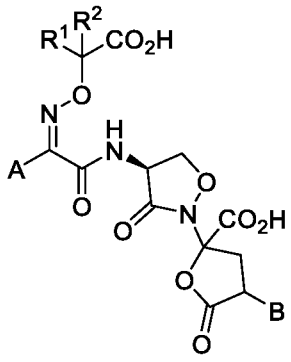
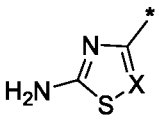
What is claimed is:

1. A compound of formula (I)



(I)

where A is defined by formula (Ia)



(Ia)

and wherein X is N or CR^3, and R^3 represents hydrogen or halogen;

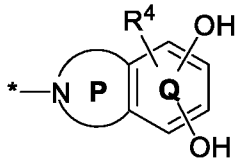
R^1 and R^2, together with the carbon atom to which they are bonded, may form a (C_3 – C_8) cycloalkyl, wherein

(i) the cycloalkyl may contain one heteroatom selected from O, N and S, and/or

(ii) the cycloalkyl may be substituted with one, two, three or four substituents selected independently of one another from the group consisting of (C_1 – C_3) alkyl and halogen; or

R^1 and R^2 may, independently of one another, represent hydrogen or (C_1-C_3) alkyl, wherein (C_1-C_3) alkyl may be substituted with a substituent selected from hydroxy and chlorine;

B is a bicyclic catechol or hydroxypyridone moiety bearing fragment defined by formula (Ia')



(Ia')

wherein P is an unsaturated 5-membered or 6-membered ring, which optionally may contain one carbonyl (CO) group, or two carbonyl (CO) groups, or one sulfone (SO_2) group, or a combination of one carbonyl (CO) and one sulfone (SO_2) group, and may further contain up to two additional N atoms; and

wherein Q may contain up to two N atoms, and wherein R^4 is selected from the group consisting of hydrogen, (C_1 – C_3) alkyl, carbonyl, trifluoromethyl, cyano and a halogen; and

salts thereof, solvates thereof, and solvates of the salts thereof.

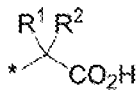
2. The compound according to claim 1, wherein the halogen of R^3 is fluorine or chlorine.

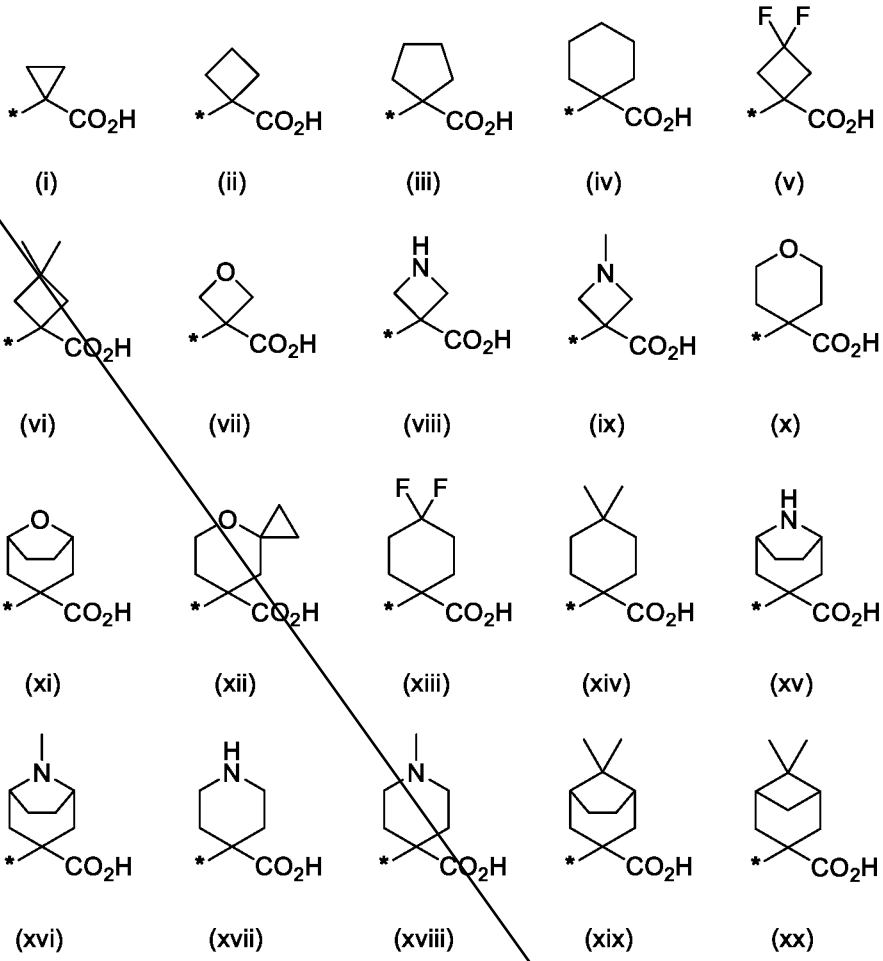
3. The compound according to claim 1, wherein the halogen of the cycloalkyl (ii) is fluorine or chlorine.

4. The compound according to claim 1, wherein the halogen of R^4 is fluorine or chlorine.

5. The compound according to claim 1, wherein P is an unsaturated 5-membered ring.

6. The compound according to claim 1, wherein Q is benzene or pyridine.

7. The compound according to claim 1, wherein  of formula (I) is selected from the group consisting of:



(i) (ii) (iii) (iv) (v)

(vi) (vii) (viii) (ix) (x)

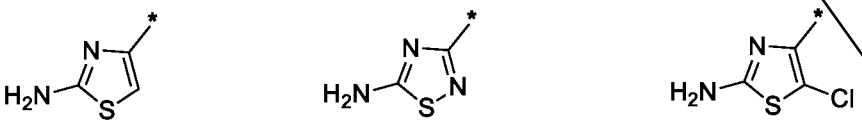
(xi) (xii) (xiii) (xiv) (xv)

(xvi) (xvii) (xviii) (xix) (xx)



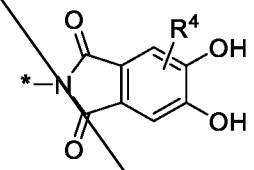
(xxi) and (xxii) .

8. The compound according to claim 1 or 7, wherein A of formula (I) is selected from the group consisting of:

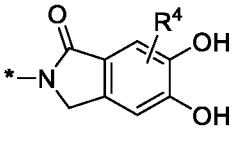


(a) (b) and (c) .

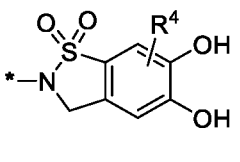
9. The compound according to any one of claims 1, 7 or 8, wherein B of formula (I) is selected from the group consisting of:



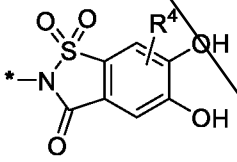
(d)



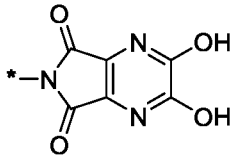
(e)



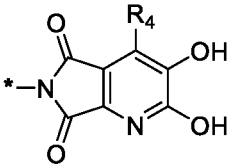
(f)



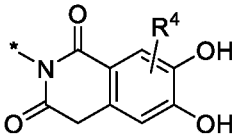
(g)



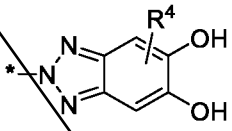
(h)



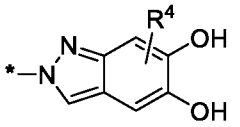
(i)



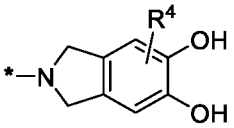
(j)



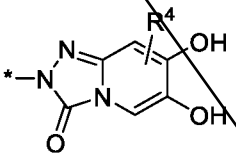
(k)



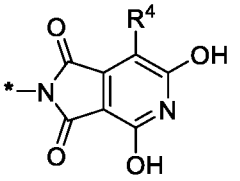
(l)



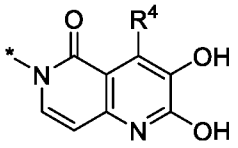
(m)



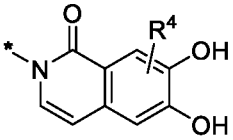
(n)



(o)

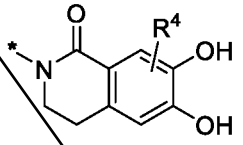


(p)



(q)

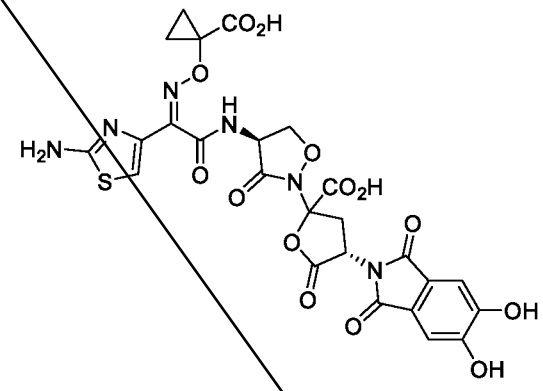
and



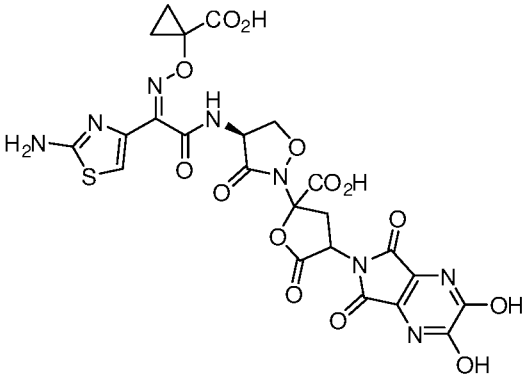
(r) .

wherein R^4 is selected from the group consisting of hydrogen, (C_1 – C_3) alkyl, trifluoromethyl, cyano and halogen.

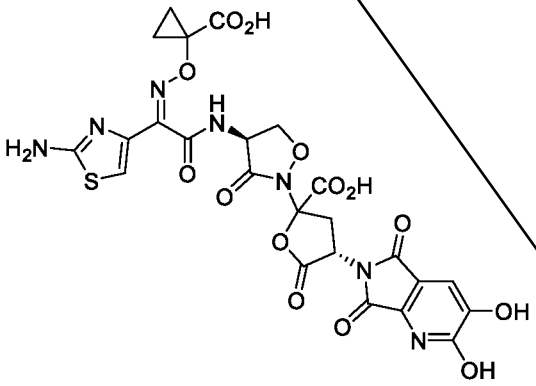
10. The compound according to claim 1, wherein the compound of formula (I) is:



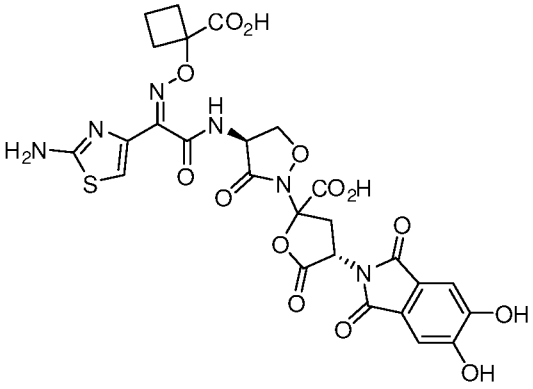
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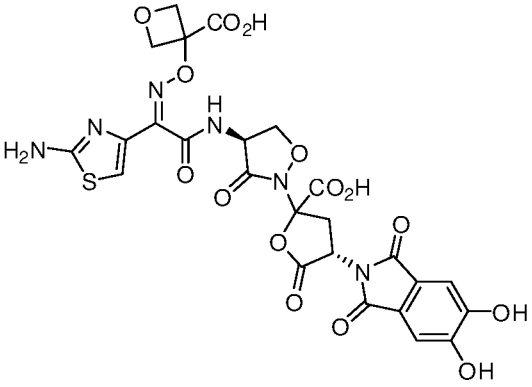
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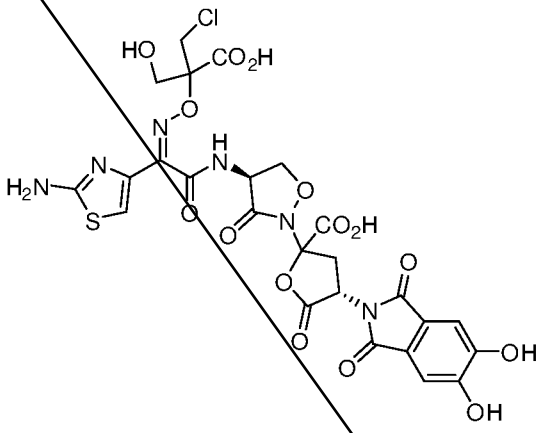
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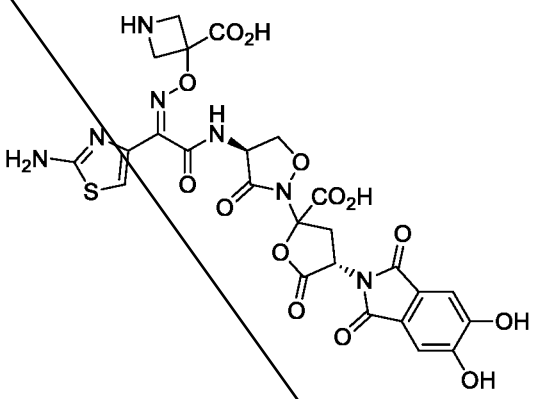
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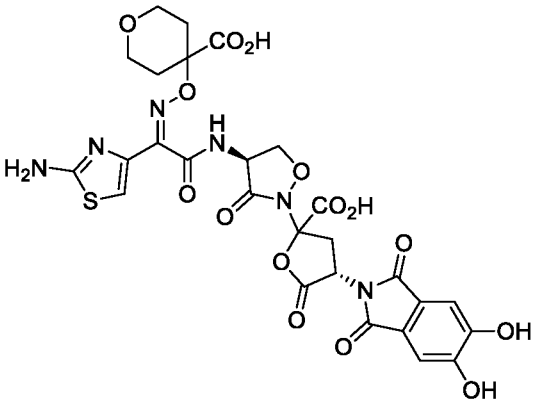
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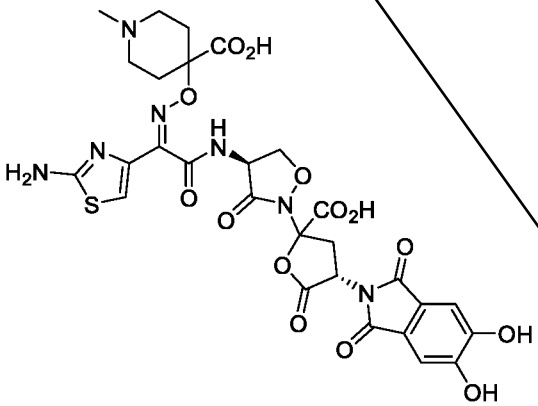
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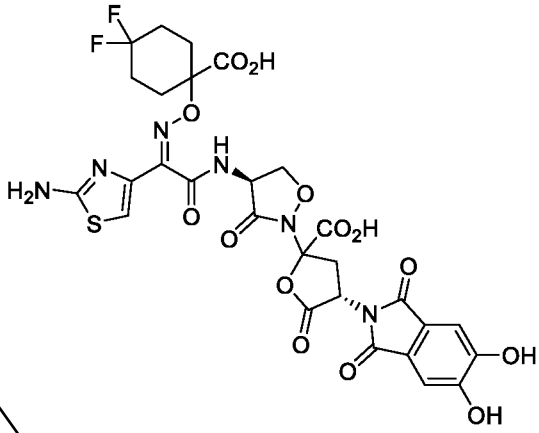
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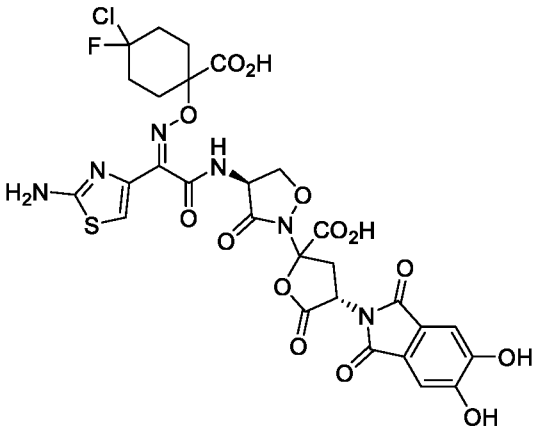
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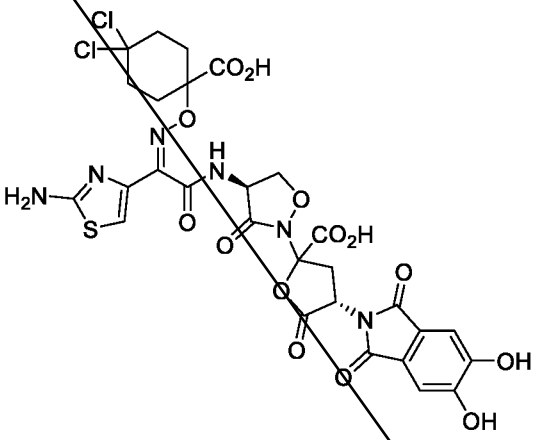
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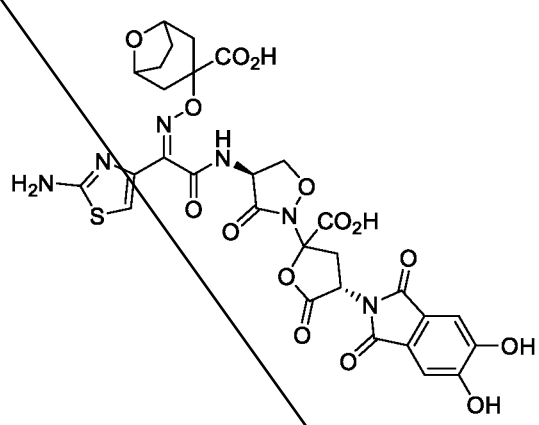
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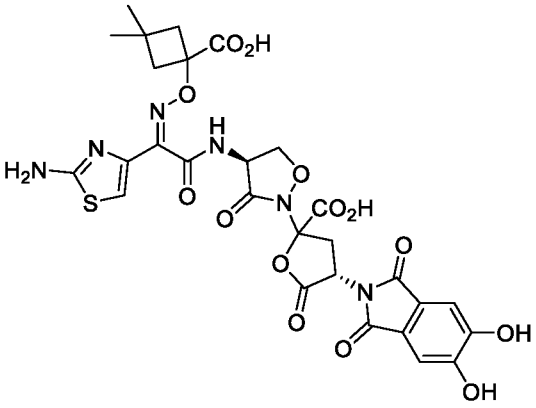
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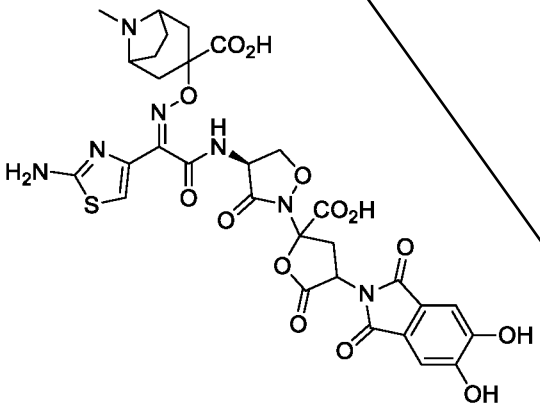
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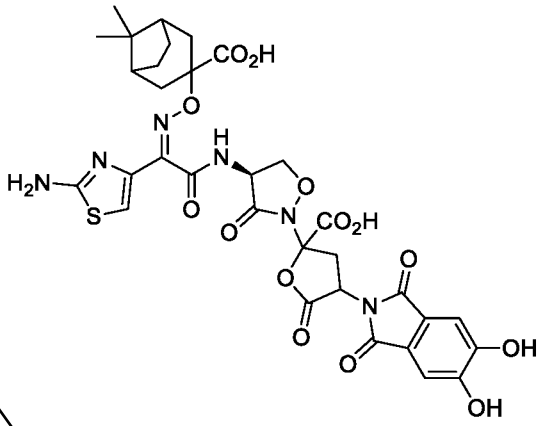
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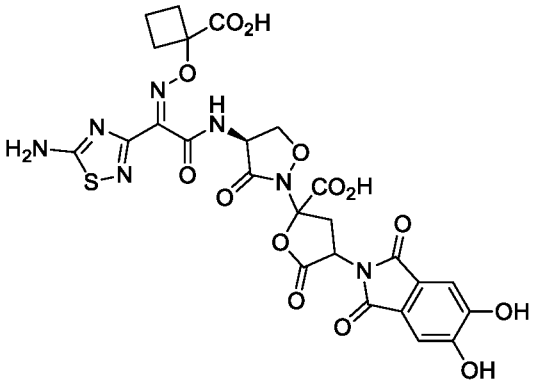
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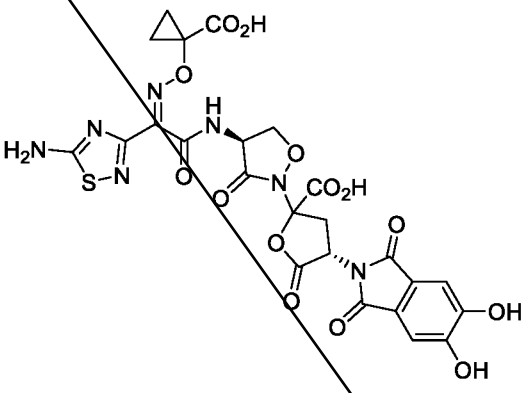
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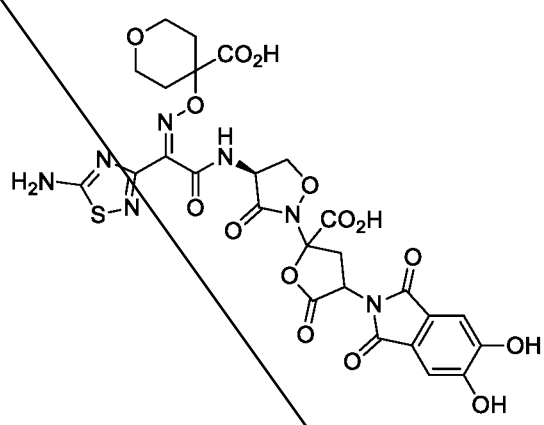
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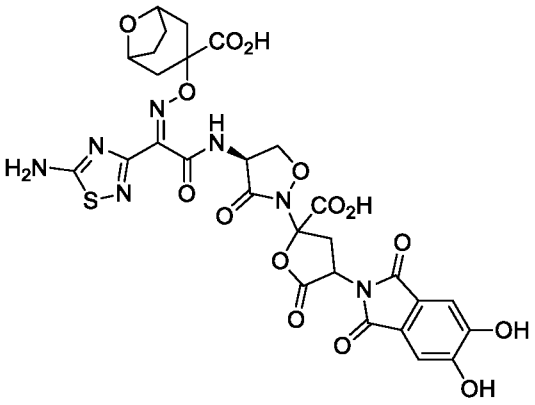
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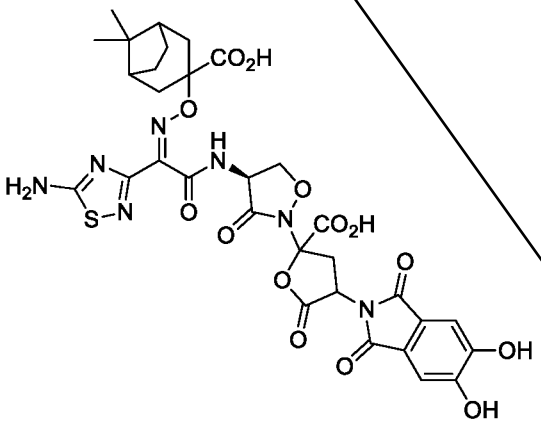
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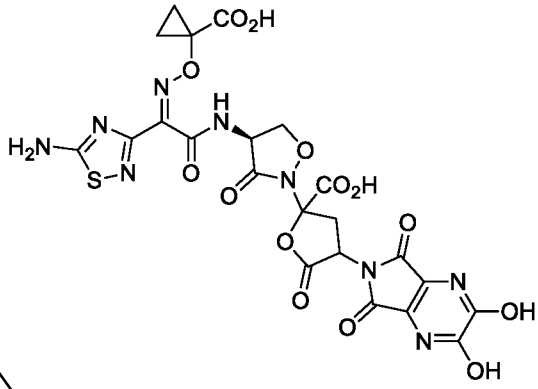
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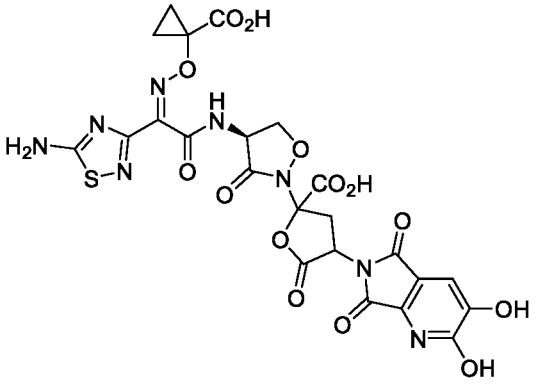
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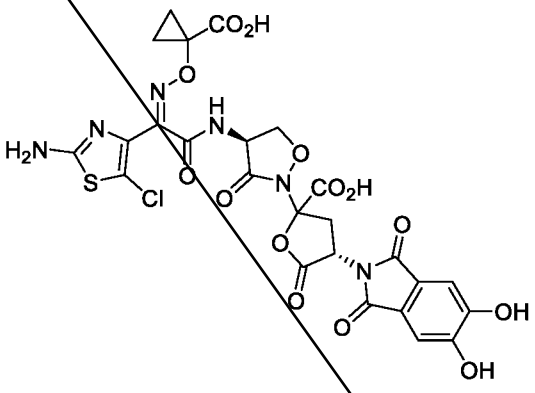
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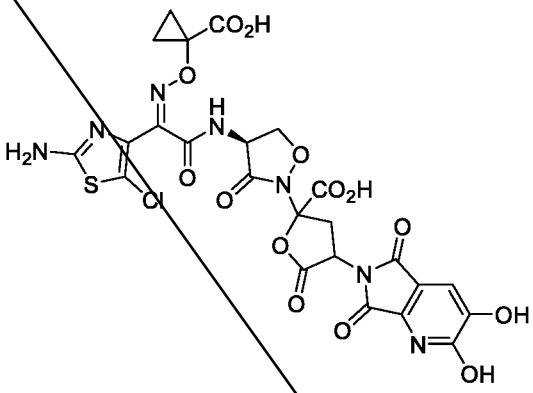
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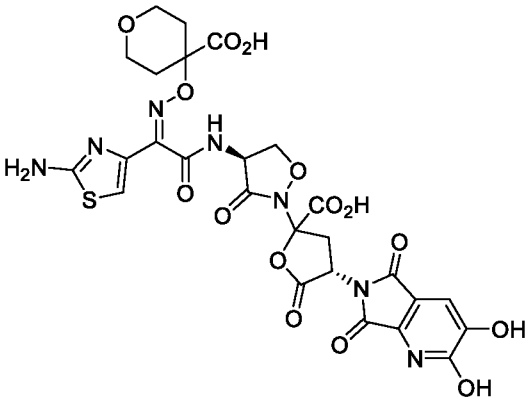
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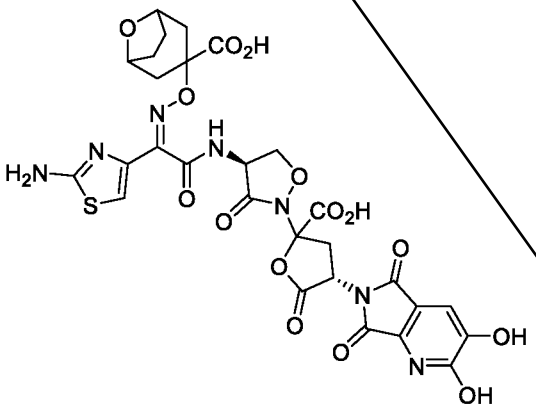
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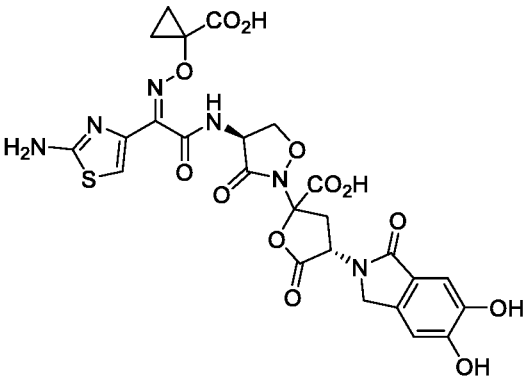
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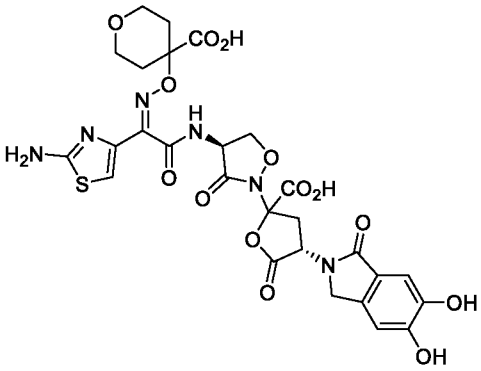
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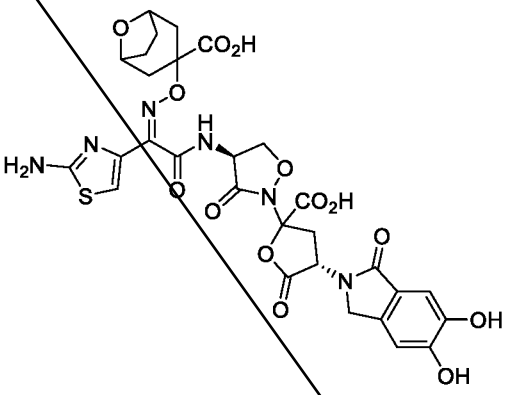
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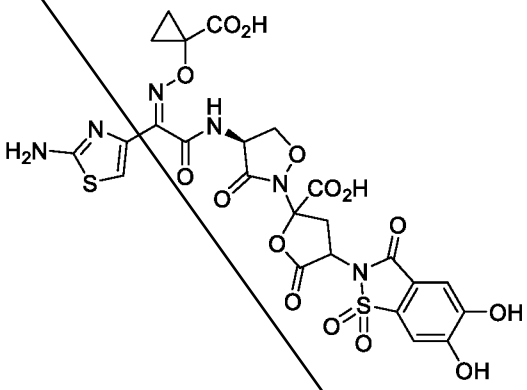
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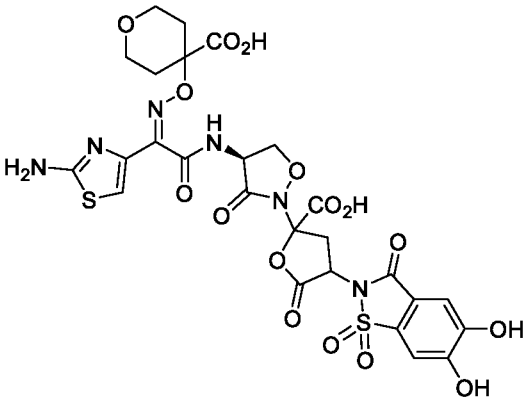
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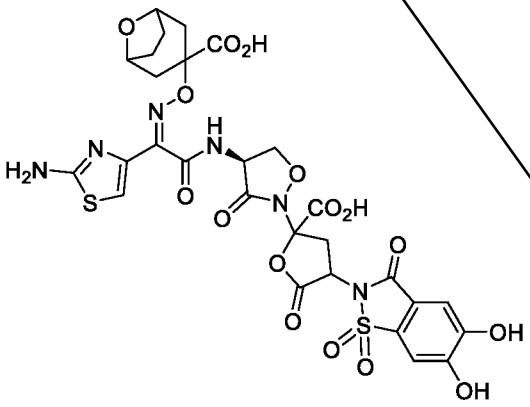
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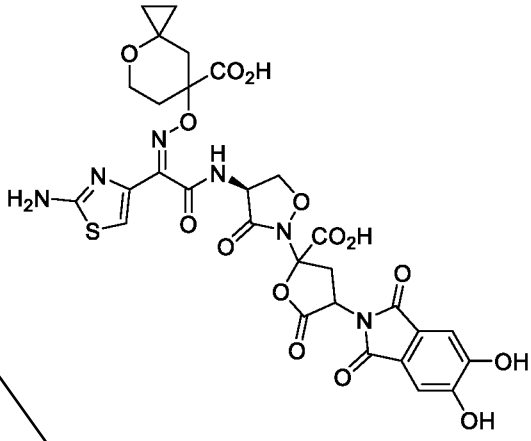
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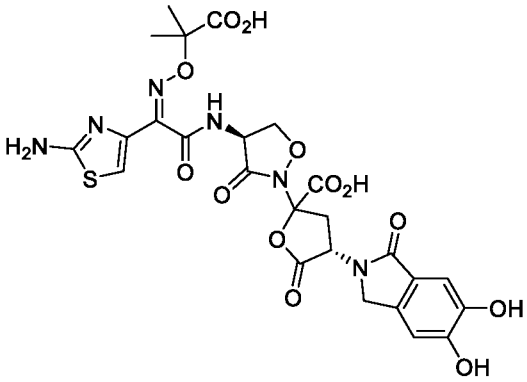
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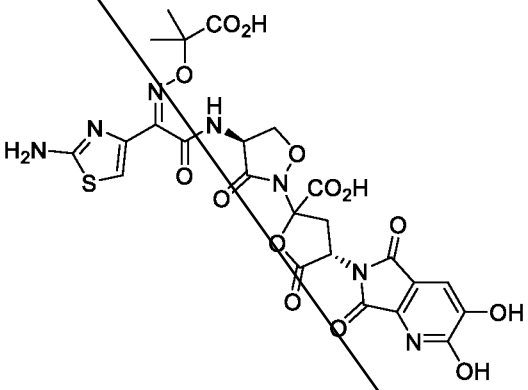
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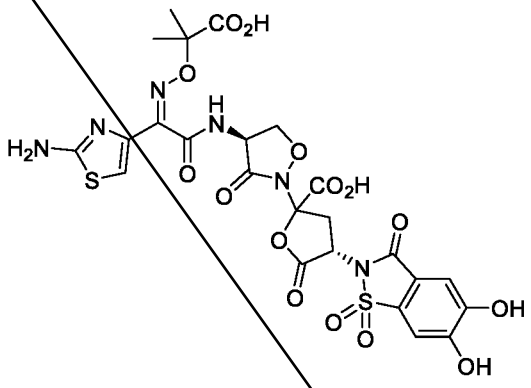
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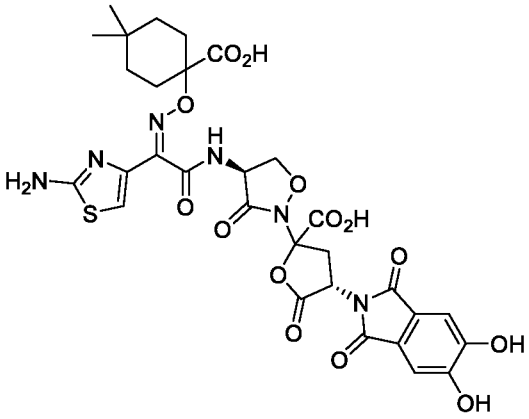
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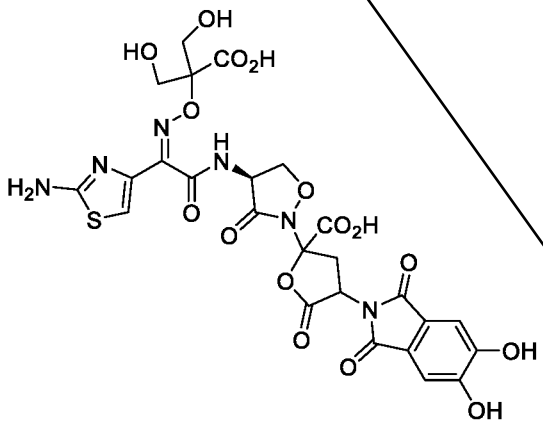
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37

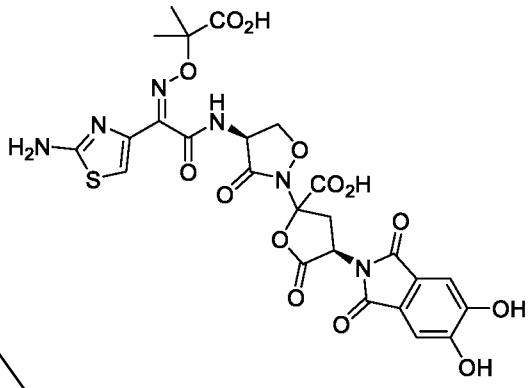


38



39

or



40 .

11. The compound according to claim 1, wherein the compound of formula (I) is:

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyrazin-6-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-((1-carboxycyclopropoxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxotetrahydrofuran-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclobutyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(3-carboxyoxetan-3-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxy-1-chloro-3-hydroxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)azetidine-3-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

4-((((Z)-1-(2-aminothiazol-4-yl)-2-(((4S)-2-((4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-yl)-3-oxoisoxazolidin-4-yl)amino)-2-oxoethylidene)amino)oxy)-1-methylpiperidine-4-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-(((1-carboxy-4,4-difluorocyclohexyl)oxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-(((1-carboxy-4-chloro-4-fluorocyclohexyl)oxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-(((1-carboxy-4,4-dichlorocyclohexyl)oxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxy-3,3-dimethylcyclobutyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-methyl-8-azabicyclo[3.2.1]octane-3-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(3-carboxy-8,8-dimethylbicyclo[3.2.1]octan-3-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclobutyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(5-amino-1,2,4-thiadiazol-3-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(5-amino-1,2,4-thiadiazol-3-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(3-carboxy-8,8-dimethylbicyclo[3.2.1]octan-3-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-

dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyrazin-6-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-5-chloro-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-5-chloro-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

7-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-4-oxaspiro[2.5]octane-7-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxy-4,4-dimethylcyclohexyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

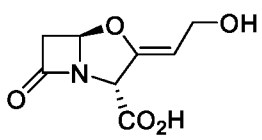
2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxy-1,3-dihydroxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid, or

(4R)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid.

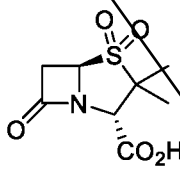
12. A pharmaceutical composition comprising one or more compounds of formula (I) of any one of claims 1-11, or pharmaceutically acceptable salts thereof, and a pharmaceutically acceptable carrier or diluent.

13. A pharmaceutical composition comprising (i) one or more compounds of formula (I) of any one of claims 1-11, or pharmaceutically acceptable salts thereof, (ii) one or more β-lactamase inhibitors, and (iii) a pharmaceutically acceptable carrier or diluent.

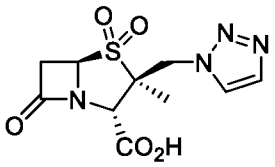
14. The pharmaceutical composition of claim 13, wherein the β-lactamase inhibitors are selected from formula (1^a) to ($1^{z'}$):



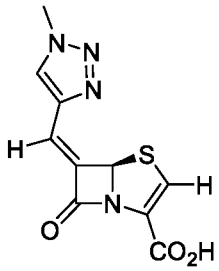
1^a (clavulanic acid)



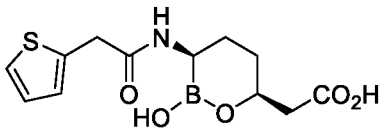
1^b (sulbactam)



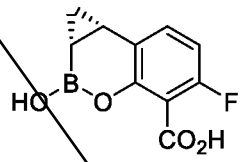
1^c (tazobactam)



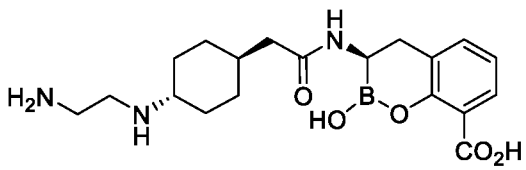
1^d (BRL-42715)

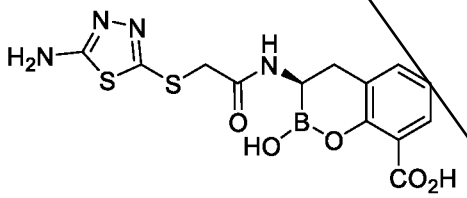


1^e (vaborbactam)

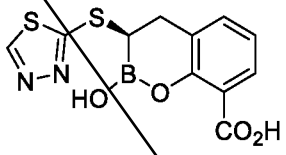


1^f (QPX-7728)

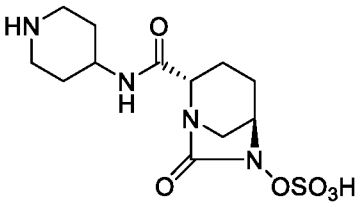




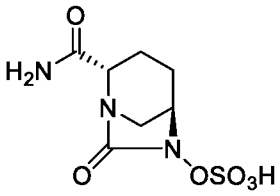
1[g] (taniborbactam, VNRX-5133)



1[h] (RPX-7262)

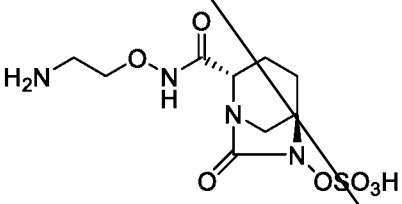


1[i] (RPX-7282)

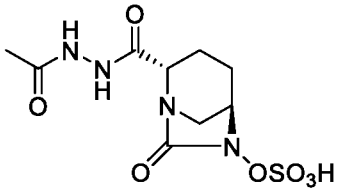


1[j] (NXL-104)

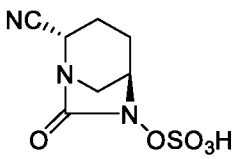
1[k] (relebactam)



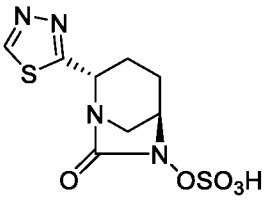
1[l] (nacubactam)



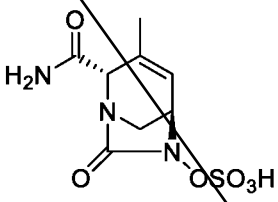
1[m] (FPI-1523)



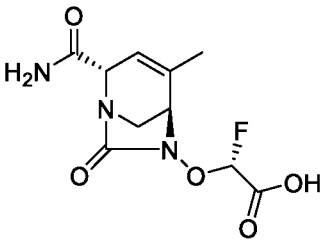
1[n] (WCK 4234)



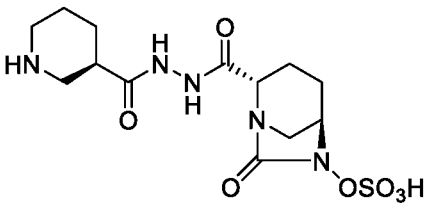
1[o]



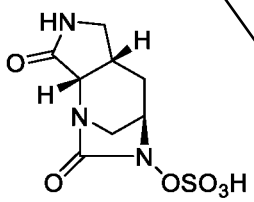
1[p] (durlobactam)



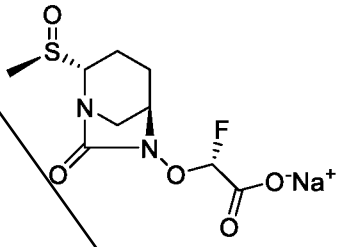
1[q] (ETX-1317)



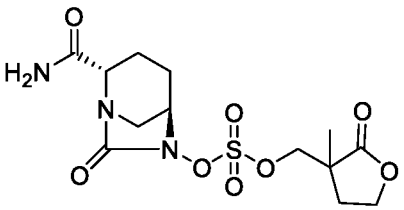
1[r] (zidebactam)

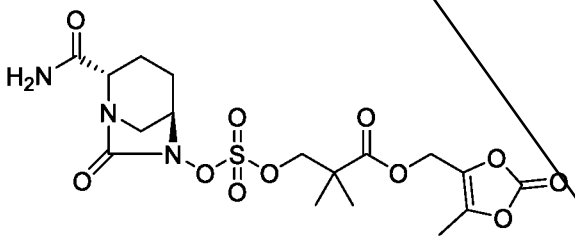


1[s]

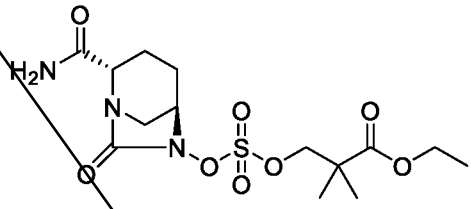


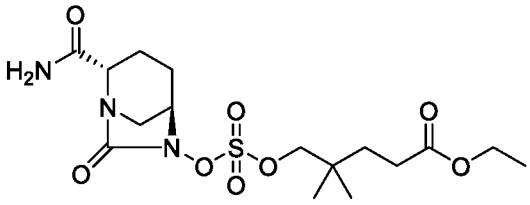
1[t]



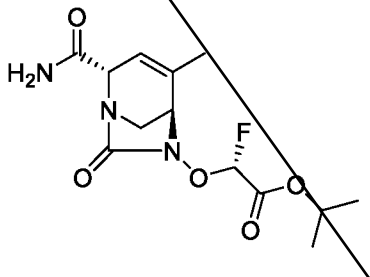


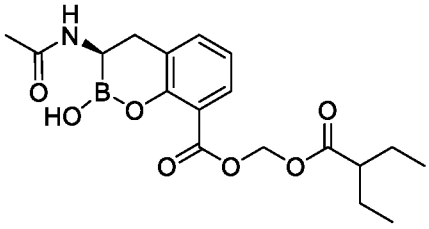
1^{u} 1^{v}



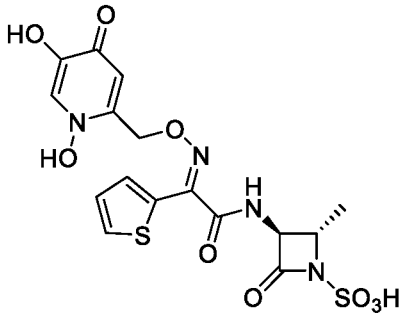


1^{w} (ARX-1796) 1^{x}





1^{y} (ETX-0282) 1^{z} (VNRX-7145) and



$1^{z'}$ (Syn2190) .

15. A method of treating or preventing a bacterial infection in a subject, comprising administering a therapeutically effective amount of a pharmaceutical composition of claim 12 to a subject having a bacterial infection, or a subject at risk of developing a bacterial infection.

