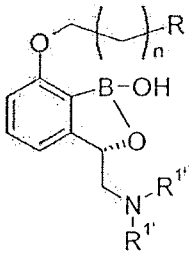
Claims:

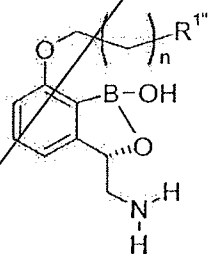
1. A process comprising contacting a compound of formula 6:



6

or a pharmaceutically acceptable salt thereof;

with a deprotecting reagent to form a compound of formula A:



A

or a pharmaceutically acceptable salt thereof;

where R is H or OR^1; R^1 and each $R^{1'}$ are each independently protecting groups; $R^{1''}$ is H or OH; and n is 0, 1, 2, 3, 4 or 5.

2. The process of Claim 1 wherein

R is OR^1;

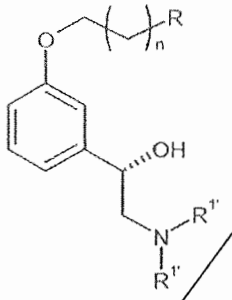
R^1 is $-CH(R^a)$-phenyl-$(R^b)_x$, trialkylsilyl, tetrahydropyranyl, $-CH_2OCH_3$, or $-CH_2OCH_2CH_2OCH_3$ groups, where R^a is H or methyl; R^b is methoxy or C_1-alkyl, C_2-alkyl, or C_3-alkyl; and x is 0, 1 or 2; and

each $R^{1'}$ is independently $-CH(R^c)$-phenyl-$(R^d)_y$, where R^c is H or methyl, each R^d is independently methoxy or C_1-alkyl, C_2-alkyl, or C_3-alkyl; n is 0, 1, 2 or 3, and y is 0, 1 or 2.

3. The process of Claim 1 wherein R is OR^1; R^1 and each $R^{1'}$ are benzyl groups; the deprotecting reagent is a reducing reagent; n is 1; and the compound of formula 6 is reduced in the presence of HCl to form the hydrochloride salt of the compound of formula A.

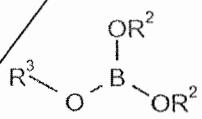
4. The process of Claim 3 wherein the deprotecting reagent is Pd/C or Pt/C in the presence of H_2 or a mixture thereof, H_2 over palladium hydroxide, or catalytic transfer hydrogenating reagent conditions.

5. The process of any of Claims 1 to 4 wherein the compound of formula 6 is prepared by contacting a compound of formula 5:



5

or a salt thereof with a borylating reagent characterized by the following formula:



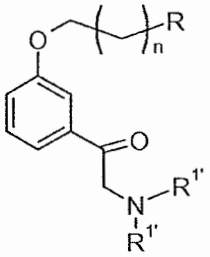
in the presence of an alkylithium reagent, where each R^2 is independently C_1-C_6-alkyl, or together with the oxygen atoms to which they are attached form a 5- or 6-membered ring; and

R^3 is C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl.

6. The process of Claim 5 wherein the borylating reagent is isopropylpinacolborate, or a tri-C_1-borate, tri-C_2-borate or tri-C_3-borate; n is 0 to 3; and the alkyl lithium reagent is *n*-BuLi, *n*-hexyllithium, or sec-BuLi.

7. The process of either Claim 5 or 6 wherein the borylating reagent is isopropylpinacolborate or trimethyl borate; n is 2 and the alkyl lithium reagent is *n*-BuLi.

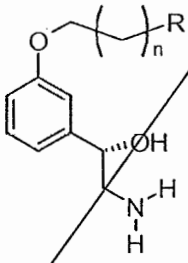
8. The process of Claim 5 wherein the compound of formula 5 or a salt thereof is prepared either by enantioselective reduction of a compound of formula 10



10

or a salt thereof;

or by contacting under basic conditions $R^{1'}X$ with a compound of formula 4:



4

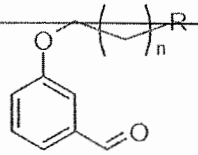
or a salt thereof,

where X is a leaving group.

9. The process of Claim 8 wherein the compound of formula 5 or a salt thereof is prepared using H_2 and Naud catalyst or H_2 and Noyori catalyst; and n is 2.

