Table S2 The associations between virulence genes and resistance phenotypes among *E. coli* (N=500)

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| Virulence gene (n) | Associations of gene (OR and 95% confidence interval) a |
| No. SF | No. SPT | No. MEQ | No. AMP | No. GEM | No. TET | No. FFC | No. CAZ | No. MEM | No. PB | No. ENR |
| *sfa* (27) | 24 140.15(39.70-494.73) | 09 8.76(3.60-21.31) | 15 21.90(9.33- 51.35) | 10 10.31(4.31-4.65) | – | 13 16.27(6.96-38.01) | 20 50.05(19.47-128.66) | 05 3.98(1.40-11.33) | 05 3.98(1.40-11.33) | – | 14 18.87(8.07-44.08) |
| *cnf1* (12) | 10 203.33(40.13-1030.15) | 06 40.67(11.440-144.56) | 09 122(29.29-508.09) | 06 40.67(11.440-144.56) | 01 3.70(0.44-31.0) | 03 13.56(3.26-56.46) | 08 81.33(21.51-307.48) | 03 13.56(3.26-56.46) | 05 29.05(8.06-104.75) | – | 04 20.33(5.38-76.87) |
| *papC* (19) | 16 135.02(36.23-503.20) | 07 14.77(5.23-41.73) | 08 18.41(6.64-51.04) | 07 14.77(5.23-41.73) | 03 4.75(1.27-17.70) | 09 22.78(8.29-62.59) | 13 54.85(18.81-159.99) | 04 6.75(2.05-22.29) | 05 9.04(2.95-27.69) | 02 2.98(0.64-13.81) | 07 14.77(5.27-41.73) |
| *hlyA* (33) | 26 52.56(21.24-130.09) | 08 4.53(1.90-10.82) | 14 10.43(4.80-22.64) | 08 4.53(1.90-10.82) | – | 14 10.43(4.80-22.64) | 19 19.21(8.85-41.70) | 07 3.81(1.54-9.43) | 09 5.31(2.28-12.34) | – | 08 4.53(1.90-10.82) |
| *sepA* (31) | 26 78.67(28.26-219.0) | 18 20.95(9.41-46.70) | 18 20.95(9.41-46.70) | 22 37.0(15.71-87.09) | 10 7.20(3.12-16.62) | 21 31.77(13.77-73.31) | 25 63.04(24.09-165.0) | 09 6.19(2.63-14.58) | 08 5.26(2.18-12.72) | – | 17 18.37(8.29-40.69) |
| *etrA* (401) | 363 2.36(1.58-3.52) | 160 0.16(0.12-0.22) | 194 0.23(0.17-0.31) | 175 0.19(0.14-0.26) | 84 0.07(0.05-0.09) | 212 0.28(0.21-0.37) | 275 0.54(0.40-0.73) | 77 0.06(0.04-0.08) | 90 0.07(0.05-0.10) | 30 0.02(0.01-0.03) | 135 0.13(0.09-0.17) |
| *aer* (140) | 124 19.93(11.43-34.75) | – | 69 2.50(1.70-3.67) | 63 2.10(1.43-3.10) | – | 73 0.20(1.91-4.12) | 82 3.64(2.46-5.36) | 25 0.56(0.35-0.90) | – | 11 0.22(0.12-0.49) | – |
| *faeG* (23) | 21 217.76(48.13-985.30) | 11 19.01(7.58-47.65) | 15 38.89(14.97-101.02) | 07 9.07(3.40-24.22) | 06 7.32(2.64-20.31) | 11 19.01(7.58-47.65) | 12 22.63(9.03-56.71) | 05 5.76(1.97-16.89) | 05 5.76(1.97-16.89) | – | 09 13.33(5.29-34.00) |
| *fasA* (156) | 143 24.26(13.33-44.13) | – | 88 2.85(1.97-4.13) | 62 1.45(1.00-2.11) | 32 0.57(0.37-0.88) | 85 2.64(1.83-3.81) | 107 4.82(3.27-7.09) | 33 0.59(0.39-0.91) | 33 0.59(0.39-0.91) | 9 0.14(0.07-0.27) | 63 1.49(1.03-2.17) |
| *eltA* (14) | 14 877.00(49.86-15426.30) | 09 56.31(16.70-190.00) | 08 41.71(12.76-136.40) | 06 23.46(7.18-76.72) | 02 5.21(1.07-25.54) | 11 114.71(28.77-457.38) | 10 78.21(21.84-280.13) | 04 12.51(3.49-44.82) | 06 23.46(7.18-76.72) | 02 5.21(1.07-25.54) | 05 17.38(5.15-58.63) |
| *estA* (26) | 24 218.77(49.03-976.09) | 22 100.27(32.19-312.31) | 19 49.48(19.09-128.24) | 21 76.57(26.74-219.28) | 12 15.63(6.57-37.16) | 20 60.77(22.49-164.21) | 22 100.27(32.19-312.31) | 11 13.37(5.59-32.00) | 09 9.66(3.93-23.72) | 06 5.47(2.02-14.78) | 16 29.17(12.06-70.55) |
| *eaeA* (198) | 177 12.86(7.90-20.91) | – | – | – | 32 0.29(0.19-0.45) | 108 1.83(1.31-2.55) | 127 2.73(1.94-3.84) | 29 0.26(0.17-0.40) | 42 0.41(0.28-0.60) | 8 0.06(0.03-0.13) | 60 0.66(0.47-0.94) |
| *exhA* (340) | 308 4.53(3.01-6.82) | 117 0.15(0.18-0.33) | 148 0.36(0.27-0.48) | 122 0.26(0.20-0.35) | 58 0.10(0.07-0.13) | 177 0.51(0.39-0.68) | – | 44 0.07(0.48-0.10) | 63 0.11(0.08-0.15) | 17 0.03(0.02-0.04) | 90 0.17(0.13-0.23) |
| *stx1* (37) | 32 80.09(29.46-217.75) | 10 4.64(2.08-10.31) | 18 11.90(5.73-24.51) | 13 6.78(3.19-14.40) | 08 3.45(1.47-8.09) | 15 8.53(4.08-17.83) | 22 18.35(8.79-38.34) | 06 2.42(0.95-6.18) | 08 3.45(1.47-8.09) | – | 12 6.01(2.80-12.91) |
| *stx2* (110) | 96 24.31(13.35-44.27) | – | 48 2.75(1.78-4.23) | 35 1.66(1.05-2.60) | 10 0.36(0.18-0.70) | 55 3.55(2.31-5.45) | 67 5.52(3.37-8.56) | 10 0.36(0.18-0.70) | 16 0.60(0.34-1.07) | 03 0.10(0.30-0.32) | – |

–, indicates no significant associations (*P* ≥ 0.05).

a, Odds ratio (OR) for associations between virulence genes and all antimicrobials (95% confidence interval in parenthesis).