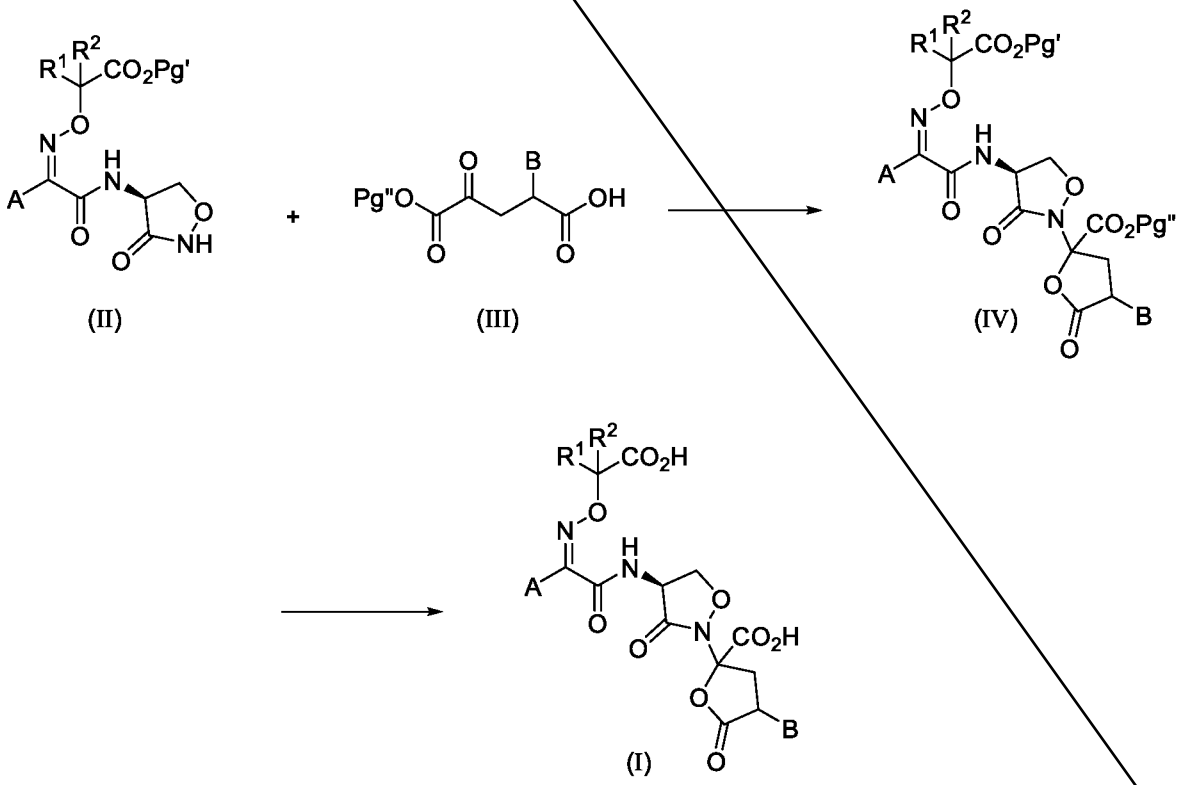
16. A method of treating or preventing a bacterial infection in a subject, comprising administering a therapeutically effective amount of a pharmaceutical composition of claim 13 to a subject having a bacterial infection, or a subject at risk of developing a bacterial infection.

17. The method of claim 15 or 16, wherein the bacterial infection is cause by a bacteria of one or more of *Enterobacterales, Escherichia coli*, *Enterobacter* spp., *Klebsiella* spp., *Serratia* spp., *Pseudomonas* spp., *Stenotrophomonas* spp., *Citrobacter* spp., *Acinetobacter* spp., *Campylobacter* spp., *Helicobacter* spp., *Vibrio* spp., *Bordetella* spp., *Salmonella* spp., *Shigella* spp., *Francisella* spp., *Burkholderia* spp., *Clostridia* spp., *Alcaligenes* spp., *Moraxella* spp., *Proteus* spp., *Neisseria* spp., *Haemophilus* spp., *Achromobacter* spp. and *Erwinia* spp.

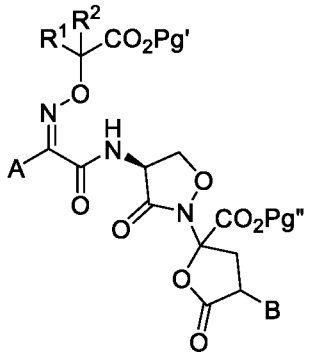
18. One or more compounds of any one of claims 1-11 for use in a method of treating and/or preventing a disease, such as a bacterial infection, such as a bacterial infection caused by a Gram-negative bacteria.

19. A method for preparing a compound of formula (I) according to claim 1, comprising performing the reaction sequence of Scheme 1.

Scheme 1



20. A method for preparing of a compound of formula (I) according to claim 1, comprising removing protecting groups from a compound of formula (IV), wherein Pg' and Pg" represent a protecting group

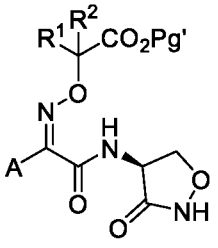


(IV)

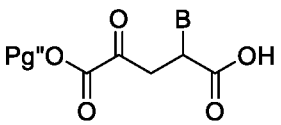
wherein carboxyl protecting groups Pg' and Pg" in formula (IV) are residues of an ester-forming aliphatic or araliphatic alcohol.

21. The method according to claim 20, wherein the carboxyl protecting groups are independently selected from the group consisting of *iso*-propyl, *tert*-butyl, methoxymethyl, ethoxymethyl, *iso*-butoxymethyl, acetoxymethyl, propionyloxymethyl, butyryloxymethyl, pivaloyloxymethyl, 1-methoxycarbonyloxyethyl, 1-ethoxycarbonyloxyethyl, p-methoxybenzyl, benzyl, o-nitrobenzyl, p-nitrobenzyl, 2,4-dinitrobenzyl, benzhydryl, phthalidyl and allyl.

22. The method according to claim 20 or 21, characterized in that compound (IV) is prepared by reacting a compound of formula (II) with a compound of formula (III)

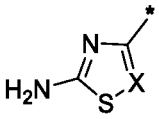


(II)



(III)

where A is defined by formula (Ia)



(Ia)

and wherein X is N or CR^3, and R^3 represents hydrogen or halogen;

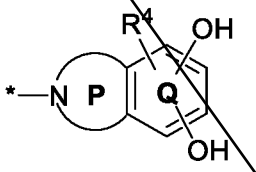
R^1 and R^2, together with the carbon atom to which they are bonded, may form a (C_3 – C_8) cycloalkyl, wherein

(i) the cycloalkyl may contain one heteroatom selected from O, N and S, and/or

(ii) the cycloalkyl may be substituted with one, two, three or four substituents selected independently of one another from the group consisting of (C_1 – C_3) alkyl and halogen; or

R^1 and R^2 may, independently of one another, represent hydrogen or (C_1-C_3) alkyl, wherein (C_1-C_3) alkyl may be substituted with a substituent selected from hydroxy and chlorine;

B is a bicyclic catechol or hydroxypyridone moiety bearing fragment defined by formula (Ia')



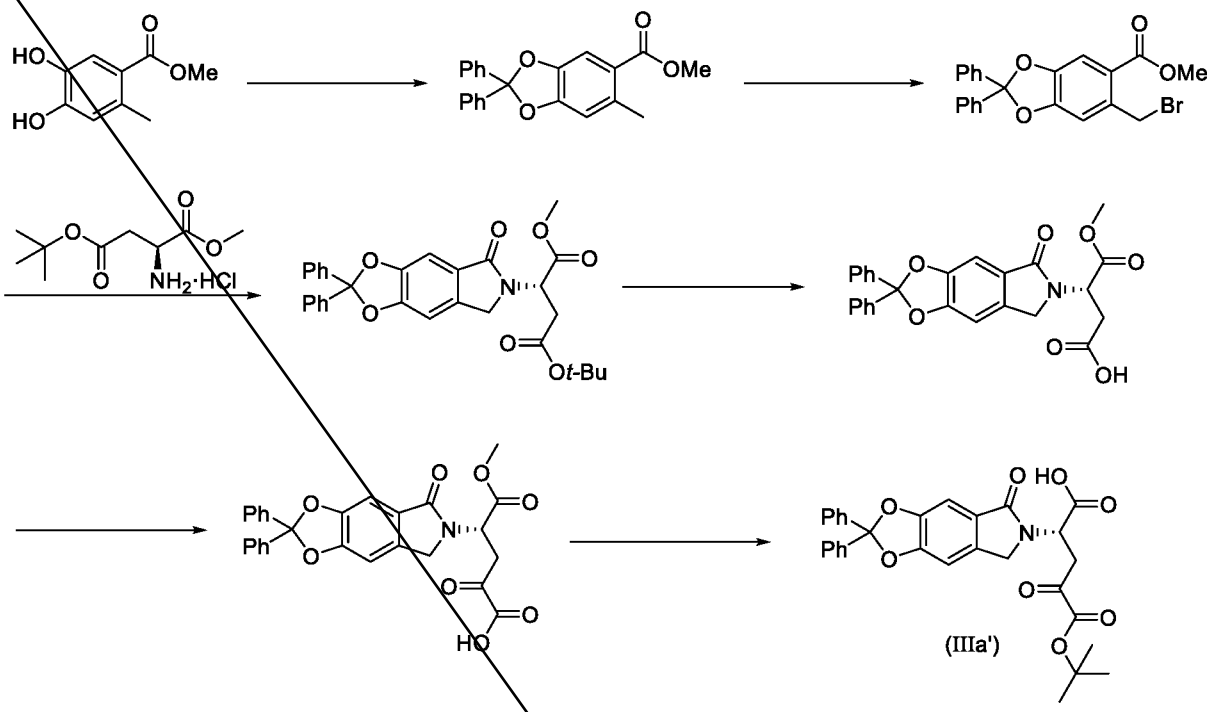
(Ia')

wherein P is an unsaturated 5-membered or 6-membered ring, which optionally may contain one carbonyl (CO) group, or two carbonyl (CO) groups, or one sulfone (SO_2) group, or a combination of one carbonyl (CO) and one sulfone (SO_2) group, and may further contain up to two additional N atoms; and

wherein Q may contain up to two N atoms, and wherein R^4 is selected from the group consisting of hydrogen, (C_1 – C_3) alkyl, carbonyl, trifluoromethyl, cyano and a halogen.

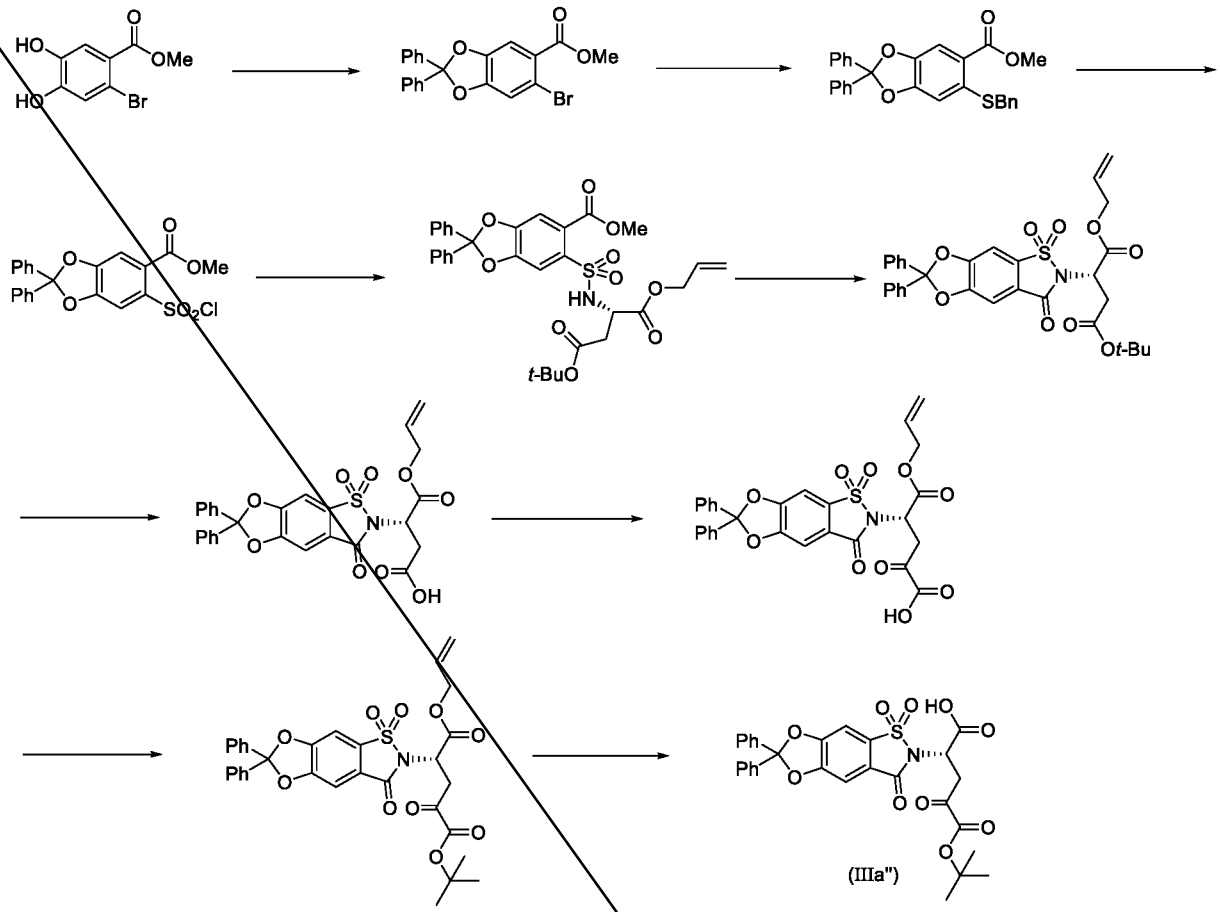
23. The method according to claim 22, wherein the compound of formula (III) is prepared by the reaction sequence of Scheme 2 to provide an intermediate of formula (IIIa').

Scheme 2



24. The method according to claim 22, wherein the compound of formula (III) is prepared by the reaction sequence of Scheme 3 to provide an intermediate of formula (IIIa'').

Scheme 3



25. The method according to claim 22, wherein the coupling reaction of intermediate (II) with intermediate (III) occurs in inert solvents in the presence of a coupling reagent, and preferably with the addition of a base, at a temperature ranging from -20 °C to 80 °C for 1 to 24 hours, preferably at a temperature of 20-30 °C overnight.

26. The method according to claim 25, wherein the inert solvents are one or more of dichloromethane, toluene, tetrahydrofuran, 1,4-dioxane, *N*,*N*-dimethylformamide, *N*,*N*-dimethylacetamide, acetonitrile, and tetrahydrofuran.

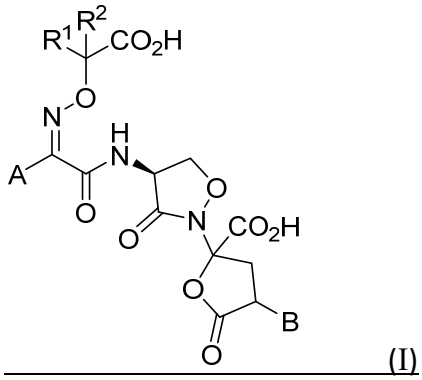
27. The method according to claim 25, wherein the coupling reagent is one or more of *N*,*N*'-diethylcarbodiimide, *N*,*N*'-dipropylcarbodiimide, *N*,*N*'-diisopropylcarbodiimide, *N*,*N*'-dicyclohexylcarbodiimide, *N*-ethyl-*N*'-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC), carbonyldiimidazole (CDI), O-(benzotriazol-1-yl)-*N*,*N*, *N*',*N*'-

tetramethyluroniumhexafluorophosphate (HBTU), O-(7-azabenzotriazol-1-yl)-*N,N,N',N'*-tetramethyluroniumhexafluorophosphate (HATU), 1-hydroxybenzotriazole (HOBt), (benzotriazol-1-yloxy)tris(dimethylamino)phosphonium hexafluorophosphate (BOP), (benzotriazol-1-yloxy)tripyrrolidinophosphonium hexafluorophosphate (PyBOP), and *N*-hydroxysuccinimide, and mixtures thereof, with or without addition of a base.

28. The method according to claim 27, wherein the base is one or more of a carbonate, a bicarbonate, triethylamine, diisopropylethylamine, *N*-methylmorpholine, *N*-methylpiperidine and 4-dimethylaminopyridine.

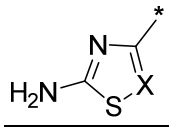
What is claimed is:

1. A compound of formula (I)



(I)

where A is defined by formula (Ia)



(Ia)

and wherein X is N or CR^3, and R^3 represents hydrogen or halogen;

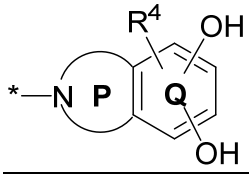
R^1 and R^2, together with the carbon atom to which they are bonded, may form a (C_3 – C_8) cycloalkyl, wherein

(i) the cycloalkyl may contain one heteroatom selected from O, N and S, and/or

(ii) the cycloalkyl may be substituted with one, two, three or four substituents selected independently of one another from the group consisting of (C_1 – C_3) alkyl and halogen; or

R^1 and R^2 may, independently of one another, represent hydrogen or (C_1-C_3) alkyl, wherein (C_1-C_3) alkyl may be substituted with a substituent selected from hydroxy and chlorine;

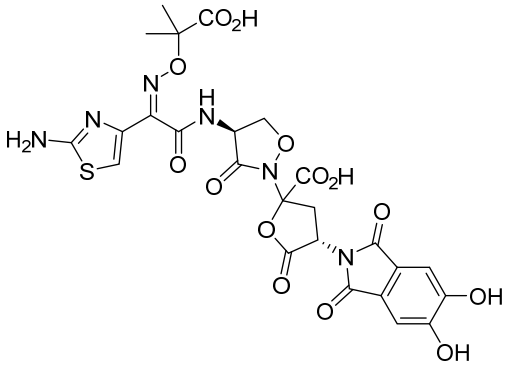
B is a bicyclic catechol or hydroxypyridone moiety bearing fragment defined by formula (Ia')



(Ia')

wherein P is an unsaturated 5-membered or 6-membered ring, which optionally may contain one carbonyl (CO) group, or two carbonyl (CO) groups, or one sulfone (SO_2) group, or a combination of one carbonyl (CO) and one sulfone (SO_2) group, and may further contain up to two additional N atoms; and

wherein Q may contain up to two N atoms, and wherein R^4 is selected from the group consisting of hydrogen, (C_1 – C_3) alkyl, carbonyl, trifluoromethyl, cyano and a halogen; and salts thereof, solvates thereof, and solvates of the salts thereof; and



wherein compound I''' is excluded from formula (I).

