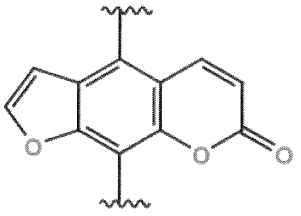
CLAIMS

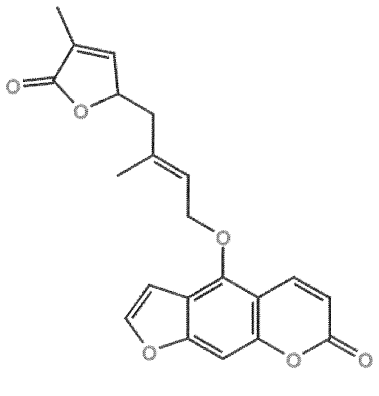
1. A pharmaceutical composition for use in the treatment and/or prevention of a parasitic mediated disease comprising a furanocoumarin derivative having the following core structure (**A**),



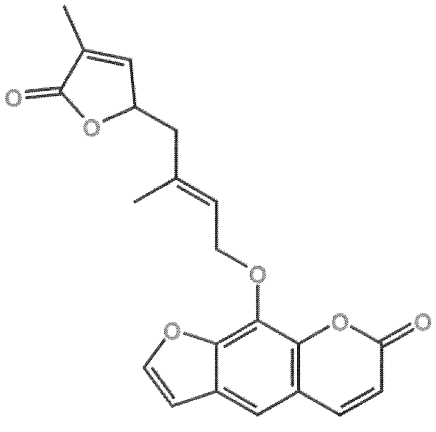
(**A**)

its pharmaceutically acceptable salt, isomer or a combination thereof

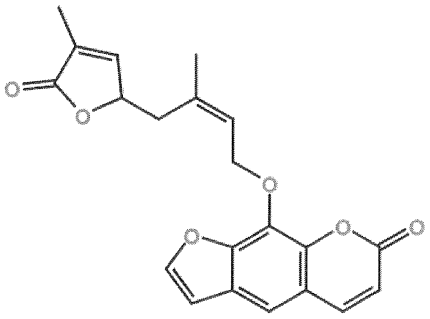
wherein the furanocoumarin derivative has the structure (**1b**); (**2b**) or (**2c**):



(**1b**)



(2b) or



(2c).

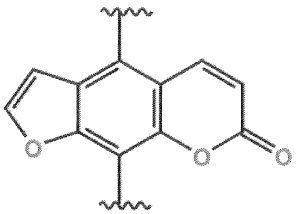
2. The pharmaceutical composition for use according to claim 1, wherein the parasitic mediated disease is transmitted by an arthropod comprising an *Anopheles* genus.

3. The pharmaceutical composition for use according to claim 1 or 2, wherein the parasitic mediated disease is malaria.

4. The pharmaceutical composition for use according to any one of the preceding claims, wherein the parasitic mediated disease is caused by a *Plasmodium* parasite.

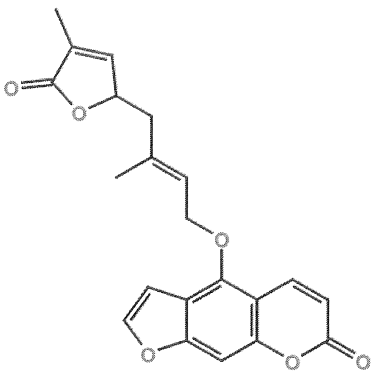
5. The pharmaceutical composition for use according to claim 4, wherein the *Plasmodium* parasite is a *Plasmodium Falciparum*.

6. A compound for use in the treatment and/or prevention of a parasitic mediated disease, the compound comprising a furanocoumarin derivative having the following core structure (**A**),

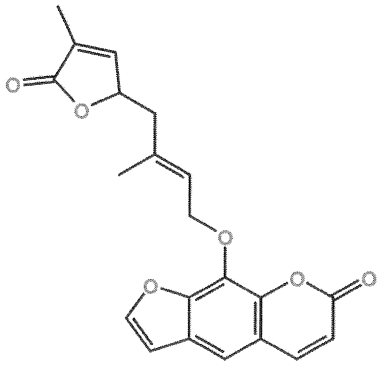


(**A**)

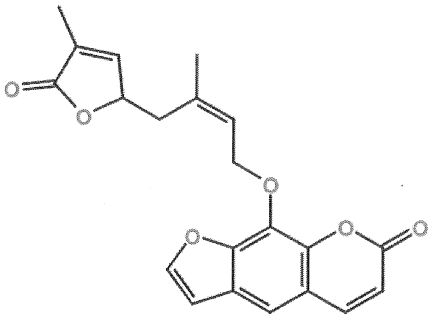
wherein the furanocoumarin derivative has the structure (**1b**), (**2b**) or (**2c**):



(**1b**)



(2b) or



(2c).

