**Description**

**A COMPOSITION FOR THE SYMPTOMATIC TREATMENT OF MS AND ALS DISEASES**

**Technical Field**

The invention relates to a composition (methylprotobiocide, protopanaxatriol protopanaxadiol, Hibiscus Rosa Sinensis and Circuiligo Orchioides extracts) for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage.

**State of the Art**

MS and ALS belong to the group of autoimmune diseases; they are the degenerative diseases originating from the condition in which the immune system of the body does not recognize its own tissues and it reacts its own tissues in the manner it would normally react an exogenous pathogenic virus or any foreign potentially harmful component. Multiple sclerosis is an autoimmune disease affecting the brain and the spinal cord. It is briefly referred to as MS. It is the most frequently encountered neurological disorder in the young adults following the neurotrauma.

Although the cause for the disease has not been fully understood, it is believed to emanate from a combination of the genetic and environmental factors. Despite the presence of its various types, these are all characterized by the inflammation of the central nervous system (CNS) and they progress by way of demyelinating (destruction, by the immune system, of the specific myelin protein surrounding the nerve tissue). In other words, MS is an autoimmune disease involving the demyelinating and the inflammation in the CNS. Autoimmunization may be briefly described as the immune system’s inability to recognize the body’s own cells, its misinterpretation of such cells to be the matter foreign to the body and its attempt to destroy the same, and as a result, the damage given to the body by itself. In the case of MS, the antigens that the immune system fails to recognize are the myelins (myelin base protein and myelin oligodendrocyte glycoprotein, etc.). The immune system cells that are considered to be primarily responsible for MS disease are the T-cells.

Although the beta-interferon therapy is currently administered to the patients, the studies conducted on the PPAR-gamma agonists, which are expected to be introduced in near future, have reached the clinical phase. In addition, the studies are under way on the immunosuppressive drugs (Azathioprine and Cyclophosphamide). However, the results concerning the effects of these medications are contradictory. Moreover, the significant side effects of such drugs are another reason restricting their use.

Currently available treatments include the types of treatment that are only able to suppress the symptoms of the diseases based on the principle of immunosuppression with the corticosteroid derivatives and the cures attempted with antagonist agents designed for suppressing the expression of important pro-inflammatory cytokines such as il-4. Today, it is known that both diseases are of the viral origin.

As a result, the presence of the need for a composition for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage 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.

Another object of the invention is to provide permanent destruction in the viral structure localized in the infected tissues and the invasiveness of the same.

Another object of the invention is to provide the simultaneous repair for the associated nervous system, muscular tissue and neuromuscular function.

Another object of the invention is to benefit from methylprotobiocide as an effective NGF expression inducer.

Another object of the invention is to trigger the renewal of the nerve cells.

Another object of the invention is to reduce the inflammation caused by infection, owing to the ability to suppress nf-kappa-B.

Another object of the invention is to support the neuromuscular junction functionality, owing to the partial androgenic properties.

Still another object of the invention is to support the protection of the muscular mass and the muscle functions.

Still another object of the invention is to encourage the reduction of the excessive immune reaction owing to the natural immunomodulator action provided.

In order to achieve the aforesaid advantages, the invention is a composition for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage, said composition being obtained by the components selected from the group comprising methylprotobiocide, 20-(s)-b-d-protopanaxatriol, 20-(s)-b-protopanaxadiol, hibiscus rosa sinensis and circuligo orchioides 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 for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage. Said composition contains methylprotobiocide, protopanaxatriol protopanaxadiol, Hibiscus Rosa Sinensis and Circuiligo Orchioides extracts.

Methylprotobiocide, 20-(s)-B-D-protopanaxatriol, 20-(s)-B-protopanaxadiol, which are the ingredients of the invention, may provide permanent destruction in the viral structure localized in the infected tissues and the invasiveness of the same, owing to their being effective suppressors for DNA polymerase, integrase and reverse transcriptase as well as their having the ability of tissue-selective nitric oxide increase.

In addition to the reduction of the viral load, the simultaneous repair is required for the nervous system, muscular tissue and the neuromuscular function associated with both diseases. The only valid theorem for an effective autoimmune disease therapy is to reduce viral load while at the same time repairing the neurological and myological damage caused by the disease.

Methylprotobiocide, one of the ingredients of the invention, is an effective NGF expression inducer. Owing to this feature, it triggers the renewal of the nerve cells. It reduces the inflammation caused by infection, owing to its ability to suppress nf-kappa-B.

The ethanol extract (10:1) of Hibiscus Rosa Sinensis and the ethanol extract (10:1) of Circuligo Orchioides, which are other ingredients of the invention, support the neuromuscular junction functionality, owing to their partial androgenic properties, and support the protection of the muscular mass and the muscle functions. They encourage the reduction of the excessive immune reaction owing to their natural immunomodulator action.

The composition according to the invention contains methylprotobiocide, 20-(s)-b-d-protopanaxatriol, 20-(s)-b-protopanaxadiol, hibiscus rosa sinensis (10:1), circuligo orchioides (10:1).

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

3-47% methylprotobiocide,

11-8% 20-(s)-b-d-protopanaxatriol,

16-25% 20-(s)-b-protopanaxadiol,

40-10% hibiscus rosa sinensis (10:1),

30-10% circuligo orchioides (10:1).

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 symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage, said composition being obtained by the components selected from the group comprising methylprotobiocide, 20-(s)-b-d-protopanaxatriol, 20-(s)-b-protopanaxadiol, hibiscus rosa sinensis and circuligo orchioides that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 3-47% by weight methylprotobiocide.
3. A composition according to Claim 1 characterized in that it comprises 11-8% by weight 20-(s)-b-d-protopanaxatriol.
4. A composition according to Claim 1 characterized in that it comprises 16-25% by weight 20-(s)-b-protopanaxadiol.
5. A composition according to Claim 1 characterized in that it comprises 40-10% by weight hibiscus rosa sinensis (10:1).
6. A composition according to Claim 1 characterized in that it comprises 30-10% by weight circuligo orchioides (10:1).
7. Use of the components according to Claims 1 to 6 obtained individually or in combinations from the group consisting of methylprotobiocide, 20-(s)-b-d-protopanaxatriol, 20-(s)-b-protopanaxadiol, hibiscus rosa sinensis and circuligo orchioides for the manufacture of a composition for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage.

**ABSTRACT**

**A COMPOSITION FOR THE SYMPTOMATIC TREATMENT OF MS AND ALS DISEASES**

The invention relates to a composition for the symptomatic treatment of MS and ALS diseases and the treatment of the associated neuromuscular damage.

No figure.