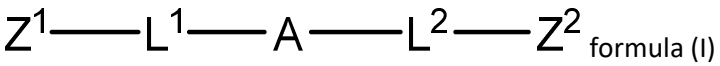
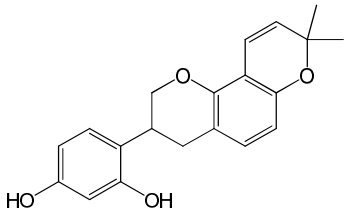
In another example, there is provided a process for preparing a compound as defined above, comprising the step of contacting a hydrophobic moiety with an N-containing moiety under reaction conditions.

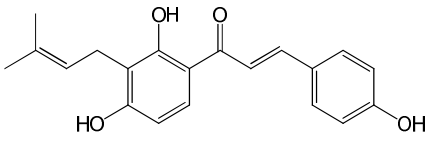
In another aspect, there is provided a process of preparing a compound,wherein the compound has the following formula (I):



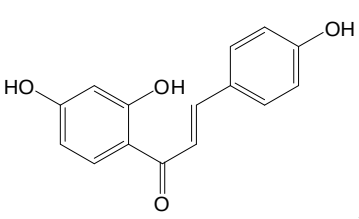
formula (I)

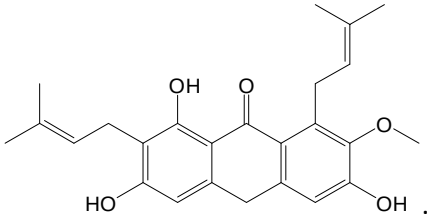
wherein A is a hydrophobic moiety selected from the group consisting of:

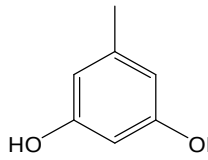


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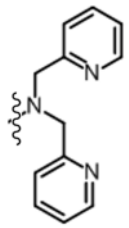


,


.


L^1 and L^2 are independently a linker, wherein the linker is independently a C_2 – C_6 alkyl; and

Z^1 and Z^2 independently has the following structure:



,

wherein the broken bond represents where the structure attaches to the remainder of formula (I), and

wherein the process comprises the steps of:

1) contacting a hydrophobic moiety with a linker under reaction conditions; and

2) contacting the linker with a N-containing moiety under reaction condition.

In another aspect, there is provided a process of preparing a compound, wherein the compound has the following formula (I):

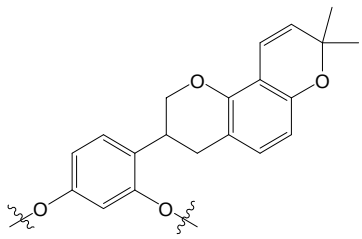
$$Z^1——L^1——A——L^2——Z^2$$ formula (I)

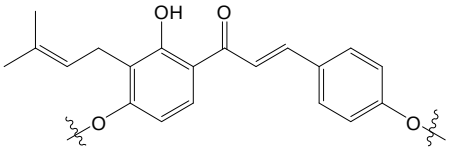
Claims

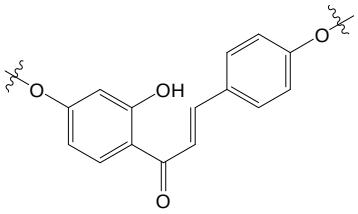
1. A compound having the following formula (I):

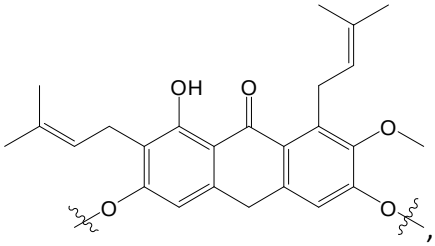
Z^1——L^1——A——L^2——Z^2 formula (I)

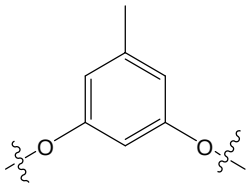
wherein A is a hydrophobic moiety selected from the group consisting of:



,


,


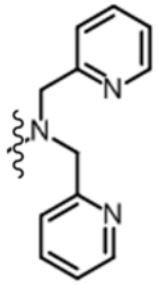
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and any mixture thereof;

L^1 and L^2 are independently a linker, wherein the linker is independently a C_2 – C_6 alkyl; and

Z^1 and Z^2 independently has the following structure:

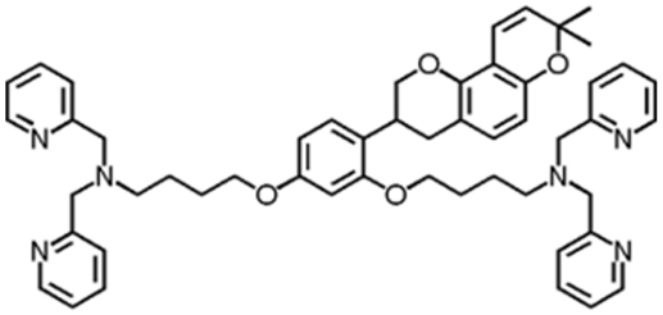


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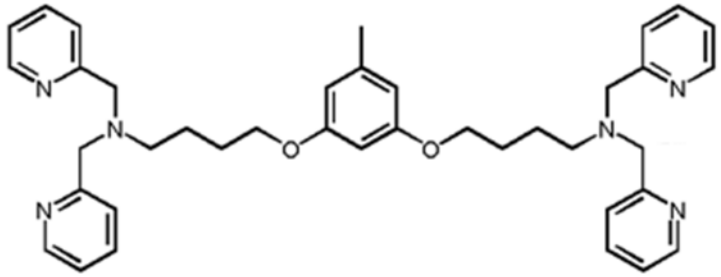
wherein the broken bond represents where the structure attaches to the remainder of formula (I).

2. The compound according to claim 1, wherein the compound of formula (I) has a logP value greater than 4.

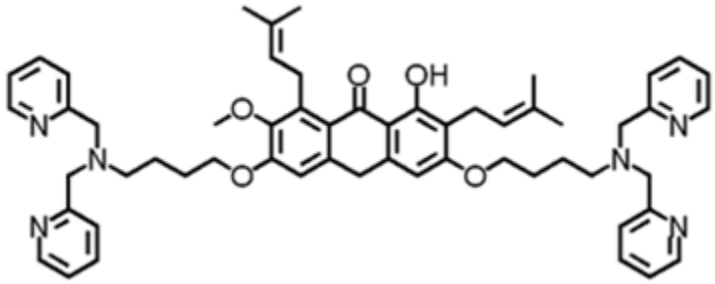
3. The compound according to claim 1 or 2, wherein the compound of formula (I) has the following structure:



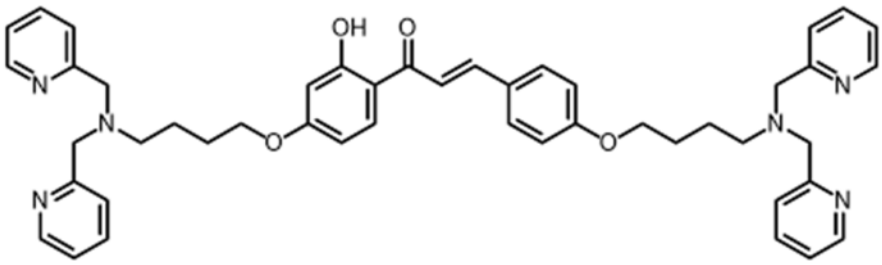
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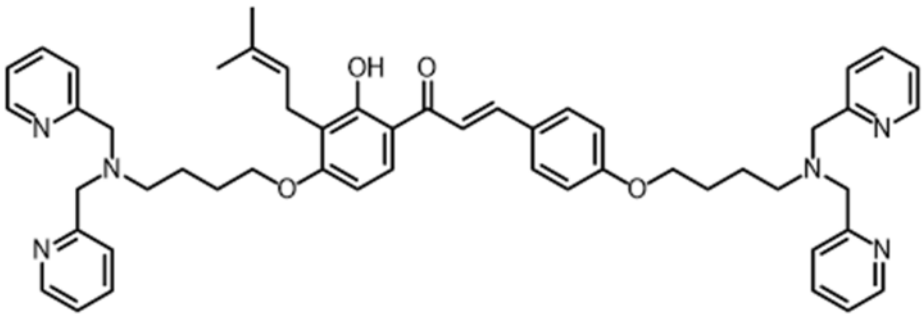
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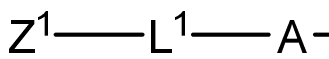


