**Description**

**A COMPOSITION FOR THE TREATMENT OF SARCOPENIA**

**Technical Field**

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

**State of the Art**

Sarcopenia is the loss of muscles resulting from the aging. After the age of 30, the number and the size of the muscle fibers decrease progressively, which in turn cause the reduction in the skeletal muscle mass. This condition is called sarcopenia.

The age-related factors causing the sarcopenia are the reduced exercise and physical activity, loss of motor units beginning in the middle age and the reduced protein synthesis in the skeletal muscles. Reduction in some sex hormones also contributes to the development of sarcopenia. The individuals with sarcopenia with insufficient protein uptake may require food supplements, while the individuals with sarcopenia with hormone deficiency may require hormone supplements.

According to the state of the art, the invention no. EP1397492B1 with classification “C12N 15/12” entitled “Modified and stabilized gdf propeptides and uses thereof” discloses modified and stabilized propeptides of Growth Differentiation Factor proteins, such as GDF-8 and Bone Morphogenetic Protein-11. Also disclosed are methods for making and using the modified propeptides to prevent or treat human or animal disorders in which an increase in muscle tissue would be therapeutically beneficial. Such disorders include muscle or neuromuscular disorders (such as amyotrophic lateral sclerosis, muscular dystrophy, muscle atrophy, congestive obstructive pulmonary disease, muscle wasting syndrome, sarcopenia, or cachexia), metabolic diseases or disorders (such as type 2 diabetes, noninsulin-dependent diabetes mellitus, hyperglycemia, or obesity), adipose tissue disorders (such as obesity) and bone degenerative diseases (such as osteoporosis).

Further, the invention no. EP2069352B1 entitled “Certain chemical entities, compositions and methods” provides certain chemical entities that modulate skeletal myosin, skeletal actin, skeletal tropomyosin, skeletal troponin C, skeletal troponin I, skeletal troponin T, and skeletal muscle, including fragments and isoforms thereof, as well as the skeletal sarcomere. Also provided are certain chemical entities, pharmaceutical compositions and medicaments for the treatment of one or more of obesity, sarcopenia, wasting syndrome, frailty, cachexia, muscle spasm, post-surgical and post-traumatic muscle weakness, and neuromuscular disease.

As a result, the presence of the need for a composition for treating sarcopenia 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 following formulation to exhibit androgenic effect in the muscle tissues and to stimulate the testosterone receptors.

Another object of the invention is to support the structure of the muscle cells and support the production of new muscle cells, owing to the partial SARM (selective androgen receptor modulator) effects.

Another object of the invention is to support the production of igf-1 in muscle tissues.

Another object of the invention is to increase the follistatin expression to suppress the myostatin function and encourage the production of new muscle cells.

Another object of the invention is to protect the structure of the neuromuscular transmission points.

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 treatment of sarcopenia. Said composition enables the following formulation to exhibit androgenic effect in the muscle tissues and stimulates the testosterone receptors. It supports the structure of the muscle cells and supports the production of new muscle cells, owing to the partial SARM (selective androgen receptor modulator) effect. It supports the production of igf-1 in muscle tissues. It increases the follistatin expression to suppress the myostatin function and encourages the production of new muscle cells. It protects the structure of the neuromuscular transmission points.

The composition according to the invention contains 11-fluoromethoxy-tricyclopentane, 7-ketoethyl-pentacyclopentane, 4,5-hexamethylhecogenin.

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

20-25% 11-fluoromethoxy-tricyclopentane,

30-35% 7-ketoethyl-pentacyclopentane,

50-40% 4,5-hexamethylhecogenin

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 treating sarcopenia and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for the treatment of sarcopenia, said composition being obtained by the components selected from the group comprising 11-fluoromethoxy-tricyclopentane, 7-ketoethyl-pentacyclopentane,  4,5-hexamethylhecogenin that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 20-25% by weight 11-fluoromethoxy-tricyclopentane.
3. A composition according to Claim 1 characterized in that it comprises 30-35% by weight 7-ketoethyl-pentacyclopentane.
4. A composition according to Claim 1 characterized in that it comprises 50-40% by weight 4,5-hexamethylhecogenin.
5. Use of the components according to Claims 1 to 4 obtained individually or in combinations from the group consisting of 11-fluoromethoxy-tricyclopentane, 7-ketoethyl-pentacyclopentane, 4,5-hexamethylhecogenin **for the manufacture of a composition for treating sarcopenia.**

**ABSTRACT**

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No figure.