



Growth Factor

Radiant complexion, fresh, protected and rested skin.

GF consists of a mixture of vitamins and amino acids rich in adenosine, which helps to form ATP improving the energy obtaining by the cell, and improving the blood flow, thus obtaining a homogeneous and visibly younger complexion.

The amino acid mixture is particularly rich in adenosine, which helps to form ATP

and improves blood flow, thereby obtaining a homogeneous complexion.

This mixture of amino acids and vitamins work synergistically, giving the skin everything necessary to regenerate and defend itself against the adversities of the environment.

Contains stabilized vitamin C, which gives the product antioxidant and whitening activity, together with the Glutathione and Sophora Flavescens extract, makes the product to act on three levels:

1. **Surface level:**
 - Antioxidant activity
 - Anti-inflammatory effect
2. **Level of epidermis:**
 - Exfoliating activity
 - Promotes anti-tyrosinase activity
 - Melanogenesis inhibition
3. **Level of dermis:**
 - Inhibition of the enzymatic activity of MMP.
 - Increased anti-glycation activity.

It incorporates **biomimetic peptides** identical to the growth factors involved in cell renewal, resulting in younger skin.

It provides **epigenetic activity**: Epigenetics is the new scientific discipline that allows influencing the behavior of genes to achieve optimal performance.

The key? **COBIOGENOL**, an active ingredient from marine origin that acts like a chemical switch activating the genes "off" by certain epigenetic factors. Normalizing the generation of proteins necessary for the rejuvenation and regeneration of the skin, neutralizing oxidative stress generated by exposure to light and blue light, and

re-structuring the stratum corneum, the outermost layer of skin, key in maintaining its Barrier and protective function.

All properties claimed for this product have been clinically demonstrated:

- Antioxidant activity
- Anti-inflammatory effect
- Exfoliating activity
- Anti-tyrosinase activity
- Inhibiting activity of melanogenesis.
- Epigenetic activity
- Protection against Electromagnetic radiation and Blue-Light

Introduction:

A radiant complexion is associated with beauty. The pigment distribution, melanin, and skin texture vary according to health status and age. An irregular coloration is an indicator of the age of the skin, since the aging is associated with the presence of dark spots.

The difference in skin color is mainly due to the presence of melanin, a pigment that protects from external aggressions, such as UV rays.

When the body generates too much melanin to protect itself from this aggressions, or simply because of aging, accumulations can be created causing blemishes or changes in skin tone. **This disorder is called hyperpigmentation and can affect all skin types.**

