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Nano capsulation delivery system used for hair loss and regrowth

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Abstract

The Nobel Prize in Physiology or Medicine 1999 was awarded to Günter Blobel "for the discovery that proteins have intrinsic signals that govern their transport and localization in the cell". These proteins can be synthetically produced and can be manufactured in a form to mimic biology (biomimetic). Peptides are short chains of amino-acids responsible for the proliferation and differentiation of cells. They are responsible for a number of cellular processes including wound healing and hair regeneration. These nanopeptides are synthetically manufactured so that a repeatable treatment can be offered via mesotherapy.

Nanopeptide mesotherapy is a treatment involving small microdroplet injections into very superficial layers of the skin. In the case of hair loss these injections are performed on the scalp. The treatment contains a mixture of ingredients including vitamins and mineral but more importantly it contains peptides which each have a seperate job:

1. Decapeptide – 4 which strengthens the hair while stimulating follicles to produce strong hair shafts.
2. Oligopeptide – 41 Stimulates hair cell proliferation and migration.
3. Acetyl Decapeptide – 3 which revitalises hair follicles by newly regenerating hair cells.
4. Copper Tripeptide – 1 Helps to strengthen hair while stimulating hair follicles to product strong hair shafts and helps with blood circulation in the scalp and revitalises hair follicles.

The procedure is based on the technique of injecting active ingredients into the scalp in order to stimulate the natural hair regeneration process.

The process works by :

Nanopeptides inactivate +5 alpha reductases which inhibits the conversion of testosterone to DHT and delays the process from Anagen to Categen - Anti Hair Loss.

The other peptides within the solution CG-Bfgf, CG-VEGF, CG–TGF–a, CG-KGF, CG-HGF are used to promote the process from Telogen to Anagen thus forming new hair.

At any one time, about 90% of the hair on a person's scalp is growing. Each follicle has its own life cycle that can be influenced by age, disease, and a wide variety of other factors. This life cycle is divided into three phases:

- Anagen - active hair growth. Lasts between two to six years.
- Catagen - transitional. Lasts two to three weeks.
- Telogen - resting phase. At the end of the resting phase (two to three months) the hair is shed and the growing cycle starts again to make a new hair to replace it.

Nanopeptide mesotherapy is a new and effective way of dealing with this problem as it is one of the most effective therapies to strengthen and thicken the hair shaft.

The appearance of one's hair depends on many different factors such as genetics, general health and the amount of care devoted to the hair. Every day, your hair shafts and follicles are exposed to the negative impact of external factors, such as prolonged exposure in air-conditioned rooms or UVrays.

A typical person loses per day, on average, from 50 to 100 hairs. This fully natural process allows our body to "replace" the old, weakened hair, with new ones. If, however, you notice that the hair is falling out every time you comb, or you find an increasing number of strands on the brush, that signals that the condition of your hair could be significantly reduced. Nanopeptide mesotherapy works by reducing the effects of hair loss and baldness for both women and men and promotes hair growth by revitalizing hair follicles and stimulating circulation, treating scalp problems and increasing the density and thickness of hair, it also stimulates and strengthens the hair roots ultimately moisturising and nourishing hair and scalp.