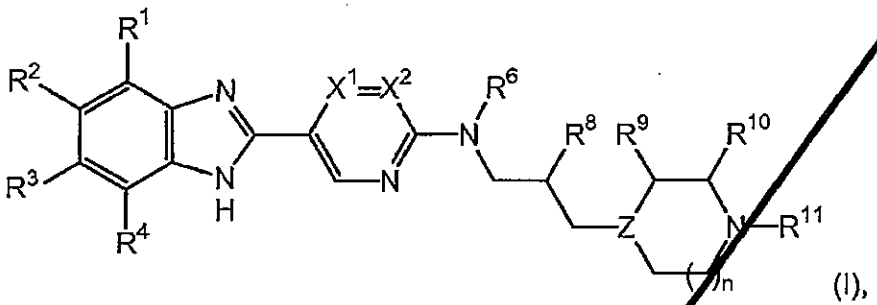
We Claim:

1. A process for the preparation of a compound of formula (I)



(I),

wherein

R^1, R^2, R^3 and R^4 are each independently selected from the group consisting of H, C_{1-4}alkyl, C_{2-4}alkenyl, C_{2-4}alkynyl, phenyl, $-CF_3$, $-OCF_3$, -CN, halo, $-NO_2$, $-OC_{1-4}$alkyl, $-SC_{1-4}$alkyl, $-S(O)C_{1-4}$alkyl, $-SO_2C_{1-4}$alkyl, $-C(O)C_{1-4}$alkyl, -C(O)phenyl, $-C(O)NR^aR^b$, $-CO_2C_{1-4}$alkyl, $-CO_2H$, $-C(O)NR^aR^b$, and $-NR^aR^b$; wherein R^a and R^b are each independently selected from the group consisting of H, C_{1-4}alkyl, and C_{3-7}cycloalkyl;

X^1 is C-R^c; wherein R^c is selected from the group consisting of H, methyl, hydroxymethyl, dimethylaminomethyl, ethyl, propyl, isopropyl, $-CF_3$, cyclopropyl, and cyclobutyl;

X^2 is N;

n is 1 or 2;

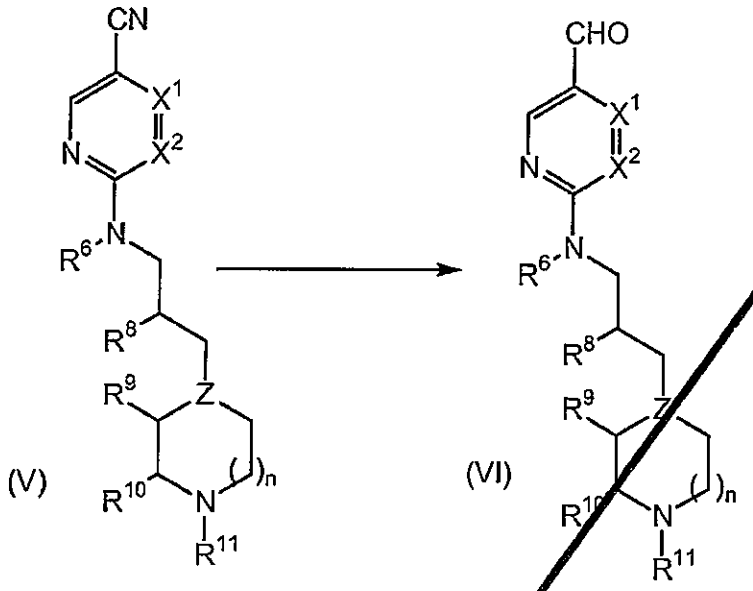
Z is selected from the group consisting of N, CH, and $C(C_{1-4}alkyl)$;

R^6 is selected from the group consisting of H, C_{1-6}alkyl, and a monocyclic cycloalkyl;

R^8 is selected from the group consisting of H and C_{1-4}alkyl;

