porphyria.

Prior Art Documents

[Patent Documents]

[0006]

[Patent Document 1] WO 2008025094

[Patent Document 2] WO 2015182723

[Patent Document 3] WO2020/138481

SUMMARY

[0006a]

In a first aspect of the present disclosure, there is provided a use of 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-(trifluoromethyl)phenyl}piperidine-4-carboxylic acid or a pharmaceutically acceptable salt or cocrystal thereof in the manufacture of a medicament for the treatment or prevention of porphyria, wherein the dose of the 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-(trifluoromethyl)phenyl}piperidine-4-carboxylic acid or the pharmaceutically acceptable salt or cocrystal thereof is 100 to 300 mg/day.

Problems to be solved by the invention

[0007]

Methods of curative treatment of porphyria are limited, and the main method for avoiding development of symptoms or for alleviation of symptoms has been prevention of exposure of the skin to sunlight. In particular, it is known that patients with photodermatoses induced by visible light tend to avoid going out in the daytime, so that the quality of life (QOL) of the patients may be remarkably deteriorated.

As described above, an analog of α-melanocyte-stimulating hormone (α-

CLAIMS

1. Use of 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-(trifluoromethyl)phenyl}piperidine-4-carboxylic acid or a pharmaceutically acceptable salt or cocrystal thereof in the manufacture of a medicament for the treatment or prevention of porphyria, wherein the dose of the 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-(trifluoromethyl)phenyl}piperidine-4-carboxylic acid or the pharmaceutically acceptable salt or cocrystal thereof is 100 to 300 mg/day.

2. The use according to claim 1, wherein the dose of the 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-(trifluoromethyl)phenyl}piperidine-4-carboxylic acid or the pharmaceutically acceptable salt or cocrystal thereof is 100 mg/day, 200 mg/day, or 300 mg/day.

3. The use according to claim 1 or 2, wherein the porphyria is erythropoietic protoporphyria, X-linked porphyria, congenital erythropoietic porphyria, variegate porphyria, acute intermittent porphyria, porphyria cutanea tarda, or hereditary coproporphyria.

4. The use according to claim 3, wherein the porphyria is erythropoietic protoporphyria or X-linked porphyria.

5. The use according to any one of claims 1 to 4, wherein the 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-(trifluoromethyl)phenyl}piperidine-4-carboxylic acid or the pharmaceutically acceptable salt or cocrystal thereof is a cocrystal of 1-{2-[(3S,4R)-1-{[(3R,4R)-1-cyclopentyl-3-fluoro-4-(4-methoxyphenyl)pyrrolidin-3-yl]carbonyl}-4-(methoxymethyl)pyrrolidin-3-yl]-5-

(trifluoromethyl)phenyl}piperidine-4-carboxylic acid and phosphoric acid.