | -  | -        | $\gamma$ | 0.43 |
| 59a             | N        | <i>E. coli</i>               | DO 30              | CTX 30, CPT 30, AMP 10,<br>CIP 5, ENR 5                           | 0.45      | +     | -                 | -   | -   | -  | -        | $\alpha$ | 0.29 |
| 66b.1.          | N        | <i>Klebsiella pneumoniae</i> | CIP 5              | CTX 30, CPT 30, AMP 10*,<br>CN 10, F 100, ENR 5, AMC<br>30        | 0.60      | +     | -                 | 24  | +   | -  | -        | $\alpha$ | 0.57 |
| 66b.2.          | N        | <i>Klebsiella pneumoniae</i> | ENR 5              | CTX 30, CPT 30, AMP 10*,<br>CN 10, F 100, CIP 5, AMC 30           | 0.60      | +     | -                 | 24  | -   | -  | -        | $\alpha$ | 0.43 |

\*Intrinsic resistance; positive (+); negative (-); hours (h); cefotaxime (CTX); ceftaroline (CPT); ampicillin (AMP); amoxicillin/clavulanate (AMC); gentamicin (CN); doxycycline (DO); enrofloxacin (ENR); ciprofloxacin (CIP); nitrofurantoin (F); meropenem (MEM); intermediate (I); resistant (R); multiple antimicrobial resistance index (MAR INDEX); virulence index (V. INDEX) – lipase (LIP); Deoxyribonuclease (Dnase); biofilm (BF); gelatinase (GEL); lecithinase (LEC); protease (PT); haemolysins (HEM); alpha ( $\alpha$ ); gamma ( $\gamma$ ); beta ( $\beta$ ).

Table S3. cont.

| ISOLATE<br>(No) | LOCATION | SPECIES ID                   | RESISTANCE PROFILE  |   | MAR INDEX |       | VIRULENCE PROFILE |     |     |    | V. INDEX |        |
|-----------------|----------|------------------------------|---------------------|---|-----------|-------|-------------------|-----|-----|----|----------|--------|
|                 |          |                              | I                   | R   | LIP       | Dnase | BF (h)            | GEL | LEC | PT | HEM      |        |
| 66c.1.          | N        | <i>Klebsiella pneumoniae</i> | -                   | CTX 30, CPT 30, AMP 10*, CN 10, CIP 5, DO 30, ENR 5, AMC 30 | 0.70      | +     | -                 | 24  | +   | -  | -        | α 0.57 |
| 68b.1.          | N        | <i>E. coli</i>               | ENR 5, AMC 30       | CTX 30, CPT 30, AMP 10, CN 10, CIP 5, DO 30                 | 0.55      | +     | +                 | 24  | -   | -  | -        | α 0.57 |
| 75a             | N        | <i>Proteus sp.</i>           | DO 30               | CTX 30, CPT 30, AMP 10, F 100                               | 0.33      | +     | -                 | 24  | +   | -  | +        | α 0.71 |
| 83a             | N        | <i>E. coli</i>               | -                   | CTX 30, CPT 30, AMP 10, CIP 5, ENR 5                        | 0.45      | +     | +                 | 24  | -   | -  | -        | α 0.57 |
| 83c             | N        | <i>E. coli</i>               | -                   | CTX 30, CPT 30, AMP 10, CIP 5, ENR 5                        | 0.45      | +     | +                 | 24  | -   | -  | -        | α 0.57 |
| 86a             | N        | <i>E. coli</i>               | ENR 5               | CTX 30, CPT 30, AMP 10, DO 30, AMC 30                       | 0.45      | +     | +                 | 24  | -   | -  | -        | β 0.57 |
| 86b             | N        | <i>E. coli</i>               | ENR 5               | CTX 30, CPT 30, AMP 10                                      | 0.27      | +     | -                 | -   | -   | -  | -        | α 0.29 |
| 88a             | N        | <i>E. coli</i>               | CN 10, CIP 5, ENR 5 | CTX 30, CPT 30, AMP 10                                      | 0.27      | +     | +                 | 24  | -   | -  | -        | α 0.57 |
| 89a.1.          | N        | <i>E. coli</i>               | ENR 5, AMC 30       | CTX 30, CPT 30, AMP 10, DO 30                               | 0.36      | +     | +                 | 72  | -   | -  | -        | α 0.57 |
| 91a             | N        | <i>E. coli</i>               | -                   | CTX 30, CPT 30, AMP 10, CIP 5, DO 30, ENR 5, AMC 30         | 0.64      | +     | +                 | -   | -   | -  | -        | α 0.43 |
| 91b.1.          | N        | <i>E. coli</i>               | -                   | CTX 30, CPT 30, AMP 10, CIP 5, DO 30, ENR 5, AMC 30         | 0.64      | +     | +                 | 48  | -   | -  | -        | α 0.57 |
| 94a.1.          | N        | <i>Morganella morganii</i>   | -                   | CTX 30, CPT 30, AMP 10*, CN 10, DO 30*, ENR 5               | 0.57      | +     | -                 | 24  | +   | -  | -        | β 0.57 |
| 94a.3.          | N        | <i>E. coli</i>               | -                   | CTX 30, CPT 30, AMP 10, CN 10, DO 30, ENR 5                 | 0.55      | +     | -                 | 24  | +   | -  | -        | β 0.57 |