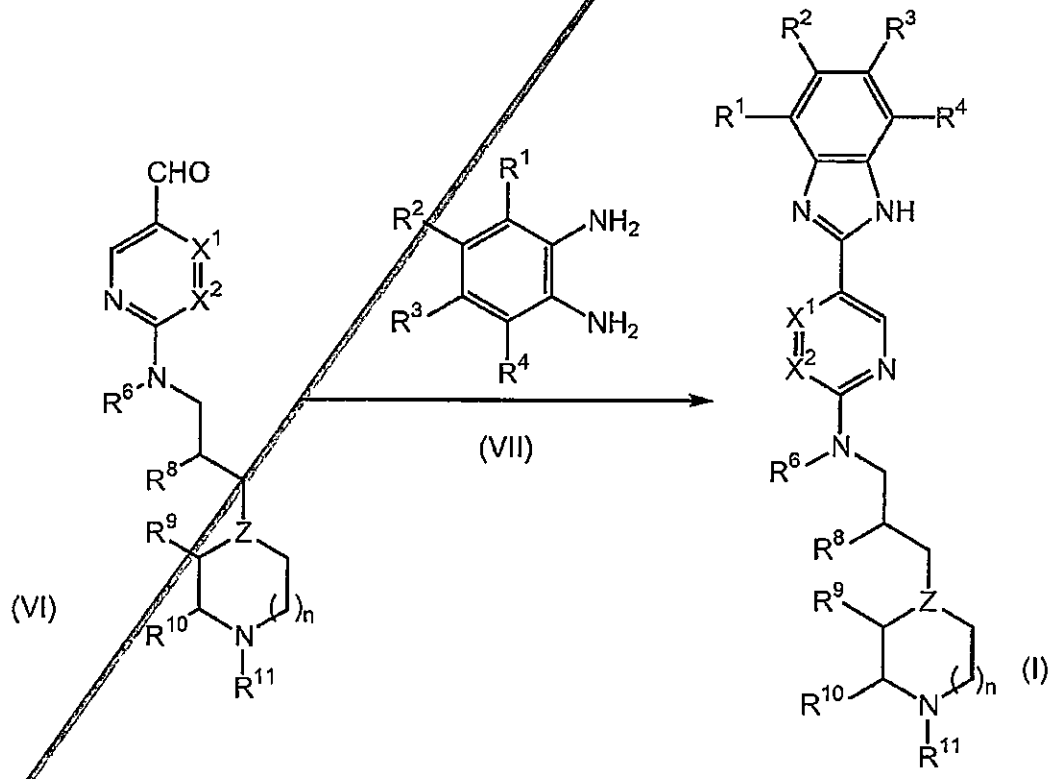
R^9, R^{10} and R^{11} are each independently selected from the group consisting of H and C_{1-4}alkyl;

or pharmaceutically acceptable salt, or pharmaceutically acceptable prodrug, or pharmaceutically active metabolite thereof; comprising



(V) (VI)

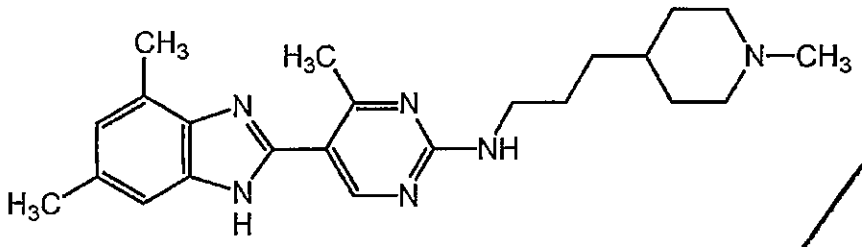
reacting a compound of formula (V) with a reducing agent system; in a solvent; at a temperature in the range of from about 0°C to about 25°C, to yield compound of formula (VI); and



(VI) (VII) (I)

