**Description**

**A COMPOSITION FOR THE TREATMENT OF VIRAL INFECTIONS**

**Technical Field**

The invention relates to a composition formed for the treatment of viral infections.

The invention relates in particular to the use of 1-monolaurin and 3,7-bis(2-hydroxyethyl)icaritin in the treatment of viral infections.

**State of the Art**

Today, the antiviral agents are the pharmacological agents used against the virus infections. They are used in order to bring under control or eliminate the viral infection. Currently, no medication has been able to be discovered, which totally eliminates the viruses and completely treats the diseases caused by the viruses. On the other hand, some antiviral medications provide successful results in the treatment of some viral infections, particularly the herpes (cold sore). Although the drug therapy reduces the severity of the viral infection, it is unable to completely treat the disease; hence the disease may recur.

In recent years, the viruses and the antiviral treatment have become quite popular due to the increase in the number of the pandemic cases and the immunosuppressive patients. Today, there exist many antiviral agents with demonstrated activity. These agents have considerably improved the clinical progress of the diseases, but there exist limitations in the treatment of the chronic and latent infections. In this document, the action mechanisms, clinical uses and the significant side effects of the drugs employed in the antiviral treatment are discussed.

The currently available antiviral drugs suppress the enzymes controlling the factors that regulate the DNA synthesis capability, self-replication capability and the ribonucleotide synthesis metabolisms of the viruses. DNA polymerase, reverse transcriptase and ribonucleotide reductase (in respective order) may be mentioned as the examples of such enzymes. Even though this approach may temporarily slow down the progress of the viral infections, the viruses generally acquire resistance to these components in the medium term. The general approach takes the form of fighting the symptoms of the viral infection, instead of fighting the viral structure itself that underlies the infection.

Moreover, in the invention no. TR19980000244T entitled "Use of griseofulvin in the prevention of the progress of the cancers", a pharmaceutical composition is disclosed, which is intended to treat the cancers occurring in the mammals and which contains griseofulvin. Along with griseofulvin, it is possible to use a chemotherapeutic agent as an ingredient boosting the action. Said griseofulvin may also be used alone or along with other viral agents or along with an action boosting agent in the treatment of the viral infections.

Further, the invention no. TR201110248 entitled "Use of 3,7-Bis(2-hydroxyethyl) icaritin component in the treatment of influenza" relates to the use of 3,7-bis(2-hydroxyethyl)icaritin component in the treatment of influenza. The invention relates to the use of 3,7-bis(2-hydroxyethyl)icaritin component in the treatment of influenza.

The invention no. TR201105399 entitled "Use of 3,7-bis(2-hydroxyethyl)icaritin component in the treatment of erectile dysfunction and the defects in the sperm production" relates to the use of 3,7-bis(2-hydroxyethyl)icaritin, which is a structurally altered analogue of icaritin, a flavonoid, in the treatment of the sexual disorders, namely the erectile dysfunction and the defects in the sperm production.

As a result, the presence of the need for a composition for the treatment of the viral infections 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 reduce the viral load by causing irreversible destruction directly in the virus itself.

Another object of the invention is to provide an effective simultaneous suppressor for reverse transcriptase and ribonucleotide reductase.

Another object of the invention is to enable the suppression of the DNA polymerase expression via the nitric oxide level increased owing to the ability to effectively increase the nitric oxide synthase.

Another object of the invention is to provide permanent damage directly in the viral structure in the tissue exposed to viral proliferation, owing to the ability of tissue-selective nitric oxide increase.

Another object of the invention is to reduce the viral load in the infected tissue.

Another object of the invention is to support the irreversible viral destruction caused by the tissue-selective nitric oxide increasing ability by way of causing irreversible damage in the fat-based dual layer viral sheath.

Still another object of the invention is to effectively support the potential antiviral action of the increase in the nitric oxide.

Still another object of the invention is to exhibit the ability to treat the secondary side effects (such as inflammation and pain) caused by the viral infections, owing to the ability to suppress cox-2 and pge-2 and increase pge-1.

In order to achieve the aforesaid advantages, the invention is a composition for the treatment of the viral infections, said composition being obtained by the components selected from the group comprising 3,7-bis(2-hydroxyethyl)icaritin, 1-monolaurin and alpha-monolaurinic acid 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**

According to the invention, 3,7-bis(2-hydroxyethyl)icaritin is an effective simultaneous suppressor for reverse transcriptase and ribonucleotide reductase. It enables the suppression of the DNA polymerase expression via the nitric oxide level increased owing to the ability to effectively increase the nitric oxide synthase.

3,7-bis(2-hydroxyethyl)icaritin may cause permanent damage directly in the viral structure in the tissue exposed to viral proliferation, owing to the ability of tissue-selective nitric oxide increase, and it may thus reduce the viral load in the infected tissue.

1-monolaurin is a lauric acid derivative. It supports the irreversible viral destruction caused by the tissue-selective nitric oxide increasing ability of the aforesaid component, by way of causing irreversible damage in the fat-based dual layer viral sheath. In this manner, it effectively supports the potential antiviral action of the oriented nitric oxide increase.

Unlike the therapies currently employed, which may only temporarily suppress the symptoms of the disease instead of suppressing the origin of the disease, this formulation reduces the viral load by causing irreversible destruction directly in the virus itself.

Owing to its ability to suppress cox-2 and pge-2 and increase pge-1, 3,7-bis(2-hydroxyethyl)icaritin, which is a simultaneously effective anti-inflammatory agent, exhibits the ability to treat the secondary side effects (such as inflammation and pain) caused by the viral infections.

The composition according to the invention contains 3,7-bis(2-hydroxyethyl)icaritin, 1-monolaurin and alpha-monolaurinic acid.

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

1-40% 3,7-bis(2-hydroxyethyl)icaritin,

24-35% 1-monolaurin,

75-25% alpha-monolaurinic acid.

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 the treatment of the viral infections and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for the treatment of the viral infections, said composition being obtained by the components selected from the group comprising 3,7-bis(2-hydroxyethyl)icaritin, 1-monolaurin and alpha-monolaurinic acid that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 1-40% by weight 3,7-bis(2-hydroxyethyl)icaritin.
3. A composition according to Claim 1 characterized in that it comprises 24-35% by weight 1-monolaurin.
4. A composition according to Claim 1 characterized in that it comprises 75-25% by weight alpha-monolaurinic acid.
5. Use of the components according to Claims 1 to 4 obtained individually or in combinations from the group comprising 3,7-bis(2-hydroxyethyl)icaritin, 1-monolaurin and alpha-monolaurinic acid for the manufacture of a composition for the treatment of viral infections.

**ABSTRACT**

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No figure.