In this case, higher RORγ antagonist activity can be expected, and furthermore, an excellent therapeutic effect or preventive effect in autoimmune diseases, such as multiple sclerosis or psoriasis, or allergic diseases, such as allergic dermatitis, can be expected.

[0024]

The present disclosure provides a medicament and an RORγ antagonist, each of which contains the cyclic amine derivative represented by the general formula (I) mentioned above or a pharmacologically acceptable salt thereof as an active ingredient.

[0024a]

In another aspect, there is provided a cyclic amine derivative as defined above or a pharmacologically acceptable salt thereof as an active ingredient for use as a medicament.

[0025]

The abovementioned medicament is preferably a therapeutic agent or preventive agent for an autoimmune disease or an allergic disease, more preferably a therapeutic agent or preventive agent for multiple sclerosis or psoriasis as the abovementioned therapeutic agent or preventive agent for an autoimmune disease, more preferably a therapeutic agent or preventive agent for allergic dermatitis as the abovementioned therapeutic agent or preventive agent for an allergic disease, and more preferably a therapeutic agent or preventive agent for contact dermatitis or atopic dermatitis as the abovementioned therapeutic agent or preventive agent for allergic dermatitis.

[0026]

Since the cyclic amine derivative of the present invention or a pharmacologically acceptable salt thereof has RORγ antagonist activity, it can effectively suppress the function of RORγ and can be used as a therapeutic agent or preventive agent for autoimmune diseases or allergic diseases.

[0026a]

In another aspect, there is provided the use of a cyclic amine derivative as defined above or a pharmacologically acceptable salt thereof as an active

ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of an autoimmune disease.

[0026b]

In another aspect, there is provided the use of a cyclic amine derivative as defined above or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of multiple sclerosis or psoriasis.

[0026c]

In another aspect, there is provided the use of a cyclic amine derivative as defined above or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of an allergic disease.

[0026d]

In another aspect, there is provided the use of a cyclic amine derivative as defined above or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of allergic dermatitis.

[0026e]

In another aspect, there is provided the use of a cyclic amine derivative as defined above or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of contact dermatitis or atopic dermatitis.

BRIEF DESCRIPTION OF THE DRAWINGS

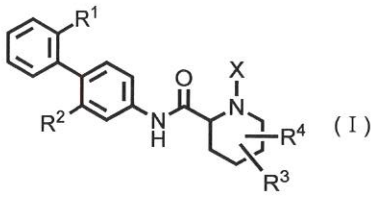
[0027]

FIG. 1 is a graph showing the suppressive effect of the compound of Example 20 on the increase in the neurological symptom score in a mouse experimental autoimmune encephalomyelitis model.

FIG. 2 is a graph showing the suppressive effect of

CLAIMS

1. A cyclic amine derivative represented by the following general formula (I):



(I)

wherein

R^1 represents an alkyloxy group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a halogen atom(s);

R^2 represents a halogen atom;

R^3 represents a hydrogen atom, a halogen atom, or a hydroxy group;

R^4 represents a hydrogen atom or a halogen atom;

X represents $-C(=O)-(CH_2)_n-R^5$ or $-S(=O)_2-R^6$;

n is an integer of 0 to 5;

R^5 represents a hydrogen atom, $-OR^7$, $-SR^7$, $-S(=O)_2-R^7$, $-C(=O)-OR^7$, $-N(R^7)R^8$, an alkyl group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a halogen atom(s), or a heteroaryl group, any hydrogen atom(s) of which is/are optionally substituted with an alkyl group(s) having 1 to 3 carbon atoms;

R^6 represents an alkyl group having 1 to 5 carbon atoms;

R^7 represents a hydrogen atom or an alkyl group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a halogen atom(s); and

R^8 represents a hydrogen atom, an alkyl group having 1 to 3 carbon atoms, an acyl group having 2 to 4 carbon atoms, or an alkylsulfonyl group having 1 to 3 carbon atoms,

or a pharmacologically acceptable salt thereof.