\*Intrinsic resistance; positive (+); negative (-); hours (h); cefotaxime (CTX); ceftaroline (CPT); ampicillin (AMP); amoxicillin/clavulanate (AMC); gentamicin (CN); doxycycline (DO); enrofloxacin (ENR); ciprofloxacin (CIP); nitrofurantoin (F); meropenem (MEM); intermediate (I); resistant (R); multiple antimicrobial resistance index (MAR INDEX); virulence index (V. INDEX) lipase (LIP); Deoxyribonuclease (DNase); biofilm (BF); gelatinase (GEL); lecithinase (LEC); protease (PT); haemolysins (HEM); alpha (α); gamma (γ); beta (β).

Table S3. cont.

| ISOLATE<br>(No) | LOCATION | SPECIES ID                  | RESISTANCE PROFILE |  | MAR INDEX |       | VIRULENCE PROFILE |     |     |    |     | V. INDEX |
|-----------------|----------|-----------------------------|--------------------|--|-----------|-------|-------------------|-----|-----|----|-----|----------|
|                 |          |                             | I                  | R  | LIP       | Dnase | BF (h)            | GEL | LEC | PT | HEM |          |
| 94a.4.          | N        | <i>Morganella morganii</i>  | -                  | CTX 30, CPT 30, AMP 10*,<br>CN 10, DO 30*, ENR 5 | 0.57      | +     | -                 | 24  | -   | -  | -   | β 0.43   |
| 94a.5.          | N        | <i>Morganella morganii</i>  | -                  | CTX 30, CPT 30, AMP 10*,<br>CN 10, DO 30*, ENR 5 | 0.57      | +     | -                 | 24  | +   | -  | -   | β 0.57   |
| 95a.1.          | N        | <i>E. coli</i>              | AMC 30             | CTX 30, CPT 30, AMP 10,<br>CIP 5, DO 30, ENR 5   | 0.55      | +     | -                 | -   | -   | -  | -   | α 0.29   |
| 95b             | N        | <i>Escherichia vulneris</i> | ENR 5              | CTX 30, CPT 30, AMP 10                           | 0.27      | +     | -                 | -   | -   | -  | -   | α 0.29   |
| 95c.1.          | N        | <i>Proteus mirabilis</i>    | -                  | CTX 30, CPT 30, AMP 10, F<br>100*, DO 30*        | 0.33      | +     | +                 | -   | +   | -  | +   | γ 0.57   |

\*Intrinsic resistance; positive (+); negative (-); hours (h); cefotaxime (CTX); ceftaroline (CPT); ampicillin (AMP); amoxicillin/clavulanate (AMC); gentamicin (CN); doxycycline (DO); enrofloxacin (ENR); ciprofloxacin (CIP); nitrofurantoin (F); meropenem (MEM); intermediate (I); resistant (R); multiple antimicrobial resistance index (MAR INDEX); virulence index (V. INDEX) lipase (LIP); Deoxyribonuclease (Dnase); biofilm (BF); gelatinase (GEL); lecithinase (LEC); protease (PT); haemolysins (HEM); alpha (α); gamma (γ); beta (β).

