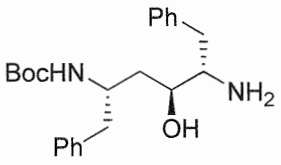
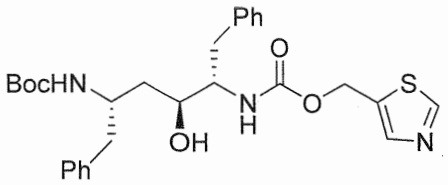
European Patent Application EP 486948 discloses a compound of formula IV' and International Patent Application Publication Number WO 1994/14436 discloses a compound of formula V'.



IV'

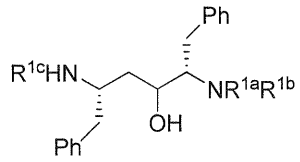
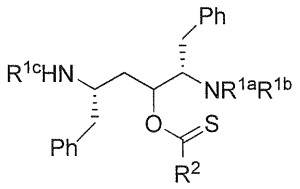
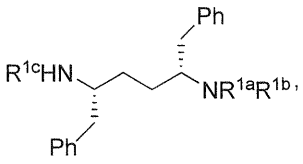
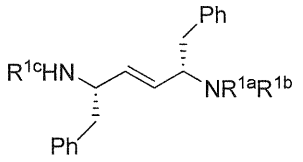
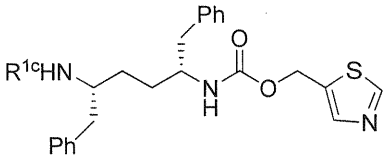
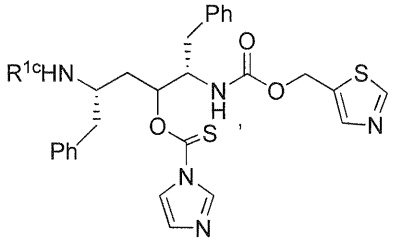
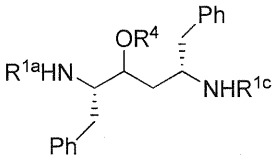
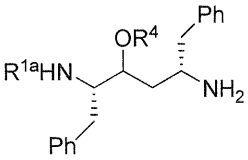
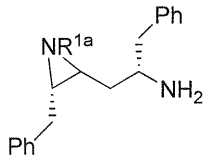


V'

There is currently a need for improved synthetic methods and intermediates that can be used to prepare the compound of formula I and salts thereof. There is also a need for improved methods and intermediates that can be used to prepare the compound of formula II and the compound of formula III which are useful for preparing the compound of formula I. The improved methods and intermediates may reduce the cost, time, and/or the amount of waste or provide an increased yield associated with the existing methods for preparing the compounds of formula I or formula II or formula III or salts or protected derivatives thereof.

Summary

A new synthetic processes and intermediates would be useful for preparing the compound of formula I. In particular, the new synthetic processes and intermediates are useful for preparing intermediates (e.g. the compounds of formula II and III) used to prepare the compound of formula I. Accordingly, in one aspect, there is provided a compound selected from:









and


wherein:

R^{1a} and R^{1b} are each independently an amine protecting group; or R^{1a} is an amine protecting group and R^{1b} is H;

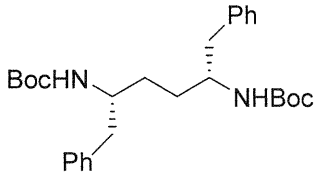
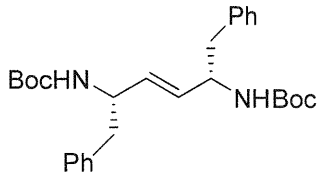
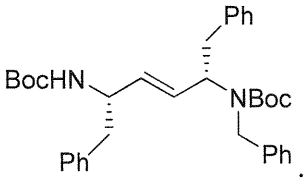
R^{1c} is -C(O)O(C_1-C_6)alkyl wherein -C(O)O(C_1-C_6)alkyl is optionally substituted with one or more halogen or (C_1-C_6)alkoxy;

R^2 is -SMe or imidazol-1-yl; and

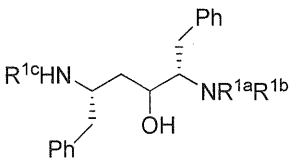
R^4 is -SO_2(C_1-C_6)alkyl or -SO_2aryl, wherein -SO_2(C_1-C_6)alkyl is optionally substituted with one or more halogen, and wherein -SO_2aryl is optionally substituted with one or more halogen, (C_1-C_6)alkyl or NO_2;