, or



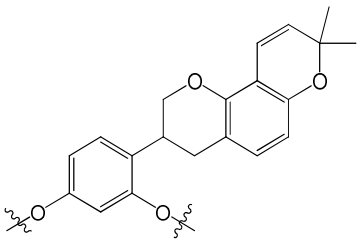
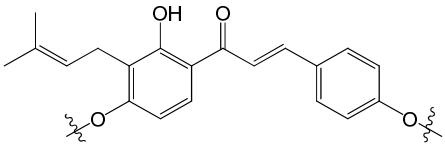
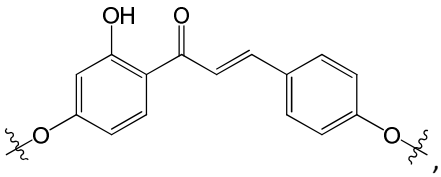
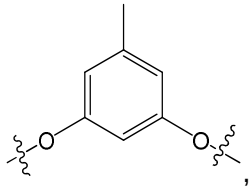
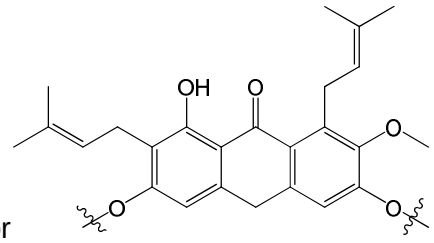
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4. A compound having the following formula (I):



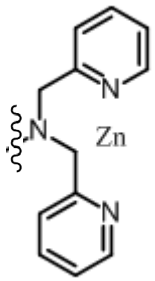
formula (I)

wherein A is a hydrophobic moiety selected from the group consisting of:


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,

,

, or

;

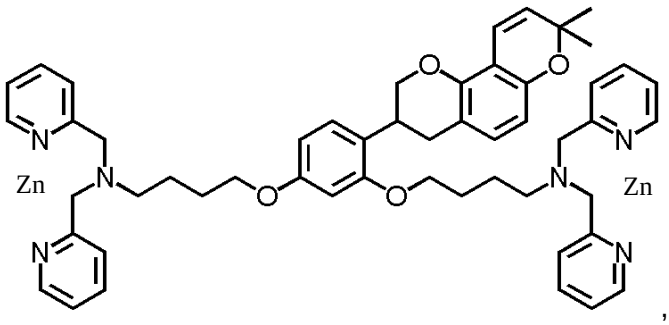
L^1 and L^2 is independently a linker, wherein the linker is independently a C_2 – C_6 alkyl; and

Z^1 and Z^2 independently has the following structure:

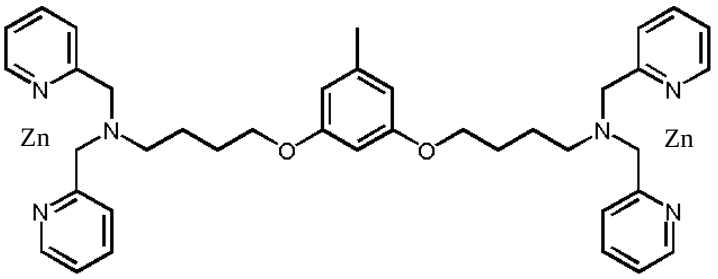

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wherein the broken bond represents where the structure attaches to the remainder of formula (I).

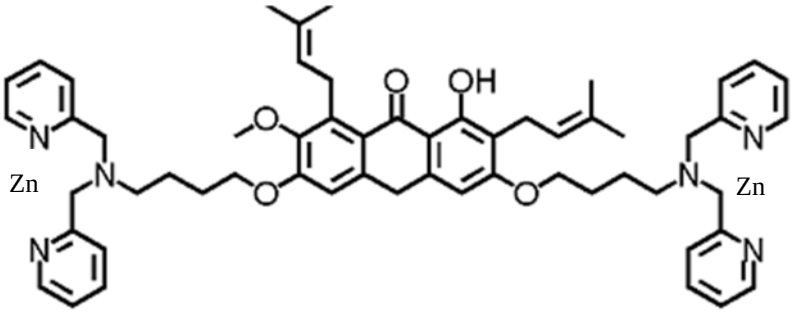
5. The compound of according to claim 4, wherein the compound of formula (I) has the following structure:



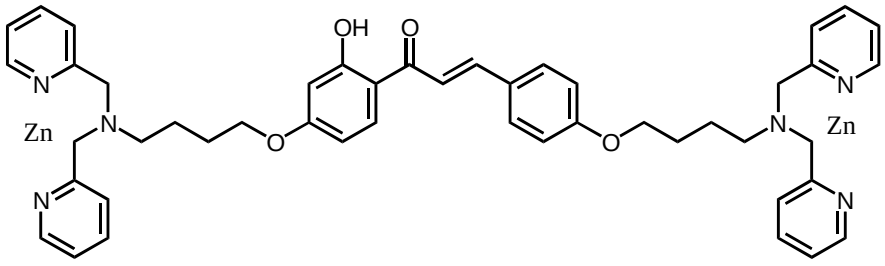
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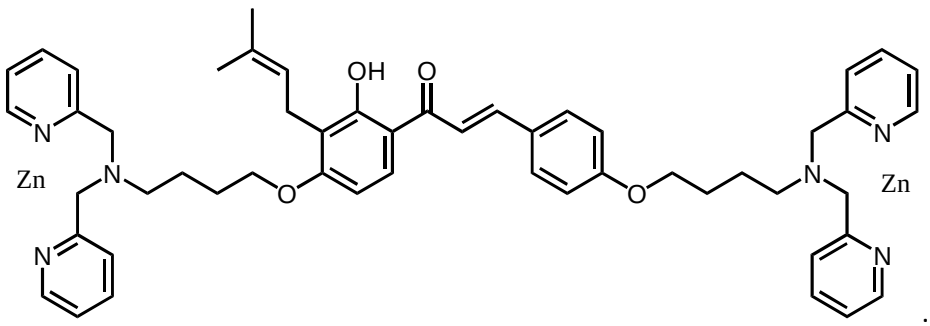
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, or



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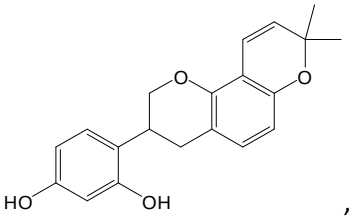
6. A pharmaceutical composition comprising a compound according to claim 4 or 5, or a pharmaceutically acceptable salt or hydrate thereof, in association with a pharmaceutically acceptable carrier.

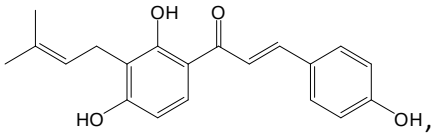
7. The pharmaceutically composition according to claim 6, wherein the pharmaceutically acceptable carrier is saline.

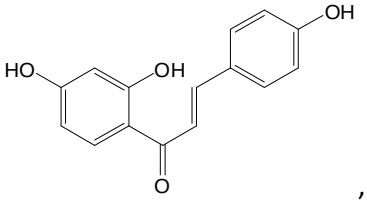
8. A process of preparing a compound, wherein the compound has the following formula (I):

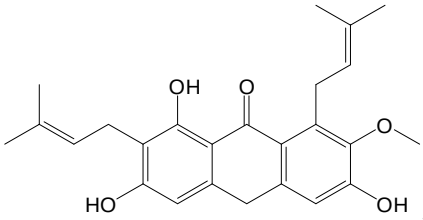
Z^1——L^1——A——L^2——Z^2 formula (I)

wherein A is a hydrophobic moiety selected from the group consisting of:



,


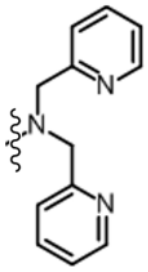
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, HO OH;

L^1 and L^2 are independently a linker, wherein the linker is independently a C_2 – C_6 alkyl; and

Z^1 and Z^2 independently has the following structure:

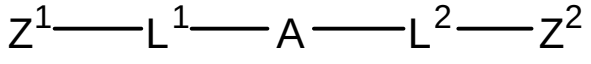


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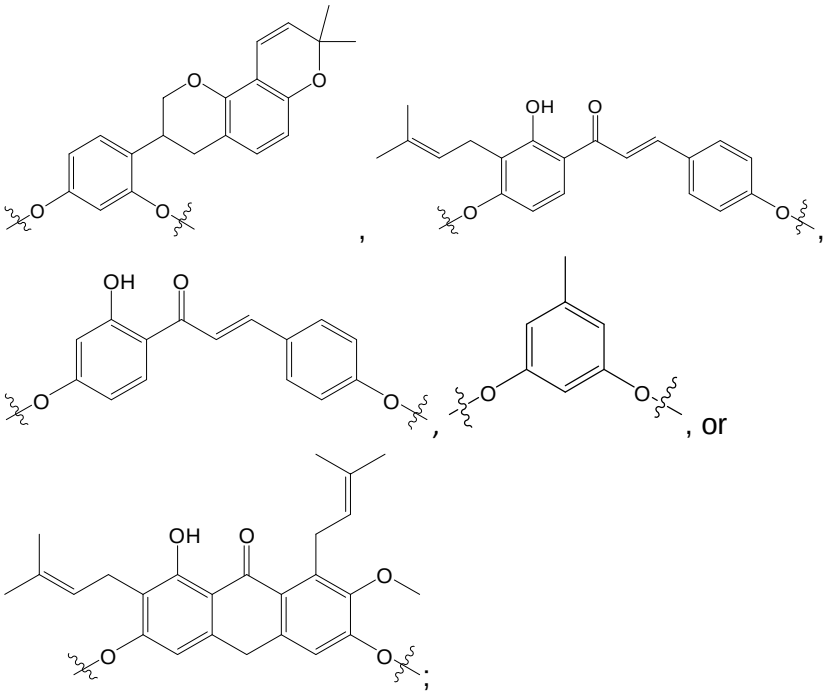
wherein the broken bond represents where the structure attaches to the remainder of formula (I), and

wherein the process comprises the steps of:
1) contacting a hydrophobic moiety with a linker under reaction conditions; and
2) contacting the linker with a N-containing moiety under reaction conditions.

9. A process of preparing a compound, wherein the compound has the following formula (I):

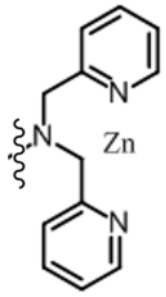

formula (I)

wherein A is a hydrophobic moiety selected from the group consisting of :



L^1 and L^2 are independently a linker, wherein the linker is independently a C_2 – C_6 alkyl; and

Z^1 and Z^2 independently has the following structure:



wherein the broken bond represents where the structure attaches to the remainder of formula (I), and

wherein the process comprises the steps of:
1) contacting a hydrophobic moiety with a linker under reaction conditions;
2) contacting the linker with a N-containing moiety under reaction conditions; and
3) adding zinc after the N-containing moiety is covalently bonded to the linker.

10. The process according to claim 8 or 9, wherein a covalent bond is formed between the hydrophobic moiety and the linker or between the linker and the N-containing moiety.

11. The process according to any one of claims 8 to 10, wherein the linker is selected from the group consisting of 1,4-dibromobutane, 1,3-diiodobutane, 1,2-dibromoethane, 1,3-dibromopropane, 1,4-diiodobutane and any combination thereof.

12. The process according to any one of claims 8 to 11, wherein the contacting is done in a solvent selected from the group consisting of acetone, methanol, ethanol, propanol, butanol, N,N-dimethylformamide, dimethylsulfoxide, tetrahydrofuran, dichloromethane, pyridine, water and any mixture thereof.

13. The process according to any one of claims 8 to 12, wherein the contacting step is performed at a temperature in the range of 21 °C to 160 °C.

14. The process according to any one of claims 8 to 13, wherein the contacting step is performed for a duration in the range of 2 hours to 36 hours.

15. Use of the compound according to claim 4 or 5 or the pharmaceutical composition according to claim 6, to kill a bacetrium in vitro, wherein the compound according to claim 4 or 5 or the pharmaceutical composition according to claim 6 is used in conjunction with colistin.

16. The use according to claim 15, wherein the bacterium is a Gram negative or Gram positive bacterium.

17. The use according to claim 15 or 16, wherein the bacterium is MCR positive or MCR negative.

18. The use according to any one of claims 15 to 17, wherein the bacterium is carbapenem-resistant.

19. A compound according to claim 4 or 5 for use in therapy.

20. Use of a compound according to claim 4 or 5 in the manufacture of a medicament for the treatment of a bacterial infection, wherein the compound according to claim 4 or 5 is to be administered in conjunction with colistin.

21. The use according to claim 20, wherein the compound according to claim 4 or 5 is present at an amount in the range of 2 µg/mL to 75 µg/mL.

22. The use according to claim 20 or 21, wherein the compound according to claim 4 or 5 and colistin are present at an equal amount by weight, or the compound according to claim 4 or 5 is present in excess of 1.5 to 6 times of colistin by weight.

23. The use according to any one of claims 20 to 22, wherein colistin is present at a range of 1 mg/kg to 10 mg/kg and the compound according to claim 4 or 5 is present at a range of 10 mg/kg to 50 mg/kg.

24. The use according to any one of claims 20 to 23, wherein the compound according to claim 4 or 5 is to be administered intramuscularly, intraperitoneally, topically, subcutaneously or intravenously.