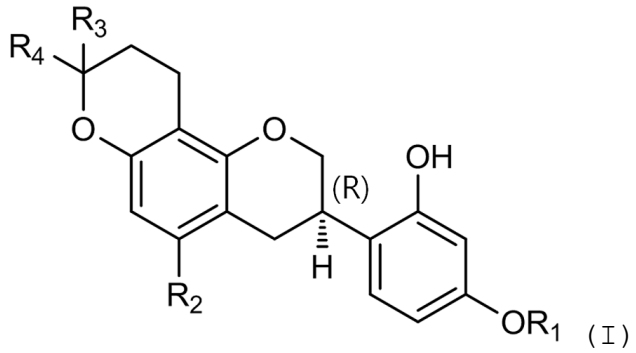
[CLAIMS]

[Claim 1]

An optically active pyranochromenylphenol compound of the following Chemical Formula (I), a pharmaceutically acceptable salt, or a solvate thereof:



(I)

wherein

R_1 is a straight or branched C_2 to C_6 alkyl group unsubstituted or substituted by a straight or branched C_1 to C_5 alkyl group, a halogen atom, or a C_1 to C_5 thioalkyl group;

R_2 is a hydrogen atom, methyl, ethyl, methoxy, or ethoxy; and

R_3 and R_4 are each independently a hydrogen atom or a C_1 to C_2 alkyl group.

[Claim 2]

The optically active pyranochromenylphenol compound, the pharmaceutically acceptable salt, or the solvate thereof of claim 1,

wherein R_1 is ethyl, n-propyl, isopropyl, n-butyl, 2-

methylpropyl, n-pentyl, 2-methylbutyl, 3-methylbutyl, 2-ethylpropyl, n-hexyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, or 2-ethylbutyl;

R_2 is a hydrogen atom; and

R_3 and R_4 are each methyl.

[Claim 3]

The optically active pyranochromenylphenol compound, the pharmaceutically acceptable salt, or the solvate thereof of claim 1,

wherein R_1 is ethyl, n-propyl, isopropyl, n-butyl, 2-methylpropyl, n-pentyl, 2-methylbutyl, 3-methylbutyl, 2-ethylpropyl, n-hexyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, or 2-ethylbutyl;

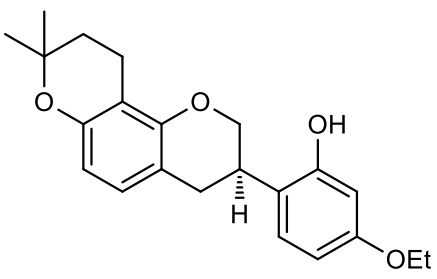
R_2 is methyl or methoxy; and

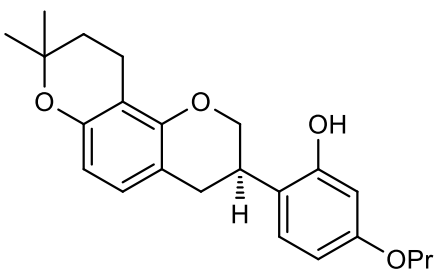
R_3 and R_4 are each methyl.

[Claim 4]

The optically active pyranochromenylphenol compound, the pharmaceutically acceptable salt, or the solvate thereof of claim 1,

wherein the compound of Chemical Formula (I) is any one of the following compounds:





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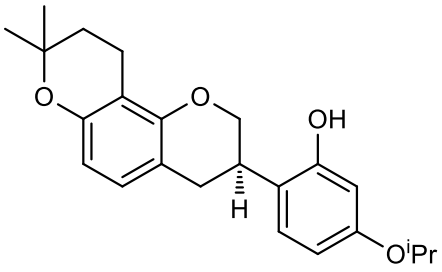

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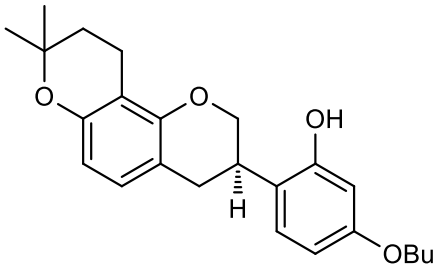

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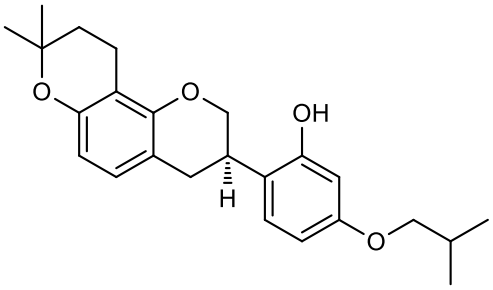

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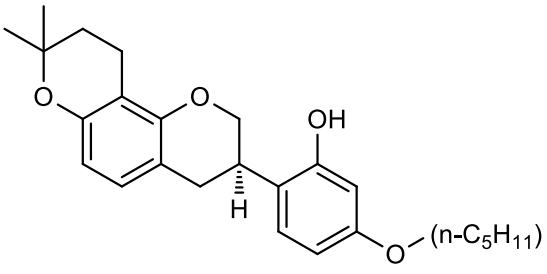

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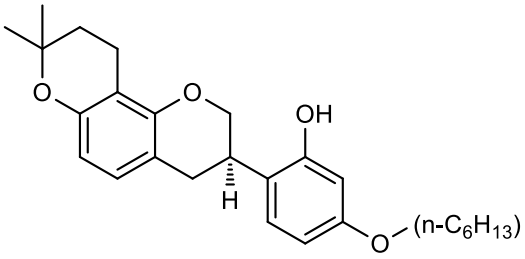

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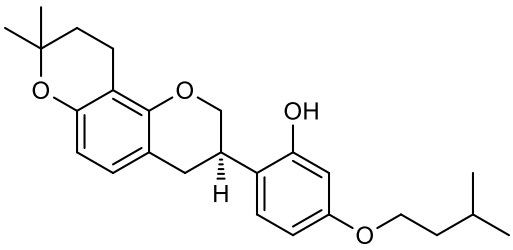