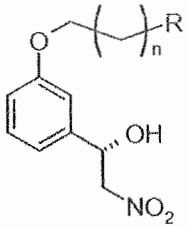
10. The process of Claim 8 wherein the compound of formula 5 or a salt thereof is prepared by contacting the compound of formula 4 or a salt thereof with benzyl bromide in the presence of a carbonate or a hydroxide.

11. The process of Claim 10 wherein the compound of formula 4 or a salt thereof is prepared by contacting formula 2 :



2

with nitromethane in the presence of a chiral reagent, to form a compound of formula 3:



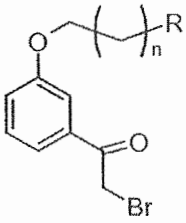
3

then reducing the nitro group to an amine group.

12. The process of Claim 11 wherein the chiral reagent is

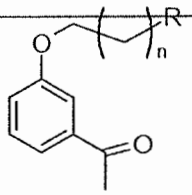
1,7,7-trimethyl-N-(pyridin-2-ylmethyl)bicyclo[2.2.1]heptan-2-amine di-hydrochloride; (4S)-4-ethyl-2-{1-ethyl-1-[(4S)-4-(1-methylethyl)-4,5-dihydro-1,3-oxazol-2-yl]propyl}-4,5-dihydro-1,3-oxazole; (S)-4-(tert-butyl)-2-(2-((S)-4-methyl-4,5-dihydrooxazol-2-yl)propan-2-yl)-4,5-dihydrooxazole; or N1,N2-bis[(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl]-1,2-ethanediamine and $Cu(OAc)_2$, and n is 2.

13. The process of Claim 8 wherein the compound of formula 10 or a salt thereof is prepared by contacting $HN(R^{1'})_2$ with a base and a compound of formula 9:



9

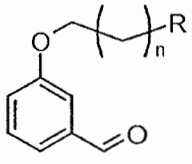
14. The process of Claim 13 wherein the compound of formula 9 is prepared by bromination of a compound of formula 8:



8

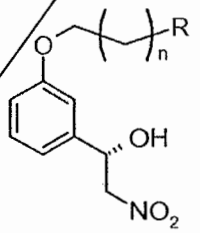
15. A process comprising the steps of:

a) contacting a compound of formula 2:



2

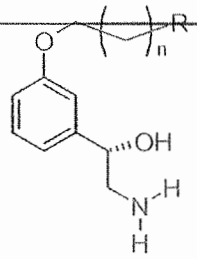
with nitromethane in the presence of a chiral reagent to make a compound of formula 3:



3 ;

where R is H or OR^1; R^1 is a protecting group; and n is 0, 1, 2, 3, 4 or 5;

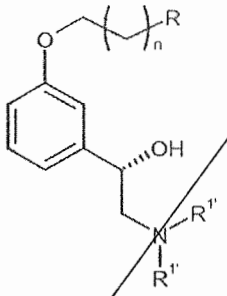
b) reducing the compound of formula 3 to form a compound of formula 4:



4

or a salt thereof;

c) contacting the compound of formula 4 or a salt thereof with $R^{1'}X$ with a base to form a compound of formula 5:

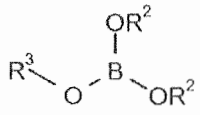


5

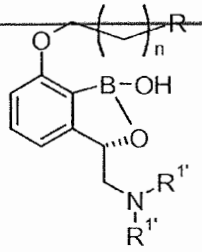
or a salt thereof,

wherein $R^{1'}$ is a protecting group and X is a leaving group;

d) contacting the compound of formula 5 or a salt thereof with a borylating reagent characterized by the following formula:



in the presence of *n*-BuLi to form a compound of formula 6:

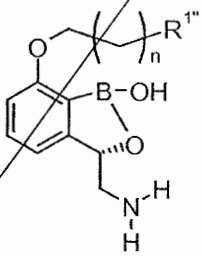


6 ;

or a pharmaceutically acceptable salt thereof,

where each R^2 is independently C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl, or together with the oxygen atoms to which they are attached form a 5- or 6-membered ring; and R^3 is C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl; and

e) contacting the compound of formula 6 or a pharmaceutically acceptable salt thereof with a deprotecting reagent to form a compound of formula A or a pharmaceutically acceptable salt thereof:



A

where $R^{1''}$ is H or OH.

