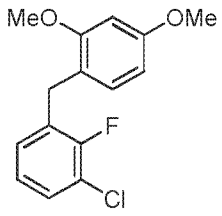
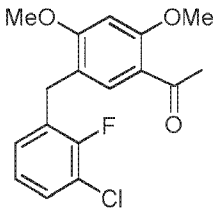
# CLAIMS

What is claimed is:

1. A compound selected from:

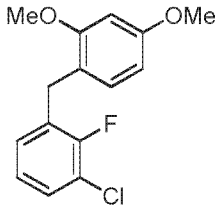



and



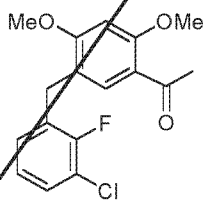

**5** **8**

2. The compound of claim 1, wherein the compound is:



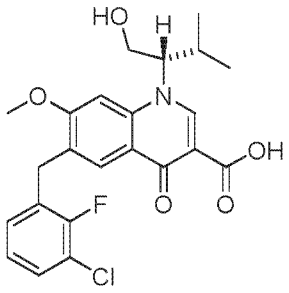

**5**

3. The compound of claim 1, wherein the compound is:



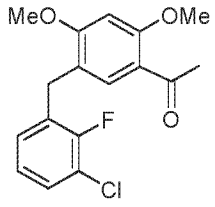

**8**

4. A method for preparing a compound of formula 13:




**13**

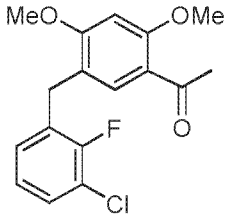
or a salt thereof, comprising converting a compound of formula 8:




**8**

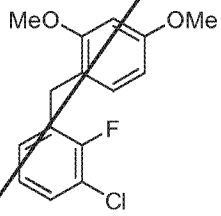
to the compound of formula 13 or the salt thereof.

5. A method for preparing a compound of formula 8:




**8**

comprising acylating a compound of formula 5:




**5**

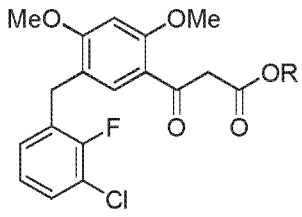
to provide the compound of formula 8.

6. The method of claim 5 wherein the compound of formula 5 is acylated with an acetyl halide.

7. The method of claim 5 or claim 6 wherein the acylation is carried out in the presence of a Lewis acid.

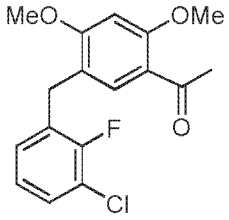
8. The method of claim 7 wherein the Lewis acid is aluminum trichloride.

9. A method for preparing a compound of formula 9:




9

comprising acylating a compound of formula 8:




8

to provide the compound of formula 9, wherein R is ($C_1$-$C_6$)alkyl.

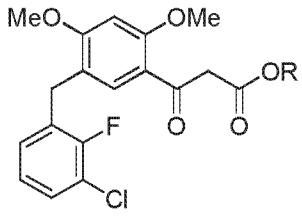
10. The method of claim 9 wherein R is ethyl.

11. The method of claim 9 or claim 10 wherein the compound of formula 8 is acylated with diethyl carbonate.

12. The method of any one of claims 9-11 wherein the acylation utilizes a base.

13. The method of claim 12 wherein the base is a metal alkoxide.

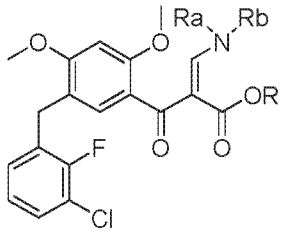
14. The method of any one of claims 5-8 further comprising converting the compound of formula 8 to a compound of formula 9:




9

wherein R is ($C_1$-$C_6$)alkyl.

15. The method of claim 9 or claim 14 further comprising converting the compound of formula 9 to a compound of formula 10:

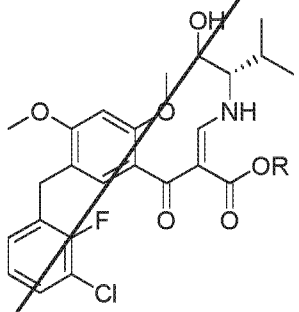


10

or a salt thereof, wherein $R_a$ and $R_b$ are each $(C_1\text{-}C_6)$alkyl.

16. The method of claim 15 wherein $R_a$ and $R_b$ are each methyl.

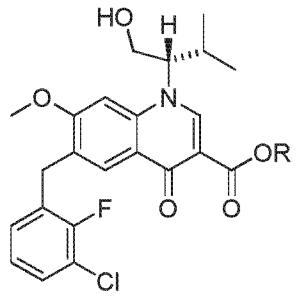
17. The method of claim 15 or claim 16 further comprising converting the compound of formula 10 or the salt thereof, to a compound of formula 11:



11

or a salt thereof.

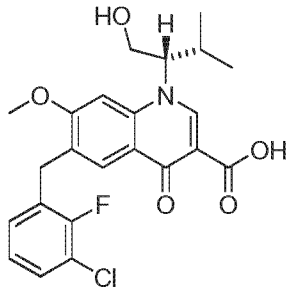
18. The method of claim 17 further comprising converting the compound of formula 11 or the salt thereof, to a compound of formula 12:



12

or a salt thereof.

19. The method of claim 18 further comprising converting the compound of formula 12 or the salt thereof, to a compound of formula 13:




13

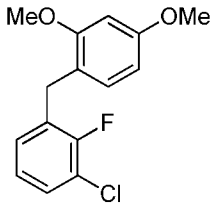
or a salt thereof.