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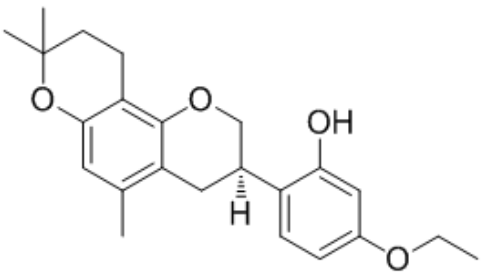

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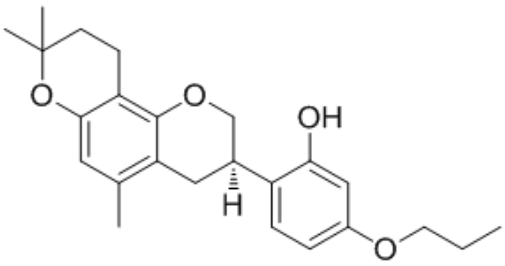

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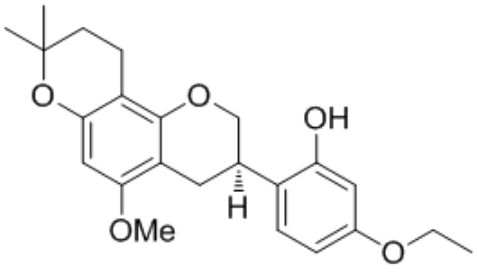

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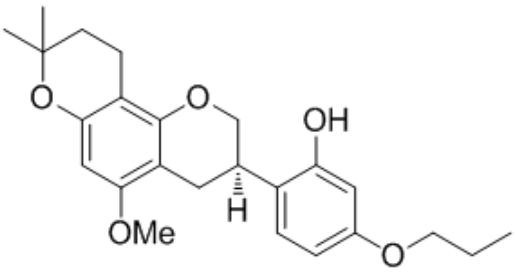
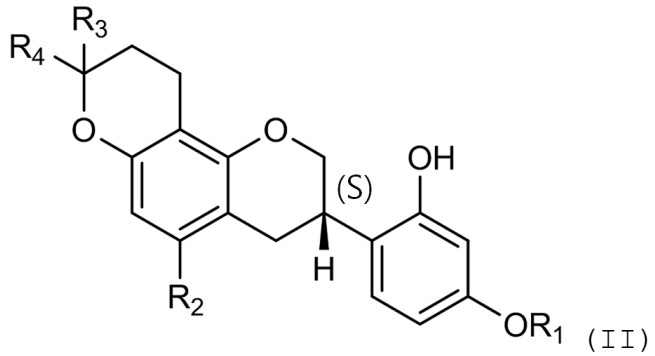


<Compound 11a>

<Compound 12a>

[Claim 5]

An optically active pyranochromenylphenol compound of the following Chemical Formula (II), a pharmaceutically acceptable salt, or a solvate thereof:



(II)

wherein

R_1 is a straight or branched C_2 to C_6 alkyl group unsubstituted or substituted by a straight or branched C_1 to C_5 alkyl group, a halogen atom, or a C_1 to C_5 thioalkyl group;

R_2 is a hydrogen atom, methyl, ethyl, methoxy, or ethoxy; and

R_3 and R_4 are each independently a hydrogen atom or a

C_1 to C_2 alkyl group.

[Claim 6]

The optically active pyranochromenylphenol compound, the pharmaceutically acceptable salt, or the solvate thereof of claim 5,

wherein R_1 is ethyl, n-propyl, isopropyl, n-butyl, 2-methylpropyl, n-pentyl, 2-methylbutyl, 3-methylbutyl, 2-ethylpropyl, n-hexyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, and 2-ethylbutyl;

R_2 is a hydrogen atom; and

R_3 and R_4 are each methyl.

[Claim 7]

The optically active pyranochromenylphenol compound, the pharmaceutically acceptable salt, or the solvate thereof of claim 5,

wherein R_1 is ethyl, n-propyl, isopropyl, n-butyl, 2-methylpropyl, n-pentyl, 2-methylbutyl, 3-methylbutyl, 2-ethylpropyl, n-hexyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, or 2-ethylbutyl;

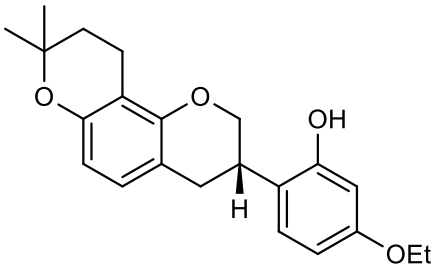
R_2 is methyl or methoxy; and

R_3 and R_4 are each methyl.

[Claim 8]

The optically active pyranochromenylphenol compound, the pharmaceutically acceptable salt, or the solvate thereof of claim 5,

wherein the compound of Chemical Formula (II) is any one of the following compounds:



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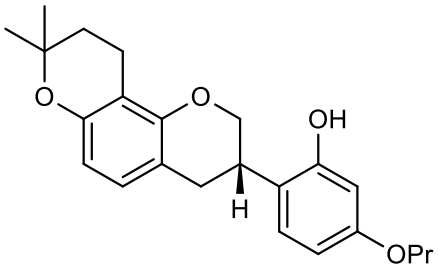

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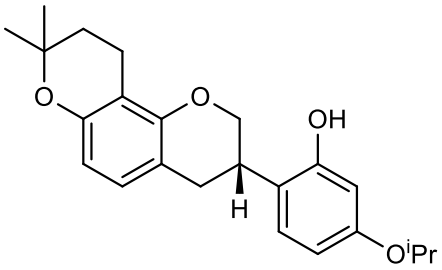

