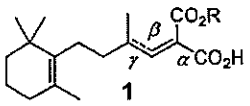
Claims

1. A compound of formula **1**

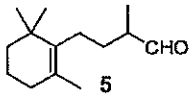


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wherein R is hydrogen, alkyl or substituted alkyl, aryl or substituted aryl.

2. A compound according to claim 1 wherein R is hydrogen, methyl or ethyl.

3. A method of preparing a compound of formula **1** comprising the step of condensing an aldehyde of formula **5**



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with malonic acid in the presence of an organocatalyst or an organocatalyst mixture in a solvent or solvent system.

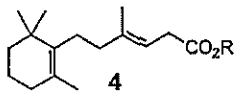
4. A method according to claim 3 wherein the organocatalyst is selected from the group consisting of ammonium salts of carboxylic acids and polycarboxylic acids, and amine components selected from the group consisting of ammonia, primary amines, secondary amines, polyamines, amino acids and peptides.

5. A method according to claim 3 or claim 4 wherein the solvent or solvent system forms an azeotrope with water, which is constantly removed from the reaction mixture by distillation.

6. A method according to any of the claims 3 to 5 wherein the condensation reaction is carried out at about 60 – 95 °C.

7. A method according to any of the claims 3 to 6 wherein the solvents are chosen from cyclohexane, benzene, toluene, *iso*-propanol and *tert*-butanol.

8. The use of a compound of formula **1** in the preparation of an ester of the formula **4** wherein said ester is formed by the decarboxylation of the compound of formula **1**, wherein R is alkyl or substituted alkyl, aryl or substituted aryl.

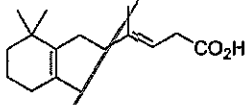


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9. The use according to claim 8 wherein the decarboxylation is carried out in a polar aprotic solvent at 75 – 85 °C.

10. The use according to claim 8 wherein the compound of formula **1** is thermally decarboxylated at a temperature of 50 – 350 °C under flow conditions.

11. The use of a compound of formula **1**, wherein R is hydrogen, in the preparation of an acid **6**, wherein said compound of formula **1** is decarboxylated in the presence of an inorganic salt or an organic cation/halide anion pair of the formula MX_n at a temperature of 50 to 250 degrees centigrade, and in a polar aprotic solvent, wherein X is a halide and n is an integer of 1 to 3, and M is a group I, II or III metal when MX_n is an inorganic salt, or M is selected from the group consisting of pyridinium, piperidinium, pyrrolidinium, imidazolium, ammonium, phosphonium and sulphonium, when MX_n is an organic cation/halide anion pair.

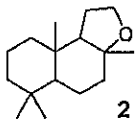


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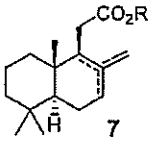
12. The use according to claim 11 wherein the metal salt is LiCl and / or $MgCl_2$ and the solvent is NMP.

13. The use of a compound of formula **1** in the preparation of a compound **2**, wherein the compound **2** is formed by decarboxylation of the compound of formula **1** to the ester of formula **4** or acid **6** according to the process steps defined in any of the claims 8 to 12 and thereafter the cyclisation of the ester **4** to provide a bicyclic ester

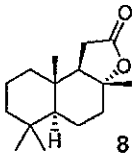
of the formula **7** or the cyclisation of the acid **6** to provide Sclareolide **8**, and a reduction / cyclization sequence of the bicyclic ester **7** or Sclareolide **8** to give compound **2**.



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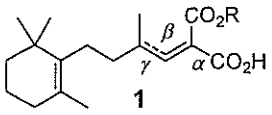


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14. An acid of the formula **6** having an E/Z-ratio of at least 83:17, and wherein R is hydrogen, obtained from a compound of formula **1**.

Claims

1. A compound of formula **1**

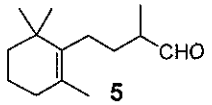


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wherein R is hydrogen, alkyl or substituted alkyl, aryl or substituted aryl.

2. A compound according to claim 1 wherein R is hydrogen, methyl or ethyl.

3. A method of preparing a compound of formula **1** wherein R is hydrogen comprising the step of condensing an aldehyde of formula **5**

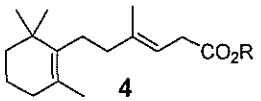


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with malonic acid in the presence of an organocatalyst or an organocatalyst mixture in a solvent or solvent system wherein the organocatalyst is selected from the group consisting of ammonium salts of carboxylic acids and polycarboxylic acids, and amine components selected from the group consisting of ammonia, primary amines, secondary amines, polyamines, amino acids and peptides, wherein the solvent or solvent system forms an azeotrope with water, which is constantly removed from the reaction mixture by distillation and wherein the condensation reaction is carried out at about 60 – 95 °C.

4. A method according to claim 3 wherein the solvents are chosen from cyclohexane, benzene, toluene, *iso*-propanol and *tert*-butanol.

5. The use of a compound of formula **1** in the preparation of an ester of the formula **4** wherein said ester is formed by the decarboxylation of the compound of formula **1**, wherein R is alkyl or substituted alkyl, aryl or substituted aryl.

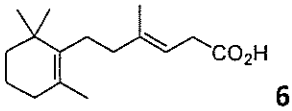


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6. The use according to claim 5 wherein the decarboxylation is carried out in a polar aprotic solvent at 75 – 85 °C.

7. The use according to claim 5 wherein the compound of formula **1** is thermally decarboxylated at a temperature of 50 – 350 °C under flow conditions.

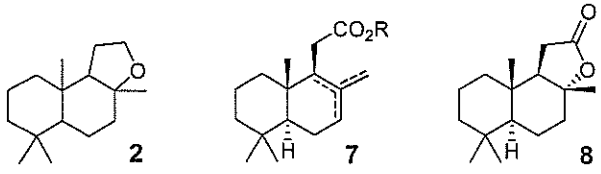
8. The use of a compound of formula **1**, wherein R is hydrogen, in the preparation of an acid **6**, wherein said compound of formula **1** is decarboxylated in the presence of an inorganic salt or an organic cation/halide anion pair of the formula MX_n at a temperature of 50 to 250 degrees centigrade, and in a polar aprotic solvent, wherein X is a halide and n is an integer of 1 to 3, and M is a group I, II or III metal when MX_n is an inorganic salt, or M is selected from the group consisting of pyridinium, piperidinium, pyrrolidinium, imidazolium, ammonium, phosphonium and sulphonium, when MX_n is an organic cation/halide anion pair.



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9. The use according to claim 8 wherein the metal salt is LiCl and / or $MgCl_2$ and the solvent is NMP.

10. The use of a compound of formula **1** in the preparation of a compound **2**, wherein the compound **2** is formed by decarboxylation of the compound of formula **1** to the ester of formula **4** or acid **6** according to the process steps defined in any of the claims 8 to 12 and thereafter the cyclisation of the ester **4** to provide a bicyclic ester of the formula **7** or the cyclisation of the acid **6** to provide Sclareolide **8**, and a reduction / cyclization sequence of the bicyclic ester **7** or Sclareolide **8** to give compound **2**.



2 **7** **8**

11. An acid of the formula **6** having an E/Z-ratio of at least 83:17, obtained from a compound of formula **1** wherein R is hydrogen.