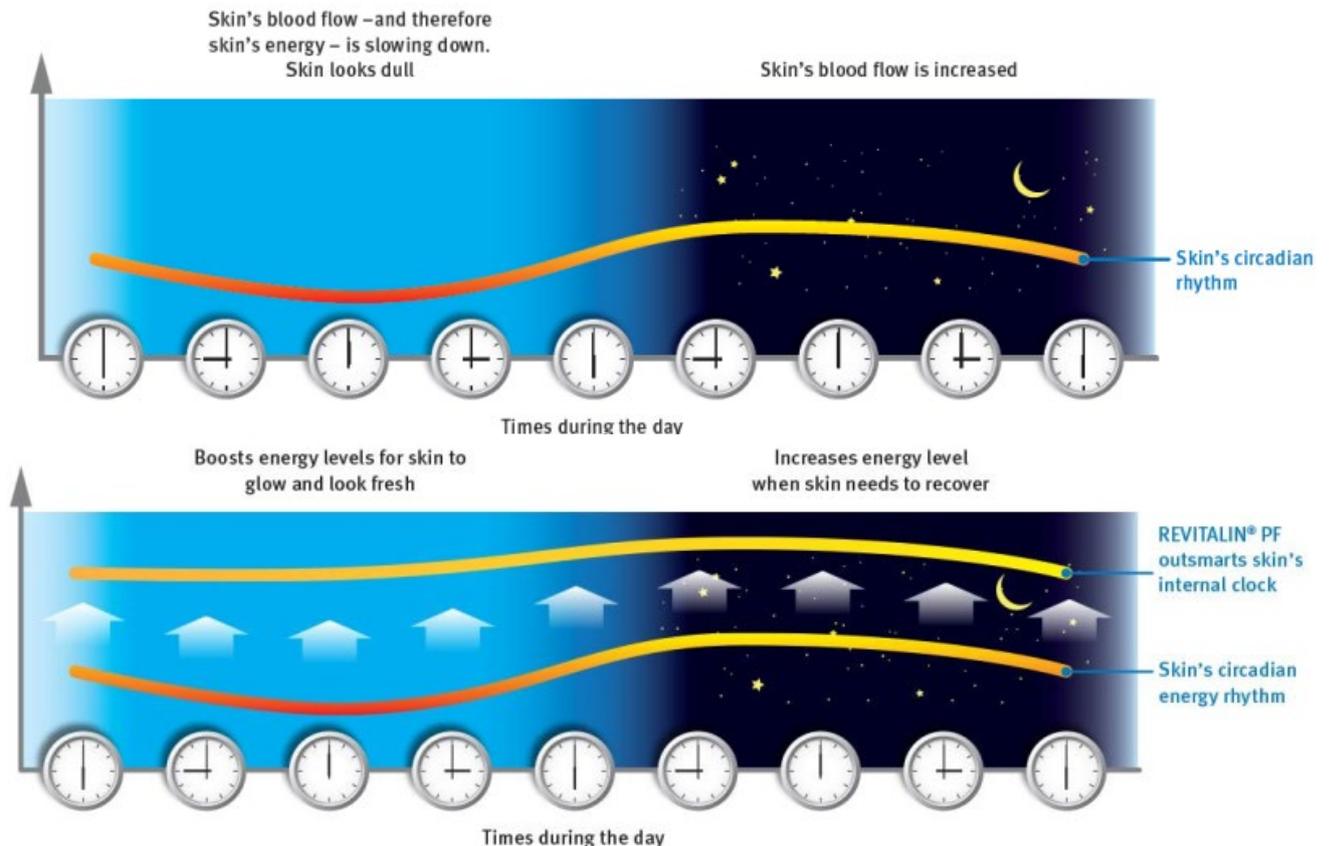
Hyperpigmentation is the third major cosmetic concern, as it is one of the obvious signs of the decline of youth. For this reason, the cosmetic goal is to reduce blemishes and age spots, and to improve the skin tone.

- ✓ It allows to recover the luminosity and light lost as a result of the chronological aging, or an undue exposure to the UV rays (photo-aging), as well as numerous aggressions to which our skin is exposed daily (pollution, cold , tobacco, poor diet, lack of sleep, stress, ...).
- ✓ With a continuous use, it manages to homogenize skin tone and reduce unwanted pigmentation.
- ✓ Contributes to reduce wrinkles and lines of expression through the synthesis of collagen and elastin.
- ✓ It increases skin's the face lack of firmness, smooth and elasticity by stimulating the synthesis of collagen which contributes to regenerate the tissue support dermal matrix.

BIOACTIVE INGREDIENTS IN GF#2 ANTIAGING:

REVITALIN PF: Improves circadian rhythms to get a young and radiant complexion

It offers real benefits by increasing the oxygen content and its consumption by the skin to help provide energized and revitalized skin that looks and feels good. The amino acid mixture is particularly rich in adenosine, which helps to form ATP and



improves blood flow, thereby obtaining a homogeneous complexion.

REVITALIN® PF Recharges the cellular energy during the night.

During the night, the cells are not stressed and are in the process of renewal. REVITALIN® PF gives you the energy you need to recharge and recover!

REVITALIN® PF Increases cellular energy during the day

During the day, the cells are stressed and the energy level is lower than at night. REVITALIN® PF gives them the energy to defend themselves against the environment around them.

