**Description**

**AN ANTIVIRAL COMPOSITION**

**Technical Field**

The invention relates to a composition formed for the purpose of antiviral use.

**State of the Art**

Vitamin B12 and Folate (VitB9) are quite important for the development, differentiation and functionality of the central nervous system. These vitamins are involved in the methionine-homocysteine pathway responsible for the supply of the methyl groups that are necessary for DNA and protein synthesis.

Methionine becomes activated to be converted into S-adenosyl methionine (SAM), which is responsible for the methylation of many important molecules. Upon the removal of the methyl group from SAM, S-adenosyl homocysteine (SAH) forms. The increase in the concentration of SAH reduces the SAM-dependent methylation capacity via antagonistic mechanisms, thereby disrupting a series of metabolic processes in the brain. The cellular function losses, DNA damage and disrupted myelin synthesis may be given as the examples of such processes. SAH is hydrolyzed to be converted into homocysteine. This reaction is reversible. The plasma homocysteine level is closely associated with the SAH level in the brain and cerebrospinal fluid in the animals.

According to the state of the art, the invention no. WO 1997/027204 with classification "C07H 19/052" entitled "Modified benzimidazole nucleosides as antiviral agents” pertains to nucleoside analogs which have antiviral activity and improved metabolic stability. More specifically, this invention pertains to modified sugar benzimidazole nucleosides, as exemplified by compounds such as benzimidazole nucleosides possessing a fluorinated sugar-like moiety and are represented by formula (I) wherein R1 is a fluorinated sugar-like moiety; and R2, R4, R5, R6 and R7 are benzimidazole substituents, such as -H, halogens, -NO2, -NR2 (where R is independently -H or an alkyl group having 1-6 carbon atoms), -OR (where R is -H or an alkyl group having 1-6 carbon atoms), -SR and -CF3.

Further, the invention no. WO 2000/016755 entitled "Antiviral combinations" relates to therapeutic combinations comprising (2R,cis)-4-amino-1-(2-hydroxymethyl-1,3-oxathiolan-5-yl)-pyrimidin-2-one (lamivudine) and a second therapeutic agent selected from (9-[(R)-2-(phosphonomethoxy) ethyl]adenine (PMEA or adefovir) and bis(pivaloyloxymethyl) (9-[(R)-2-(phosphonomethoxy)ethyl]adenine (the oral prodrug of PMEA, adefovir dipivoxil). The invention is also concerned with pharmaceutical compositions containing said combinations and their use in the treatment of HBV infections including infections with HBV mutants bearing resistance to nucleoside and/or non-nucleoside inhibitors.

Further, the invention no. EP2155758B1 entitled "Tetrahydrofuro[3,4-d]dioxolane compounds for use in the treatment of viral infections and cancer" provides compounds of formula (I), as described herein, or pharmaceutically acceptable salts thereof, as well as pharmaceutical compositions comprising the compounds, and synthetic methods and intermediates that are useful for preparing the compounds. The compounds of formula (I) are useful as anti-viral agents and/or as anti-cancer agents.

As a result, the presence of the need for a composition for antiviral use and the inadequacy of the existing solutions have made it necessary to perform an improvement in the relevant art.

**Object of the Invention**

In order to eliminate the disadvantages of the state of the art, an object of the invention is to provide S-adenosyl homocysteine hydrolase.

Another object of the invention is to provide ribonucleotide reductase.

Another object of the invention is to provide DNA methyl transferase.

Another object of the invention is to provide thymidylate synthase.

In order to achieve the aforesaid advantages, the invention is a composition for antiviral use, said composition being obtained by the components selected from the group comprising 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symponoside, 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symposide that are used individually or in combinations.

The structural and characteristic features and all the advantages of the invention will become more clearly understood from the detailed description provided below and therefore, the evaluation must be made taking this detailed description into consideration.

**Detailed Description of the Invention**

The invention is a composition formed for the purpose of antiviral use. Said invention provides S-adenosyl homocysteine hydrolase, ribonucleotide reductase, DNA methyl transferase and thymidylate synthase.

The composition according to the invention contains 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symponoside, 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symposide.

Said composition is obtained by a mixture of the aforesaid components according to the following ratios by weight:

1-99% 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symponoside,

99-1% 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symposide.

The composition is obtained from the aforesaid components selected from the aforesaid group and used according to the mentioned weight ratio ranges individually or in combinations.

Said invention also encompasses the use of said composition for antiviral purpose and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for antiviral use, said composition being obtained by the components selected from the group comprising 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symponoside, 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symposide that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 1-99% by weight 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symponoside.
3. A composition according to Claim 1 characterized in that it comprises 99-1% by weight 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symposide.
4. Use of the components according to Claims 1 to 3 obtained individually or in combinations selected from the group consisting of 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symponoside, 1,4,5,6,7,8-hexafluoro-4-(2-dihydroxyphenyl)-7-(2-dimethoxyphenyl)-2-methyl-5-oxo-3-symposide for the manufacture of a composition for antiviral use.

**ABSTRACT**

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The invention relates to a composition formed for the purpose of antiviral use.

No figure.