7. The compound according to claim 6, wherein the parasitic mediated disease is transmitted by an arthropod, wherein the arthropod comprises an *Anopheles* genus.

8. The compound according to claim 6 or 7, wherein the parasitic mediated disease is malaria.

9. The compound according to any of claims 6 to 8, wherein the parasitic mediated disease is caused by a *Plasmodium* parasite

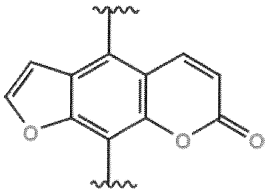
10. The compound according to claim 9, wherein the *Plasmodium* parasite is a *Plasmodium Falciparum*.

11. The compound according to any one of claims 6 to 10, wherein the compound is isolated from a plant, wherein the plant comprises a *Rutaceae* family

12. The compound according to claim 11, wherein the plant comprises a *Clausena lansium* species.

13. The compound according to claim 11 or 12, wherein the compound is isolated from the leaves of the plant.

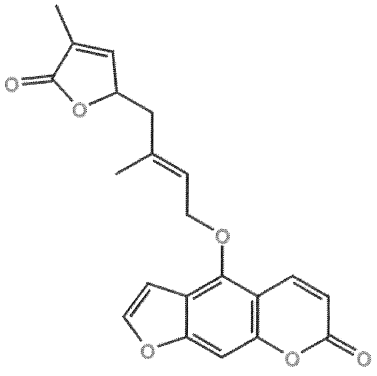
14. Use of a compound comprising a furanocoumarin derivative having core structure (**A**),



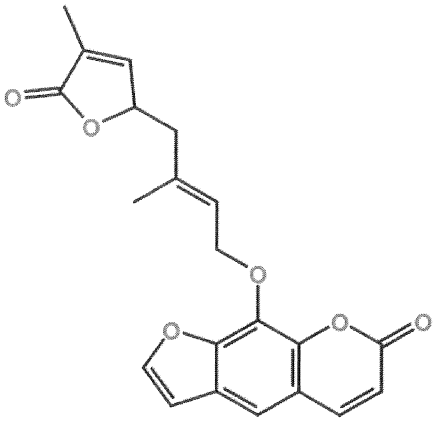
(**A**)

its pharmaceutically acceptable salt, isomer or a combination thereof, wherein the furanocoumarin derivative has the structure **(1b), (2b)** or **(2c)**:

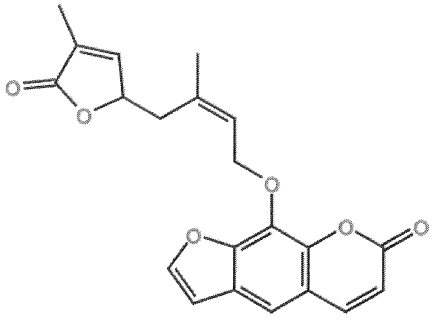
5



(**1b**)



(2b) or



(2c)

in the manufacture of a medicament for use in the treatment and/or prevention of a parasitic mediated disease.

15. The use according to claim 14, wherein the compound is isolated from a plant, preferably the leaves of a plant and wherein the plant comprises a *Rutaceae* family.

16. The use according to claim 15, wherein the plant comprises a *Clausena lansium* species.

17. The use according to any one of claims 14 to 16, further comprising the steps of:

(a) defatting the leaves of a plant comprising *Clausena lansium* prior to a step of maceration in a polar solvent and evaporation of the polar solvent, preferably by ultrasonication in a hydrocarbon solvent, preferably hexane;

(b) acidifying the maceration extract to form an acidified extract, preferably by adding hydrochloric acid solution after the first extract is dissolved in ethanol;

(c) filtering the acidified extract to obtain a filtrate;

(d) basifying the filtrate to form a basified filtrate, preferably by adding sodium hydroxide solution;

(e) extracting the basified filtrate with dichloromethane to form a second extract;

(f) separating the second extract into a first aqueous fraction and a second dichloromethane fraction, wherein the dichloromethane fraction is preferably separated by column chromatography; and

(g) drying the first and second fractions, preferably the dichloromethane fraction is further extracted with an alcohol solvent,

wherein the furanocoumarin derivative or its isomer is present in the first and/or second fraction, and wherein preferably one or more steps are repeated to increase purity and/or yield.