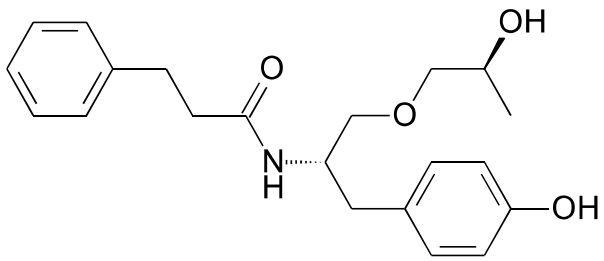
Summary

The present disclosure relates to a polymorphic form of (*S,S*)-2-N(3-O-(propan-2-ol)-1-propyl-4-hydroxybenzene)-3-phenylpropylamide and to the treatment or prophylaxis of pain, inflammation and/or autoimmunity and provides a method of treating or preventing pain, inflammation and/or autoimmunity as well as the use of this polymorphic form in the manufacture of medicaments for the treatment or prophylaxis of pain (preferably nociceptive or neuropathic), inflammation and/or autoimmunity in humans and/or non-human animals.

In one aspect, the present disclosure provides a polymorphic form of a compound having the formula:



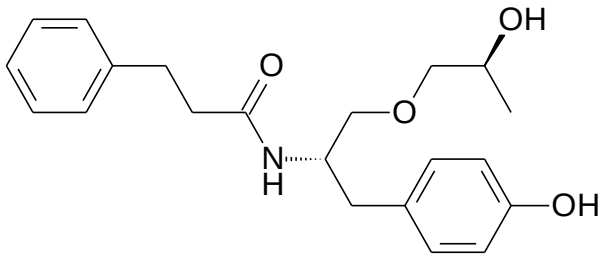
wherein the polymorphic form has a melting point in the range from 105 °C to 110 °C, wherein the polymorphic form has an X-ray powder diffraction pattern (CuKα) comprising a peak at 19.0 ± 0.2 °2θ, wherein the X-ray powder diffraction pattern (CuKα) further comprises one or more peaks selected from peaks at 11.25 ± 0.2, 17.38 ± 0.2, 17.57 ± 0.2, 20.74 ± 0.2, 20.91 ± 0.2, 22.42 ± 0.2 and 23.30 ± 0.2 °2θ.

In another aspect, the present disclosure provides use of the polymorphic form as described herein, in the manufacture of a medicament for the treatment or prophylaxis of pain. In another aspect, the present disclosure provides use of the polymorphic form as described herein, in the manufacture of a medicament for the treatment or prophylaxis of inflammation and/or autoimmunity. In yet another aspect, the present disclosure provides use of a pharmaceutical composition in the manufacture of a medicament for the treatment or prophylaxis of pain, inflammation and/or autoimmunity, said composition comprising a pharmaceutically effective amount of one or more of the compounds as described herein, optionally together with one or more pharmaceutically acceptable excipients.

More specifically, the compound used in the present disclosure is a compound of the following chemical formula:

CLAIMS

1. A polymorphic form of a compound having the formula:



wherein the polymorphic form has a melting point in the range from 105 °C to 110 °C.~~,~~

~~2.~~ ~~The polymorphic form according to claim 1,~~ wherein the polymorphic form has an X-ray powder diffraction pattern (CuKα) comprising a peak at 19.0 ± 0.2 °2θ.~~,~~

~~3.~~ ~~The polymorphic form according to claim 2,~~ wherein the X-ray powder diffraction pattern (CuKα) further comprises one or more peaks selected from peaks at 11.25 ± 0.2, 17.38 ± 0.2, 17.57 ± 0.2, 20.74 ± 0.2, 20.91 ± 0.2, 22.42 ± 0.2 and 23.30 ± 0.2 °2θ.

4~~2~~. The polymorphic form according to ~~any one of~~ claim~~s~~ 1~~ to 3~~, wherein the polymorphic form has a melting point in the range from 106 °C to 109 °C, preferably 107 °C to 108 °C.

3~~5~~. The polymorphic form according to ~~any one of~~ claim~~s~~ 1~~ to 3~~, wherein the polymorphic form has a melting enthalpy within the range of 100 J/g to 140 J/g, preferably 110 J/g to 130 J/g and more preferably 115 to 125 J/g.

4~~6~~. The polymorphic form according to any one of claims 1 to 3~~5~~ for use as a medicament.

5~~7~~. Use of the polymorphic form according to any one of claims 1 to 3~~5~~, in the manufacture of a medicament for the treatment or prophylaxis of pain.

~~8~~6. Use of the polymorphic form according to any one of claims 1 to 3~~5~~, in the manufacture of a medicament for the treatment or prophylaxis of inflammation and/or autoimmunity.

~~9~~7. Use of a pharmaceutical composition in the manufacture of a medicament for the treatment or prophylaxis of pain, inflammation and/or autoimmunity, said composition comprising a pharmaceutically effective amount of one or more of the compounds according to any one of claims 1 to ~~5~~3, optionally together with one or more pharmaceutically acceptable excipients.

8~~10~~. The use according to claim 7~~9~~, wherein said composition is formulated as a unit dosage form, preferably comprising from 0.1 to 500 mg of the one or more compounds.

9~~11~~. The use according to claim 7~~9~~ or 8~~10~~, wherein the pharmaceutical composition is to be administered orally.