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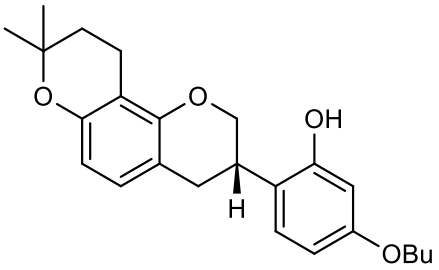

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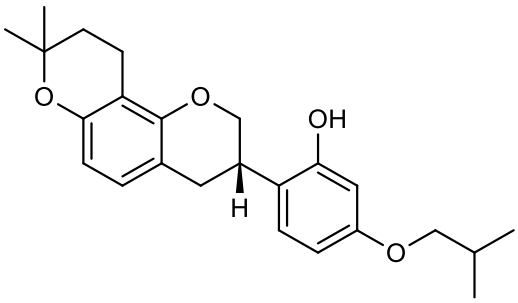

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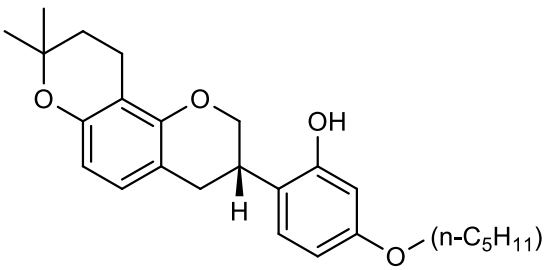

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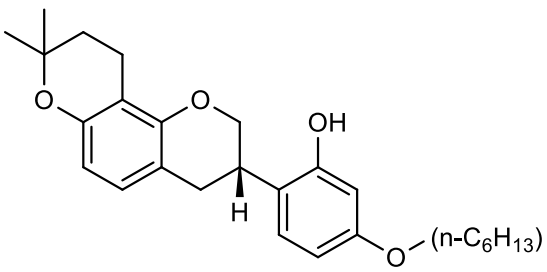

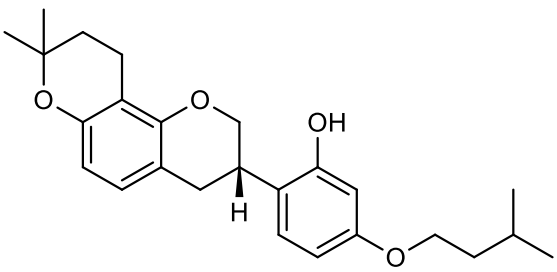

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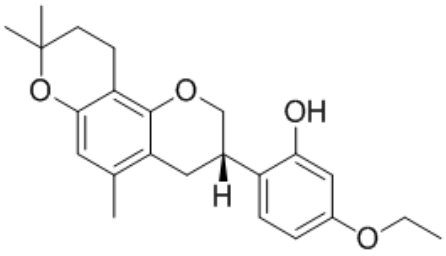

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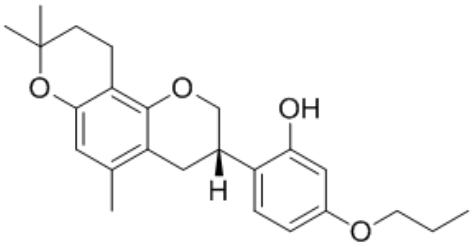

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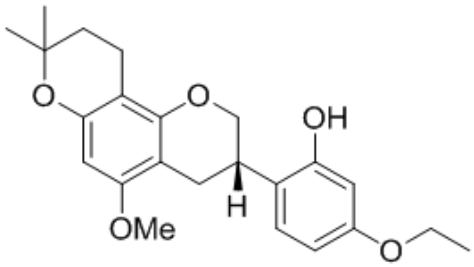

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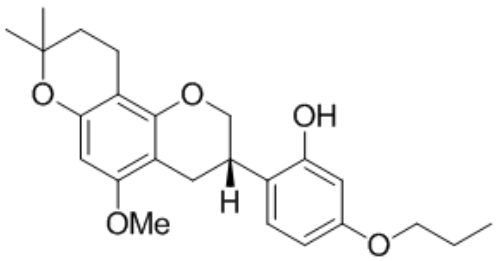
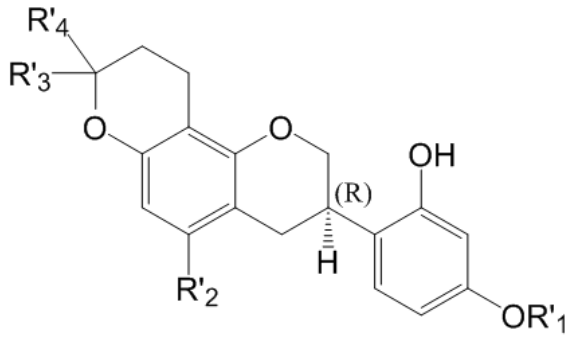


<Compound 11b>

<Compound 12b>

[Claim 9]

A pharmaceutical composition for use in preventing or treating diabetes, comprising an optically active pyranochromenylphenol compound of the following Chemical Formula (I'), a pharmaceutically acceptable salt, or a solvate thereof:



(I')

wherein

R'_1 is a straight or branched C_1 to C_6 alkyl group unsubstituted or substituted by a straight or branched C_1 to C_5 alkyl group, a halogen atom, or a C_1 to C_5 thioalkyl group;

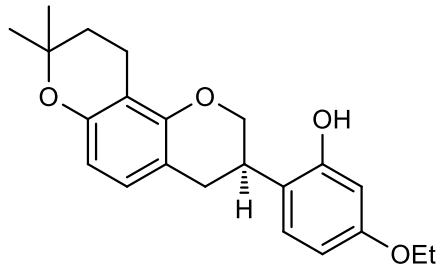
R'_2 is a hydrogen atom, methyl, ethyl, methoxy, or ethoxy; and

R'_3 and R'_4 are each independently a hydrogen atom or a C_1 to C_2 alkyl group.