SCELLEYE: BIO-MIMETICAL PEPTIDE. Plant Growth Factor

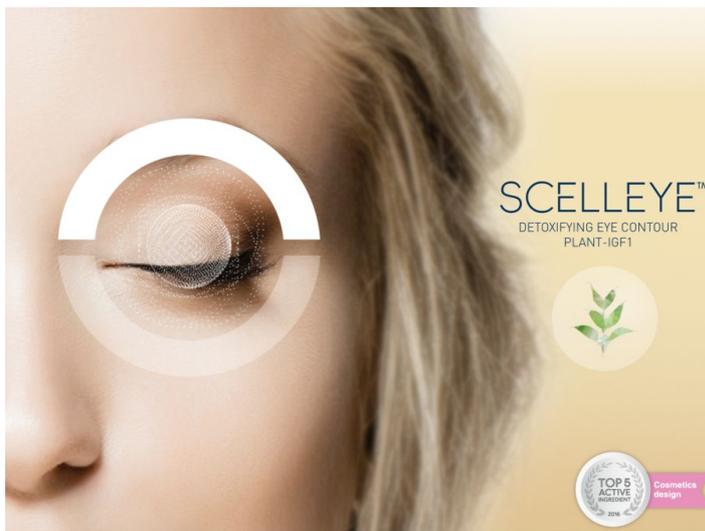
What are growth factors?

Growth factors are proteins that bind to their own receptors on the cell surface with the primary result of activating cell proliferation and / or differentiation.

Growth factors regulate the expression of the constituent proteins of the extracellular matrix: collagen, elastin, laminin, etc.

What are bio-mimetic peptides?

They are synthetic agonists (which have the same function) as natural growth factors and completely mimic their action, providing the same clinical benefits.



Scelleye Contains plant-IGF-1 from wild plant biofactories to help you design your true beauty covering multiple eye care concerns such as UV, pollutants, wrinkles and dark circles.

COBIOGENOL: Electromagnetic protection, protection against Blue-Light. Epigenetic Science



First active ingredient focused on reducing the biological disorders produced by exposure to **Electromagnetic Radiation**.

Electromagnetic waves are a form of energy consisting in vibrations of electric and magnetic fields. We live in a sea of invisible electronic pollution, which is becoming toxic to our health.

 ■ Oxidative Stress



Several studies [1][1][3] have shown that skin exposure to cell radiation suffers several biological parameter alterations:

- ✓ Massive increase in free radical production (ROS)
 - ✓ Decrease in cell regeneration
 - ✓ Lost in cohesion between keratinocytes
 - ✓ Stratum corneum weakening
- ✓ Disturbed skin refraction: lost in brightness, becoming dry and uncomfortable

COBIOGENOL, is a functional ingredient proved to reduce the skin biological alterations, resulted from the exposure to EMR.

It helps at the restoration process of the skin, being a specific anti-stress agent. It is a concentrated solution of purified marine glycogen, ready to use at cosmetic skin care preparations.



Glucose is the most important sugar at the cellular level. It plays a very important role in the energetic metabolism of the cells. Its energy is used at the restoration process of the skin.



The goal of this study was to evaluate the capacity of COBIOGENOL in protecting cells from the damage caused by induced electromagnetic radiation (EMR), by reducing oxidative stress (ROS).

To this end, Human keratinocyte cells were exposed to 6 hours of EMR generated by a mobile phone to assess the response of skin cells to the induced oxidative stress and test the potential of COBIODEFENDER EMR to prevent EMR-induced ROS.

▪ Cellular epigenetic rejuvenation

Epigenetics is a new paradigm in the Science of Anti-Aging.

Epigenetic change happens regular and naturally but can also be influenced by several factors including age, the environment (UV radiation, pollution...), lifestyle, emotions and diseases and much more that are yet to be discovered.

These factors discussed above, have the ability to "turn" or "turn off" certain genes, whose effects will be observed physically or physiologically.

The "on" or "off" effect of genes can be accomplished by three mechanisms:

- 1) MicroRNAs
- 2) Histone modification
- 3) DNA mutilation

What are miRNAs?

MicroRNAs turn on and off numerous biological processes such as cell survival, skin repair, processes, hair growth...

Epigenetics and the future of skin care

We can regulate microRNA expression to rejuvenate. miRNAs are involved in regulation processes such as cell cycles, DNA repair systems, reactions to oxidative stress, apoptosis.



