

Recap of characteristics of the *E. coli* strains as found or referred to in Grad et al, 2012.

Relevant for Exercise 2

Species

All strains are of the species *Escherichia coli*.

MLST

The strains are all ST678 (supplementary material p. 1, column 2).

Plasmids

The strains contain two plasmids (p. 3065, 1st column):

- pAA, characteristic of enteroaggregative *E. coli*
- A plasmid encoding an extended-spectrum β -lactamase (*bla*CTX-M-15)

Antibiotic Susceptibility (supplementary material p. 1, column 2):

Except for the historical Ec04-8351 and Ec09-7901 strains, all strains were resistant to:

- Ampicillin
- Third-generation cephalosporins (ESBL production)
- Streptomycin
- Nalidixic acid
- Tetracyclin
- Cotrimoxazole

The strains were susceptible to:

- Carbapenems
- Ciprofloxacin
- Chloramphenicol
- Kanamycin
- Gentamicin

The historical Ec04-8351 and Ec09-7901 strains were only resistant to nalidixic acid.

Relevant for Exercise 3

Serotype

The strains are of the serotype O104:H4 (p. 3065, 1st column, and supplementary material p. 1, column 1).

Virulence Factors (supplementary material p. 1, column 2):

The strains were positive for:

- *stx2* (*stx2a* variant) (encodes shiga toxin, note that *vtx* is another name for *stx*, just as verocytotoxin is another name for shiga toxin)
- *aggR* (regulates the expression of aggregative adherence fimbriae)
- *pic* (encodes protein involved in intestinal colonization)

The strains were negative for:

- *stx1* (shiga toxin)
- *eae* (encodes intimin)
- *hlyA* (encodes haemolysin A)
- *astA* (encoding a heat-stable enterotoxin 1)

Relevant for Exercise 4

Fig. 1 (p. 3067).