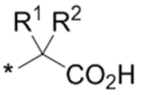
2. The compound according to claim 1, wherein the halogen of R^3 is fluorine or chlorine.

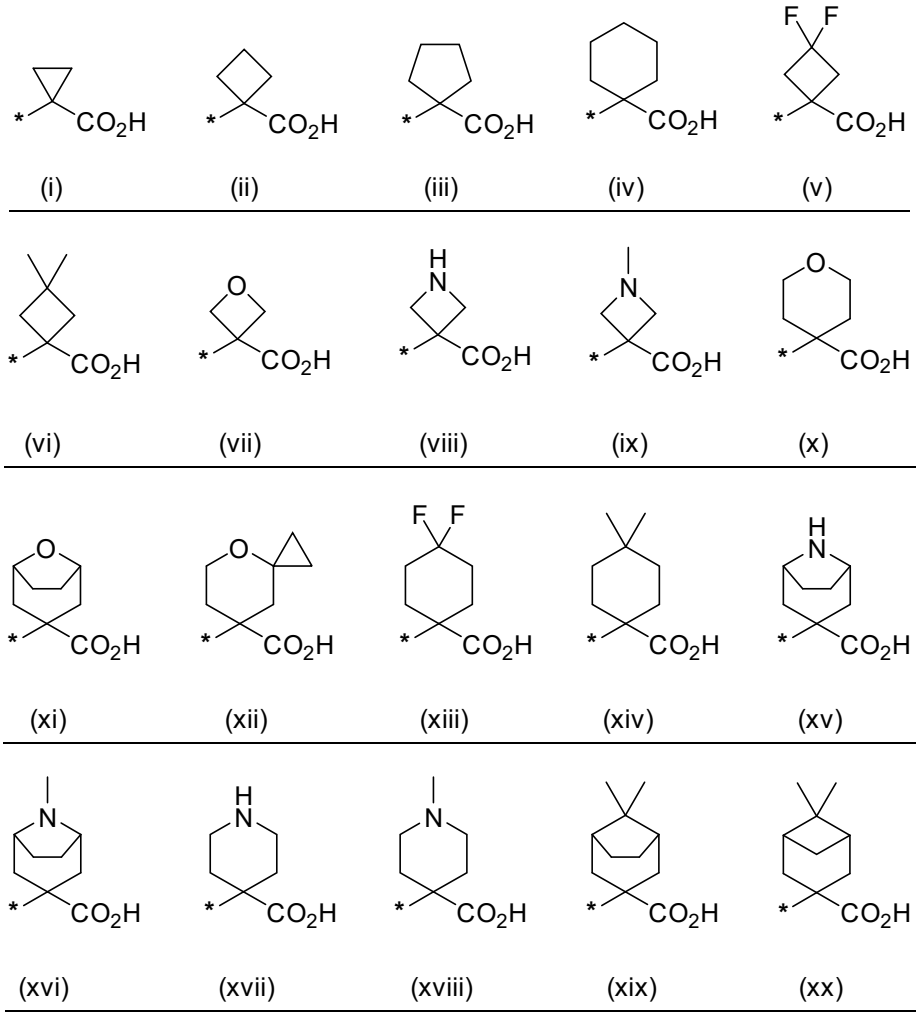
3. The compound according to claim 1, wherein the halogen of the cycloalkyl (ii) is fluorine or chlorine.

4. The compound according to claim 1, wherein the halogen of R^4 is fluorine or chlorine.

5. The compound according to claim 1, wherein P is an unsaturated 5-membered ring.

6. The compound according to claim 1, wherein Q is benzene or pyridine.

7. The compound according to claim 1, wherein  of formula (I) is selected from the group consisting of:



(i) (ii) (iii) (iv) (v)

(vi) (vii) (viii) (ix) (x)

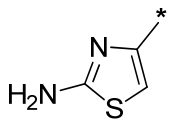
(xi) (xii) (xiii) (xiv) (xv)

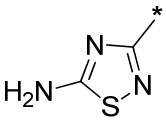
(xvi) (xvii) (xviii) (xix) (xx)

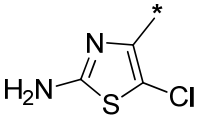


(xxi) and (xxii) .

8. The compound according to claim 1 or 7, wherein A of formula (I) is selected from the group consisting of:

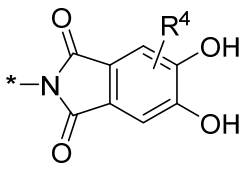


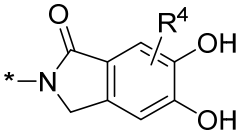


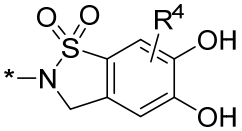


(a) (b) and (c) .

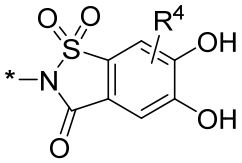
9. The compound according to any one of claims 1, 7 or 8, wherein B of formula (I) is selected from the group consisting of:

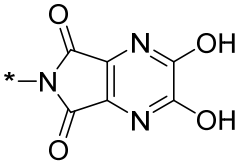


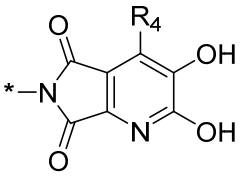




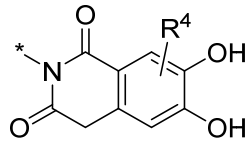
(d) (e) (f)

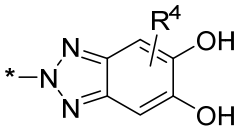


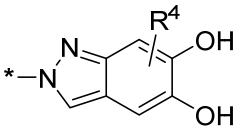




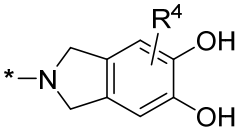
(g) (h) (i)

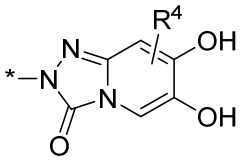


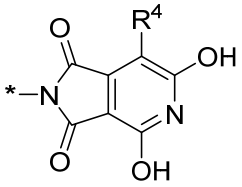




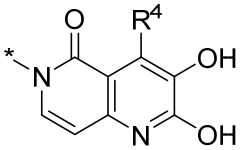
(j) (k) (l)

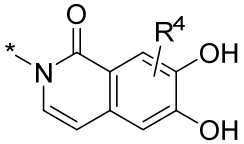


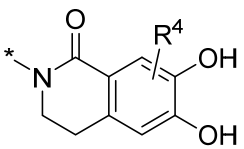




(m) (n) (o)



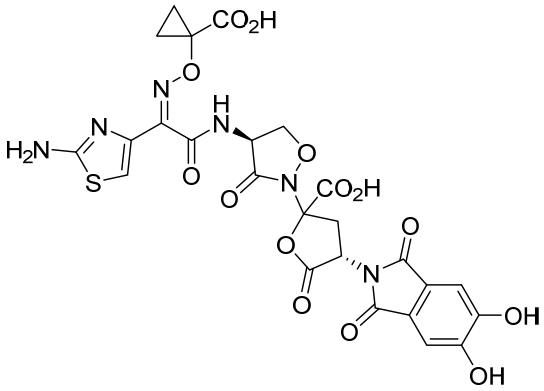




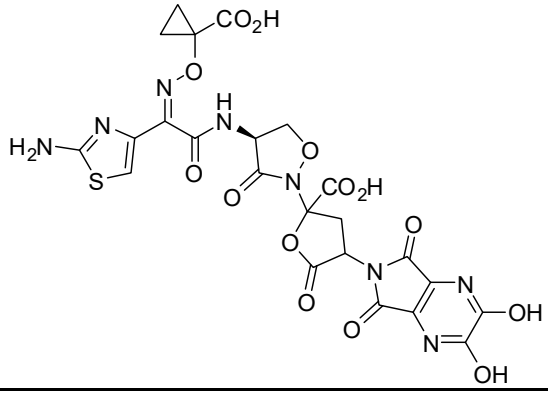
(p) (q) and (r)

wherein R^4 is selected from the group consisting of hydrogen, (C_1 – C_3) alkyl, trifluoromethyl, cyano and halogen.

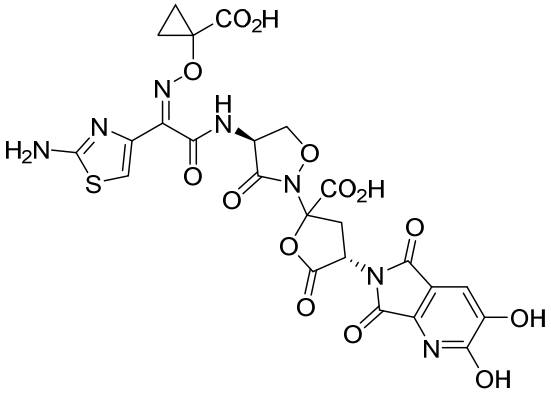
10. The compound according to claim 1, wherein the compound of formula (I) is:



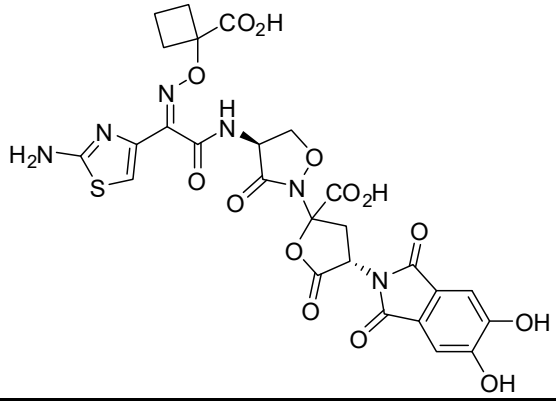
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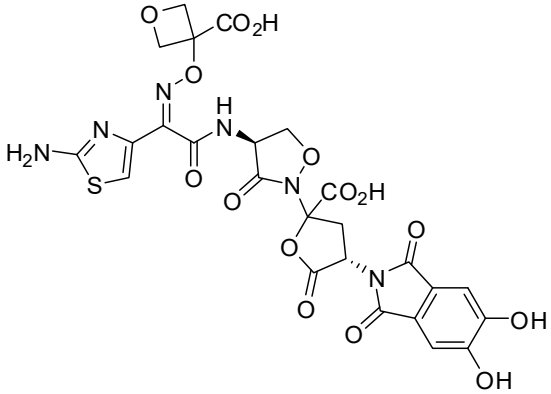
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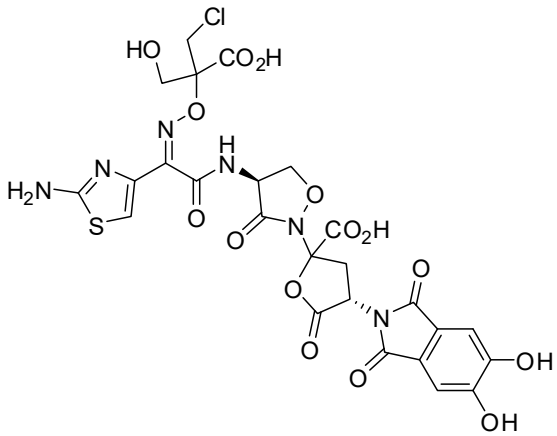


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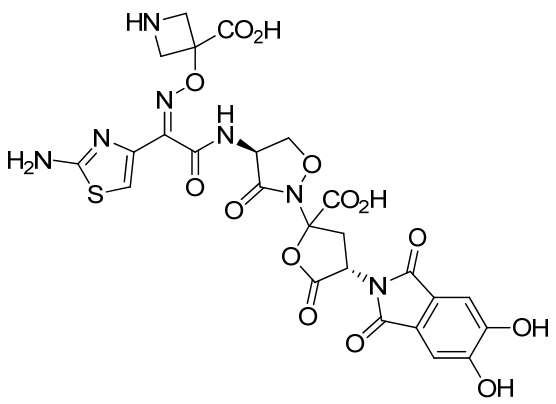


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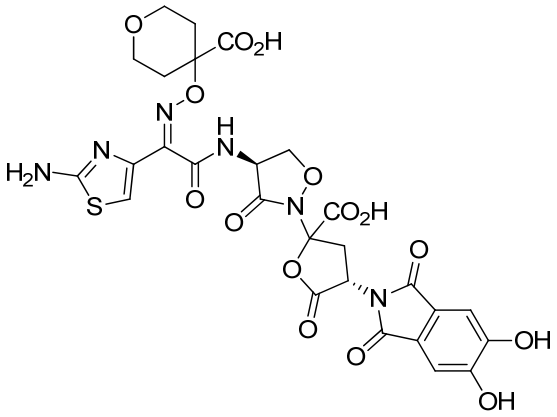




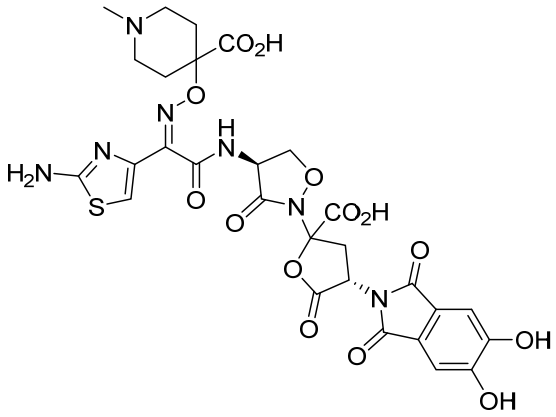
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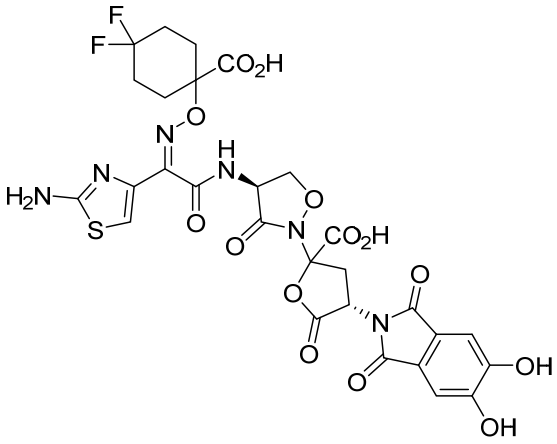
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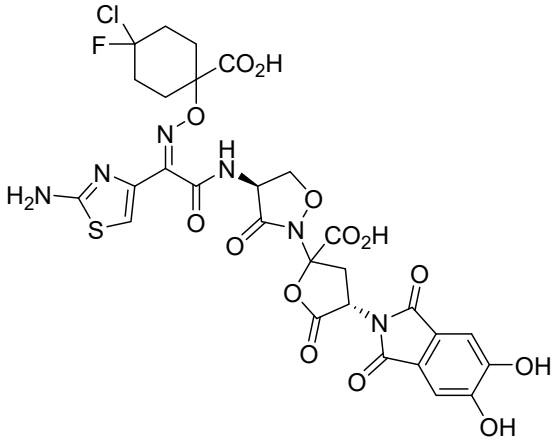
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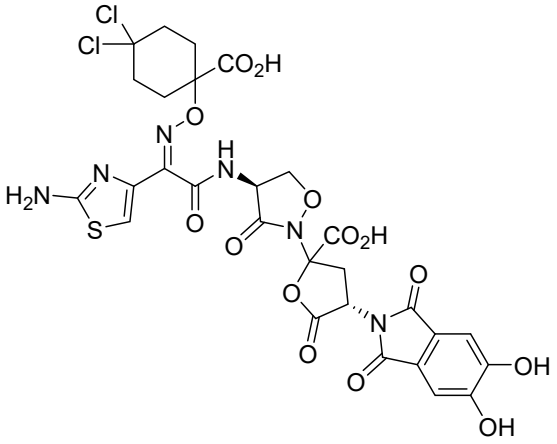
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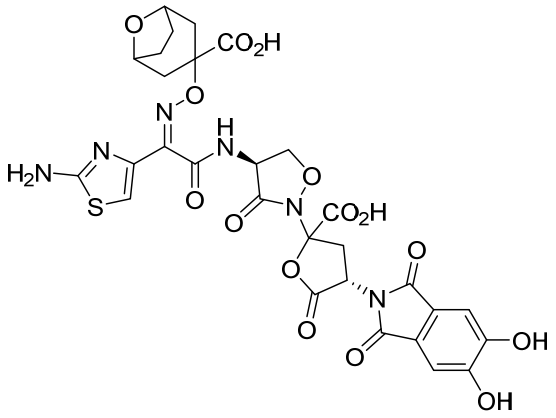


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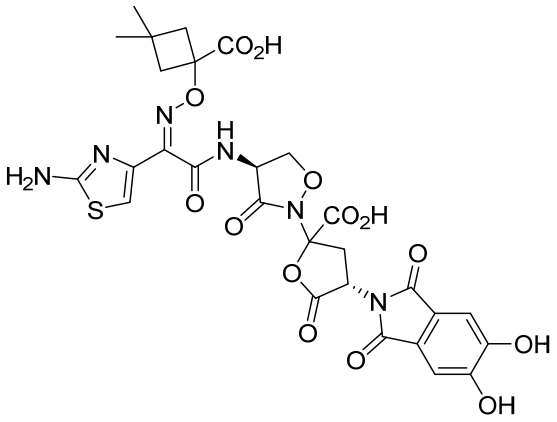


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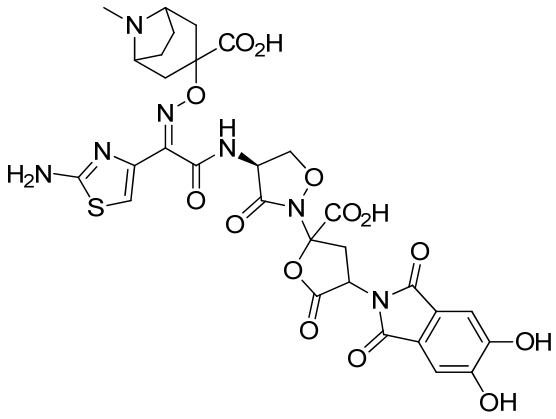
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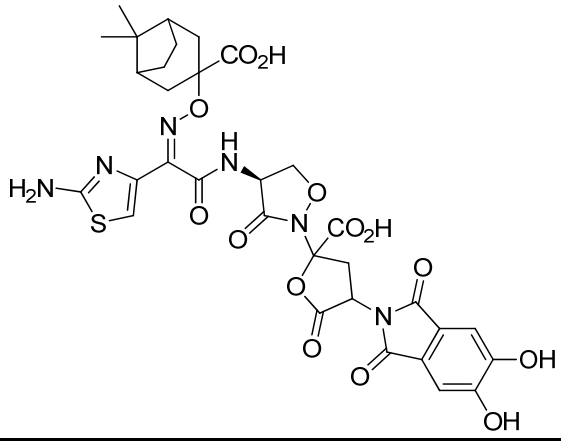
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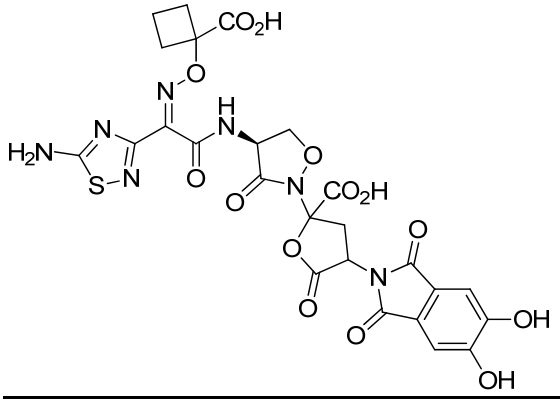
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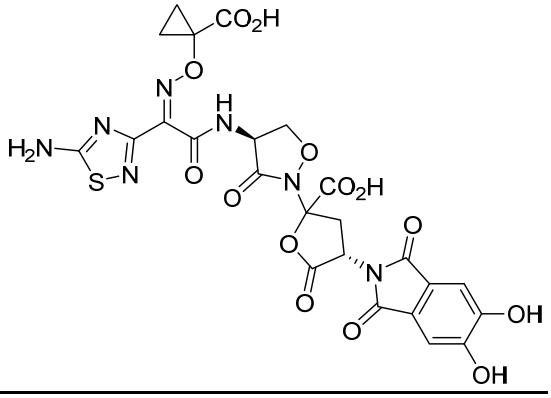
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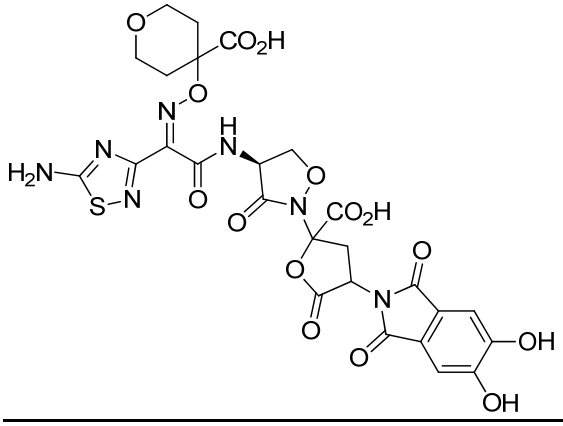
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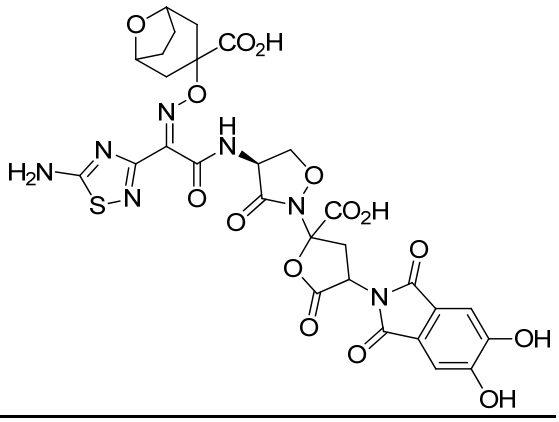
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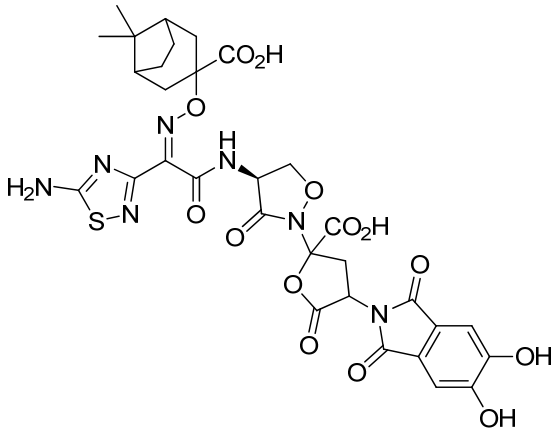
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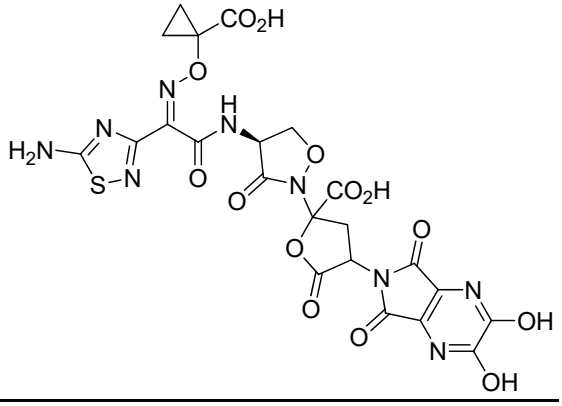
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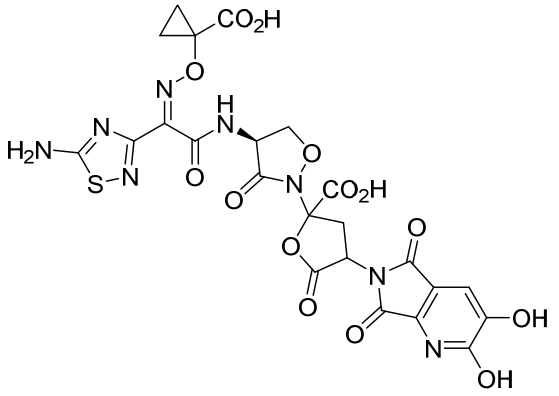
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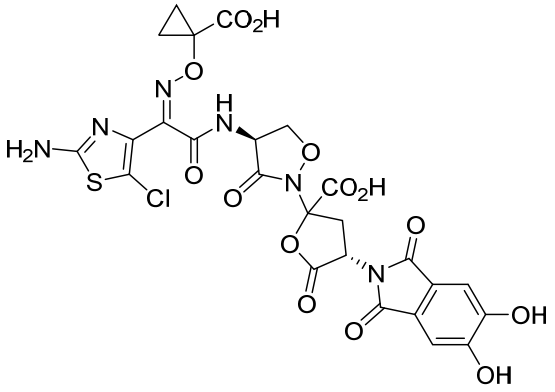
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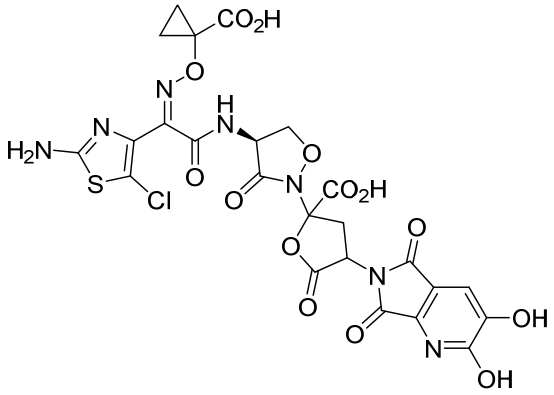
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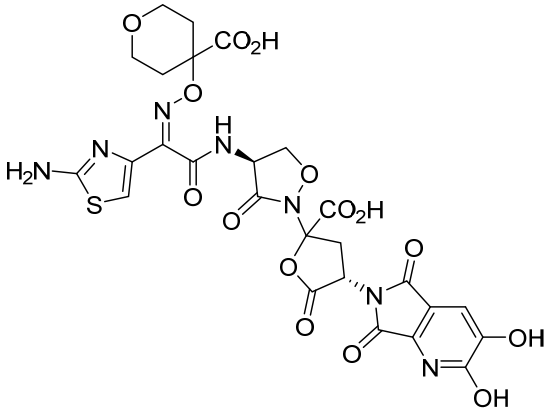
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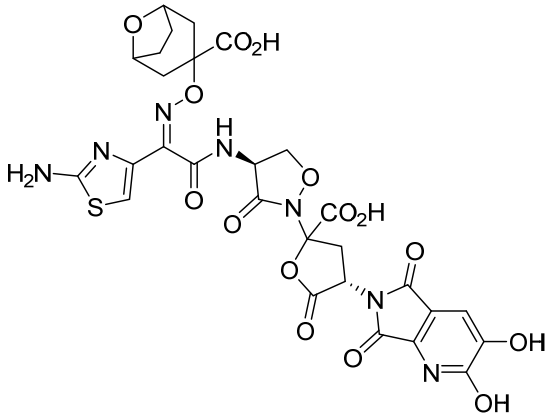
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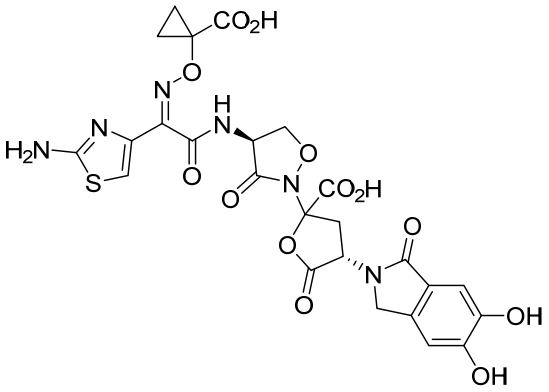
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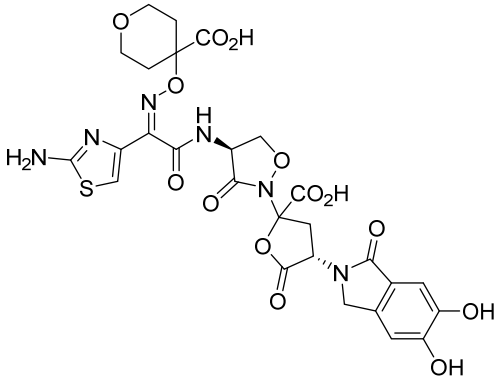
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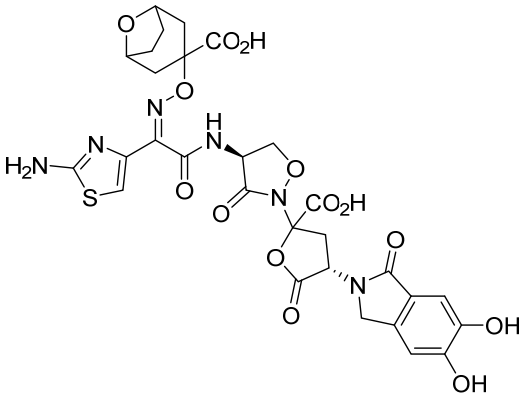
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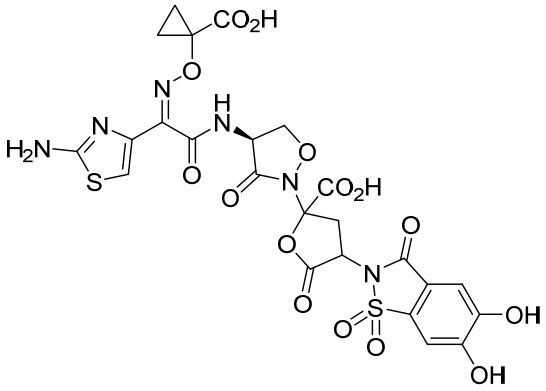
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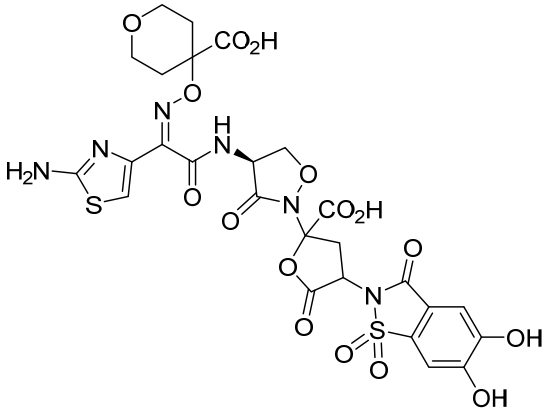
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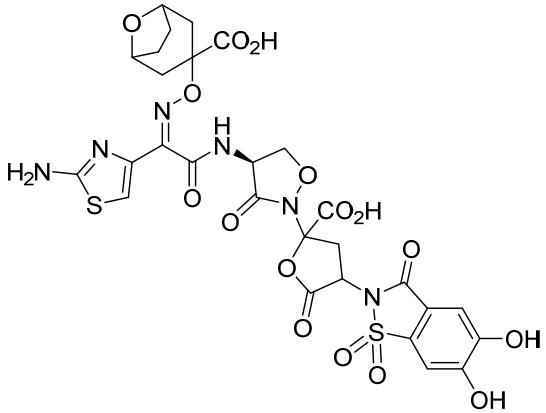
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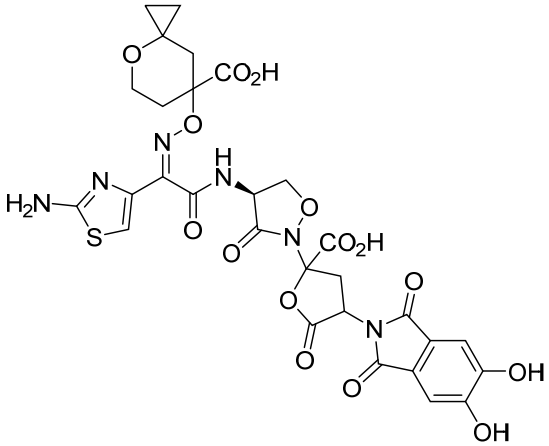
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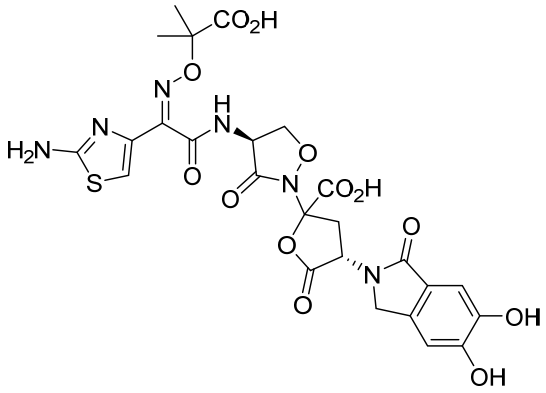
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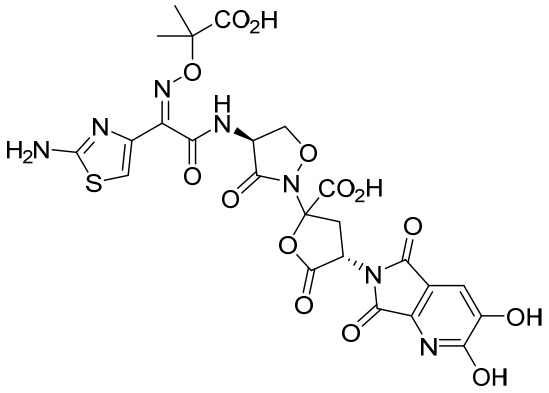
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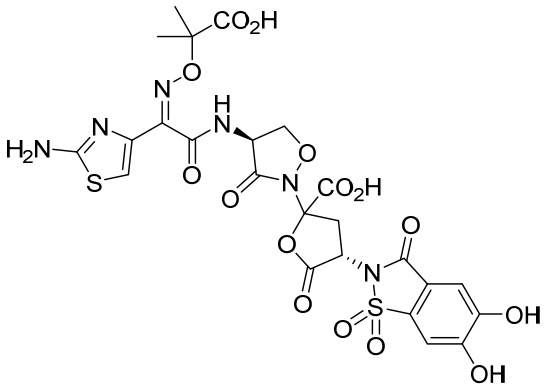
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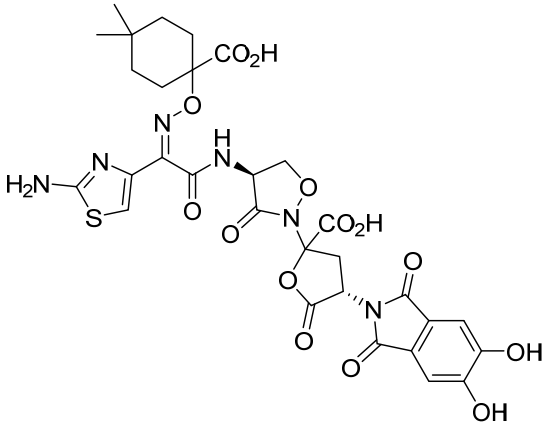


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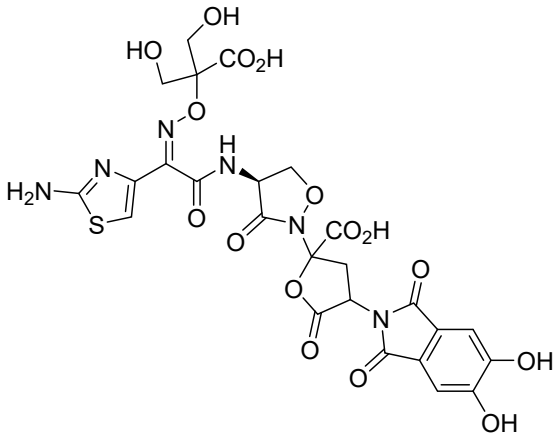


36





37 **38**, or



39 .

11. The compound according to claim 1, wherein the compound of formula (I) is:

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyrazin-6-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-((1-carboxycyclopropoxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxotetrahydrofuran-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclobutyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(3-carboxyoxetan-3-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxy-1-chloro-3-hydroxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)azetidine-3-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

4-((((Z)-1-(2-aminothiazol-4-yl)-2-(((4S)-2-((4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-yl)-3-oxoisoxazolidin-4-yl)amino)-2-oxoethylidene)amino)oxy)-1-methylpiperidine-4-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-(((1-carboxy-4,4-difluorocyclohexyl)oxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-(((1-carboxy-4-chloro-4-fluorocyclohexyl)oxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-carboxylic acid

(4S)-2-((S)-4-((Z)-2-(2-aminothiazol-4-yl)-2-(((1-carboxy-4,4-dichlorocyclohexyl)oxy)imino)acetamido)-3-oxoisoxazolidin-2-yl)-4-(5,6-dihydroxy-1,3-dioxoisoindolin-2-yl)-5-oxotetrahydrofuran-2-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxy-3,3-dimethylcyclobutyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-methyl-8-azabicyclo[3.2.1]octane-3-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(3-carboxy-8,8-dimethylbicyclo[3.2.1]octan-3-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclobutyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(5-amino-1,2,4-thiadiazol-3-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(5-amino-1,2,4-thiadiazol-3-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(3-carboxy-8,8-dimethylbicyclo[3.2.1]octan-3-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-

dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyrazin-6-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(5-amino-1,2,4-thiadiazol-3-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-5-chloro-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-5-chloro-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[(4S)-2-carboxy-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxycyclopropyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolane-2-carboxylic acid

4-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)oxane-4-carboxylic acid

3-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-8-oxabicyclo[3.2.1]octane-3-carboxylic acid

7-({(Z)-[1-(2-amino-1,3-thiazol-4-yl)-2-({(4S)-2-[2-carboxy-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolan-2-yl]-3-oxo-1,2-oxazolidin-4-yl}amino)-2-oxoethylidene]amino}oxy)-4-oxaspiro[2.5]octane-7-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1-oxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(2,3-dihydroxy-5,7-dioxo-5,7-dihydro-6H-pyrrolo[3,4-b]pyridin-6-yl)-5-oxooxolane-2-carboxylic acid

(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,1,3-trioxo-1,3-dihydro-2H-1λ^6,2-benzothiazol-2-yl)-5-oxooxolane-2-carboxylic acid

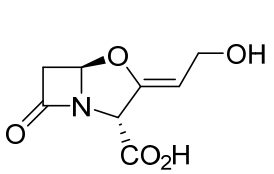
(4S)-2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(1-carboxy-4,4-dimethylcyclohexyl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid, or

2-[(4S)-4-{[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-{[(2-carboxy-1,3-dihydroxypropan-2-yl)oxy]imino}acetyl]amino}-3-oxo-1,2-oxazolidin-2-yl]-4-(5,6-dihydroxy-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)-5-oxooxolane-2-carboxylic acid.

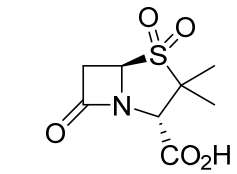
12. A pharmaceutical composition comprising one or more compounds of formula (I) of any one of claims 1-11, or pharmaceutically acceptable salts thereof, and a pharmaceutically acceptable carrier or diluent.

13. A pharmaceutical composition comprising (i) one or more compounds of formula (I) of any one of claims 1-11, or pharmaceutically acceptable salts thereof, (ii) one or more β-lactamase inhibitors, and (iii) a pharmaceutically acceptable carrier or diluent.

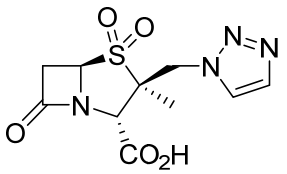
14. The pharmaceutical composition of claim 13, wherein the β-lactamase inhibitors are selected from formula (1^a) to ($1^{z'}$):



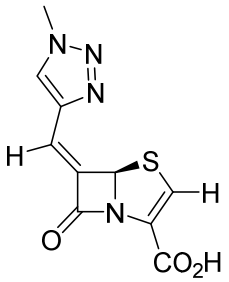
1^a (clavulanic acid)



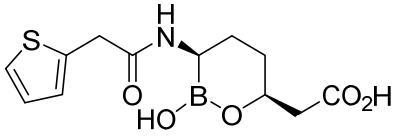
1^b (sulbactam)



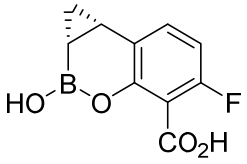
1^c (tazobactam)



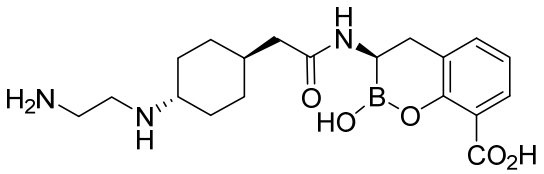
1^d (BRL-42715)



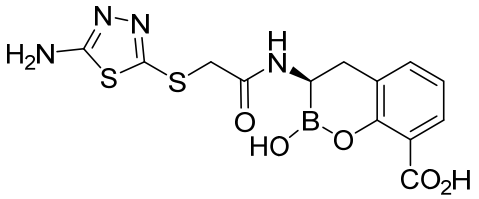
1^e (vaborbactam)



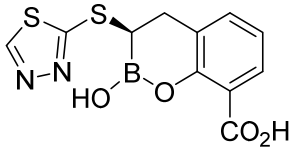
1^f (QPX-7728)

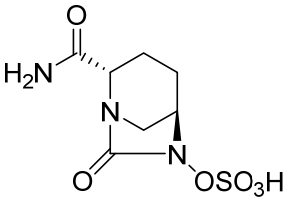


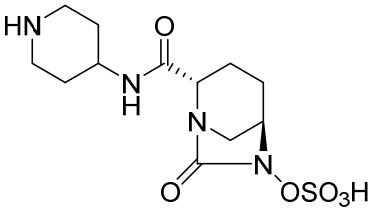
1^g (taniborbactam, VNRX-5133)



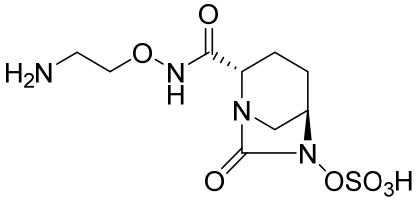
1^h (RPX-7262)

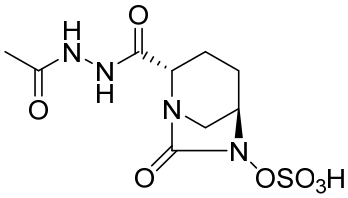


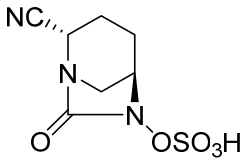




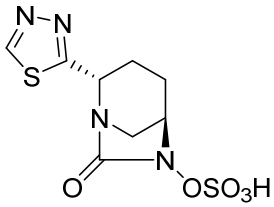
1^{i} (RPX-7282) 1^{j} (NXL-104) 1^{k} (relebactam)

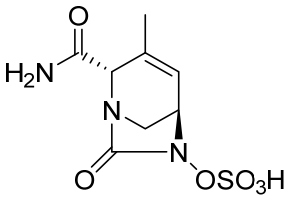


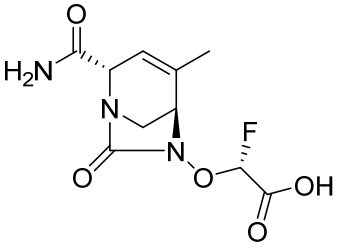




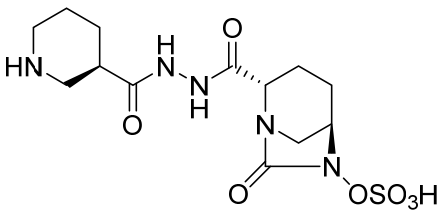
1^{l} (nacubactam) 1^{m} (FPI-1523) 1^{n} (WCK 4234)

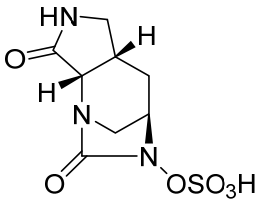


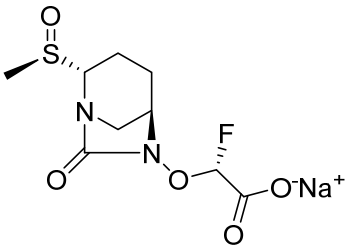




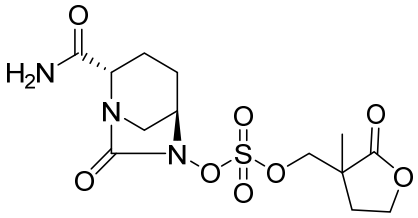
1^{o} 1^{p} (durlobactam) 1^{q} (ETX-1317)

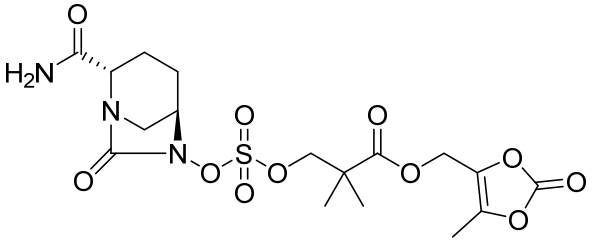




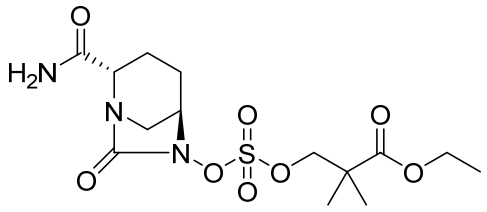


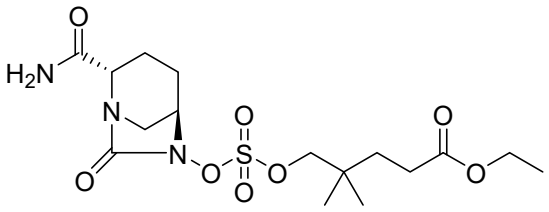
1^{r} (zidebactam) 1^{s} 1^{t}



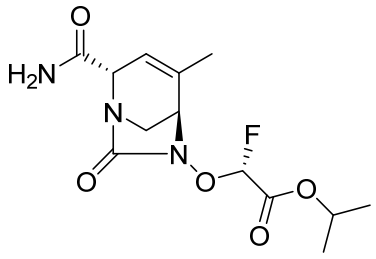


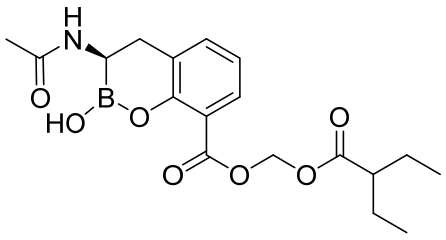
1^{u} 1^{v}



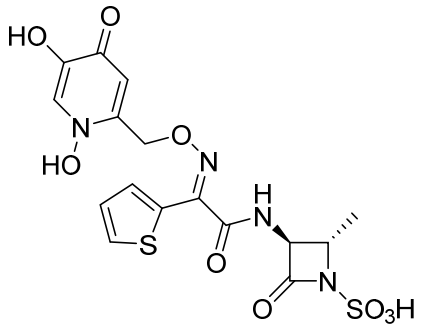


1[w] (ARX-1796) 1[x]