20. The method of claim 4 further comprising converting the compound of formula 8 or the salt thereof to the compound of formula 13 or the salt thereof by any of the methods described in any one of claims 9-13 or 15-19.

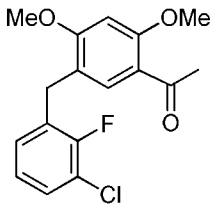
## CLAIMS

What is claimed is:

1. A compound selected from:

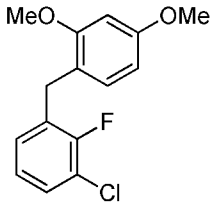



and



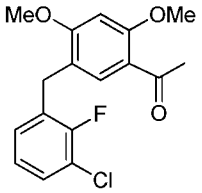

**5** **8**

2. The compound of claim 1, wherein the compound is:



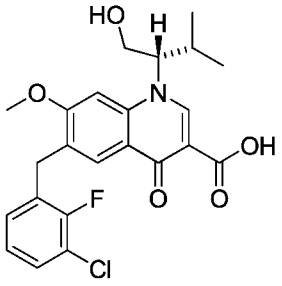

**5**

3. The compound of claim 1, wherein the compound is:



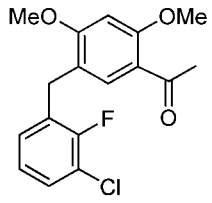

**8**

4. A method for preparing a compound of formula 13:




**13**

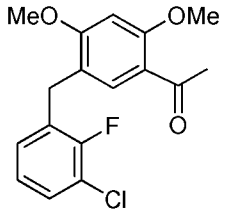
or a salt thereof, comprising converting a compound of formula 8:




**8**

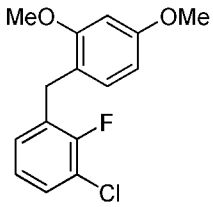
to the compound of formula 13 or the salt thereof.

5. A method for preparing a compound of formula 8:




**8**

comprising acylating a compound of formula 5:




**5**

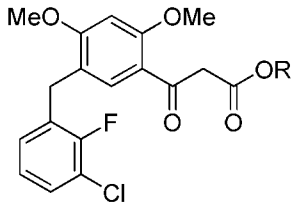
to provide the compound of formula 8.

6. The method of claim 5 wherein the compound of formula 5 is acylated with an acetyl halide.

7. The method of claim 5 wherein the acylation is carried out in the presence of a Lewis acid.

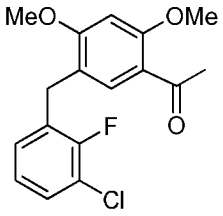
8. The method of claim 7 wherein the Lewis acid is aluminum trichloride.

9. A method for preparing a compound of formula 9:




**9**

comprising acylating a compound of formula 8:




**8**

to provide the compound of formula 9, wherein R is $(C_1\text{-}C_6)$alkyl.

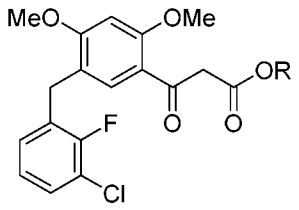
10. The method of claim 9 wherein R is ethyl.

11. The method of claim 9 wherein the compound of formula 8 is acylated with diethyl carbonate.

12. The method of claim 9 wherein the acylation utilizes a base.

13. The method of claim 12 wherein the base is a metal alkoxide.

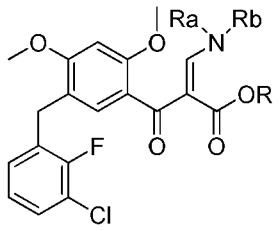
14. The method of claim 5 further comprising converting the compound of formula 8 to a compound of formula 9:




**9**

wherein R is ($C_1$-$C_6$)alkyl.

15. The method of claim 9 further comprising converting the compound of formula 9 to a compound of formula 10:

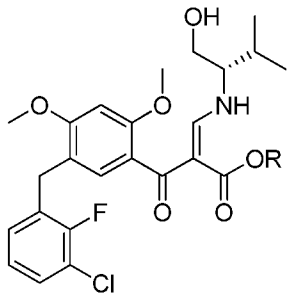



**10**

or a salt thereof, wherein $R_a$ and $R_b$ are each ($C_1$-$C_6$)alkyl.

16. The method of claim 15 wherein $R_a$ and $R_b$ are each methyl.

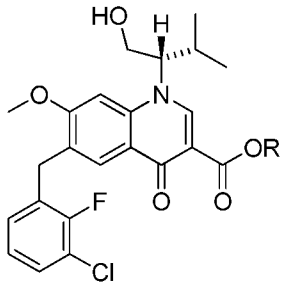
17. The method of claim 15 further comprising converting the compound of formula 10 or the salt thereof, to a compound of formula 11:




**11**

or a salt thereof.

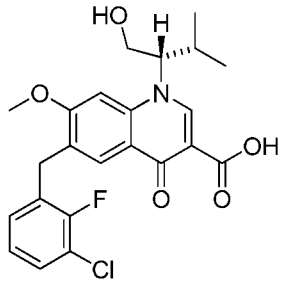
18. The method of claim 17 further comprising converting the compound of formula 11 or the salt thereof, to a compound of formula 12:




**12**

or a salt thereof.

19. The method of claim 18 further comprising converting the compound of formula 12 or the salt thereof, to a compound of formula 13:




**13**

or a salt thereof.

20. The method of claim 4 wherein converting the compound of formula 8 to the compound of formula 13 or the salt thereof comprises the method described in claim 7.

21. The method of claim 4 wherein converting the compound of formula 8 to the compound of formula 13 or the salt thereof comprises the method described in claim 13.