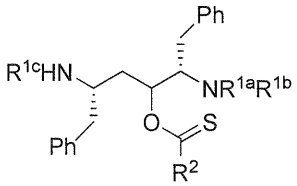
and salts thereof;

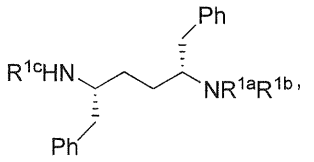
provided the compound is not:

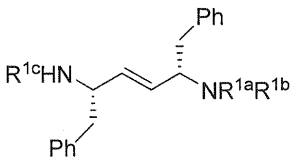


or


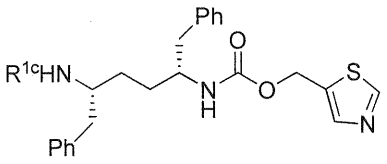
In one embodiment a compound is selected from:

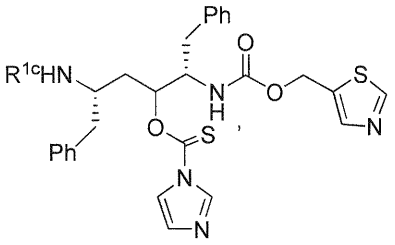


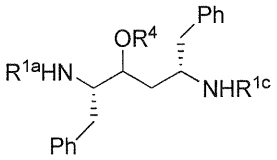
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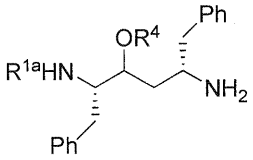
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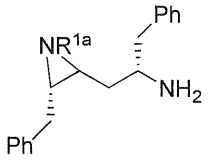
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and


wherein:

R^{1a} and R^{1b} are each independently an amine protecting group; or R^{1a} is an amine protecting group and R^{1b} is H;

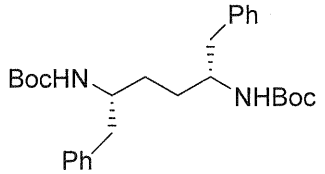
R^{1c} is -C(O)O(C_1-C_6)alkyl wherein -C(O)O(C_1-C_6)alkyl is optionally substituted with one or more (e.g. 1, 2, 3, 4 or 5) halogen or (C_1-C_6)alkoxy;

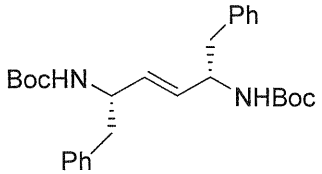
R^2 is -SMe or imidazol-1-yl; and

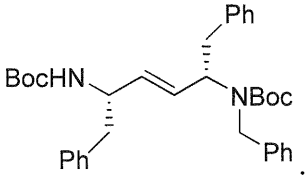
R^4 is -SO_2(C_1-C_6)alkyl or -SO_2aryl, wherein -SO_2(C_1-C_6)alkyl is optionally substituted with one or more (e.g. 1, 2, 3, 4 or 5) halogen, and wherein -SO_2aryl is optionally substituted with one or more (e.g. 1, 2, 3, 4 or 5) halogen, (C_1-C_6)alkyl or NO_2;

and salts thereof;

provided the compound is not:

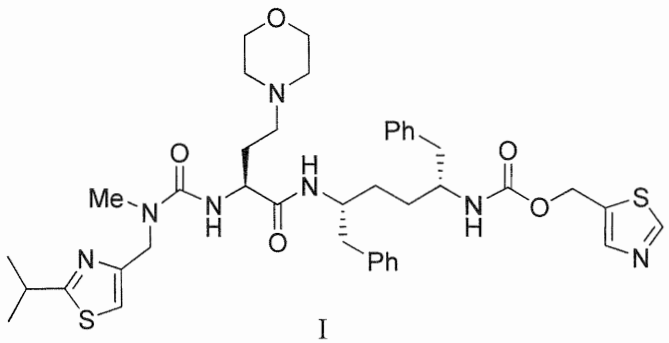


,


or


.

In one aspect, there is provided a method for preparing a compound of formula I:



I

or a salt thereof, comprising converting a compound as described above.

In another embodiment there is a method for preparing a compound of formula 1a or a salt thereof, comprising protecting a compound of formula IVa: