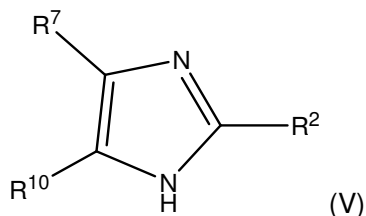


Claims

1. A compound, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, having the general formula (V):

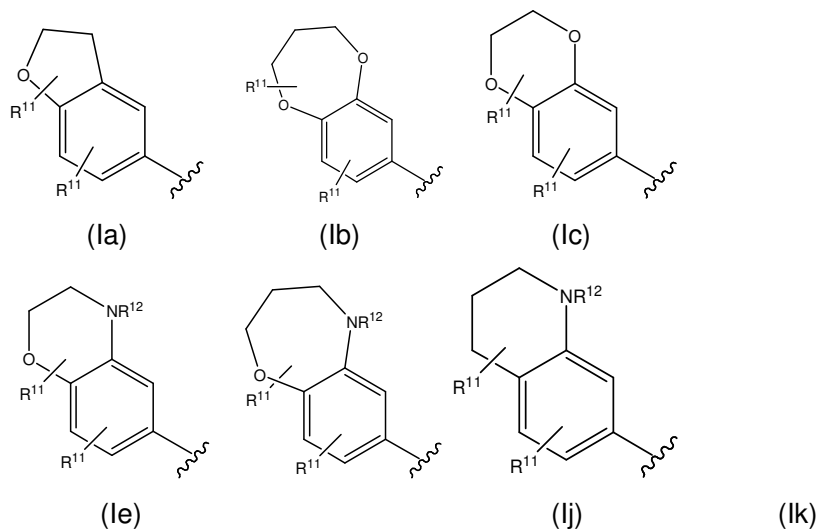


wherein

R^2 is NH_2 or methyl ($-\text{CH}_3$);

R^7 is selected from the group consisting of phenyl, wherein the phenyl group is substituted with one or more substituents selected from the group consisting of NH_2 , NHMe , CONH_2 and $\text{OCH}_2\text{fluorophenyl}$;

or R^7 is a fused bicyclic system selected from the group consisting of:



wherein each R^{11} is independently selected from hydrogen and halogen; and R^{12} is selected from hydrogen, $\text{C}_{1-4}\text{alkyl}$, $\text{C}_{3-7}\text{cycloalkyl}$, $\text{C}_{4-7}\text{heterocyclyl}$, COR^{13} , SO_2R^{13} , $\text{C}_{1-4}\text{alkyl-CO}_2\text{R}^{14}$, $\text{C}_{1-4}\text{alkyl-OR}^{14}$, $\text{C}_{1-4}\text{alkyl-NR}^{14}\text{R}^{15}$, $\text{C}_{1-4}\text{alkyl-C}_{3-7}\text{cycloalkyl}$, $\text{COC}_{1-4}\text{alkyl-NR}^{14}\text{R}^{15}$, an amino acid, and a quaternary ammonium cation ($\text{NR}^{16}_4^+$);

R^{13} is selected from $\text{C}_{1-4}\text{alkyl}$, $\text{C}_{3-7}\text{cycloalkyl}$, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6- membered heteroaryl being optionally

substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

R¹⁴ and R¹⁵ are independently selected from hydrogen, C₁₋₄alkyl, C₁₋₄alkyl-hydroxyl, C₃₋₇cycloalkyl, phenyl, monocyclic 5- or 6- membered heteroaryl, and SO₂R¹³, the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

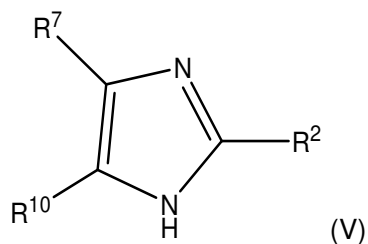
R¹⁶ groups are independently selected from C₁₋₄alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

R¹⁰ is selected from the group consisting of phenyl and pyridyl, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C₁₋₄alkyl, O (oxo), S(sulfinyl), CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation, and the pyridyl is optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₄alkyl, O (oxo), S(sulfinyl), C₁₋₄alkoxy, CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH¹⁶₄⁺); and

R⁸ is selected from the group consisting of 3- to 5- membered cycloalkyl and CH₂R⁹;

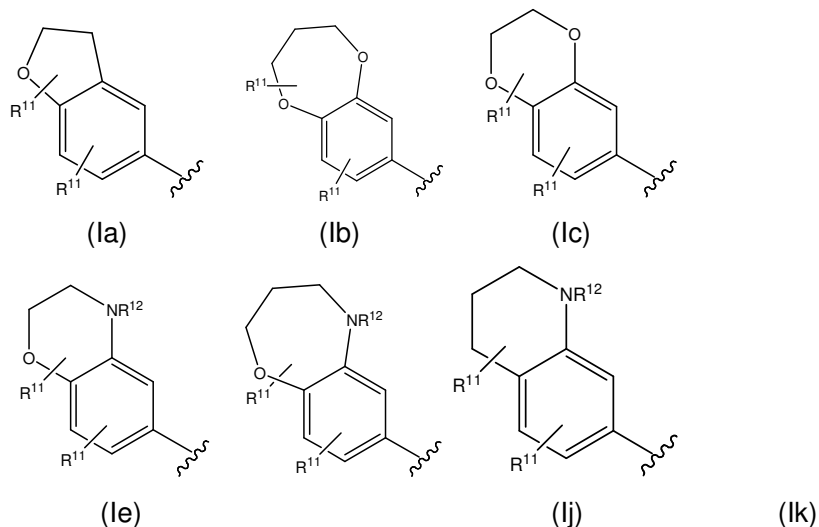
R⁹ is selected from the group consisting of phenyl, monocyclic 5- or 6-membered heteroaryl and monocyclic C₃₋₇cycloalkyl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³.