[Claim 10]

The pharmaceutical composition for use of claim 9,

wherein the optically active pyranochromenylphenol compound of Chemical Formula (I') is any one of the following compounds:



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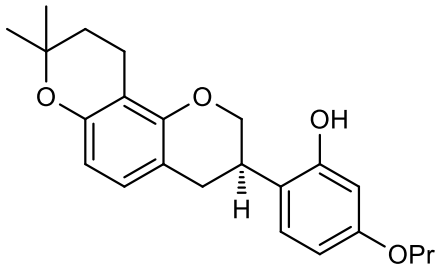

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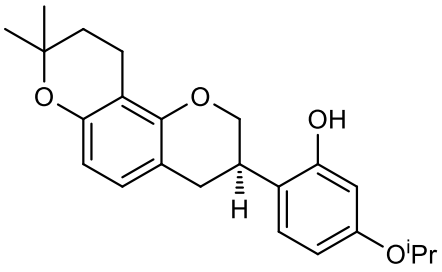

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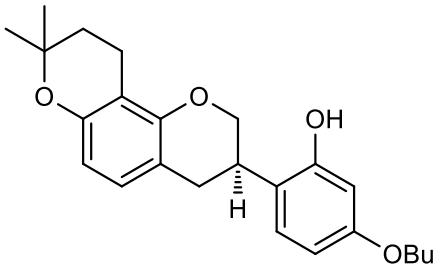

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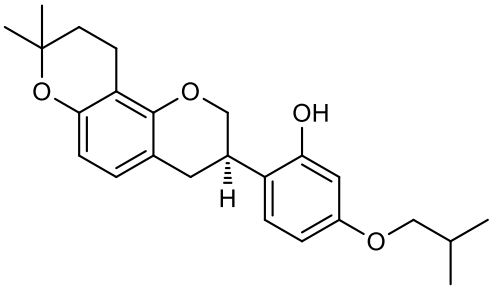

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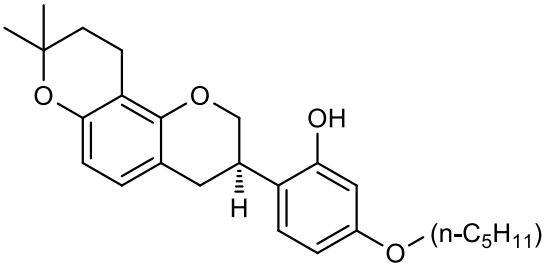

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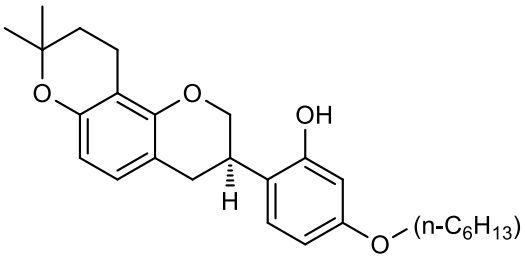

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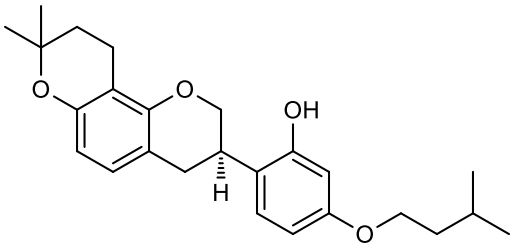

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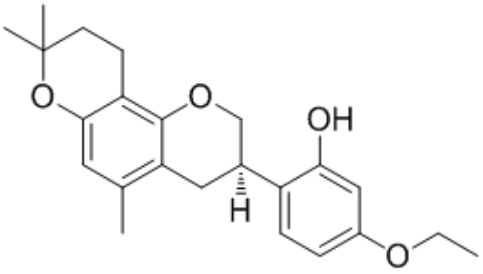

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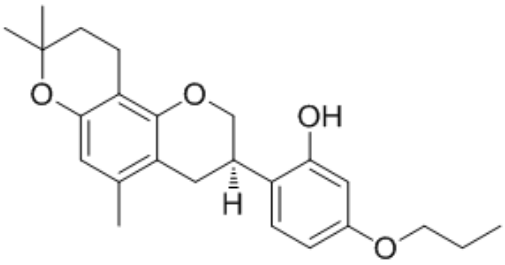

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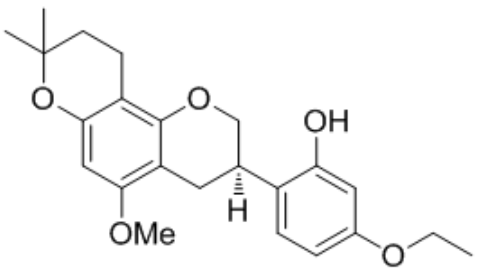

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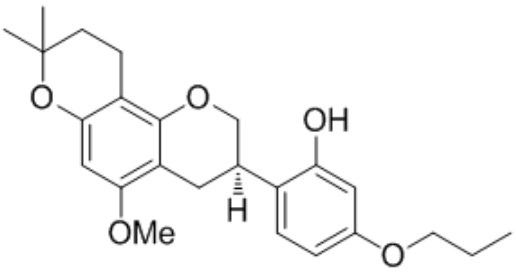

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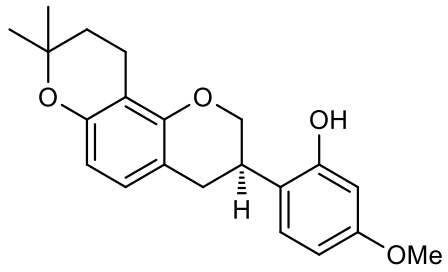
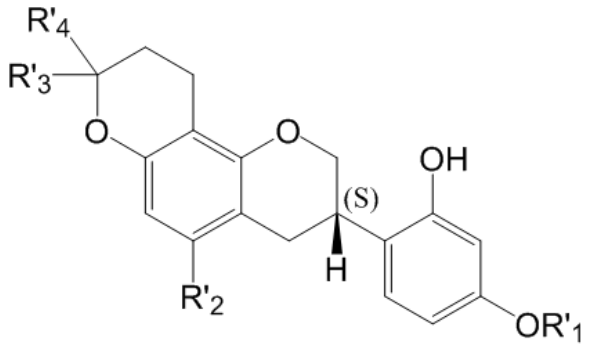


