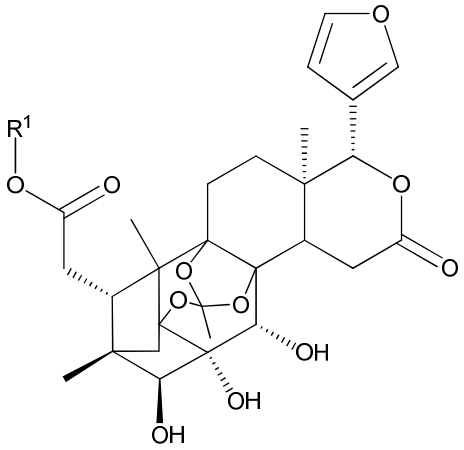
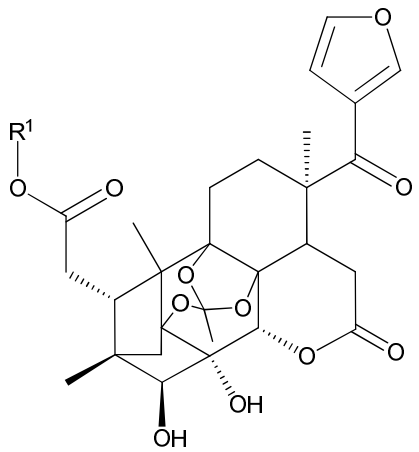
CLAIMS

1. A method of producing a compound of Formula Ib from a compound of Formula Ia:



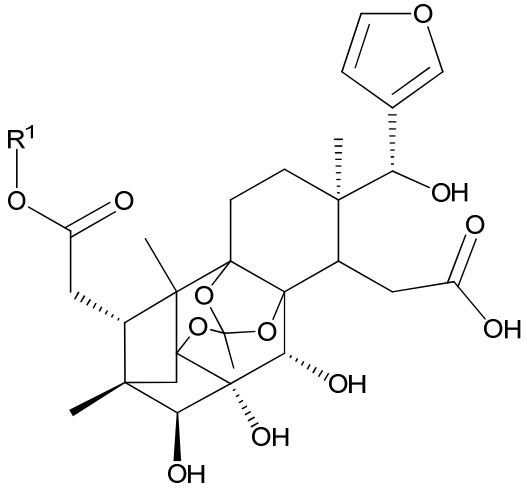
Formula Ia



Formula Ib

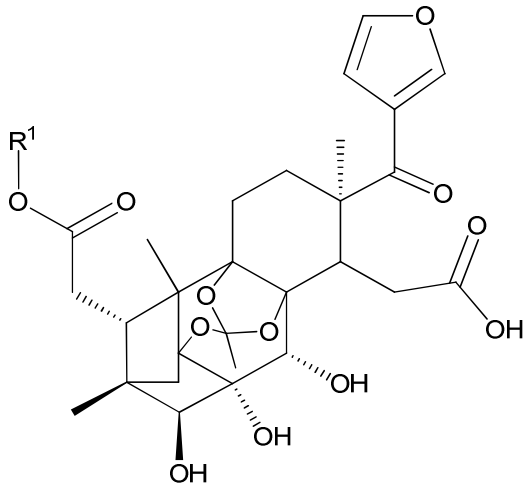
wherein R^1 is a straight, branched or cyclic alkyl group with 1 to 6 carbon atoms that is unsubstituted or substituted, said method comprising

(i) reacting a compound of Formula Ia with a base, of sufficient strength to open the lactone ring, but not to hydrolyze the group R^1 to form a carboxylic group, to obtain a compound of Formula III;



Formula III

(ii) reacting a compound of Formula III with a selectively oxidizing agent, to obtain a compound of Formula IV; and



Formula IV

(iii) reacting a compound of Formula IV with a coupling agent,in the presence of a sterically hindered organic base, thereby obtaining a compound of Formula Ib.

2. The method according to claim 1, wherein the base is barium hydroxide octahydrate in methanol or sodium trimethylsilanolate.