16. The process of Claim 15 wherein:

R^1 and each $R^{1'}$ are benzyl groups;

n is 2;

the chiral reagent is $Cu(OAc)_2$ and 1,7,7-trimethyl-N-(pyridin-2-ylmethyl)bicyclo[2.2.1]heptan-2-amine di-hydrochloride; (4S)-4-ethyl-2-{1-ethyl-1-[(4S)-4-(1-methylethyl)-4,5-dihydro-1,3-oxazol-2-yl]propyl}-4,5-dihydro-1,3-oxazole; (S)-4-(tert-

~~butyl)-2-(2-((S)-4-methyl-4,5-dihydrooxazol-2-yl)propan-2-yl)-4,5-dihydrooxazole; or~~ N1,N2-bis[(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl]-1,2-ethanediamine;

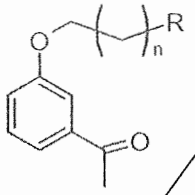
X is a leaving group selected from Br, Cl, I, tosyl or triflyl;

the borylating reagent is isopropylpinacolborate or trimethylborate; and

the deprotecting agent is hydrogenation in the presence of a Pd/C catalyst, Pt/C catalyst or a mixture of Pd/C + Pt/C catalysts.

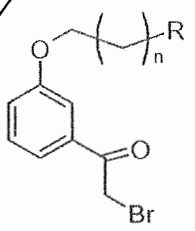
17. A process comprising the steps of:

a) brominating a compound of formula 8:



8

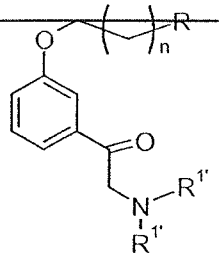
to form a compound of formula 9:



9 ;

where R is H or OR^1; R^1 is a protecting group; and n is 0, 1, 2, 3, 4 or 5;

b) contacting the compound of formula 9 with $HN(R^{1'})_2$ to form a compound of formula 10:

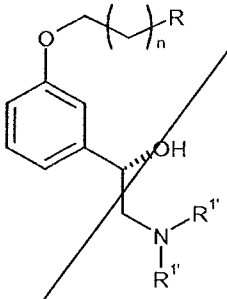


10

or a salt thereof,

where each $R^{1'}$ is a protecting group;

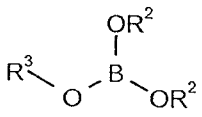
c) enantioselectively reducing the compound of formula 10 or a salt thereof to form a compound of formula 5:



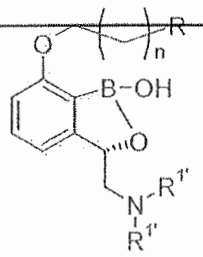
5

or a salt thereof;

d) contacting the compound of formula 5 or a salt thereof with a borylating reagent characterized by the following formula:



in the presence of *n*-BuLi, to form a compound of formula 6:

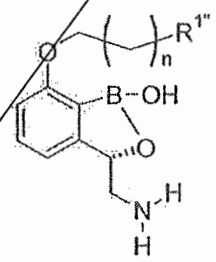


6

or a pharmaceutically acceptable salt thereof,

where each R^2 is independently C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl, or together with the oxygen atoms to which they are attached form a 5- or 6-membered ring; and R^3 is C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl; and

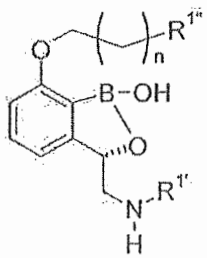
e) contacting the compound of formula 6 or a pharmaceutically acceptable salt thereof with a deprotecting reagent to form a compound of formula A or a pharmaceutically acceptable salt thereof:



A

where $R^{1''}$ is H or OH.

18. A compound of formula 6a:



6a

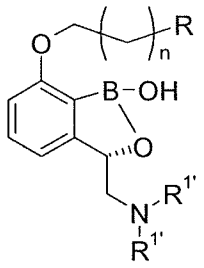
~~or a pharmaceutically acceptable salt thereof, where $R^{1''}$ is H or OH; and $R^{1'}$ is a protecting~~ group.

19. The compound of Claim 18 wherein $R^{1'}$ is benzyl, 1-phenylethyl, 2-methoxybenzyl, 3-methoxybenzyl, 4-methoxybenzyl, 2,4-dimethoxybenzyl, or diphenylmethyl; $R^{1''}$ is OH; and n is 0, 1, 2 or 3.

20. The compound of either Claim 18 or 19 wherein $R^{1'}$ is benzyl and n is 2.

Claims:

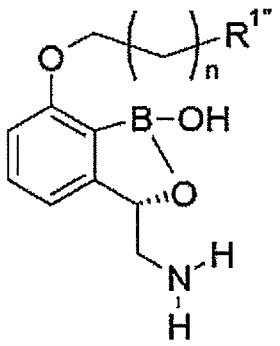
1. A process comprising contacting a compound of formula 6:



6

or a pharmaceutically acceptable salt thereof;

with a deprotecting reagent to form a compound of formula A:

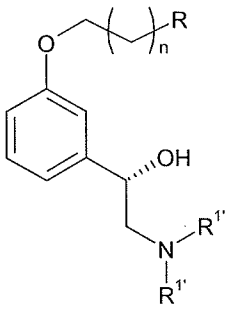


A

or a pharmaceutically acceptable salt thereof;

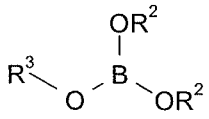
where R is H or OR^1; R^1 and each $R^{1'}$ are each independently protecting groups; $R^{1''}$ is H or OH; and n is 0, 1, 2, 3, 4 or 5

wherein the compound of formula 6 is prepared by contacting a compound of formula 5:



5

or a salt thereof with a borylating reagent characterized by the following formula:



in the presence of an alkylithium reagent, where each R^2 is independently C_1-C_6-alkyl, or together with the oxygen atoms to which they are attached form a 5- or 6-membered ring; and

R^3 is C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl.

2. The process of Claim 1 wherein

R is OR^1;

R^1 is $-CH(R^a)$-phenyl-$(R^b)_x$, trialkylsilyl, tetrahydropyranyl, $-CH_2OCH_3$, or $-CH_2OCH_2CH_2OCH_3$ groups, where R^a is H or methyl; R^b is methoxy or C_1-alkyl, C_2-alkyl, or C_3-alkyl; and x is 0, 1 or 2; and

each $R^{1'}$ is independently $-CH(R^c)$-phenyl-$(R^d)_y$, where R^c is H or methyl, each R^d is independently methoxy or C_1-alkyl, C_2-alkyl, or C_3-alkyl; n is 0, 1, 2 or 3, and y is 0, 1 or 2.

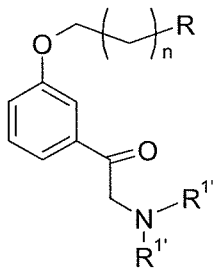
3. The process of Claim 1 wherein R is OR^1; R^1 and each $R^{1'}$ are benzyl groups; the deprotecting reagent is a reducing reagent; n is 1; and the compound of formula 6 is reduced in the presence of HCl to form the hydrochloride salt of the compound of formula A.

4. The process of Claim 3 wherein the deprotecting reagent is Pd/C or Pt/C in the presence of H_2 or a mixture thereof, H_2 over palladium hydroxide, or catalytic transfer hydrogenating reagent conditions.

5. The process of Claim 1 wherein the borylating reagent is isopropylpinacolborate, or a tri-C_1-borate, tri-C_2-borate or tri-C_3-borate; n is 0 to 3; and the alkyl lithium reagent is *n*-BuLi, *n*-hexyllithium, or sec-BuLi.

6. The process of either Claim 1 or 5 wherein the borylating reagent is isopropylpinacolborate or trimethyl borate; n is 2 and the alkyl lithium reagent is *n*-BuLi.

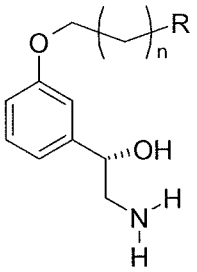
7. The process of Claim 1 wherein the compound of formula 5 or a salt thereof is prepared either by enantioselective reduction of a compound of formula 10



10

or a salt thereof;

or by contacting under basic conditions $R^{1'}X$ with a compound of formula 4:



4

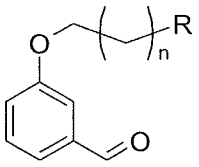
or a salt thereof,

where X is a leaving group.

8. The process of Claim 7 wherein the compound of formula 5 or a salt thereof is prepared using H_2 and (*S*)-2-[(S_P)-2-(diphenylphosphino)ferrocenyl]-4-isopropyl-2-oxazoline triphenylphosphine ruthenium(II) dichloride complex or H_2 and (R)-BINAP-Ru-(R,R)-(+)-DPEN Cl; and n is 2.

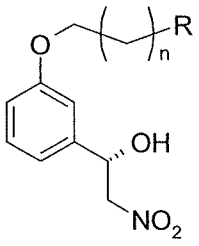
9. The process of Claim 7 wherein the compound of formula 5 or a salt thereof is prepared by contacting the compound of formula 4 or a salt thereof with benzyl bromide in the presence of a carbonate or a hydroxide.

10. The process of Claim 9 wherein the compound of formula 4 or a salt thereof is prepared by contacting formula 2 :



2

with nitromethane in the presence of a chiral reagent, to form a compound of formula 3:



3

then reducing the nitro group to an amine group.

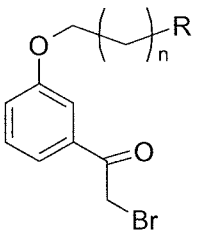
11. The process of Claim 10 wherein the chiral reagent is

1,7,7-trimethyl-N-(pyridin-2-ylmethyl)bicyclo[2.2.1]heptan-2-amine di-hydrochloride; (4S)-4-ethyl-2-{1-ethyl-1-[(4S)-4-(1-methylethyl)-4,5-dihydro-1,3-oxazol-2-yl]propyl}-4,5-dihydro-1,3-oxazole;

(S)-4-(tert-butyl)-2-(2-((S)-4-methyl-4,5-dihydrooxazol-2-yl)propan-2-yl)-4,5-dihydroo xazole; or

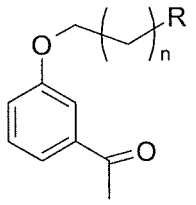
N1,N2-bis[(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl]-1,2-ethanediamine in the presence of-$Cu(OAc)_2$; and n is 2.

12. The process of Claim 7 wherein the compound of formula 10 or a salt thereof is prepared by contacting $HN(R^{1'})_2$ with a base and a compound of formula 9:



9

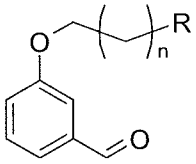
13. The process of Claim 12 wherein the compound of formula 9 is prepared by bromination of a compound of formula 8:



8

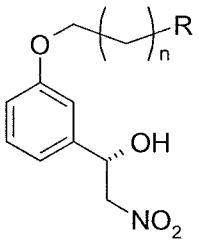
14. A process comprising the steps of:

a) contacting a compound of formula 2:



2

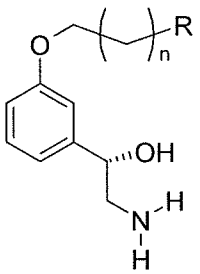
with nitromethane in the presence of a chiral reagent to make a compound of formula 3:



3 ;

where R is H or OR^1; R^1 is a protecting group; and n is 0, 1, 2, 3, 4 or 5;

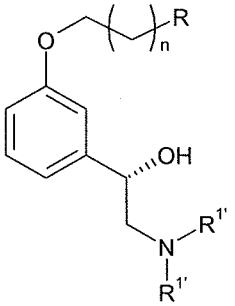
b) reducing the compound of formula 3 to form a compound of formula 4:



4

or a salt thereof;

c) contacting the compound of formula 4 or a salt thereof with $R^{1'}X$ with a base to form a compound of formula 5:

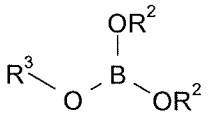


5

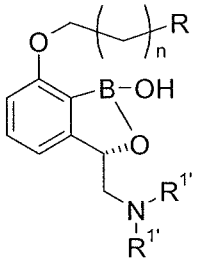
or a salt thereof,

wherein $R^{1'}$ is a protecting group and X is a leaving group;

d) contacting the compound of formula 5 or a salt thereof with a borylating reagent characterized by the following formula:



in the presence of *n*-BuLi to form a compound of formula 6:

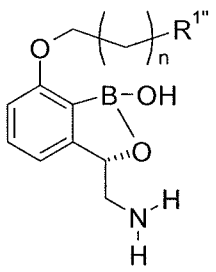


6 ;

or a pharmaceutically acceptable salt thereof,

where each R^2 is independently C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl, or together with the oxygen atoms to which they are attached form a 5- or 6-membered ring; and R^3 is C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl; and

e) contacting the compound of formula 6 or a pharmaceutically acceptable salt thereof with a deprotecting reagent to form a compound of formula A or a pharmaceutically acceptable salt thereof:



A

where $R^{1''}$ is H or OH.