COBIOGENOL is a natural epigenetic active ingredient that can regulate microRNA expression. This means that it has the ability to act on the expression of miRNAs and "switch on" or "switch off" certain genes.

Summary of COBIOGENOL activity:

- ✓ Protection of oxidative stress caused by electromagnetic radiation
- ✓ DNA protection and rejuvenation
- ✓ Anti-aging activity
- ✓ Aged cells acquire characteristics of young cells

CORUM 9515: New generation of stable vitamin C



CORUM 9515 is a new generation of stable vitamin C derivative that provides superb whitening effects, serves to promote collagen synthesis and protects DNA damage.

- ✓ Effective and stable skin lightening agent
- ✓ Balance the skin tone
- ✓ Reduce dark spot
- ✓ Prevent photoaging
- ✓ Increase collagen synthesis
- ✓ Excellent anti-oxidation properties
- ✓ Scavenge radical
- ✓ DNA protection

Vitamin C, or L-ascorbic acid, acts as a cofactor for collagen synthesis. It has a high regenerating ability, by its collagen synthesis stimulating activity.

Vitamin C is essential for the proline hydroxylation, therefore in the development and maintenance of collagen integrity. In addition, vitamin C inhibits the synthesis of Extracellular Matrix Metalloproteinase enzymes of, enzymes which stimulates collagen degradation in the dermis.

Vitamin C's collagen stimulating properties provides it with wound healing properties, caused by trauma, cuts, burns, or surgery. It is also suitable for the formation of new tissues.

Its chemical structure is similar to that of glucose (in many mammals and plants, this vitamin is synthesized from glucose and galactose). All compounds which possess the biological activity of ascorbic acid are known as Vitamin C. We should note that the only active form of Vitamin C is L-Ascorbic Acid.

As Vitamin C is a water-soluble substance, it is rapidly eliminated from the organism. Our body tends to protect vital organs, so any vitamin deficiency is felt primarily in the skin (less vital organ), which explains the importance of its topical application.

Pure Vitamin C is very unstable and sensitive to oxidation. Vitamin C contained is stabilized by an ethyl group and its effectiveness has been tested clinically:

Vitamin C Mechanisms of action:



Vitamin C anti-aging action is exerted through several ways:

1. Synthesis and repair of dermal collagen

Deficiency of ascorbic acid (AA) produces significant alterations in connective tissue, since Vitamin C is essential for collagen synthesis.

Vitamin C is essential for the transformation of proline in hydroxyproline and lysine in hydroxylysine (essential constituents of collagen). Consequently Vitamin C offers stability to the extracellular matrix.

2. Antioxidant activity

Vitamin C protects cells from free radicals. From all the scientific publications regarding Vitamin C, the most interesting are those related to the photoprotective effect of ascorbic acid when topically applied.

In parallel, the British Journal of Dermatology some years before, evidenced this protective effect of vitamin C, when used topically, on pig skin damaged by ultraviolet radiation.

The Spanish Journal of Physiology published a study showing how direct application of vitamin C protects, and thus prevents the aging in human skin cells in culture subjected to a strong oxidation stimulus with hydrogen peroxide.

All this goes to show that the UV light, after exhausting all the vitamin C present in the skin, cause an increase in free radicals, making manifest the neutralizing action of vitamin C.

3. Anti-inflammatory action

Vitamin C inhibits NFκB, which is responsible for the activation of a number of pro-inflammatory cytokines. Therefore, Vitamin C has a potential anti-inflammatory activity and can be used in conditions like acne vulgaris and rosacea. It can promote wound healing and prevent post-inflammatory hyperpigmentation.

4. Vitamin C as a whitening agent

When choosing a whitening agent, it is important to differentiate between substances that are toxic to the melanocyte and substances that interrupt the key steps of melanogenesis. Vitamin C falls into the latter category of depigmenting agents. Vitamin C interacts with copper ions at the tyrosinase-active site and inhibits action of the enzyme tyrosinase, thereby decreasing the melanin formation.