**Description**

**A COMPOSITION FOR THE TREATMENT OF HYPOTHYROIDISM**

**Technical Field**

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

**State of the Art**

Hypothyroidism is the deficiency of the thyroxine hormone in the adults. The disease has unique symptoms. These symptoms result from the lack or deficiency of the thyroxine hormone. The disease has various reasons. For example, leaving a wide thyroid mass passive in terms of function following the surgical, drug or radioactive iodine treatment of the patients with excess thyroxine (hyperthyroidism) may lead to the deficiency of thyroid, i.e. hypothyroidism. Reduction in the secretion of “Thyrotropin Hormone Releasing Factor (THRF)” from hypothalamus or reduction in the secretion of thyrotropin due to a tumoral development in the adenohypophysis or inadequate functioning of the thyroid gland for uncertain reasons cause the cases of “hypothyroidism”. Goiter development may also be observed in some of the hypothyroidism episodes.

Hyperthyroidism is today a disease that is curable to a significant extent. In the times where the treatment methods were not known, the gradual weakening of the heart caused this disease to result in death. This dangerous condition has now been eliminated owing to the artificially iodized proteins in use, artificial synthesis of triiodothyronine (T3), the most effective thyroid hormone, and the dry thyroid extracts obtained from the animals. Thus, the hypothyroidism patients may live in a healthy condition until advanced ages.

The current treatment begins with low doses as a rule. Artificial hormone (T4) is administered at 25-50 microgram per day. Then the daily dose is increased until the most suitable level is reached.

The dose required in practice is adjusted by assessing the effects obtained. Since the effect of the thyroid hormones on the mechanism emerges slowly, a period of at least about two weeks is allowed to pass before making the necessary adjustments. This conventional treatment approach aims to prevent or reduce the side effects. It is recommended especially for the old persons and/or the persons with heart disease. Higher doses such as 50-100 microgram per day may be administered to the young individuals and the persons with no other disease. With these doses, the values close to the required level of thyroid hormone in the blood are obtained. The most suitable hormone dose is determined according to the clinical symptoms and the level of thyroid hormones in each patient. TSH level is particularly useful for determining the dose to be administered. As mentioned before, this hormone is produced by hypophysis, and when the level of thyroid hormones in the blood drops, it is released at higher quantities to stimulate thyroid. Elevated TSH levels indicate that the treatment for correcting the deficiency remains incapable, while the opposite condition indicates that the thyroid hormone being administered is more than necessary.

While the requirement for the thyroid hormone notably increases during the adolescence, this requirement gradually decreases in the old age. Therefore, the doses must be kept high during the adolescence and low during the old age. For the old patients and the patients with complaints such as angina pectoris, it is suitable to add to the treatment the drugs that reduce the oxygen requirement of the heart, for example a beta blocker (commonly known as beta blocker, full name beta adrenergic receptor blocking agent). This type of drugs prevents to some extent the adrenaline-stimulation of the beta receptors available particularly in the cardiac muscle cells and the smooth muscle fibers of the vessels. Thus, the thyroid treatment, which speeds up the metabolic activity and increases the oxygen requirement, is prevented from dangerously forcing the constricted coronary vessels in the old persons. The treatment with thyroid drugs usually lasts a lifetime. Thyroid rarely reaches the level to produce sufficient hormone. This possibility is valid only for the mild forms of hypothyroidism.

As a result, the presence of the need for a composition for the treatment of hypothyroidism 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 the treatment for hypothyroidism.

Another object of the invention is to trigger the release of dopamine.

Another object of the invention is to provide the stimulation of the thyroid hormone.

Another object of the invention is to trigger both T4 production and the conversion of T4 to T3.

Another object of the invention is to increase the expression of deiodinase D1 and D2.

Another object of the invention is to provide hypoglycemic effect.

Another object of the invention is to prevent the blood sugar imbalances likely to result from elevated thyroid hormone levels.

Another object of the invention is to increase the expression of adenosyl cyclase enzyme and elevate the level of cAMP.

Another object of the invention is to enable the simultaneous triggering in the brain for the TRH release and TSH release.

Another object of the invention is to support both T4 formation and the conversion of T4 to T3.

In order to achieve the aforesaid advantages, the invention is a composition for the treatment of hypothyroidism, said composition being obtained by the components selected from the group comprising dimethylsalidroside, alphamethylsalidroside, 1,3-colforsin acetate 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 treatment of hypothyroidism.

Dimethylsalidroside and alphamethylsalidroside, the ingredients of the composition according to the invention, trigger the release of dopamine from substantia nigra and thus provide the stimulation of thyroid hormone. Dimethylsalidroside and alphamethylsalidroside also trigger both T4 production and the conversion of T4 to T3. These ingredients, which provide this effect by increasing the expression of deiodinase D1 and D2, also have hypoglycemic effect. This prevents the blood sugar imbalances likely to result from elevated thyroid hormone levels.

1,3-colforsin acetate, another ingredient of the invention, is a labdane diterpenic component contained by the family coleus. It increases the expression of adenosyl cyclase enzyme and elevates the level of cAMP. In this way, the TRH release and TSH release are simultaneously triggered in the brain. 1,3-colforsin acetate, which also increases the expression of deiodinase D1 and D2 as in the salidroside derivatives, supports both T4 formation and the conversion of T4 to T3.

The composition according to the invention contains dimethylsalidroside, alphamethylsalidroside, 1,3-colforsin acetate.

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

12-25% dimethylsalidroside,

45-60% alphamethylsalidroside,

43-15% 1,3-colforsin acetate.

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 hypothyroidism and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for the treatment of hypothyroidism, said composition being obtained by the components selected from the group comprising dimethylsalidroside, alphamethylsalidroside, 1,3-colforsin acetate that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 12-25% by weight dimethylsalidroside.
3. A composition according to Claim 1 characterized in that it comprises 45-60% by weight alphamethylsalidroside.
4. A composition according to Claim 1 characterized in that it comprises 43-15% by weight 1,3-colforsin acetate.
5. Use of the components according to Claims 1 to 4 obtained individually or in combinations from the group consisting of dimethylsalidroside, alphamethylsalidroside, 1,3-colforsin acetate for the manufacture of a composition for treating hypothyroidism.

**ABSTRACT**

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

No figure.