15. The process of Claim 14 wherein:

R^1 and each $R^{1'}$ are benzyl groups;

n is 2;

the chiral reagent is 1,7,7-trimethyl-N-(pyridin-2-ylmethyl)bicyclo[2.2.1]heptan-2-amine di-hydrochloride; (4S)-4-ethyl-2-{1-ethyl-1-[(4S)-4-(1-methylethyl)-4,5-dihydro-1,3-oxazol-2-yl]propyl}-4,5-dihydro-1,3-oxazole; (S)-4-(tert-butyl)-2-(2-((S)-4-methyl-4,5-dihydrooxazol-2-yl)propan-2-yl)-4,5-dihydroo xazole; or N1,N2-bis[(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl]-1,2-ethanediamine in the presence of $Cu(OAc)_2$;

X is a leaving group selected from Br, Cl, I, tosyl or triflyl;

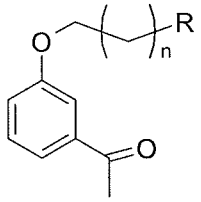
the borylating reagent is isopropylpinacolborate or trimethylborate; and

the deprotecting agent is hydrogenation in the presence of a Pd/C catalyst, Pt/C catalyst

or a mixture of Pd/C + Pt/C catalysts.

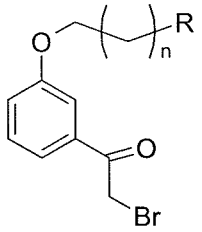
16. A process comprising the steps of:

a) brominating a compound of formula 8:



8

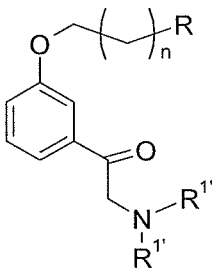
to form a compound of formula 9:



9 ;

where R is H or OR^1; R^1 is a protecting group; and n is 0, 1, 2, 3, 4 or 5;

b) contacting the compound of formula 9 with $HN(R^{1'})_2$ to form a compound of formula 10:

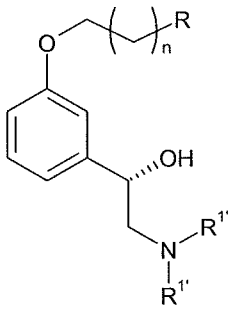


10

or a salt thereof,

where each $R^{1'}$ is a protecting group;

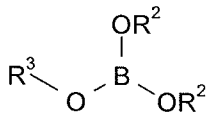
c) enantioselectively reducing the compound of formula 10 or a salt thereof to form a compound of formula 5:



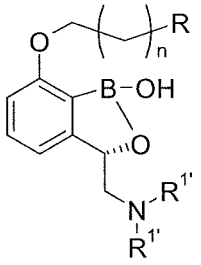
5

or a salt thereof;

d) contacting the compound of formula 5 or a salt thereof with a borylating reagent characterized by the following formula:



in the presence of *n*-BuLi, to form a compound of formula 6:

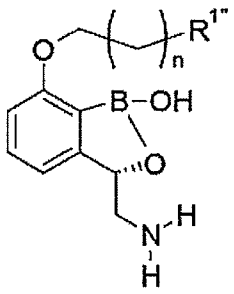


6 ;

or a pharmaceutically acceptable salt thereof,

where each R^2 is independently C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl, or together with the oxygen atoms to which they are attached form a 5- or 6-membered ring; and R^3 is C_1-alkyl, C_2-alkyl, C_3-alkyl, C_4-alkyl, C_5-alkyl, C_6-alkyl; and

e) contacting the compound of formula 6 or a pharmaceutically acceptable salt thereof with a deprotecting reagent to form a compound of formula A or a pharmaceutically acceptable salt thereof:



A

where $R^{1''}$ is H or OH.