**Description**

**A COMPOSITION COMPRISING ANTI-VIRAL METHOXYSORININ DERIVATIVES THAT EXHIBIT THE CHARACTERISTIC OF SUPPRESSING RIBONUCLEOTIDE REDUCTASE**

**Technical Field**

The invention relates to a composition comprising the anti-viral methoxysorinin derivatives formed for suppressing ribonucleotide reductase.

**State of the Art**

Ribonucleotide reductase is an enzyme that catalyzes the reduction of the ribonucleotides and the conversion of the same to the deoxyribonucleotides, which are the basic constituents of DNA, in all the existing organisms. This reaction is also the rate-controlling step in the biosynthesis of DNA. This enzyme, having a quite important function, is comprised by two sub units referred to as R1 and R2. The R2 sub unit reduces and activates the molecular oxygen by means of the binuclear Fe (II) center present in its active center, and in this way, a long-lived tyrosyl radical is formed in the R1 sub unit. This very moment, the journey of the electron begins, which is to continue over 35 Angstrom\* (proton synchronous-proton coupled electron transfer). During this long travel, one tryptophane and three tyrosine amino acids accompany the electron with the intermediate radical products they form. At the last stop, the cysteinyl radical is formed, which is to realize the reduction of ribonucleotide and is located in the R1 sub unit.

According to the state of the art, the invention no. EP2155758B1 entitled “Tetrahydrofuro[3,4-d]dioxolane compounds for use in the treatment of viral infections and cancer” with classification “C07D 519/00” provides compounds of formula 1, 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 1 are useful as anti-viral agents and/or as anti-cancer agents.

As a result, the presence of the need for a composition for suppressing the ribonucleotide reductase 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 enable the suppression of the ribonucleotide reductase.

Another object of the invention is to enable the suppression of protease.

Another object of the invention is to enable the suppression of neuroaminidase.

In order to achieve the aforesaid advantages, the invention is a composition for suppressing the ribonucleotide reductase, said composition being obtained by the components selected from the group comprising N-​​(4-​​methoxyphenyl)​-​​4-​​(2-​​ethylamine[1,​​2-​​a]​pyridin-​​4-yl)​-methoxysorinin, N-​​(4-​​ethoxypropionyl)​-​​2-​​(2-​​dimethylimidazo[1,​​2-​​a]​dirhamnosyl-​​3-yl)​-methoxysorinin 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 comprising the anti-viral methoxysorinin derivatives formed for suppressing ribonucleotide reductase. Said invention enables the suppression of ribonucleotide reductase, the suppression of protease and the suppression of neuroaminidase.

The composition according to the invention contains N-​​(4-​​methoxyphenyl)​-​​4-​​(2-​​ethylamine[1,​​2-​​a]​pyridin-​​4-yl)​-methoxysorinin, N-​​(4-​​ethoxypropionyl)​-​​2-​​(2-​​dimethylimidazo[1,​​2-​​a]​dirhamnosyl-​​3-​yl)​-methoxysorinin.

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

1-99% N-​​(4-​​methoxyphenyl)​-​​4-​​(2-​​ethylamine[1,​​2-​​a]​pyridin-​​4-​​yl)​-methoxysorinin,

99-1% N-​​(4-​​ethoxypropionyl)​-​​2-​​(2-​​dimethylimidazo[1,​​2-​​a]​dirhamnosyl-​​3-​​yl)​-methoxysorinin.

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 suppressing the ribonucleotide reductase and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for suppressing the ribonucleotide reductase, said composition being obtained by the components selected from the group comprising N-​​(4-​​methoxyphenyl)​-​​4-​​(2-​​ethylamine[1,​​2-​​a]​pyridin-​​4-yl)​-methoxysorinin, N-​​(4-​​ethoxypropionyl)​-​​2-​​(2-​​dimethylimidazo[1,​​2-​​a]​dirhamnosyl-​​3-yl)​-methoxysorinin that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 1-99% by weight N-​​(4-​​methoxyphenyl)​-​​4-​​(2-​​ethylamine[1,​​2-​​a]​pyridin-​​4-​​yl)​-methoxysorinin.
3. A composition according to Claim 1 characterized in that it comprises 99-1% by weight N-​​(4-​​ethoxypropionyl)​-​​2-​​(2-​​dimethylimidazo[1,​​2-​​a]​dirhamnosyl-​​3-​​yl)​-methoxysorinin.
4. Use of the components according to Claims 1 to 3 obtained individually or in combinations selected from the group consisting of N-​​(4-​​methoxyphenyl)​-​​4-​​(2-​​ethylamine[1,​​2-​​a]​pyridin-​​4-​​yl)​-methoxysorinin, N-​​(4-​​ethoxypropionyl)​-​​2-​​(2-​​dimethylimidazo[1,​​2-​​a]​dirhamnosyl-​​3-​​yl)​-methoxysorinin for the manufacture of a composition for suppressing the ribonucleotide reductase.

**ABSTRACT**

**A COMPOSITION COMPRISING ANTI-VIRAL METHOXYSORININ DERIVATIVES THAT EXHIBIT THE CHARACTERISTIC OF SUPPRESSING RIBONUCLEOTIDE REDUCTASE**

The invention relates to a composition formed for suppressing ribonucleotide reductase.

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