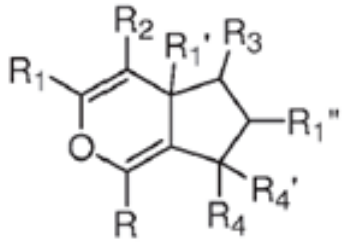
CLAIMS

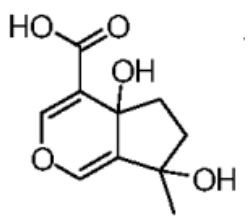
1. Compounds of the general formula C, which are ipolamiide derivatives:



C

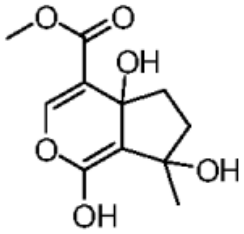
wherein R corresponds to H, OH; R_1, $R_{1'}$, $R_{1''}$ correspond to H, OH;
R_2 corresponds to COOH, $COOCH_3$; R_3 corresponds to H, CH_3; R_4, $R_{4'}$ correspond to H, OH, CH_2OH, CH_3.

2. Compounds of formula C according to claim 1, selected from



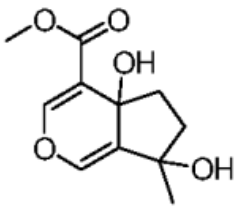
(IV)

,



(V)

, and



(VIII)

.

3. Compounds of formula C as defined in claim 1 or 2, for use as a medicament.

4. Compounds of formula C as defined in claim 1 or 2, for use as immunosuppressants in the treatment of immune disorders.

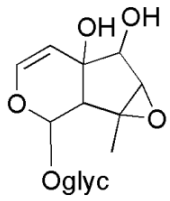
5. Compounds of formula C for use as defined in claim 4, wherein the immune disorder is vitiligo.

6. Use of compounds of formula C as defined in claim 1 or 2 in the manufacture of a medicament for the treatment of immune disorders.

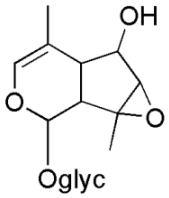
7. The use according to claim 6, wherein the immune disorder is vitiligo.

8. A pharmaceutical composition comprising ipolamiide derivatives of formula C as defined in claim 1 or 2, and a pharmaceutically acceptable vehicle, optionally further comprising ipolamiide.

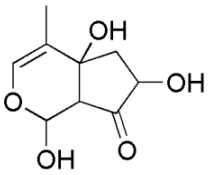
9. Pharmaceutical composition, according to claim 8, additionally comprising at least one of the following compounds:



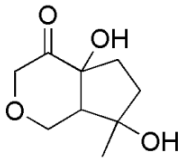
(XII)



(XIII)



(XIV)



(XV)

10. Process for production of active compounds comprising the step of subjecting at least one ipolamiide compound to a heating step at high temperatures in a suitable solvent for a time sufficient to obtain the ipolamiide derivatives of formula C as defined in claim 1 or 2.

11. Process for production, according to claim 10, wherein the active compounds comprise immunosuppressive activity.

12. Process for production, according to claim 10, wherein the solvent is water.

13. Process for production, according to claim 10, allowing to obtain high concentrations of the ipolamiide derivatives.

14. Process for production, according to claim 10, wherein the high concentrations comprise about 0.5% to about 45% of the ipolamiide derivatives in a mixture.

15. Process for production, according to claim 10, wherein the high temperatures comprise temperatures above 35 °C.

16. Process for production, according to claim 15, wherein the high temperatures comprise temperatures between 35 °C and 165 °C.

17. Process for production, according to claim 10, comprising a hydrolysis step.

18. Process for production, according to claim 17, comprising an acid hydrolysis step.

19. Process for production, according to claim 17, comprising a basic hydrolysis step.

20. Process for production of extract enriched with ipolamiide derivatives of formula C as defined in claim 1 or 2, comprising the steps of:

a) selecting input vegetal biomass with a content of ipolamiide between 2.5% and 3.5% obtained from plants of the genus *Stachytarpheta*;

b) submitting the selected biomass from a) to oven drying at temperature between 40 to 80 °C, until obtaining the humidity stabilization between 10 to 12%;

c) milling the vegetal biomass;

d) performing the extraction of the vegetal biomass through the steps of:

i. heating of the vegetal biomass at a temperature between 70 to 100 °C, with constant stirring;

ii. maceration of the vegetal biomass at room temperature;

iii. heating of the vegetal biomass with temperature between 70 to 100 °C.

21. Process for production of extract, according to claim 20, further comprising the steps of:

iv. filtering and concentration of the extract;

v. drying in Spray Dryer, during 1 to 60 seconds, with inlet temperature between 155 and 165 °C and outlet temperature between 85 to 95 °C, coupled to a dehumidifier.

22. Process for production of extract, according to claim 20, in which the vegetal biomass heating of d) occur for 5 to 30 minutes.

23. Process for production of extract, according to claim 20, in which the vegetal biomass heating of d) occur for 5 to 15 hours.

24. Process for production of extract, according to claim 20, in which the input vegetal biomass comprises the aerial parts of the plants of the genus *Stachytarpheta*.

25. Process for production of extract, according to claim 20, in which the plant is *Stachytarpheta cayennensis*.

26. Process for production of extract, according to claim 20, in which the process enables an extraction yield of about 8 to about 10%.

27. Process for production of the extract, according to claim 20, in which the process comprises an aqueous extraction.

28. Process for production of extract, according to claim 20, in which the process provides an extract containing about 1% to about 20% of ipolamiide and derivatives.

29. Process for production of extract, according to any one of claims 20 to 28, comprising the step of predicting the theoretical content of ipolamiide and its derivatives of formula C in the extract from the actual content of ipolamiide in the input vegetal biomass using Equation I:

% Theoretical content of ipolamiide and derivatives in the extract = % Actual content of ipolamiide in the vegetal biomass x DER / (< actual content of ipolamiide and derivatives in the extract/actual content of ipolamiide in the input vegetal biomass >) ± standard deviation (Equation I).

30. Extracts from plants of the genus *Stachytarpheta* enriched with ipolamiide derivatives of formula C as defined in claim 1 or 2.

31. Extracts from plants of the genus *Stachytarpheta* enriched with ipolamiide derivatives of formula C obtained by the process as defined in any of the claims 20 to 29.

32. Extracts from plants of the genus *Stachytarpheta* according to claim 30 or 31, containing from 1% to 20% of ipolamiide or ipolamiide derivatives of formula C.

33. Extracts from plants of the genus *Stachytarpheta* as defined in any one of claims 30 to 32, for use as a medicament.

34. Extracts from plants of the genus *Stachytarpheta* as defined in any one of claims 30 to 32, for use as immunosuppressants in the treatment of immunological disorders.

35. Use of extracts from plants of the genus *Stachytarpheta* as defined in any one of claims 30 to 32 in the manufacture of a medicament for treating immunological disorders.