3. The method according to claim 1 or 2, wherein the selectively oxidizing agent is selected from the group consisting of Dess Martin periodane, pyridinium chlorochromate, Swern oxidation (oxalyl chloride and DMSO), Corey-Kim oxidation, Jones oxidation (Chromium trioxide), TEMPO, and Burgess reagents.

4. The method according to any one of the preceding claims, wherein the coupling agent is a carbodiimide coupling agent.

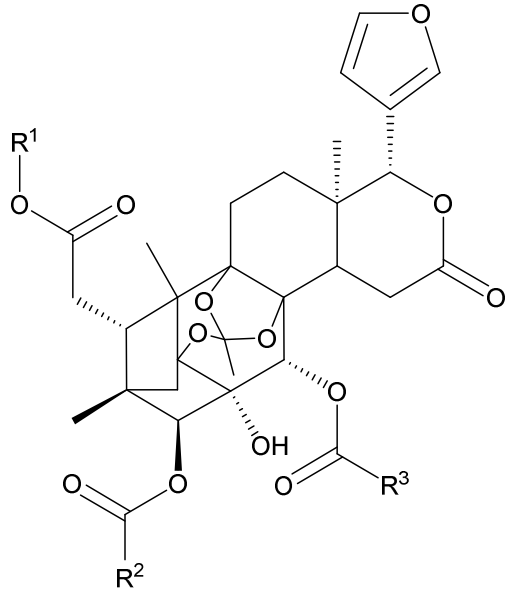
5. The method according to any one of the preceding claims, wherein the carbodiimide coupling agent is selected from 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride (EDC.HCl), N,N'-dicyclehexylcarbo-diimide (DCC), N,N'- diisopropylcarbodimide (DIC), and DCC/HOBt

(hydroxybenzotrialzole).

6. The method according to any one of the preceding claims, wherein the sterically hindered organic base is selected from the group consisting of N-diisopropylethylamine (DIPEA), Dimethyl-aminopyridine (DMAP), Tri-ethylamine (TEA), and 4-pyrrolidino pyridine (PPY).

7. The method according to any one of the preceding claims, wherein a compound of Formula Ia is obtained or obtainable by a method comprising the steps of:

(i) providing a composition comprising a compound of Formula IIa:



Formula IIa

wherein R^1 is a straight, branched or cyclic alkyl group with 1 to 6 carbon atoms that is unsubstituted or substituted,

R^2 and R^3 independently are selected from straight, branched or cyclic, substituted or unsubstituted alkyl groups with 1 to 6 carbons or from a nicotinyl group; and/or

providing an extract composition from *Entandrophragma caudatum*, comprising at least the compound of Formula IIa, wherein

a) R^2 and R^3 independently are selected from straight or branched alkyl groups with 1 to 6 carbon atoms or a nicotinyl group; and

b) R^1 is methyl;

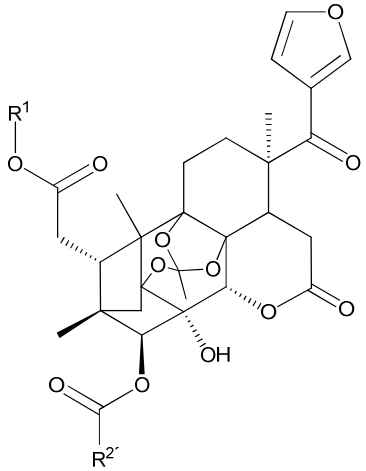
(ii) subjecting the extract composition and/or optionally the composition from step (i) to one or more distillations and to an introduction of a solvent comprising an aliphatic alkanol;

(iii) performing an alkanolysis reaction by, in the presence of the aliphatic alcohol, adding an aliphatic metal alkoxide to start the reaction, and subsequently an acid to stop the alkanolysis reaction, thereby obtaining the compound of Formula Ia.

8. The method according to claim 7, performed with the extract composition of *Entandrophragma caudatum.*

9. The method according to claim 7 or claim 8, wherein the extract composition of *Entandrophragma caudatum* comprises at least one of phragmalin-3,30-di-isobutyrate, phragmalin-3-isobutyrate-30-proprionate, or phragmalin-3-nicotinate-30-isobutyrate.