<Compound 13a>

[Claim 11]

A pharmaceutical composition for use in preventing or treating obesity, comprising an optically active pyranochromenylphenol compound of the following Chemical Formula (II'), a pharmaceutically acceptable salt, or a solvate thereof:



(II')

wherein

R'_1 is a substituted or unsubstituted straight or branched C_1 to C_6 alkyl group unsubstituted or substituted by a straight or branched C_1 to C_5 alkyl group, a halogen atom, or a C_1 to C_5 thioalkyl group;

R'_2 is a hydrogen atom, methyl, ethyl, methoxy, or ethoxy; and

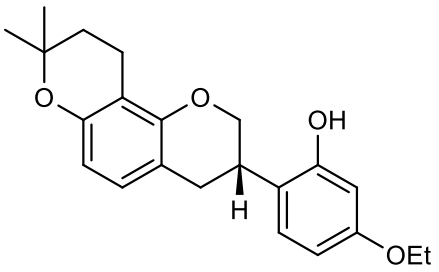
R'_3 and R'_4 are each independently a hydrogen atom or

a C_1 to C_2 alkyl group.

[Claim 12]

The pharmaceutical composition for use of claim 11,

wherein the optically active pyranochromenylphenol compound of Chemical Formula (II') is any one of the following compounds:



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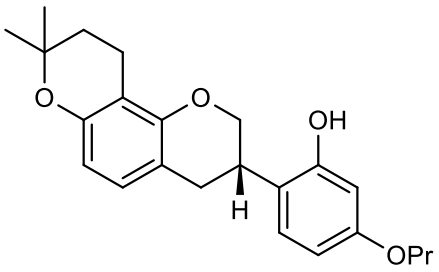

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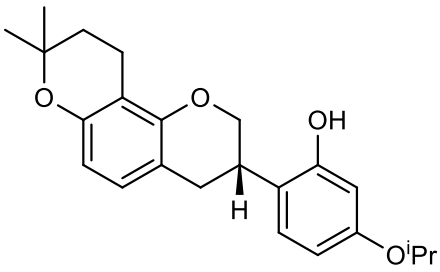

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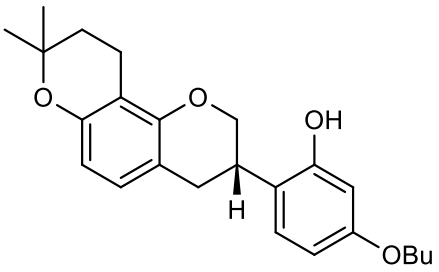

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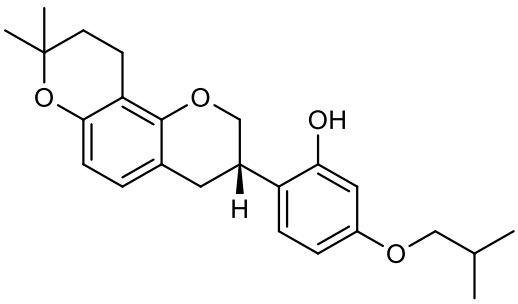

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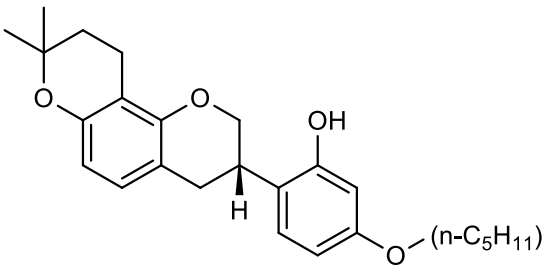

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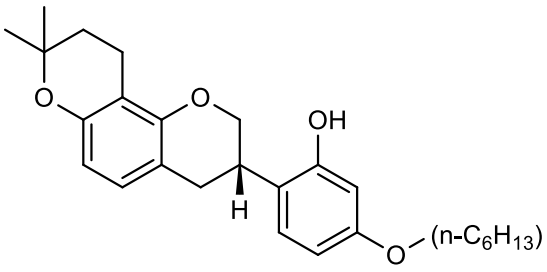

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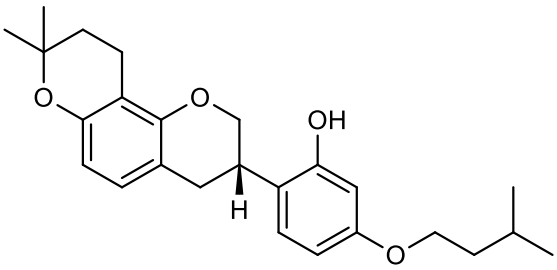

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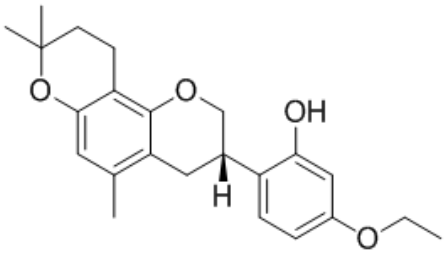

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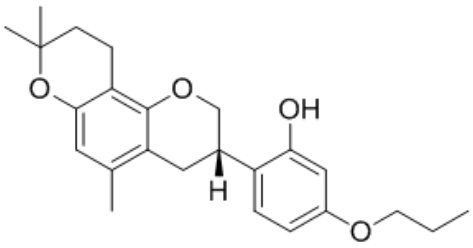

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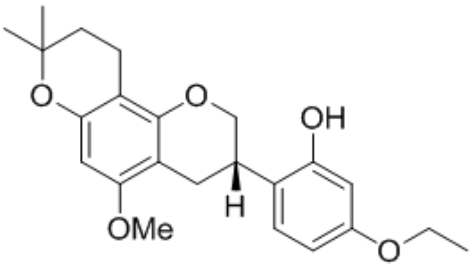

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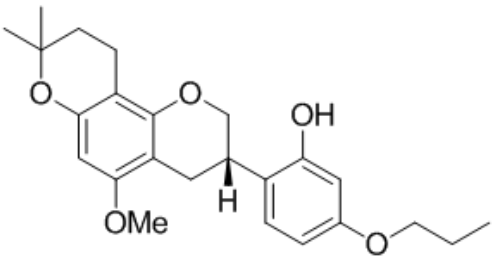

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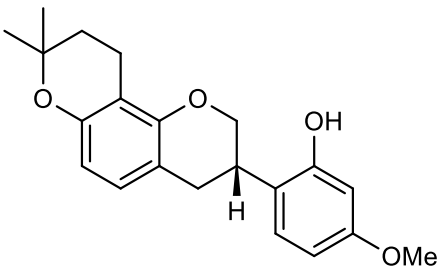
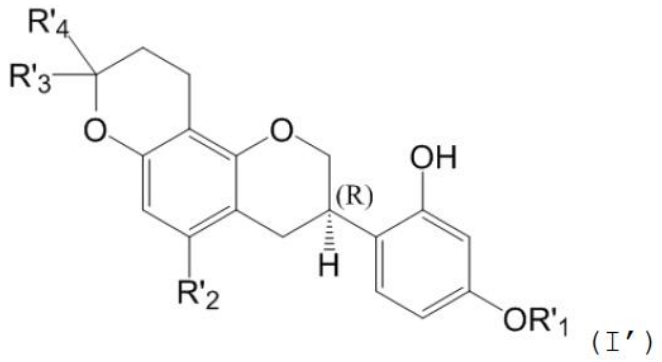


<Compound 13b>

[Claim 13]

Use of a pharmaceutical composition in the manufacture of a medicament for preventing or treating diabetes, wherein the composition comprises an optically active pyranochromenylphenol compound of the following Chemical Formula (I'), a pharmaceutically acceptable salt, or a solvate thereof:



(I')

wherein

R'_1 is methyl, ethyl, n-propyl, isopropyl, n-butyl, 2-methylpropyl, n-pentyl, 2-methylbutyl, 3-methylbutyl, 2-ethylpropyl, n-hexyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, or 2-ethylbutyl;

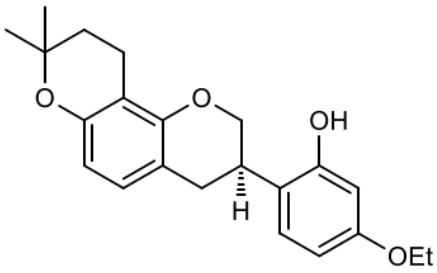
R'_2 is a hydrogen atom, methyl, ethyl, methoxy, or ethoxy; and

R'_3 and R'_4 are each independently a hydrogen atom or a C_1 to C_2 alkyl group.

[Claim 14]

The use of claim 13, wherein the optically active pyranochromenylphenol compound of Chemical Formula (I') is

any one of the following compounds:



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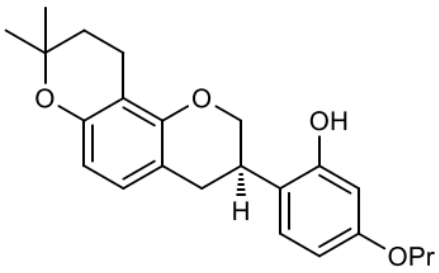

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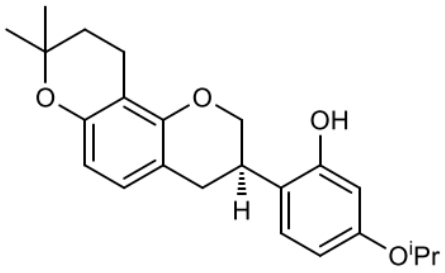

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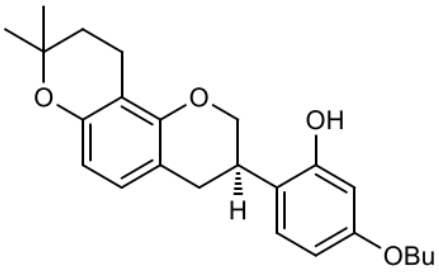

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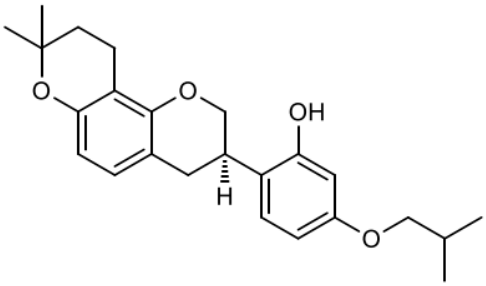

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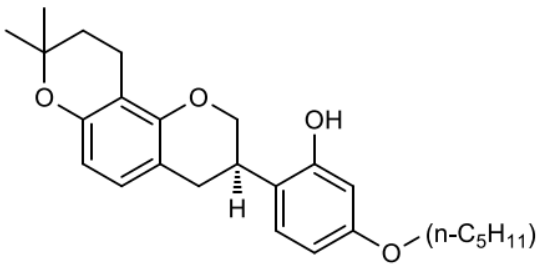

