

3

heterocyclic(lower)alkanoyl groups such as heterocyclic acetyl, heterocyclic propanoyl, heterocyclic butanoyl, heterocyclic pentanoyl, heterocyclic hexanoyl, etc.;

heterocyclic(lower)alkenoyl groups such as heterocyclic propenoyl, heterocyclic butenoyl, heterocyclic pentenoyl, heterocyclic hexenoyl, etc.;

heterocyclic glyoxyloyl and the like.

The acyl group for R¹ may have one or more suitable substituent(s). Among the above-mentioned examples for the acyl groups, an aroyl group which may have one or more suitable substituent(s) is particularly preferable.

Examples of suitable substituents in the acyl group include a heterocyclic group substituted by an aryl group having a lower alkoxy group, a heterocyclic group substituted by an aryl group having a lower alkoxy(lower)alkoxy group, a heterocyclic group substituted by an aryl group having a lower alkoxy(higher)alkoxy group, a heterocyclic group substituted by an aryl group having a cyclo(lower)alkyloxy group, a heterocyclic group substituted by an aryl group having a heterocyclic group, a heterocyclic group substituted by a cyclo(lower)alkyl group having a cyclo(lower)alkyl group, a heterocyclic group substituted by an aryl group having an aryl group substituted by a lower alkoxy(lower)alkoxy and a heterocyclic group substituted by an aryl group having a heterocyclic group substituted by a cyclo(lower)alkyl group.

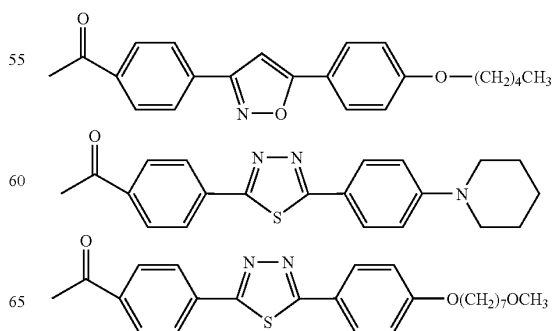
Among these examples, preferred are an unsaturated 3- to 8-membered heteromonocyclic group containing one to two oxygen atom(s) and one to three nitrogen atom(s) and substituted by phenyl having (C₄-C₆)alkoxy, an unsaturated condensed heterocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having (C₄-C₆)alkoxy, an unsaturated 3- to 8-membered heteromonocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having (C₁-C₄)alkoxy(C₄-C₆)alkoxy, an unsaturated 3- to 8-membered heteromonocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having (C₁-C₄)alkoxy(C₇-C₁₄)alkoxy, a saturated 3- to 8-membered heteromonocyclic group containing one to four nitrogen atom(s) and substituted by phenyl having (C₁-C₄)alkoxy(C₇-C₁₄)alkoxy, an unsaturated condensed heterocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having cyclo(C₄-C₆)alkyloxy, an unsaturated condensed heterocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl, a saturated 3- to 8-membered heteromonocyclic group containing one to two oxygen atom(s) and one to three nitrogen atom(s), a saturated 3- to 8-membered heteromonocyclic group having one to four nitrogen atom(s) and substituted by cyclo(C₄-C₆)alkyl having cyclo(C₄-C₆)alkyl, an unsaturated 3- to 8-membered heteromonocyclic group having one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having phenyl substituted by (C₁-C₄)alkoxy(C₁-C₄)alkoxy, an unsaturated 3- to 8-membered heteromonocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having a saturated 3- to 8-membered heteromonocyclic group which contains one to four nitrogen atom(s) and is substituted by cyclo(C₄-C₆)alkyl, and an unsaturated condensed heterocyclic group containing one to two sulfur atom(s) and one to three nitrogen atom(s) and substituted by phenyl having a saturated 3- to 8-membered heteromonocyclic group which contains one to four nitrogen atom(s) and has cyclo(C₄-C₆)alkyl.