2. A compound according to claim 1, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, wherein R² is NH₂.
3. A compound according to claim 1 or 2, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, wherein each R¹¹ is independently selected from hydrogen and F, preferably each R¹¹ is hydrogen.
4. A compound according to any of claims 1 to 3, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, having the general formula (V):



wherein R^2 is NH_2 ;

R^7 is a fused bicyclic system selected from the group consisting of:



wherein each R^{11} is hydrogen and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NR^{16}_4^+$);

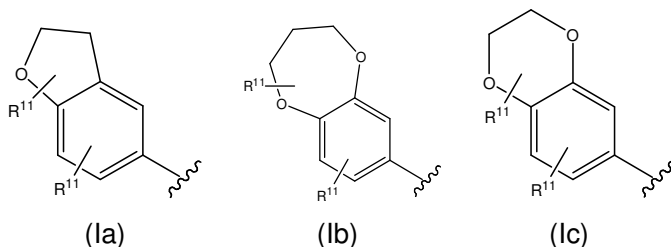
R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

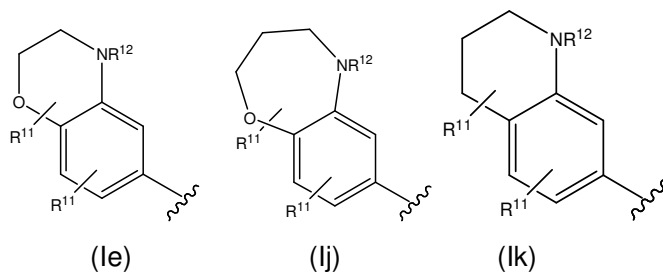
R^{14} and R^{15} are independently selected from hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-hydroxyl, C_{3-7} cycloalkyl, phenyl, monocyclic 5- or 6- membered heteroaryl, and SO_2R^{13} , the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{16} groups are independently selected from C_{1-4} alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ; and

R^{10} is selected from the group consisting of phenyl and pyridyl, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C_{1-4} alkyl, O (oxo), S(sulfinyl), $CONR^3R^4$, NR^3R^4 , OR^8 , hydroxyl, OCF_3 , $-CF_3$, R^8 , C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation, and the pyridyl is optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-4} alkyl, O (oxo), S(sulfinyl), C_{1-4} alkoxy, $CONR^3R^4$, NR^3R^4 , OR^8 , hydroxyl, OCF_3 , $-CF_3$, R^8 , C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NH^{16}_4^+$).

5. A compound according to any of claims 1 to 4, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, wherein R^{10} is selected from the group consisting of phenyl optionally substituted with one or more substituents selected from the group consisting of NH_2 , $NHMe$, C_{1-2} alkyl, $CONH_2$, $CONHMe$, $CONMe_2$, OCH_2C_3 cycloalkyl, OC_3 cycloalkyl, OCF_3 and hydroxyl, and pyridyl optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$, C_{1-2} alkyl, C_{1-2} alkoxy, $CONH_2$, $CONHMe$, $CONMe_2$, OCH_2C_3 cycloalkyl, OC_3 cycloalkyl, OCF_3 and hydroxyl; preferably the phenyl group is optionally substituted with one or more substituents selected from the group consisting of NH_2 , $NHMe$, and C_{1-2} alkyl, and the pyridyl group is optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$ and C_{1-2} alkyl.
6. A compound according to any of claims 1 to 5, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, wherein R^7 is a fused bicyclic system selected from the group consisting of:





wherein each R^{11} is hydrogen and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NR^{16}_4^+$);

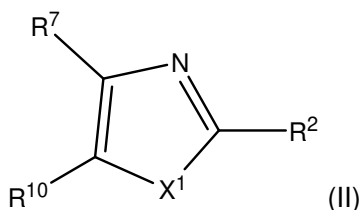
R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{14} and R^{15} are independently selected from hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-hydroxyl, C_{3-7} cycloalkyl, phenyl, monocyclic 5- or 6- membered heteroaryl, and SO_2R^{13} , the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{16} groups are independently selected from C_{1-4} alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 .

7. A compound according to any of claims 1 to 6, wherein R^{10} is a pyridyl group optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$, C_{1-2} alkyl, C_{1-2} alkoxy, $CONH_2$, $CONHMe$, $CONMe_2$, OCH_2C_3 cycloalkyl, OC_3 cycloalkyl, OCF_3 and hydroxyl; preferably the pyridyl group is optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$ and C_{1-2} alkyl.
8. A pharmaceutical composition comprising a compound according to any preceding claim, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, and a pharmaceutically acceptable carrier.