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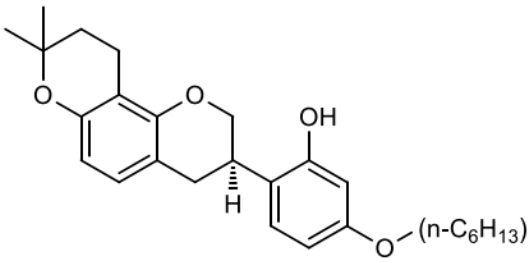

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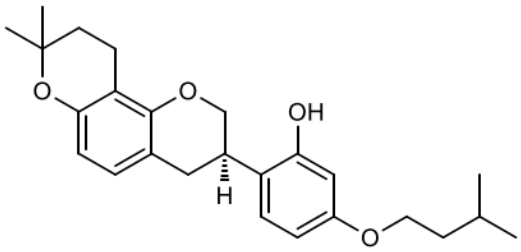

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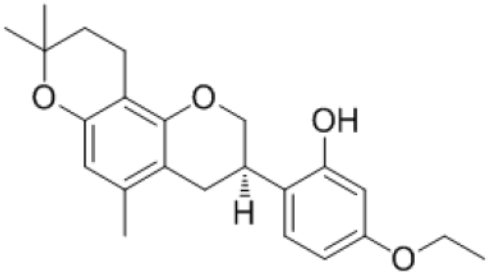

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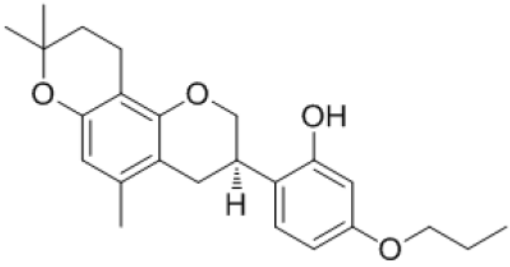

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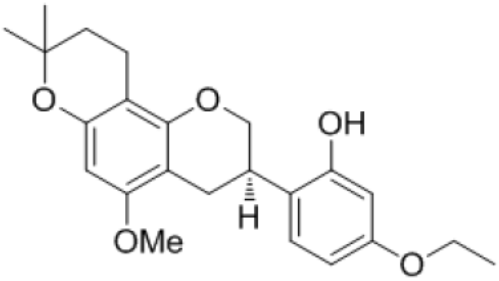

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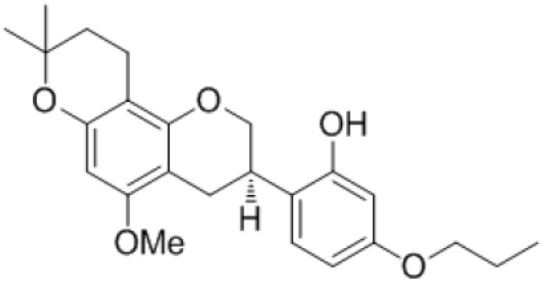

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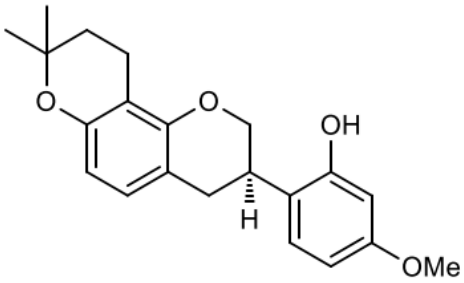
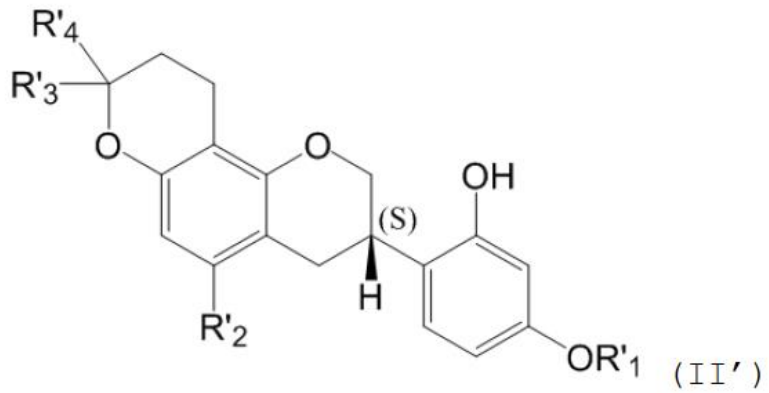


<Compound 13a>.

[Claim 15]

Use of a pharmaceutical composition in the manufacture of a medicament for preventing or treating obesity, wherein the composition comprises an optically active pyranochromenylphenol compound of the following Chemical Formula (II'), a pharmaceutically acceptable salt, or a solvate thereof:



(II')

wherein

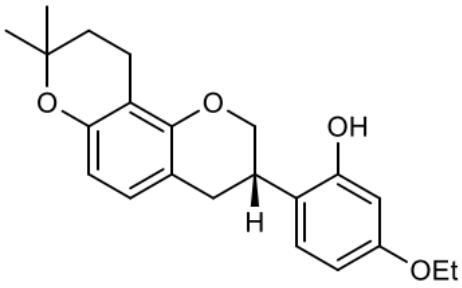
R'_1 is methyl, ethyl, n-propyl, isopropyl, n-butyl, 2-methylpropyl, n-pentyl, 2-methylbutyl, 3-methylbutyl, 2-ethylpropyl, n-hexyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, or 2-ethylbutyl;

R'_2 is a hydrogen atom, methyl, ethyl, methoxy, or ethoxy; and

R'_3 and R'_4 are each independently a hydrogen atom or a C_1 to C_2 alkyl group.