4

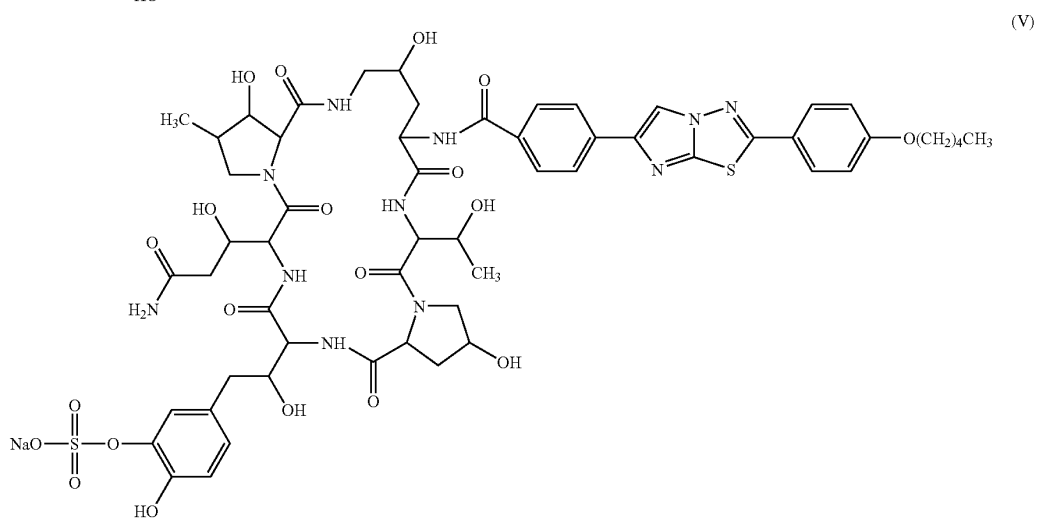
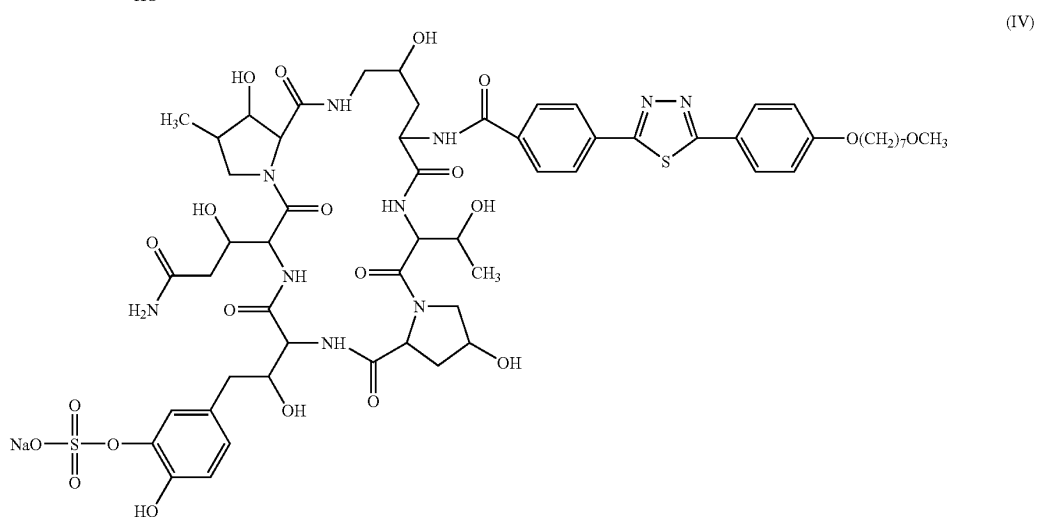
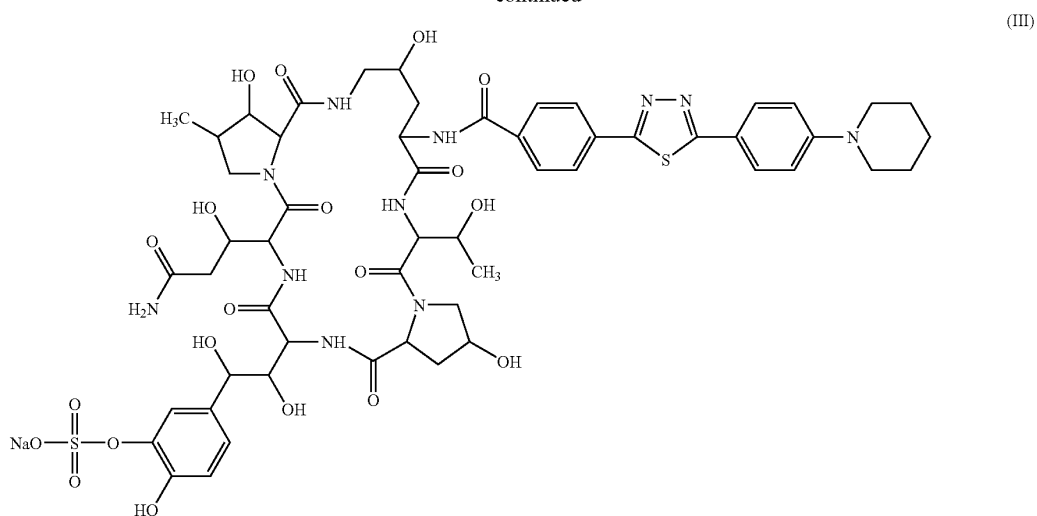
Among these, particularly preferred are an isoxazolyl group substituted by phenyl having pentyloxy, an imidazothiadiazolyl group substituted by phenyl having pentyloxy, a thiadiazolyl group substituted by phenyl having methoxyhexyloxy, a thiadiazolyl group substituted by phenyl having methoxyoctyloxy, a thiadiazolyl group substituted by phenyl having methoxyheptyloxy, an imidazothiadiazolyl group substituted by phenyl having cyclohexyloxy, an imidazothiadiazolyl group substituted by phenyl having dimethylmorpholino, a piperazinyl group substituted by phenyl having methoxyheptyloxy, a piperazinyl group substituted by phenyl having methoxyoctyloxy, a piperazinyl group substituted by phenyl having cyclohexyl having cyclohexyl, a thiadiazolyl group substituted by phenyl having phenyl substituted by methoxyethoxy, a thiadiazolyl group substituted by phenyl having phenyl substituted by methoxybutoxy, a thiadiazolyl group substituted by phenyl having phenyl substituted by ethoxypropoxy, an imidazothiadiazolyl group substituted by phenyl having piperazinyl substituted by cyclohexyl, an imidazothiadiazolyl group substituted by phenyl having piperazinyl substituted by cyclohexyl, and the like.

Accordingly, particularly suitable examples of the acyl group of R¹ may be a benzoyl group having isoxazolyl substituted by phenyl having pentyloxy, a benzoyl group having imidazothiadiazolyl substituted by phenyl having pentyloxy, a benzoyl group having thiadiazolyl substituted by phenyl having methoxyhexyloxy, a benzoyl group having thiadiazolyl substituted by phenyl having methoxyoctyloxy, a benzoyl group having thiadiazolyl substituted by phenyl having methoxyheptyloxy, a benzoyl group having imidazothiadiazolyl substituted by phenyl having cyclohexyloxy, a benzoyl group having imidazothiadiazolyl substituted by phenyl having dimethylmorpholino, a benzoyl group having piperazinyl substituted by phenyl having methoxyheptyloxy, a benzoyl group having piperazinyl substituted by phenyl having methoxyoctyloxy, a benzoyl group having piperazinyl substituted by cyclohexyl having cyclohexyl, a benzoyl group having thiadiazolyl substituted by phenyl having phenyl substituted by methoxyethoxy, a benzoyl group having thiadiazolyl substituted by phenyl having phenyl substituted by methoxybutoxy, a benzoyl group having thiadiazolyl substituted by phenyl having phenyl substituted by ethoxypropoxy, a benzoyl group having imidazothiadiazolyl substituted by phenyl having piperazinyl substituted by cyclohexyl, a benzoyl group having imidazothiadiazolyl substituted by phenyl having piperazinyl substituted by cyclohexyl, and the like.

Particularly preferable examples of the acyl groups of R₁ are represented by the formulas:



-continued



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