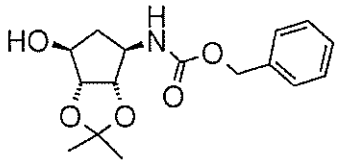
Claims

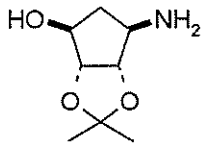
1. A process for preparing benzyl [(3a*S*,4*R*,6*S*,6a*R*)-6-hydroxy-2,2-dimethyltetrahydro-3a*H*-cyclopenta[*d*][1,3]dioxol-4-yl]carbamate **(VI)**,



(VI),

comprising the steps of

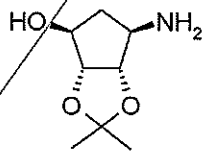
(a) mixing a compound of formula **(III)**,



(III),

with an enantiomerically pure protected amino acid to form a diastereoisomeric salt;

(b) crystallizing said salt to deliver a protected amino acid salt of a compound of formula **(IV)**,



(IV);

(c) treating the protected amino acid salt of the compound of formula **(IV)** with an acid; and

(d) reacting the product from c) with benzyl chloroformate in the presence of a suitable base, such as potassium carbonate.

2. A process according to claim 1, wherein the solvent in step (a) is selected from aliphatic alcohols, aliphatic esters, aliphatic ketones, aromatic solvents and mixtures thereof.

3. A process according to claim 2, wherein the solvent in step (a) is a mixture of *iso*-propanol and toluene.

4. A process according to claim 2, wherein the solvent in step (a) is *iso*-propanol.

5. A process according to claim 2, wherein the solvent in step (a) is a mixture of methyl *iso*-butyl ketone and toluene.

6. A process according to claim 2, wherein the solvent in step (a) is methyl *iso*-butyl ketone.

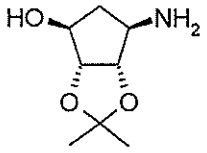
7. A process according to any one of claims 1-6 wherein the protecting group for the enantiomerically pure protected amino acids is selected from Boc, Cbz or Bz.

8. A process according to any one of claims 1-7 wherein the enantiomerically pure protected amino acid is selected from L-Boc-phenylalanine, L-Boc-leucine, Cbz-L-alanine, Bz-L-alanine, Cbz-L-phenylalanine, Boc-L-alanine, Cbz-L-tyrosine, Boc-L-tyrosine, D-Boc-phenylalanine, Cbz-D-alanine, Bz-D-alanine, Cbz-D-phenylalanine, Boc-D-alanine, Cbz-D-tyrosine or Boc-D-tyrosine.

9. A process according to claim 8 wherein the enantiomerically pure protected amino acid is L-Boc-phenylalanine.

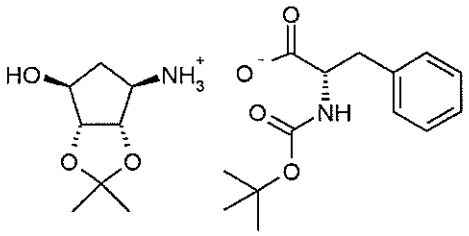
10. A process according to claim 8 wherein the enantiomerically pure protected amino acid is L-Boc-leucine.

11. A protected amino acid salt of a compound of formula **(IV)**,



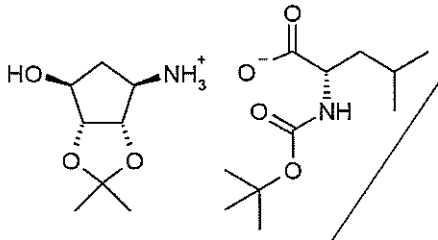
(IV).

12. The intermediate compound (3a*S*,4*R*,6*S*,6a*R*)-6-hydroxy-2,2-dimethyltetrahydro-3a*H*-cyclopenta[*d*][1,3]dioxol-4-aminium (2*S*)-2-[(*tert*-butoxycarbonyl)amino]-3-phenylpropanoate **(Va)**,



(Va).

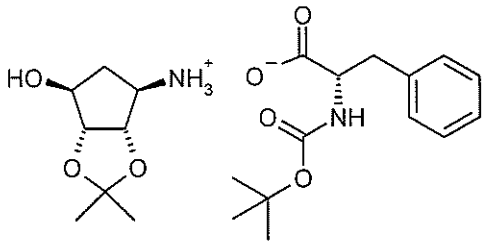
13. The intermediate compound (3a*S*,4*R*,6*S*,6a*R*)-6-hydroxy-2,2-dimethyltetrahydro-3a*H*-cyclopenta[*d*][1,3]dioxol-4-aminium (2*S*)-2-[(*tert*-butoxycarbonyl)amino]-4-methylpentanoate **(Vb)**,



(Vb).

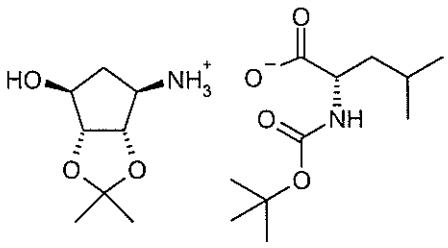
CLAIMS

1. The compound (3a*S*,4*R*,6*S*,6a*R*)-6-hydroxy-2,2-dimethyltetrahydro-3a*H*-cyclopenta[*d*][1,3]dioxol-4-aminium (2*S*)-2-[(*tert*-butoxycarbonyl)amino]-3-phenylpropanoate **(Va)**,



(Va).

2. The compound (3a*S*,4*R*,6*S*,6a*R*)-6-hydroxy-2,2-dimethyltetrahydro-3a*H*-cyclopenta[*d*][1,3]dioxol-4-aminium (2*S*)-2-[(*tert*-butoxycarbonyl)amino]-4-methylpentanoate **(Vb)**,



(Vb).