[Claim 16]

The use of claim 15, wherein the optically active pyranochromenylphenol compound of Chemical Formula (II') is any one of the following compounds:



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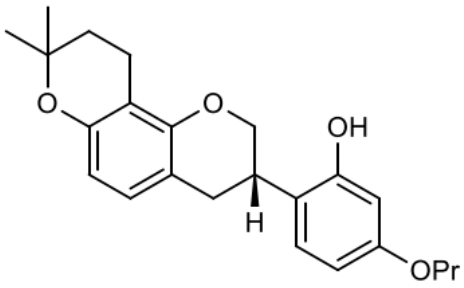

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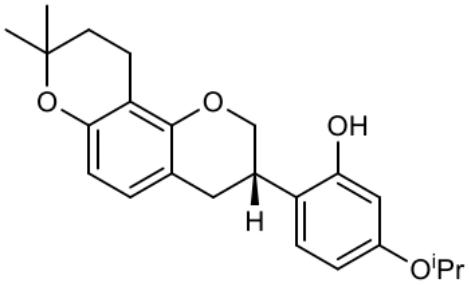

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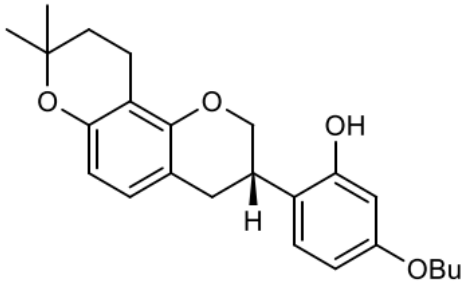

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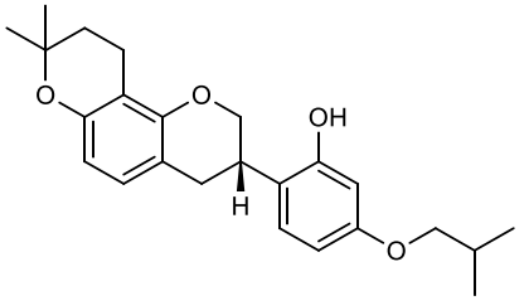

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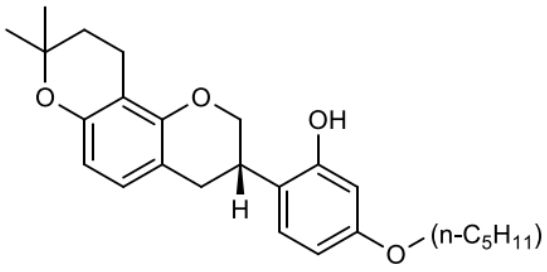

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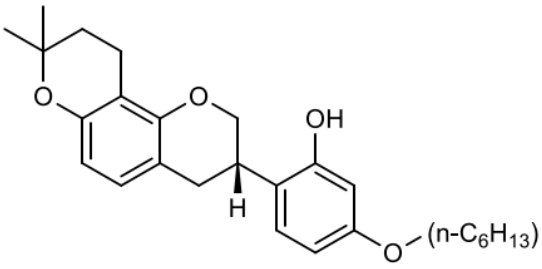

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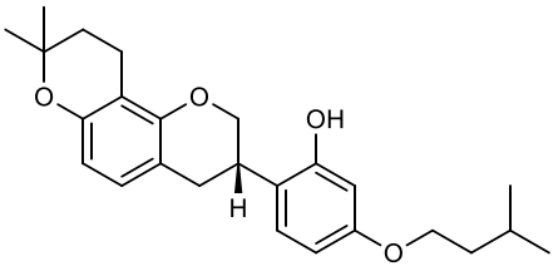

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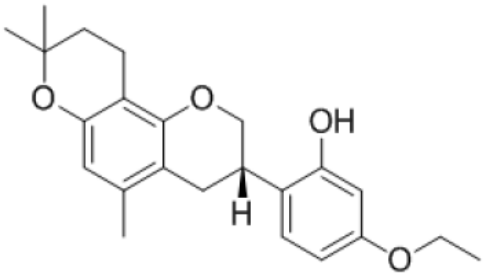

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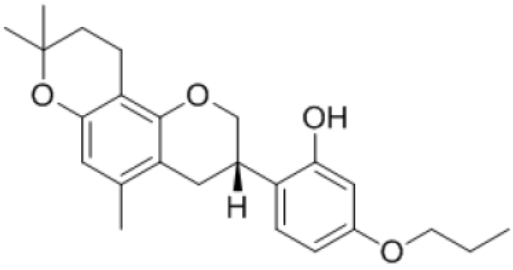

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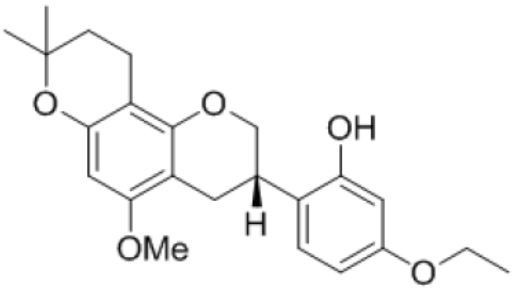

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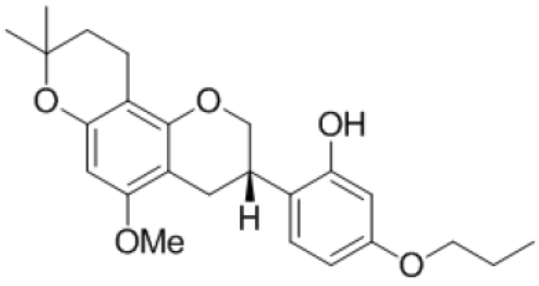

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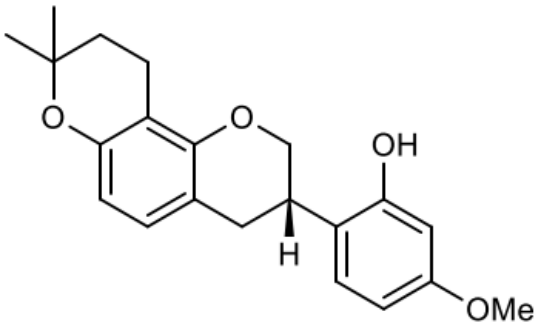

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