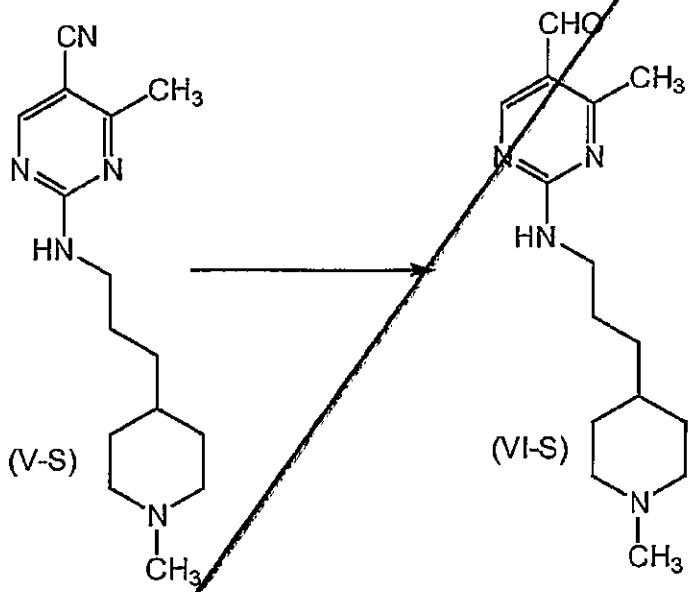
reacting compound of formula (VI) with a compound of formula (VII) in the presence of an oxidizing agent system, in a solvent, at a temperature in the range of from about 25°C to about 100°C.

2. A process for the preparation of a compound of formula (I-A)

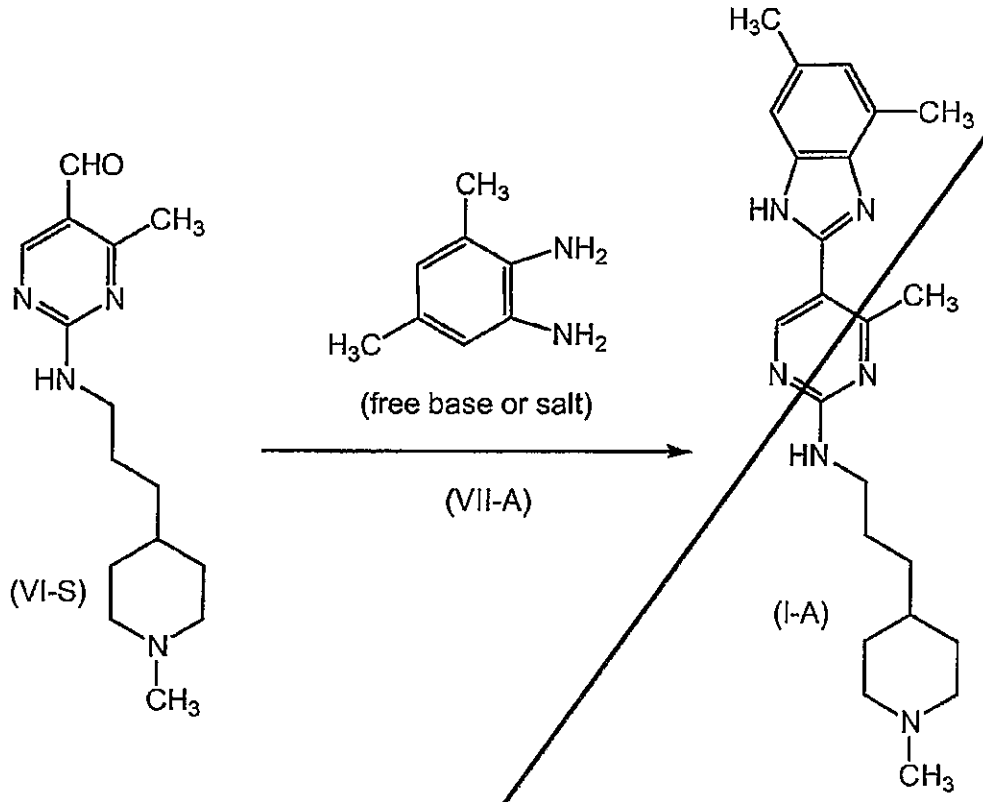


(I-A)

or pharmaceutically acceptable salt, or pharmaceutically acceptable prodrug, or pharmaceutically active metabolite thereof; comprising



reacting a compound of formula (V-S) with a reducing agent system; in a solvent; at a temperature in the range of from about 0°C to about 25°C, to yield compound of formula (VI-S);



reacting compound of formula (VI-S) with a compound of formula (VII-A) in the presence of an oxidizing agent system, in a solvent, at a temperature in the range of from about 25°C to about 100°C, to yield compound of formula (I-A).

3. A process as in Claim 2 wherein the reducing agent system is selected from the group consisting of Diabl-H, and RANEY® nickel and a source of hydrogen.

4. A process as in Claim 2, wherein the reducing agent system is DIBAL-H; wherein the DIBAL-H is present in an amount in the range of from about 1.0 to about 5.0 molar equivalents; and wherein the solvent in said reacting a compound of formula (V-S) is selected from the group consisting of anhydrous toluene and anhydrous THF.

5. A process as in Claim 4, wherein DIBAL-H is present in an amount of about 2.5 molar equivalents.

6. A process as in Claim 2, wherein the reducing agent system is RANEY® nickel and a source of hydrogen; wherein the source of hydrogen is formic acid; and wherein the solvent in said reacting a compound of formula (V-S) is water.

7. A process as in Claim 6, wherein the RANEY® nickel is present in an amount in of about 200% by weight and wherein the formic acid is present in an excess amount.

8. A process as in Claim 2, wherein compound of formula (V-S) is reacted with the reducing agent system at a temperature of about 5 to about 25°C.

9. A process as in Claim 2, wherein compound of formula (VII-A) is present as its corresponding free base.

10. A process as in Claim 2, wherein the compound of formula (VII-A) is present in an amount in the range of from about 1.0 to about 1.25 molar equivalents.

11. A process as in Claim 10, wherein the compound of formula (VII-A) is present in an amount in the range of from about 1.0 to about 1.1 molar equivalents.

12. A process as in Claim 2, wherein the oxidizing agent system is selected from the group consisting of $Na_2S_2O_5$/air and Na_2SO_3/air.

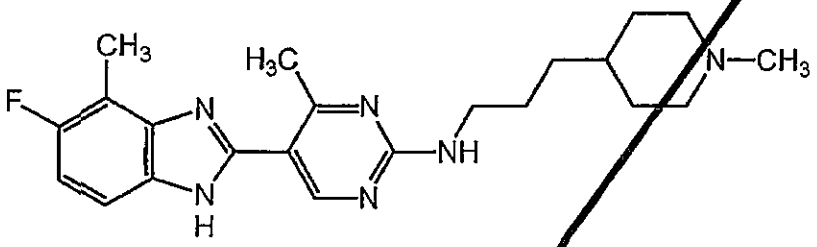
13. A process as in Claim 2, wherein the oxidizing agent or oxidizing agent system is present in an amount in the range of from about 0.90 to about 1.5 molar equivalents.

14. A process as in Claim 13, wherein the oxidizing agent system is present in an amount of about 1.0 molar equivalents.

15. A process as in Claim 2, wherein the compound of formula (VI-S) is reacted with compound of formula (VII-A) in water.

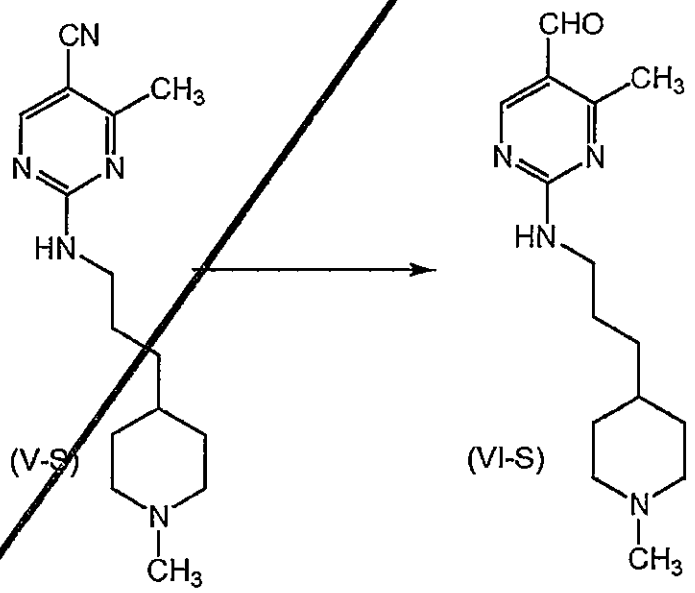
16. A process as in Claim 2, wherein the compound of formula (VI-S) is reacted with compound of formula (VII-A) at a temperature in the range of from about 55°C to about 65°C.

17. A process for the preparation of a compound of formula (I-B)

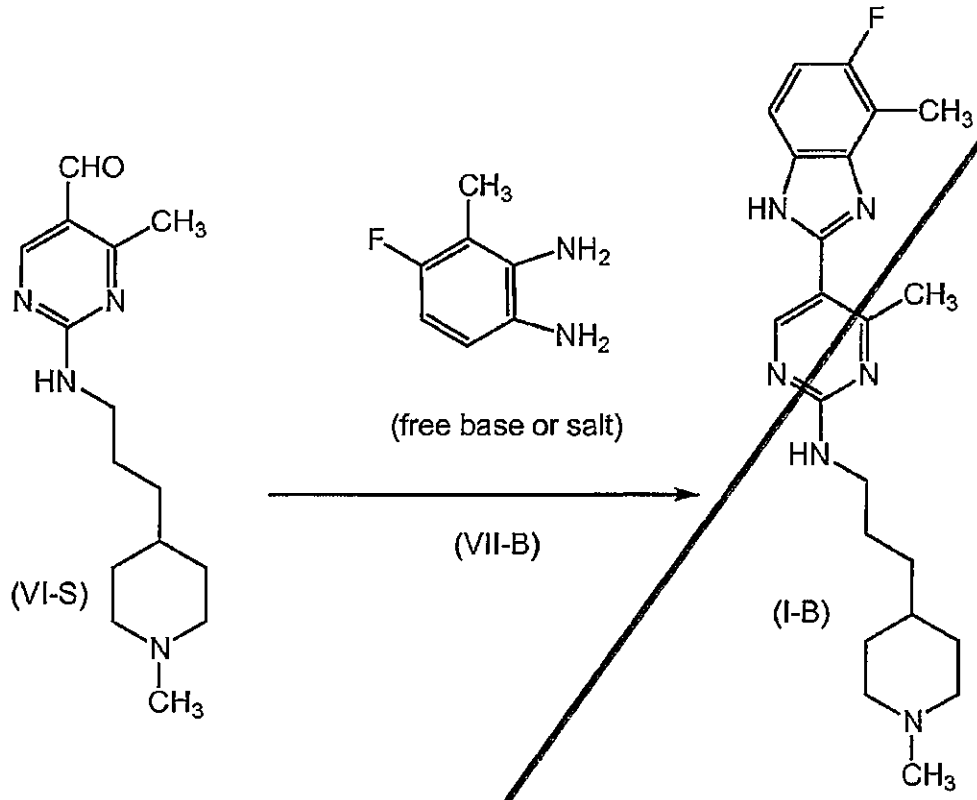


(I-B)

or pharmaceutically acceptable salt, or pharmaceutically acceptable prodrug, or pharmaceutically active metabolite thereof; comprising



reacting a compound of formula (V-S) with a reducing agent system; in a solvent; at a temperature in the range of from about 0°C to about 25°C; to yield compound of formula (VI-S); and



reacting the compound of formula (VI-S) with a compound of formula (VII-B) in the presence of an oxidizing agent system, in a solvent at a temperature in the range of from about 25°C to about 100°C, to yield compound of formula (I-B).

18. A process as in Claim 17, wherein the reducing agent system is selected from the group consisting of DIBAL-H, and RANEY® nickel and a source of hydrogen.

19. A process as in Claim 17, wherein the reducing agent system is DIBAL-H; wherein the DIBAL-H is present in an amount in the range of from about 1.0 to about 5.0 molar equivalents; and wherein the solvent in said reacting a compound of formula (V-S) is selected from the group consisting of anhydrous THF and anhydrous toluene.

20. A process as in Claim 19, wherein the DIBAL-H is present in an amount of about 2.5 molar equivalents.

21. A process as in Claim 17, wherein the reducing agent system is RANEY® nickel and a source of hydrogen; wherein the source of hydrogen is formic acid; and wherein the solvent in said reacting a compound of formula (V-S) is water.

22. A process as in Claim 21, wherein the RANEY® nickel is present in an amount of about 20% by weight and wherein the formic acid is present in an excess amount.

23. A process as in Claim 17, wherein the compound of formula (V-S) is reacted with the reducing agent system at a temperature of from about 5°C to about 25°C.

24. A process as in Claim 17, wherein the compound of formula (VII-B) is present as its corresponding free base.

25. A process as in Claim 17, wherein the compound of formula (VII-B) is present in an amount in the range of from about 1.0 to about 1.25 molar equivalents.

26. A process as in Claim 25, wherein the compound of formula (VII-B) is present in an amount in the range of from about 1.0 to about 1.1 molar equivalents.

27. A process as in Claim 17, wherein the oxidizing agent system is selected from the group consisting of $Na_2S_2O_5$/air and Na_2SO_3/air.

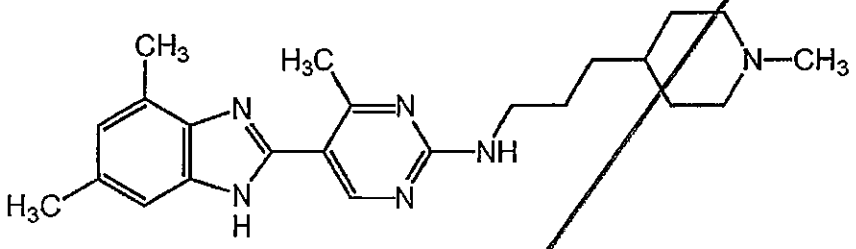
28. A process as in Claim 17, wherein the oxidizing agent system is present in an amount in the range of from about 0.90 to about 1.5 molar equivalents.

29. A process as in Claim 28, wherein the oxidizing agent system is present in an amount of about 1.0 molar equivalents.

30. A process as in Claim 17, wherein the compound of formula (VI-S) is reacted with the compound of formula (VII-B) in water.

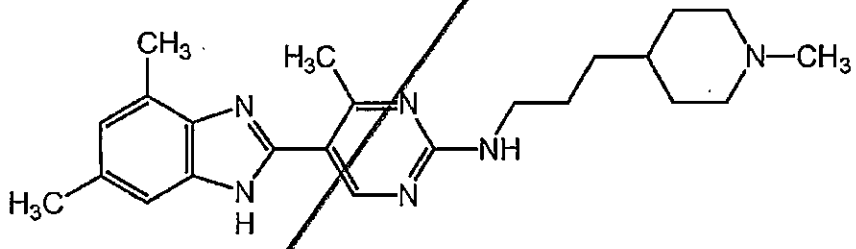
31. A process as in Claim 17, wherein the compound of formula (VI-S) is reacted with the compound of formula (VII-B) at a temperature in the range of from about 55°C to about 65°C.

32. A crystalline hemi-tartrate of compound of formula (I-A)



(I-A).

33. A crystalline hemi-tartrate of compound of formula (I-A)

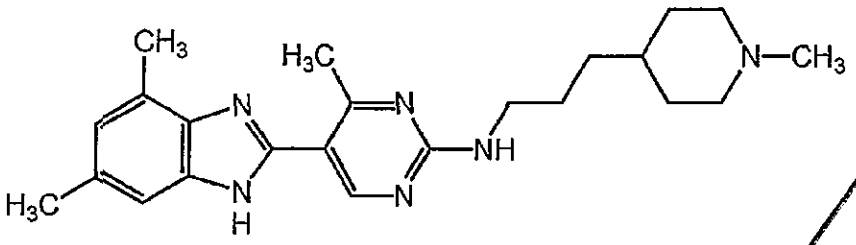


(I-A)

whose powder X-ray diffraction spectrum comprises the following powder X-ray diffraction peaks:

Pos. [°2θ]	d-spacing [Å]
6.49	13.62
8.58	10.30
9.17	9.64
10.35	8.55
10.75	8.23
16.72	5.30
17.46	5.08
18.89	4.70
23.60	3.77

34. A process for the preparation of a hemi-tartrate of compound of formula (I-A)



(I-A),

comprising:

dissolving the compound of formula (I-A) in an organic solvent forming a solution;

heating said solution to a first temperature in the range of from about 35°C to about reflux;

adding L-tartaric acid to form a tartrate solution; and

heating said tartrate solution to a second temperature in the range of from about 50°C to about reflux to form a heated mixture.

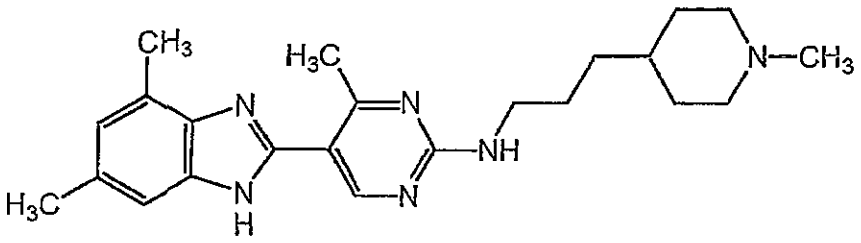
35. A process as in Claim 34, wherein said heating said first temperature is about 50°C.

36. A process as in Claim 34, wherein the L-tartaric acid is added in an amount of about 0.5 molar equivalents.

37. A process as in Claim 34, wherein said second temperature is a temperature of about 70°C to about 75°C.

38. A process as in Claim 34, further comprising cooling said heated mixture to a temperature in the range of from about 0°C to about -5°C.

39. A process for the recrystallization of a hemi-tartrate of compound of formula (I-A)



(I-A),

comprising:

dissolving the hemi-tartrate of compound of formula (I-A) in a mixture of water and an organic solvent, or in a mixture of organic solvents; and

removing a sufficient amount of water to yield a mixture with boiling point of between about 78°C and about 80°C.

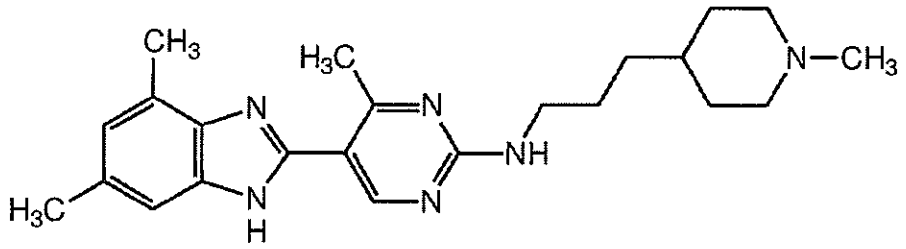
40. A process as in Claim 39, wherein the hemi-tartrate of compound of formula (I-A) is dissolved in one of the following mixtures: a mixture of water and denatured ethanol, and a mixture of methanol and denatured ethanol.

41. A process as in Claim 40, wherein the hemi-tartrate of compound of formula (I-A) is dissolved in a mixture of water and denatured ethanol; and wherein the water in the mixture is present in an amount of from about 1% to about 1.5% by weight.

42. A process as in Claim 39, wherein said dissolving is made in a mixture of water and an organic solvent, and further comprising heating said hemi-tartrate of the compound of formula (I-A) in said mixture of water and an organic solvent to azeotropically remove the water.

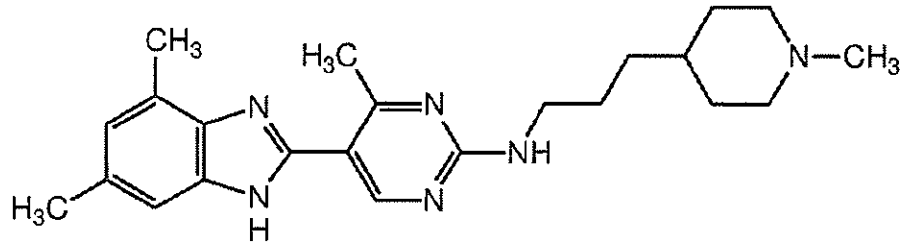
CLAIMS

1. A crystalline hemi-tartrate of compound of formula (I-A)



(I-A).

