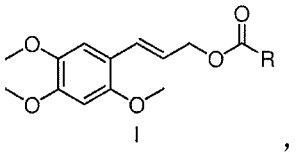
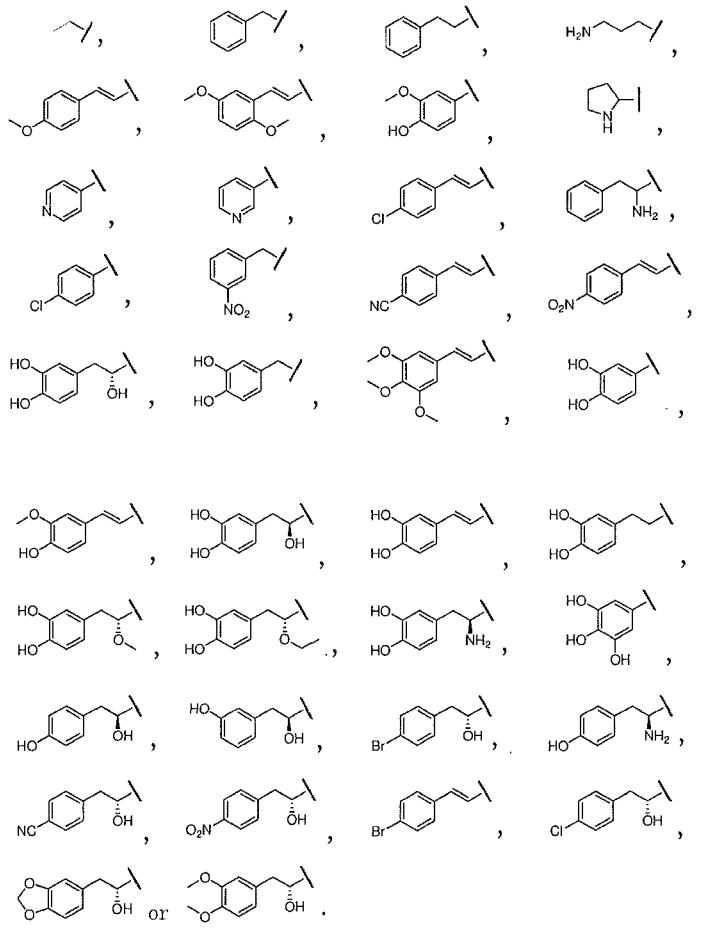
CLAIMS

1. Ester of α-Asaronol, having the structure represented by formula I

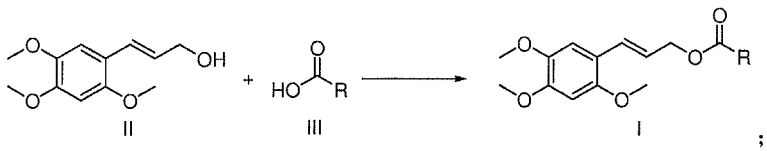


I ,

wherein R is:



2. A method for preparing ester of α-Asaronol, comprising: sequentially adding the compound of formula II, the compound of formula III and the catalyst in a molar ratio of 1.0 to 2.0 : 1.0 to 2.0 : 0.1 to 1.0 into a reaction vessel containing a suitable organic solvent, and after complete dissolution, adding dehydrating agent, wherein the molar ratio of the dehydrating agent to the compound of formula II is 1 to 2 : 1, stirring the mixture at room temperature for 5-20 hours, and after completion of the reaction, extracting the reaction mixture with ethyl acetate/water to separate the organic phase, which is then dried over anhydrous sodium sulfate, concentrated, and purified by column chromatography to obtain the product,



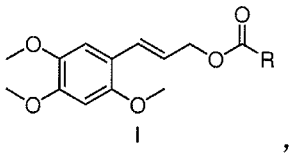
II III I ;

wherein the catalyst is one of pyridine, 2,4,6-trimethylpyridine, 2,6-dimethylpyridine, 2,6-di-*tert*-butyl-4-methylpyridine and 4-dimethylpyridine, or any combination thereof;

the organic solvent is one of dichloromethane, trichloromethane, tetrachloromethane, tetrahydrofuran, ethyl acetate, methyl *tert*-butyl ether, diethyl ether, 1,4-dioxane, *N,N*-dimethylformamide, *N*-methyl pyrrolidone, *N,N*-dimethylacetamide and dimethylsulfoxide, or any combination thereof; and

the dehydrating agent is dicyclohexylcarbodiimide, 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride, or diisopropylcarbodiimide,

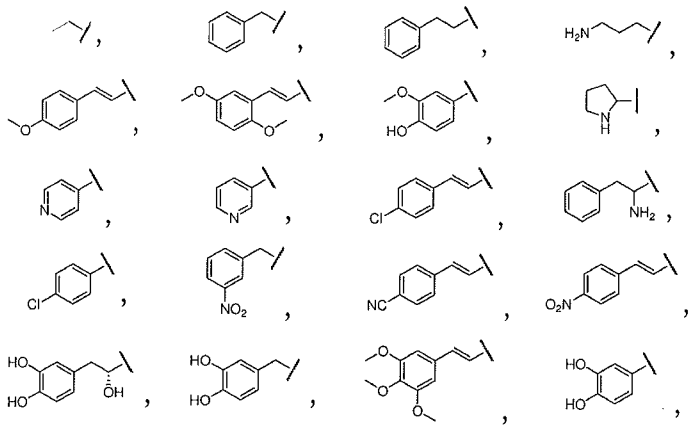
wherein the ester of α-Asaronol, having the structure represented by formula I

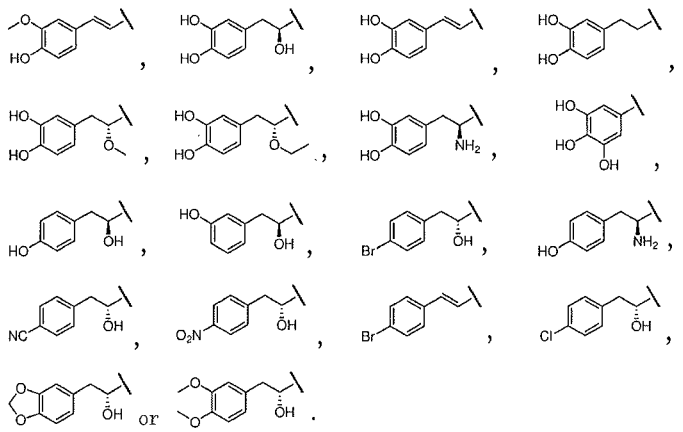


I ,

wherein R is a branched or linear C_{1-12} alkyl, alkenyl or alkynyl; a C_{3-9} cycloalkyl or substituted cycloalkyl; a C_{3-9} cycloalkenyl or substituted cycloalkenyl; an aryl, a monosubstituted aryl or a polysubstituted aryl; a heterocyclic aryl, a monosubstituted heterocyclic aryl or a polysubstituted heterocyclic aryl; or an amino acid group.

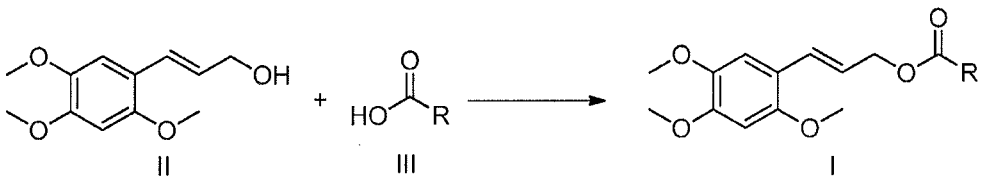
3. The method according to claim 2, wherein R is:



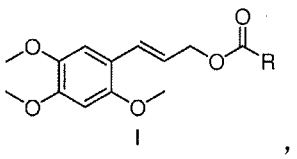


4. A method for preparing ester of α-Asaronol, comprising:

reacting α-Asaronol with the compound of formula III under the Mitsunobu reaction condition to obtain ester of α-Asaronol

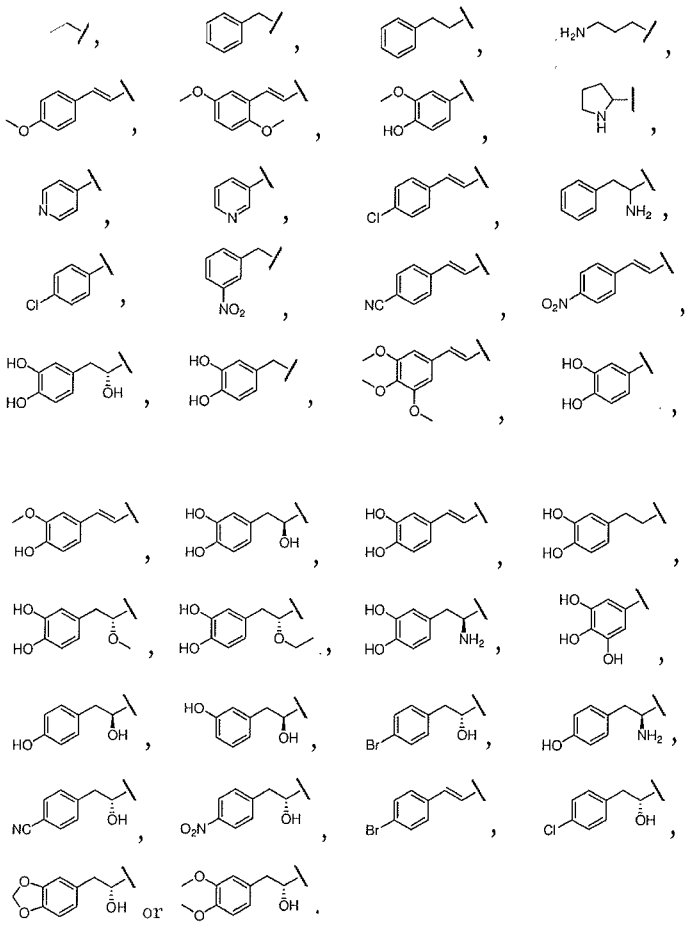


wherein the ester of α-Asaronol, having the structure represented by formula I



wherein R is a branched or linear C_{1-12} alkyl, alkenyl or alkynyl; a C_{3-9} cycloalkyl or substituted cycloalkyl; a C_{3-9} cycloalkenyl or substituted cycloalkenyl; an aryl, a monosubstituted aryl or a polysubstituted aryl; a heterocyclic aryl, a monosubstituted heterocyclic aryl or a polysubstituted heterocyclic aryl; or an amino acid group.

5. The method according to claim 4, wherein R is:



6. The method according to claim 4 or claim 5, comprising: dissolving α-Asaronol, the compound of formula, an azo compound, and an organophosphorus compound in a molar ratio of 1 to 1.5 : 1 to 1.5 : 1 to 1.5 : 1 to 1.5 in dry tetrahydrofuran, reacting at room temperature for 10-48 hours, extracting the reaction mixture with ethyl acetate/water to separate the organic phase, which is then dried over anhydrous sodium sulfate, concentrated, and purified by column chromatography to obtain the product.

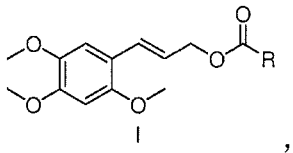
7. The method according to claim 6, wherein the azo compound is diethyl azodicarboxylate, diisopropyl azodicarboxylate, azodicarboxylic dipiperidide, *N,N,N',N'*-tetramethylazodicarboxamide, *N,N,N',N'*-tetraisopropylazodicarboxamide or 4,7-dimethyl-3,4,5,6,7,8-hexahydro-1,2,4,7-tetraazadicin-3,8-dione.

8. The method according to claim 6, wherein the organophosphorus compound is triphenylphosphine, tributylphosphine or trimethylphosphine.

9. A stereoisomer or a mixture of different stereoisomeric compounds of the compound of claim 1.

10. Use of a compound in preparation of medicament for calming, mind tranquillizing, senile dementia resisting, convulsion resisting, epilepsy resisting and depression resisting,

wherein the compound is ester of α-Asaronol, having the structure represented by formula I



I ,

wherein R is a branched or linear C_{1-12} alkyl, alkenyl or alkynyl; a C_{3-9} cycloalkyl or substituted cycloalkyl; a C_{3-9} cycloalkenyl or substituted cycloalkenyl; an aryl, a monosubstituted aryl or a polysubstituted aryl; a heterocyclic aryl, a monosubstituted heterocyclic aryl or a polysubstituted heterocyclic aryl; or an amino acid group.