2. The cyclic amine derivative according to claim 1, wherein:

R^1 is an alkyloxy group having 1 to 3 carbon atoms, any 1 to 3

hydrogen atoms of which are optionally substituted with a fluorine atom(s) or a chlorine atom(s);

R^2 is a fluorine atom or a chlorine atom;

R^3 is a hydrogen atom, a fluorine atom, a chlorine atom, or a hydroxy group;

R^4 is a hydrogen atom, a fluorine atom, or a chlorine atom;

R^5 is a hydrogen atom, $-OR^7$, $-SR^7$, $-S(=O)_2-R^7$, $-C(=O)-OR^7$, $-N(R^7)R^8$, an alkyl group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a fluorine atom(s) or a chlorine atom(s), or a heteroaryl group, any hydrogen atom(s) of which is/are optionally substituted with a methyl group(s);

R^6 is an alkyl group having 1 to 3 carbon atoms; and

R^7 is a hydrogen atom or an alkyl group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a fluorine atom(s) or a chlorine atom(s),

or a pharmacologically acceptable salt thereof.

3. The cyclic amine derivative according to claim 1, wherein:

R^1 is a methoxy group, any 1 to 3 hydrogen atoms of which are optionally substituted with a fluorine atom(s);

R^2 is a fluorine atom or a chlorine atom;

R^3 is a hydrogen atom, a fluorine atom, or a hydroxy group;

R^4 is a hydrogen atom or a fluorine atom;

n is an integer of 0 to 4;

R^5 is a hydrogen atom, $-OR^7$, $-N(R^7)R^8$, an alkyl group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a fluorine atom(s), or a 5-membered ring heteroaryl group, any hydrogen atom(s) of which is/are optionally substituted with a methyl group(s);

R^6 is a methyl group or an ethyl group;

R^7 is a hydrogen atom or an alkyl group having 1 to 3 carbon atoms, any 1 to 3 hydrogen atoms of which are optionally substituted with a fluorine atom(s); and

R^8 is a hydrogen atom, a methyl group, an acyl group having

2 to 4 carbon atoms, or an alkylsulfonyl group having 1 to 3 carbon atoms,
or a pharmacologically acceptable salt thereof.

4. The cyclic amine derivative according to claim 1, wherein:
R^1 is a trifluoromethoxy group;
R^2 is a chlorine atom;
R^3 is a hydrogen atom;
R^4 is a hydrogen atom;
X is $-C(=O)-(CH_2)_n-R^5$;
n is an integer of 0 to 3;
R^5 is a methyl group, a trifluoromethyl group, $-N(R^7)R^8$, or an imidazolyl, triazolyl, or tetrazolyl group, any hydrogen atom(s) of which is/are optionally substituted with a methyl group(s);
R^7 is a hydrogen atom, a methyl group, or an ethyl group; and
R^8 is a hydrogen atom, a methyl group, an acetyl group, a propionyl group, a methylsulfonyl group, or an ethylsulfonyl group,
or a pharmacologically acceptable salt thereof.

5. A cyclic amine derivative according to any one of claims 1 to 4 or a pharmacologically acceptable salt thereof as an active ingredient for use as a medicament.

6. Use of a cyclic amine derivative according to any one of claims 1 to 4 or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of an autoimmune disease.

7. Use of a cyclic amine derivative according to any one of claims 1 to 4 or a pharmacologically acceptable salt thereof as

an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of multiple sclerosis or psoriasis.

8. Use of a cyclic amine derivative according to any one of claims 1 to 4 or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of an allergic disease.

9. Use of a cyclic amine derivative according to any one of claims 1 to 4 or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of allergic dermatitis.

10. Use of a cyclic amine derivative according to any one of claims 1 to 4 or a pharmacologically acceptable salt thereof as an active ingredient, in the manufacture of a therapeutic agent or preventive agent for the treatment of contact dermatitis or atopic dermatitis.