1[y] (ETX-0282) 1[z] (VNRX-7145) and

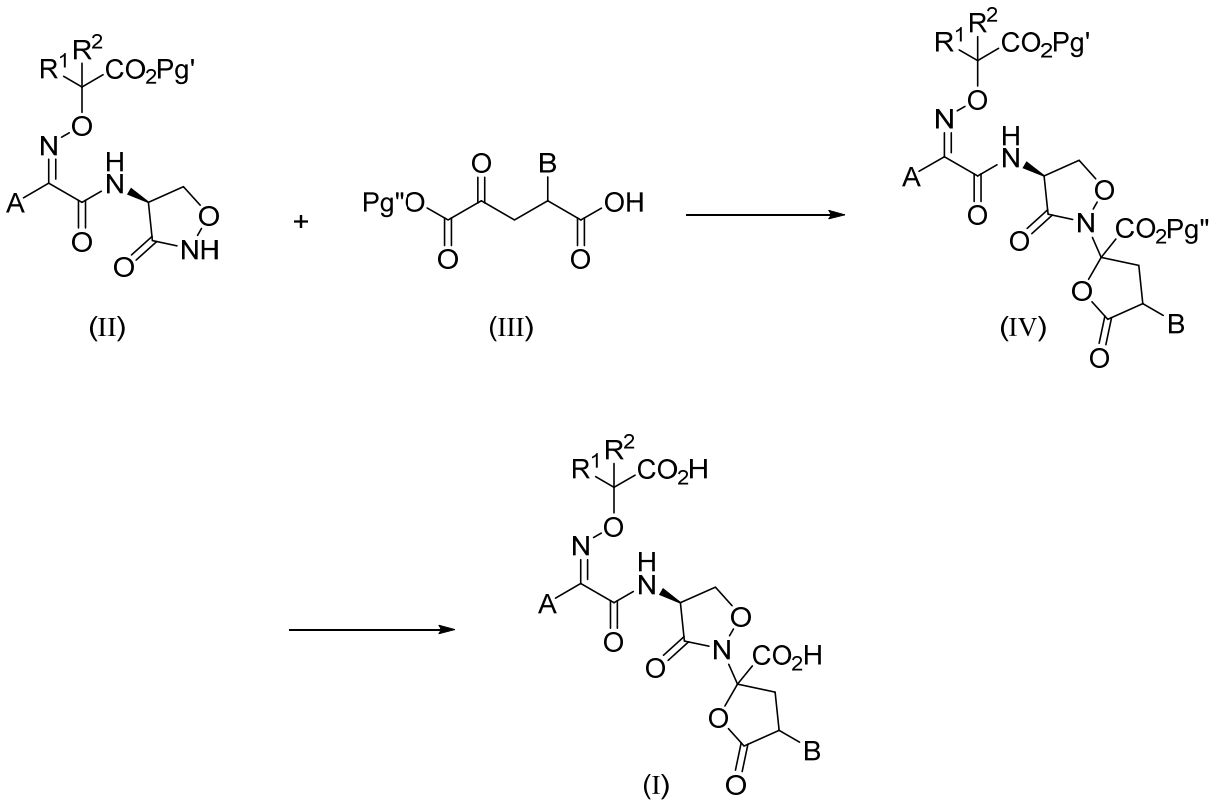


1[z'] (Syn2190) .

15. The pharmaceutical composition of any one of claims 12 to 14 for use in treating or preventing a bacterial infection.

16. A method for preparing a compound of formula (I) according to claim 1, comprising performing the reaction sequence of Scheme 1

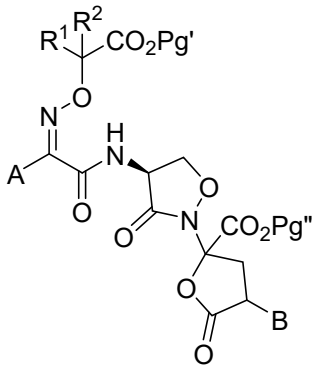
Scheme 1



(II) (III) (IV) (I)

.

17. A method for preparing a compound of formula (I) according to claim 1, comprising removing protecting groups from a compound of formula (IV), wherein Pg' and Pg" represent a protecting group

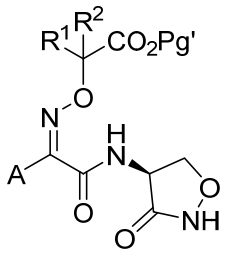


(IV)

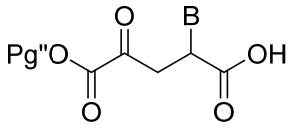
wherein carboxyl protecting groups Pg' and Pg" in formula (IV) are residues of an ester-forming aliphatic or araliphatic alcohol.

18. The method according to claim 17, wherein the carboxyl protecting groups are independently selected from the group consisting of *iso*-propyl, *tert*-butyl, methoxymethyl, ethoxymethyl, *iso*-butoxymethyl, acetoxymethyl, propionyloxymethyl, butyryloxymethyl, pivaloyloxymethyl, 1-methoxycarbonyloxyethyl, 1-ethoxycarbonyloxyethyl, p-methoxybenzyl, benzyl, o-nitrobenzyl, p-nitrobenzyl, 2,4-dinitrobenzyl, benzhydryl, phthalidyl and allyl.

19. The method according to claim 17 or 18, characterized in that compound (IV) is prepared by reacting a compound of formula (II) with a compound of formula (III)

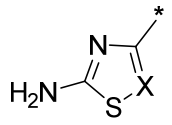


(II)



(III)

where A is defined by formula (Ia)



(Ia)

and wherein X is N or CR^3, and R^3 represents hydrogen or halogen;

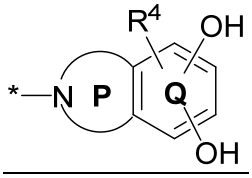
R^1 and R^2, together with the carbon atom to which they are bonded, may form a (C_3 – C_8) cycloalkyl, wherein

(i) the cycloalkyl may contain one heteroatom selected from O, N and S, and/or

(ii) the cycloalkyl may be substituted with one, two, three or four substituents selected independently of one another from the group consisting of (C_1 – C_3) alkyl and halogen; or

R^1 and R^2 may, independently of one another, represent hydrogen or (C_1-C_3) alkyl, wherein (C_1-C_3) alkyl may be substituted with a substituent selected from hydroxy and chlorine;

B is a bicyclic catechol or hydroxypyridone moiety bearing fragment defined by formula (Ia')



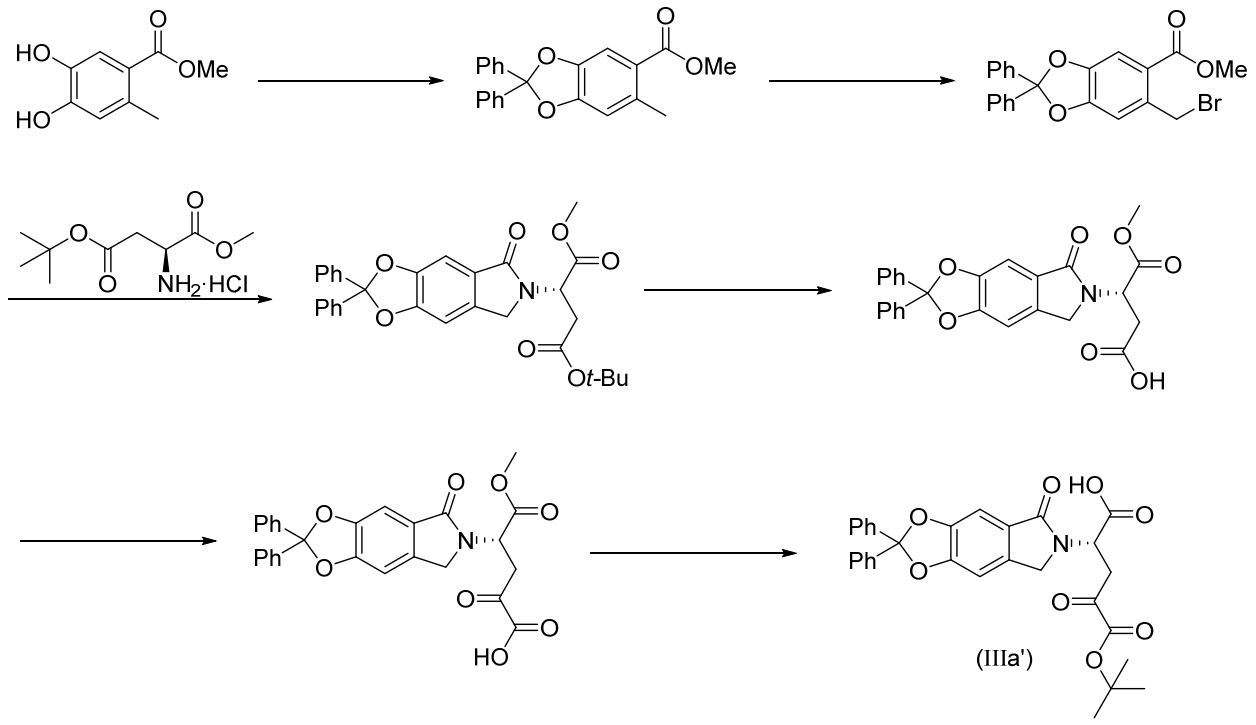
(Ia')

wherein P is an unsaturated 5-membered or 6-membered ring, which optionally may contain one carbonyl (CO) group, or two carbonyl (CO) groups, or one sulfone (SO_2) group, or a combination of one carbonyl (CO) and one sulfone (SO_2) group, and may further contain up to two additional N atoms; and

wherein Q may contain up to two N atoms, and wherein R^4 is selected from the group consisting of hydrogen, (C_1 – C_3) alkyl, carbonyl, trifluoromethyl, cyano and a halogen.

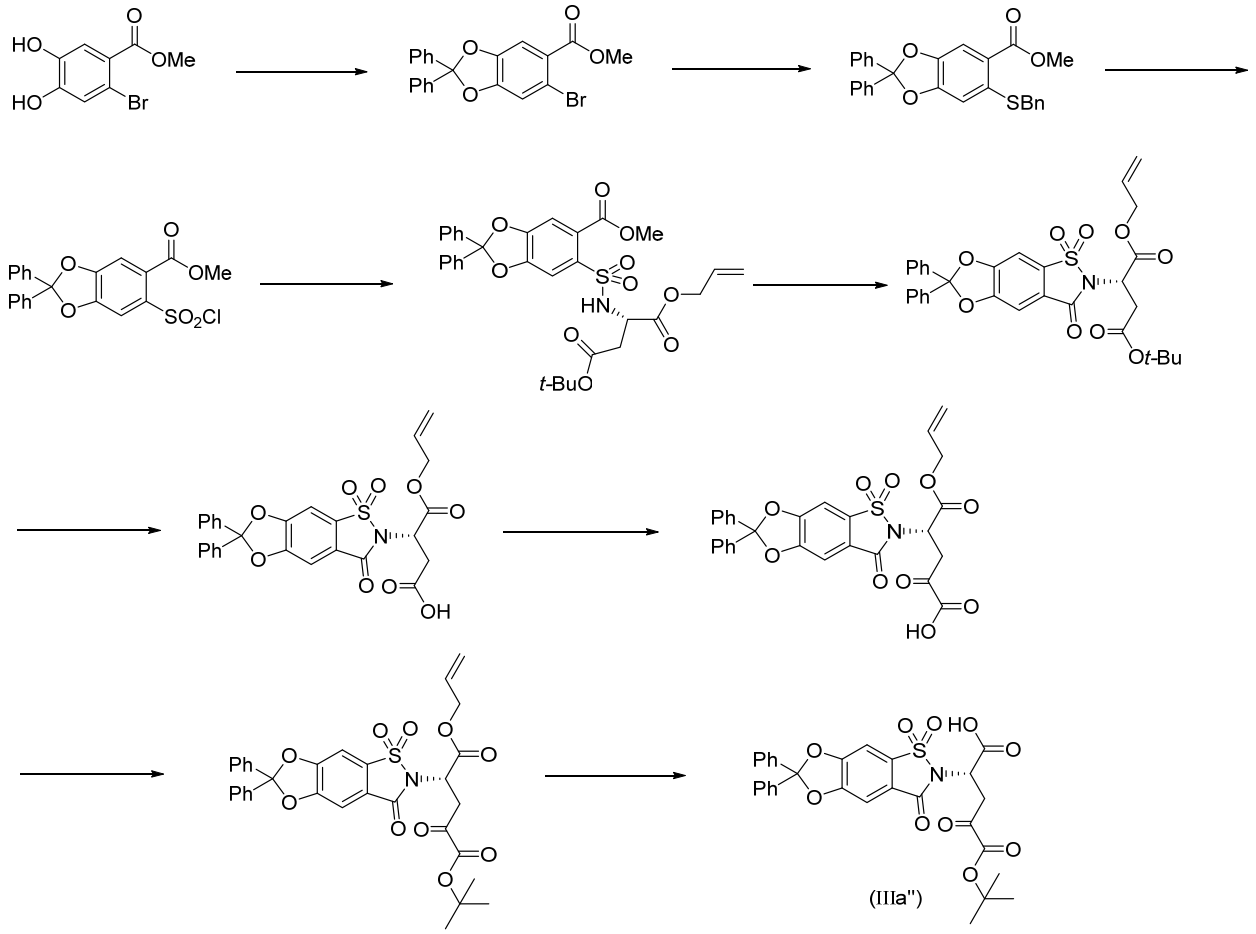
20. The method according to claim 19, wherein the compound of formula (III) is prepared by the reaction sequence of Scheme 2 to provide an intermediate of formula (IIIa')

Scheme 2



21. The method according to claim 19, wherein the compound of formula (III) is prepared by the reaction sequence of Scheme 3 to provide an intermediate of formula (IIIa'')

Scheme 3



22. The method according to claim 19, wherein the coupling reaction of intermediate (II) with intermediate (III) occurs in inert solvents in the presence of a coupling reagent at a temperature ranging from -20 °C to 80 °C for 1 to 24 hours.

23. The method according to claim 22, wherein the inert solvents are one or more of dichloromethane, toluene, tetrahydrofuran, 1,4-dioxane, *N*,*N*-dimethylformamide, *N*,*N*-dimethylacetamide, acetonitrile, and tetrahydrofuran.

24. The method according to claim 22, wherein the coupling reagent is one or more of *N*,*N*'-diethylcarbodiimide, *N*,*N*'-dipropylcarbodiimide, *N*,*N*'-diisopropylcarbodiimide, *N*,*N*'-dicyclohexylcarbodiimide, *N*-ethyl-*N*'-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC), carbonyldiimidazole (CDI), O-(benzotriazol-1-yl)-*N*,*N*, *N'*,*N'*-

tetramethyluroniumhexafluorophosphate (HBTU), O-(7-azabenzotriazol-1-yl)-*N,N,N',N'*-tetramethyluroniumhexafluorophosphate (HATU), 1-hydroxybenzotriazole (HOBt), (benzotriazol-1-yloxy)tris(dimethylamino)phosphonium hexafluorophosphate (BOP), (benzotriazol-1-yloxy)tripyrrolidinophosphonium hexafluorophosphate (PyBOP), and *N*-hydroxysuccinimide, and mixtures thereof, with or without addition of a base.

25. The method according to claim 22, further comprising addition of a base to the coupling reaction, wherein the base is one or more of a carbonate, a bicarbonate, triethylamine, diisopropylethylamine, *N*-methylmorpholine, *N*-methylpiperidine and 4-dimethylaminopyridine.

26. Use of the pharmaceutical composition of any one of claims 12 to 14 for the manufacture of a medicament for treating or preventing a bacterial infection.

27. The use of claim 26, wherein the bacterial infection is caused by a bacteria of one or more of *Enterobacterales, Escherichia coli*, *Enterobacter* spp., *Klebsiella* spp., *Serratia* spp., *Pseudomonas* spp., *Stenotrophomonas* spp., *Citrobacter* spp., *Acinetobacter* spp., *Campylobacte*r spp., *Helicobacter* spp., *Vibrio* spp., *Bordetella* spp., *Salmonella* spp., *Shigella* spp., *Francisella* spp., *Burkholderia* spp., *Clostridia* spp., *Alcaligenes* spp., *Moraxella* spp., *Proteus* spp., *Neisseria* spp., *Haemophilus* spp., *Achromobacter* spp. and *Erwinia* spp.

28. A compound of formula (I) according to claim 1 when prepared by the method of any one of claims 16 to 25.