2. A crystalline hemi-tartrate of compound of formula (I-A)

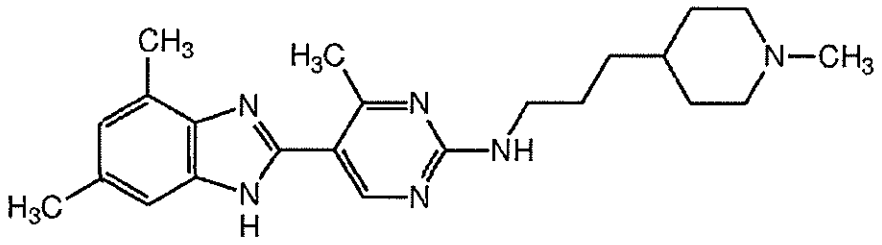


(I-A)

whose powder X-ray diffraction spectrum comprises the following powder X-ray diffraction peaks:

Pos. [°2θ]	d-spacing [Å]
6.49	13.62
8.58	10.30
9.17	9.64
10.35	8.55
10.75	8.23
16.72	5.30
17.46	5.08
18.89	4.70
23.60	3.77

3. A process for the preparation of a hemi-tartrate of compound of formula (I-A)



(I-A),

comprising:

dissolving the compound of formula (I-A) in an organic solvent forming a solution;

heating said solution to a first temperature in the range of from about 35°C to about reflux;

adding L-tartaric acid to form a tartrate solution; and

heating said tartrate solution to a second temperature in the range of from about 50°C to about reflux to form a heated mixture.

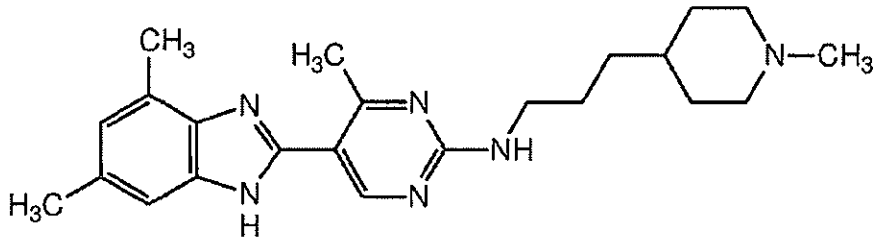
4. A process as in claim 3, wherein said heating said first temperature is about 50°C.

5. A process as in claim 3 or 4, wherein the L-tartaric acid is added in an amount of about 0.5 molar equivalents.

6. A process as in any one of claims 3 to 5, wherein said second temperature is a temperature of about 70°C to about 75°C.

7. A process as in any one of claims 3 to 6, further comprising cooling said heated mixture to a temperature in the range of from about 0°C to about -5°C.

8. A process for the recrystallization of a hemi-tartrate of compound of formula (I-A)



(I-A),

comprising:

dissolving the hemi-tartrate of compound of formula (I-A) in a mixture of water and an organic solvent, or in a mixture of organic solvents; and

removing a sufficient amount of water to yield a mixture with boiling point of between about 78°C and about 80°C.

9. A process as in claim 8, wherein the hemi-tartrate of compound of formula (I-A) is dissolved in one of the following mixtures: a mixture of water and denatured ethanol, and a mixture of methanol and denatured ethanol.

10. A process as in claim 9, wherein the hemi-tartrate of compound of formula (I-A) is dissolved in a mixture of water and denatured ethanol; and wherein the water in the mixture is present in an amount of from about 1% to about 1.5% by weight.

11. A process as in claim 10, wherein said water is present in an amount of about 1.4% by weight.

12. A process as in claim 8, wherein said dissolving is made in a mixture of water and an organic solvent, and further comprising heating said hemi-tartrate of the compound of formula (I-A) in said mixture of water and an organic solvent to azeotropically remove the water.