10. The method according to any one of the preceding claims, wherein the method comprises producing a compound of Formula V from the compound of Formula Ib by reacting the compound of Formula Ib with an esterification agent and a sterically hindered base to selectively introduce the group $R^{2'}$ of Formula V:

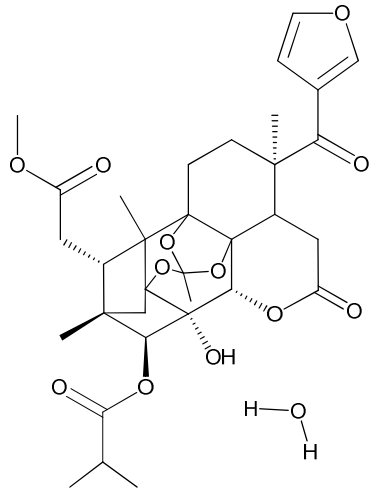


Formula V

wherein $R^{2'}$ is a straight, branched or cyclic optionally substituted alkyl group with 1 to 6 carbon atoms.

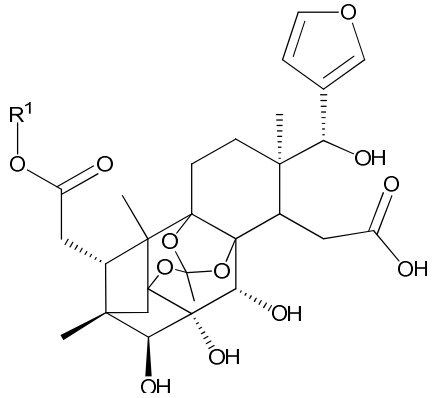
11. The method according to claim 10, further comprising consecutively purifying the compound of Formula V with a less polar solvent, preferably ethyl acetate, and consecutively with a dual polarity solvent, preferably acetone with water and with mixtures thereof, thereby obtaining a solid monohydrate of a compound of Formula V.

12. The method according to claim 11, wherein the monohydrate is a monohydrate of Formula VI:



Formula VI.

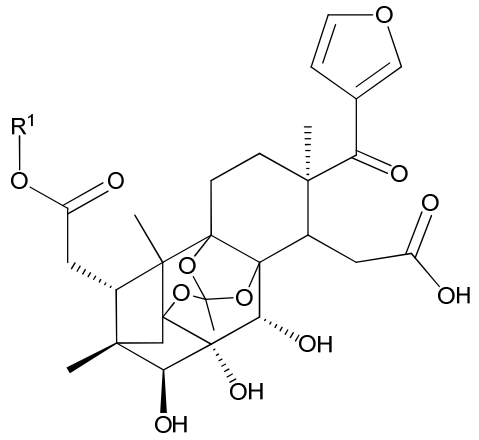
13. A compound of Formula III:



Formula III

wherein R^1 is a straight, branched or cyclic alkyl group with 1 to 6 carbon atoms.

14. A compound of Formula IV:

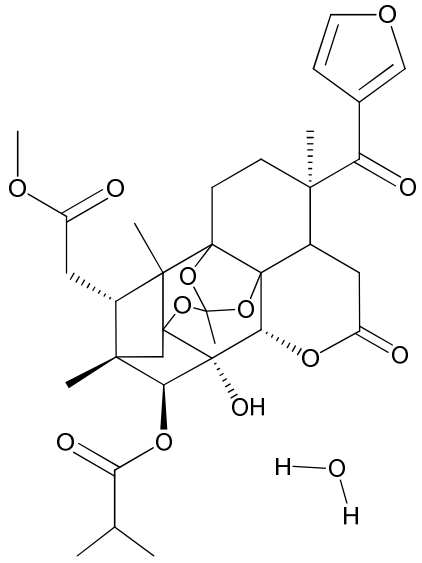


Formula IV

wherein R^1 is a straight, branched or cyclic alkyl group with 1 to 6 carbon atoms.

15. A compound according to claim 13 or claim 14 wherein R^1 is methyl.

16. A monohydrate of Formula VI:



Formula VI.