9. A compound or pharmaceutical composition according to any preceding claim, for use in therapy or prophylaxis of an infection with, or disease caused by, *Enterobacteriaceae*.
10. A compound or pharmaceutical composition according to any of claims 1-8, for use in a method of treatment of an infection with, or a disease caused by, *Enterobacteriaceae*.
11. Use of a compound or pharmaceutical composition according to any of claims 1 to 8, in the manufacture of a medicament for the treatment of an infection with, or a disease caused by, *Enterobacteriaceae*.
12. The use according to claim 11, wherein said medicament is to be administered to a subject in need thereof.
13. A compound, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, having the general formula (II):



wherein

X^1 is selected from NR^1 ;

R^1 is selected from hydrogen or C_{1-2} alkyl;

R^2 is NR^3R^4 or methyl ($-CH_3$);

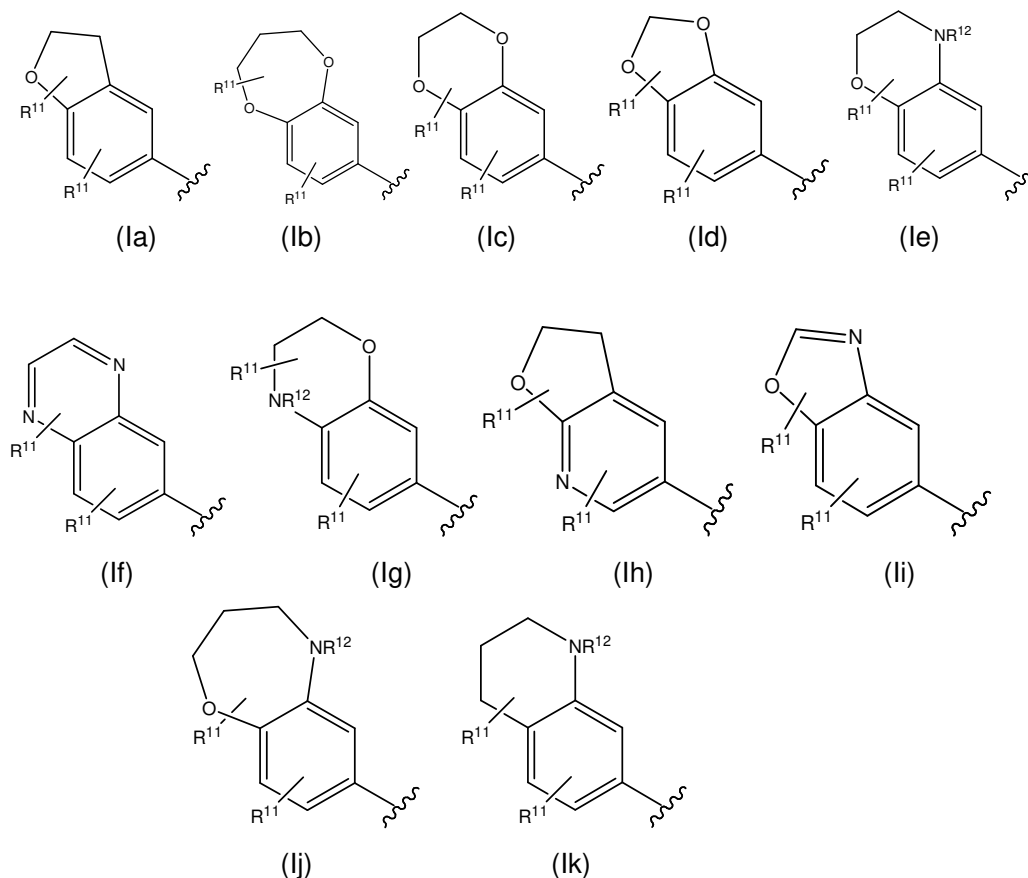
R^3 and R^4 are independently selected from the group consisting of hydrogen, C_{1-3} alkyl, COR^5 , $CONR^5R^6$, CO_2R^5 , C_{1-2} alkyl- NR^5R^6 ;

R^5 and R^6 are independently selected from the group consisting of hydrogen and C_{1-4} alkyl;

R^7 is selected from the group consisting of phenyl, monocyclic 5- to 7- membered heterocyclyl and monocyclic 5- or 6-membered heteroaryl, wherein the phenyl is substituted with one or more substituents selected from the group consisting of NR^3R^4 , $CONR^3R^4$, OR^8 , OCF_3 , OCH_2CN and hydroxyl, and the monocyclic 5- or to 7-

membered heterocyclyl and monocyclic 5- or 6-membered heteroaryl groups are optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, C_{1-2} alkoxy, NR^3R^4 , $CONR^3R^4$, OR^8 , OCF_3 , C_{1-2} alkoxy-CN and hydroxyl;

or R^7 is a fused bicyclic system selected from the group consisting of any one of (Ia) to (Ik):



wherein each R^{11} is independently selected from hydrogen, halogen, O (oxo), and C_{1-4} alkyl; and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NR^{16}_4^+$);

R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{14} and R^{15} are independently selected from hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-hydroxyl, C_{3-7} cycloalkyl, phenyl, monocyclic 5- or 6-membered heteroaryl, and SO_2R^{13} , the

phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

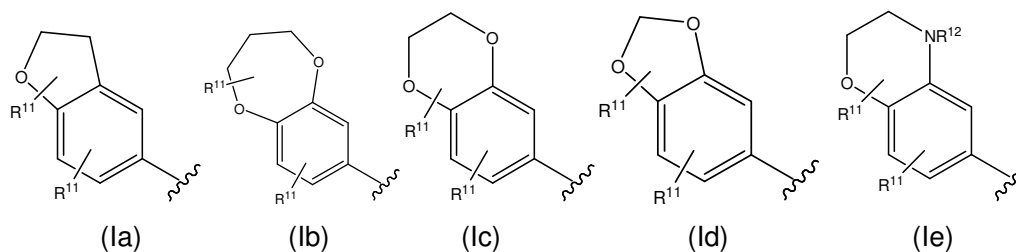
R¹⁶ groups are independently selected from C₁₋₄alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

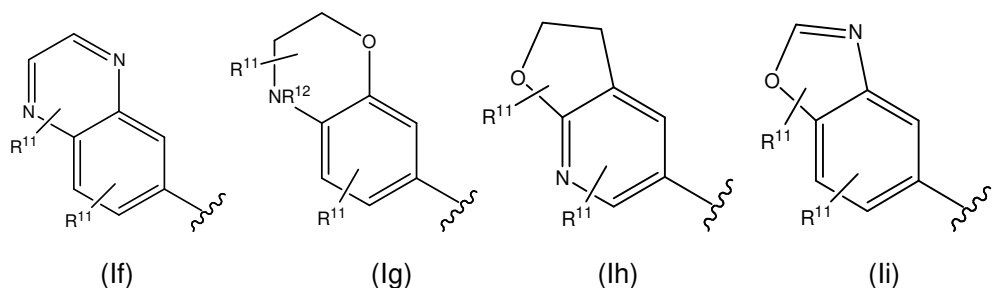
R⁸ is selected from the group consisting of 3- to 5- membered cycloalkyl and CH₂R⁹;

R⁹ is selected from the group consisting of phenyl, monocyclic 5- or 6-membered heteroaryl and monocyclic C₃₋₇cycloalkyl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

R¹⁰ is selected from the group consisting of phenyl and monocyclic 5- or 6-membered heteroaryl ring, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C₁₋₄alkyl, O (oxo), S(sulfinyl), CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH¹⁶₄⁺), and the 5- or 6-membered heteroaryl rings are optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₄alkyl, O (oxo), S(sulfinyl), C₁₋₄alkoxy, CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH¹⁶₄⁺);

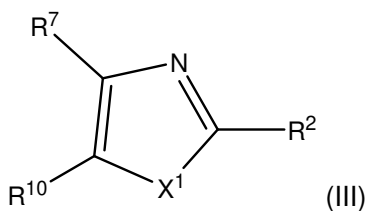
or R¹⁰ is a fused bicyclic system selected from the group consisting of any one of (Ia) to (Ii):





wherein each R^{11} is independently selected from hydrogen, halogen or C_{1-4} alkyl and R^{12} is selected from hydrogen, or C_{1-4} alkyl.

14. A compound according to claim 13, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein R^2 is NR^3R^4 .
15. A compound according to claim 13 or 14, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, having the general formula (III):



wherein

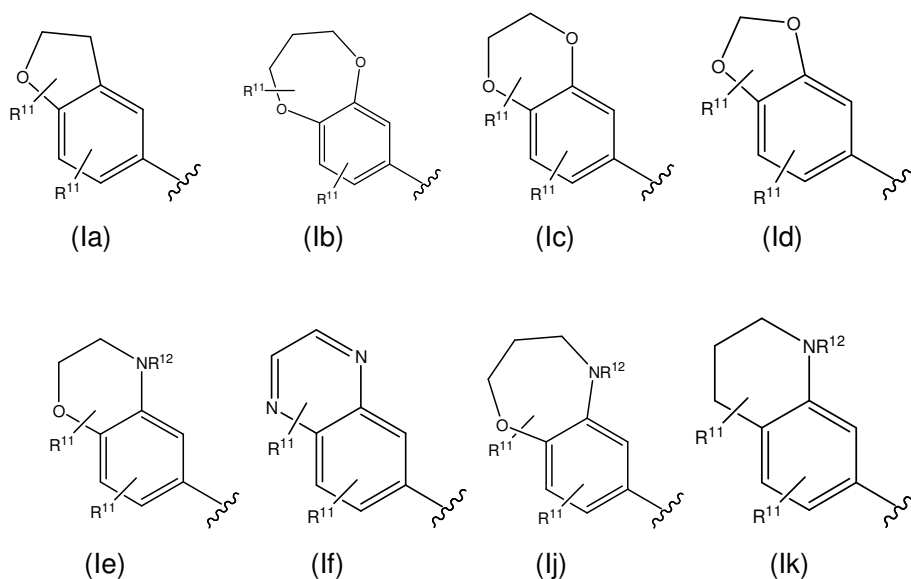
X^1 is NH;

R^2 is NHR^3 or methyl ($-CH_3$);

R^3 and R^4 are independently selected from the group consisting of hydrogen and C_{1-3} alkyl;

R^7 is selected from the group consisting of phenyl, monocyclic 6-membered nitrogen containing heterocyclyl and monocyclic 6-membered nitrogen containing heteroaryl, wherein the phenyl group is substituted with one or more substituents selected from the group consisting of NH_2 , $NHMe$, $CONR^3R^4$, OCH_2R^9 , OCF_3 , OCH_2CN , and hydroxyl, and the 6-membered heterocyclyl and 6-membered heteroaryl groups are optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$, C_{1-2} alkyl, C_{1-2} alkoxy, $CONR^3R^4$, OCH_2R^9 , OCF_3 , OCH_2CN , and hydroxyl ;

or R^7 is a fused bicyclic system selected from the group consisting of:



wherein each R^{11} is independently selected from hydrogen, halogen, O (oxo), and C_{1-4} alkyl; and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NR^{16}_4^+$);

R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

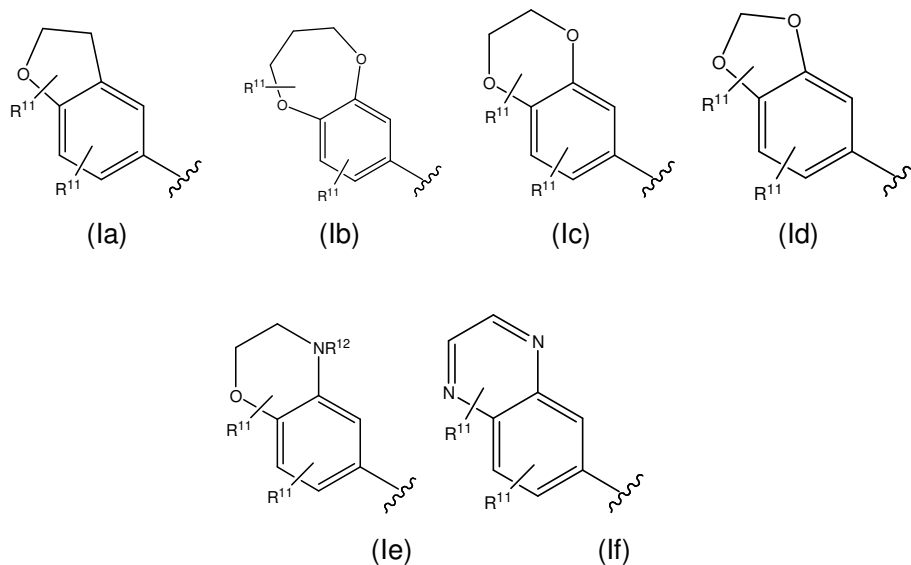
R^{14} and R^{15} are independently selected from hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-hydroxyl, C_{3-7} cycloalkyl, phenyl, monocyclic 5- or 6-membered heteroaryl, and SO_2R^{13} , the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{16} groups are independently selected from C_{1-4} alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^9 is selected from the group consisting of phenyl optionally substituted with one or more substituents selected from the group consisting of Cl, F, methyl, NH_2 , $NHMe$, and OH;

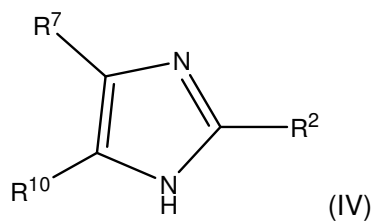
R^{10} is selected from the group consisting of phenyl and monocyclic 6-membered nitrogen containing heteroaryl, and monocyclic 6-membered nitrogen containing

heterocyclyl, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C₁₋₄alkyl, O (oxo), S(sulfinyl), CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH¹⁶₄⁺), and the 6-membered heteroaryl and 6-membered heterocyclyl groups are optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₄alkyl, O (oxo), S(sulfinyl), C₁₋₄alkoxy, CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH¹⁶₄⁺); or R¹⁰ is a fused bicyclic system selected from the group consisting of:



wherein each R¹¹ is independently selected from hydrogen, halogen and C₁₋₄alkyl and R¹² is selected from hydrogen, and C₁₋₄alkyl.

16. A compound according to any of claims 13 to 15, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, having the general formula (IV):



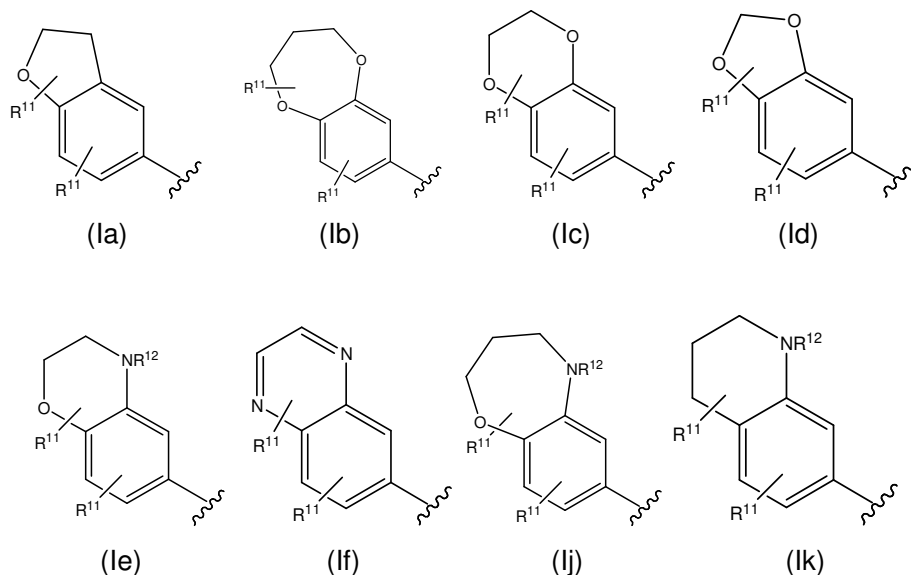
wherein

R^2 is selected from the group consisting of NHR^3 or methyl ($-\text{CH}_3$);

R^3 is selected from the group consisting of hydrogen and C_{1-3} alkyl;

R^7 is selected from the group consisting of phenyl, pyridyl, and pyrimidine, wherein the phenyl group is substituted with one or more substituents selected from the group consisting of NH_2 , NHMe , CONH_2 , CONHMe , OCH_2R^9 , OCF_3 , OCH_2CN , and hydroxyl, and the pyridyl group is optionally substituted with one or more substituents selected from the group consisting of Cl , F , NH_2 , Me , NHMe , methoxy, ethoxy, CONH_2 , CONHMe , OCH_2R^9 , OCF_3 , OCH_2CN , and hydroxyl;

or R^7 is a fused bicyclic system selected from the group consisting of:



wherein each R^{11} is independently selected from hydrogen, F , O (oxo), methyl and ethyl; and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $\text{NR}^{14}\text{R}^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $\text{NR}^{14}\text{R}^{15}$, an amino acid, and a quaternary ammonium cation ($\text{NR}^{16}_4^+$);

R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6- membered heteroaryl being optionally

substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

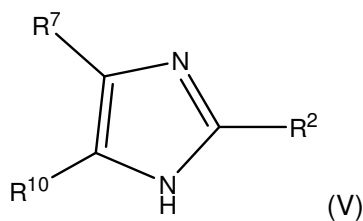
R¹⁴ and R¹⁵ are independently selected from hydrogen, C₁₋₄alkyl, C₁₋₄alkyl-hydroxyl, C₃₋₇cycloalkyl, phenyl, monocyclic 5- or 6- membered heteroaryl, and SO₂R¹³, the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

R¹⁶ groups are independently selected from C₁₋₄alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

R⁹ is selected from the group consisting of phenyl optionally substituted with F, methyl, NH₂ and OH;

R¹⁰ is selected from the group consisting of phenyl, pyridyl and pyridinone, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C₁₋₄alkyl, O (oxo), S(sulfinyl), CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH₄¹⁶⁺), and the pyridyl is optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₄alkyl, O (oxo), S(sulfinyl), C₁₋₄alkoxy, CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH₄¹⁶⁺).

17. A compound according to claim 15 or 16, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein R² is NHR³.
18. A compound according to any of claims 13 to 17, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, having the general formula (V):

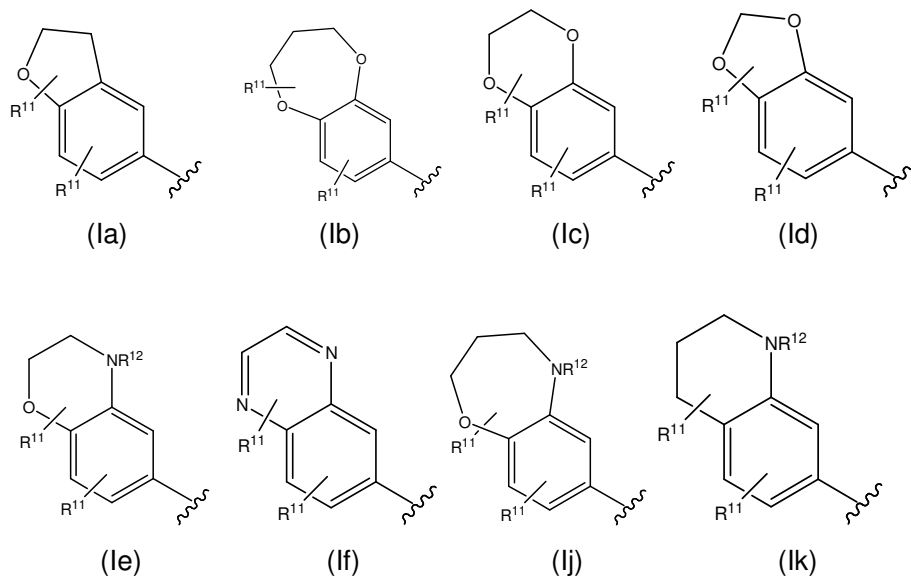


wherein

R^2 is NH_2 or methyl ($-\text{CH}_3$);

R^7 is selected from the group consisting of phenyl and pyridyl, wherein the phenyl group is substituted with one or more substituents selected from the group consisting of NH_2 , NHMe , CONH_2 , $\text{OCH}_2\text{fluorophenyl}$ and hydroxyl, and the pyridyl group is optionally substituted with one or more substituents selected from the group consisting of Cl , F , NH_2 , Me , NHMe , methoxy, CONH_2 , $\text{OCH}_2\text{fluorophenyl}$ and hydroxyl;

or R^7 is a fused bicyclic system selected from the group consisting of:



wherein each R^{11} is independently selected from hydrogen and F ; and R^{12} is selected from hydrogen, $\text{C}_{1-4}\text{alkyl}$, $\text{C}_{3-7}\text{cycloalkyl}$, $\text{C}_{4-7}\text{heterocyclyl}$, COR^{13} , SO_2R^{13} , $\text{C}_{1-4}\text{alkyl-CO}_2\text{R}^{14}$, $\text{C}_{1-4}\text{alkyl-OR}^{14}$, $\text{C}_{1-4}\text{alkyl-NR}^{14}\text{R}^{15}$, $\text{C}_{1-4}\text{alkyl-C}_{3-7}\text{cycloalkyl}$, $\text{COC}_{1-4}\text{alkyl-NR}^{14}\text{R}^{15}$, an amino acid, and a quaternary ammonium cation ($\text{NR}^{16}_4^+$);

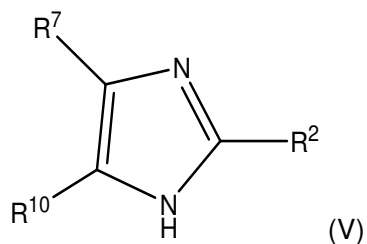
R^{13} is selected from $\text{C}_{1-4}\text{alkyl}$, $\text{C}_{3-7}\text{cycloalkyl}$, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, $\text{C}_{1-2}\text{alkyl}$, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R¹⁴ and R¹⁵ are independently selected from hydrogen, C₁₋₄alkyl, C₁₋₄alkyl-hydroxyl, C₃₋₇cycloalkyl, phenyl, monocyclic 5- or 6- membered heteroaryl, and SO₂R¹³, the phenyl or 5- or 6- membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³;

R¹⁶ groups are independently selected from C₁₋₄alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₂alkyl, O (oxo), S (sulfinyl), NR³R⁴, OR³ and SR³; and

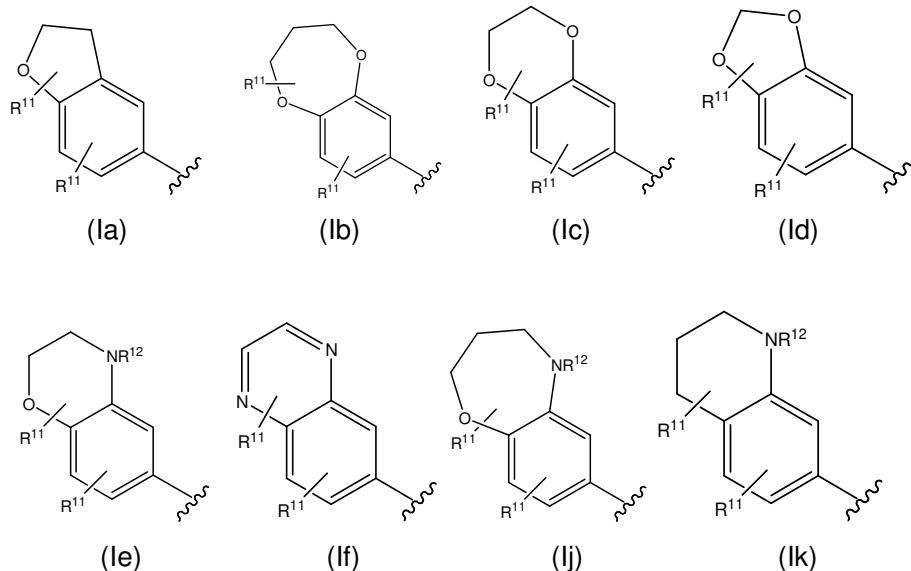
R¹⁰ is selected from the group consisting of phenyl and pyridyl, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C₁₋₄alkyl, O (oxo), S(sulfinyl), CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation, and the pyridyl is optionally substituted with one or more substituents selected from the group consisting of halogen, C₁₋₄alkyl, O (oxo), S(sulfinyl), C₁₋₄alkoxy, CONR³R⁴, NR³R⁴, OR⁸, hydroxyl, OCF₃, -CF₃, R⁸, C₃₋₇cycoalkyl, C₄₋₇heterocyclyl, COR¹³, SO₂R¹³, C₁₋₄alkyl-CO₂R¹⁴, C₁₋₄alkyl-OR¹⁴, C₁₋₄alkyl-NR¹⁴R¹⁵, C₁₋₄alkyl-C₃₋₇cycloalkyl, COC₁₋₄alkyl-NR¹⁴R¹⁵, an amino acid, and a quaternary ammonium cation (NH¹⁶₄⁺).

19. A compound according to claim 18, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein R² is NH₂.
20. A compound according to claim 18 or 19, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein each R¹¹ is hydrogen.
21. A compound according to any of claims 18 to 20, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, having the general formula (V):



wherein R^2 is NH_2 ;

R^7 is a fused bicyclic system selected from the group consisting of:



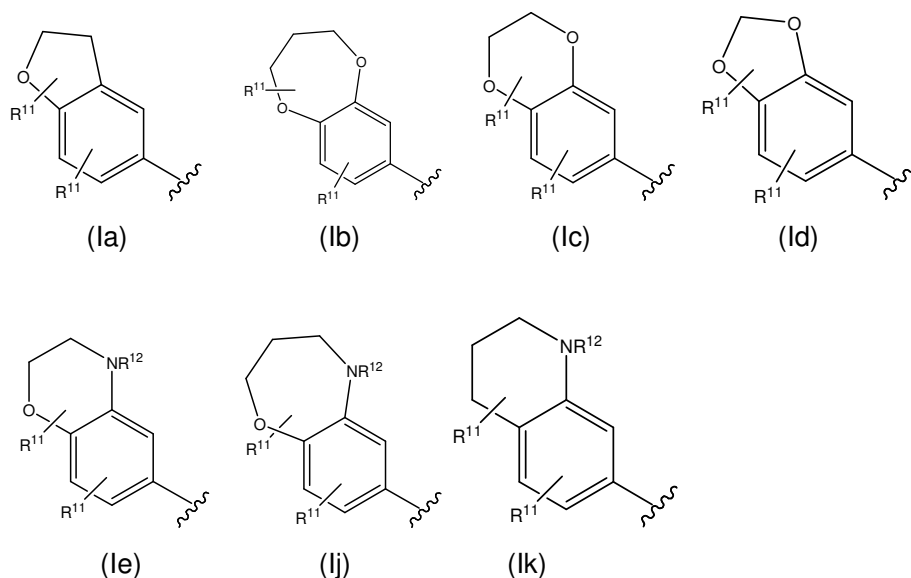
wherein each R^{11} is independently selected from hydrogen; and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $\text{NR}^{14}\text{R}^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $\text{NR}^{14}\text{R}^{15}$, an amino acid, and a quaternary ammonium cation ($\text{NR}^{16}_4^+$);

R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{14} and R^{15} are independently selected from hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-hydroxyl, C_{3-7} cycloalkyl, phenyl, monocyclic 5- or 6-membered heteroaryl, and SO_2R^{13} , the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{16} groups are independently selected from C_{1-4} alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ; and R^{10} is selected from the group consisting of phenyl and pyridyl, wherein the phenyl is optionally substituted with one or more substituents selected from the group consisting of C_{1-4} alkyl, O (oxo), S(sulfinyl), $CONR^3R^4$, NR^3R^4 , OR^8 , hydroxyl, OCF_3 , $-CF_3$, R^8 , C_{3-7} cycoalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation, and the pyridyl is optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-4} alkyl, O (oxo), S(sulfinyl), C_{1-4} alkoxy, $CONR^3R^4$, NR^3R^4 , OR^8 , hydroxyl, OCF_3 , $-CF_3$, R^8 , C_{3-7} cycoalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NH^{16}_4^+$).

22. A compound according to any of claims 18 to 21, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein R^{10} is selected from the group consisting of phenyl optionally substituted with one or more substituents selected from the group consisting of NH_2 , $NHMe$, C_{1-2} alkyl, $CONH_2$, $CONHMe$, $CONMe_2$, OCH_2C_3 cycloalkyl, OC_3 cycloalkyl, OCF_3 and hydroxyl, and pyridyl optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$, C_{1-2} alkyl, C_{1-2} alkoxy, $CONH_2$, $CONHMe$, $CONMe_2$, OCH_2C_3 cycloalkyl, OC_3 cycloalkyl, OCF_3 and hydroxyl; preferably the phenyl group is optionally substituted with one or more substituents selected from the group consisting of NH_2 , $NHMe$, and C_{1-2} alkyl, and the pyridyl group is optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$ and C_{1-2} alkyl.
23. A compound according to any of claims 18 to 22, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein R^7 is a fused bicyclic system selected from the group consisting of:



wherein each R^{11} is hydrogen and R^{12} is selected from hydrogen, C_{1-4} alkyl, C_{3-7} cycloalkyl, C_{4-7} heterocyclyl, COR^{13} , SO_2R^{13} , C_{1-4} alkyl- CO_2R^{14} , C_{1-4} alkyl- OR^{14} , C_{1-4} alkyl- $NR^{14}R^{15}$, C_{1-4} alkyl- C_{3-7} cycloalkyl, COC_{1-4} alkyl- $NR^{14}R^{15}$, an amino acid, and a quaternary ammonium cation ($NR^{16}_4^+$);

R^{13} is selected from C_{1-4} alkyl, C_{3-7} cycloalkyl, phenyl, and monocyclic 5- or 6-membered heteroaryl, the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{14} and R^{15} are independently selected from hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-hydroxyl, C_{3-7} cycloalkyl, phenyl, monocyclic 5- or 6-membered heteroaryl, and SO_2R^{13} , the phenyl or 5- or 6-membered heteroaryl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 ;

R^{16} groups are independently selected from C_{1-4} alkyl and phenyl, the phenyl being optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-2} alkyl, O (oxo), S (sulfinyl), NR^3R^4 , OR^3 and SR^3 .

24. A compound according to any of claims 18 to 23, or a pharmaceutically acceptable salt, hydrate, solvate, prodrug, or ester thereof, for use in the treatment of infection with, or disease caused by the bacterium *Enterobacteriaceae*, wherein R^{10} is a pyridyl group optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH_2 , $NHMe$, C_{1-2} alkyl, C_{1-2} alkoxy, $CONH_2$, $CONHMe$, $CONMe_2$, OCH_2C_3 cycloalkyl, OC_3 cycloalkyl, OCF_3 and hydroxyl; preferably the

pyridyl group is optionally substituted with one or more substituents selected from the group consisting of Cl, F, NH₂, NHMe and C₁₋₂alkyl.