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**DETOX MASK with  
ACTIVATED CHARCOAL:**  
**Immediate Soothing  
Effect.**  
**Intensive detoxification.**  
**Decongestant.**  
**Regenerating**  
**Moisturizing**  
**Immunomodulatory**



**DETOX BLACK MASK** is an intensive and restorative soothing mask. It also incorporates the latest advances in cosmetics **based on epigenetics** incorporating an active ingredient with **natural epigenetic activity: DRAGON'S BLOOD**.

**DETOX BLACK MASK** Is indicated for **dehydrated or sensitive skin, irritated, reddened and for cases of sunburn, redness, tightness or irritation**. Also to detoxify the skin in depth.

**It allows the skin to breathe and shine with its own light.**

Provides an **immediate soothing effect**. **Nourishes, hydrates and regenerates, returning the feeling of well-being.**

Reconstitute the protective barrier of damaged skin, leaving it **soft and comfortable**. It incorporates **DRAGON'S BLOOD**, with **regenerating and moisturizing properties**. It is also an active ingredient with **epigenetic properties** that stimulates the **genes that code for detoxifying proteins of the skin**, as well as for the synthesis of **Acuaporin 3** and "**Tight-junctions**", proteins responsible for the skin's immunoregulatory function.

**Properties and indications:**

- Suitable for dehydrated skin, redness, sunburn, irritation ...
- Nourishes and hydrates the skin leaving it soft and reconstituting its natural protective barrier.
- With an **important soothing and anti-irritation effect** thanks to **CHIA OIL**
- Restores the feeling of well-being immediately.
- **Immediate decongestant effect**
- **Cleaning and detoxification**

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

Today we know that the environment, the lifestyle, the emotions ... in definitive, the history of the skin, generates epigenetic factors that influence decisively in our way of aging, more than the genetic inheritance itself.

## **BIOACTIVE INGREDIENTS IN DETOX BLACK MASK:**

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**DRAGON'S BLOOD: Epigenetic Activity, Anti-pollution, Regenerating, Anti-inflammatory, Immunomodulatory**

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**COSMOS  
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**Certificado Cosmos – Ecocert;**  
**DRAGON'S BLOOD** is a hydro-glycolic extract obtained from the latex of the tree *Croton lechleri*, with multiple beneficial properties for skin care treatments.

Over 90% of the isolated dried weight of the dragon's blood of *Croton lechleri* are **Proanthocyanidins**, which include such as catequins as well as proanthocyanidinic oligomers of up to 20 units. These compounds have strong anti-oxidant properties and they protect and strength the collagen fibres.

Contains **Taspine**, which was the first component to be related to a pharmacologic activity.

In-vivo tests show that Taspine has a powerful **cicatrizant effect**. It promotes the early phases of wound healing and its mechanism of action could be related to the stimulation of fibroblast chemotaxis.

Among the minor components there is also a lignan named 3',4-O-dimetilcedrusine, diterpens and unsaturated fatty acids. We can also find benzoic acid, pigments, flavonoids...



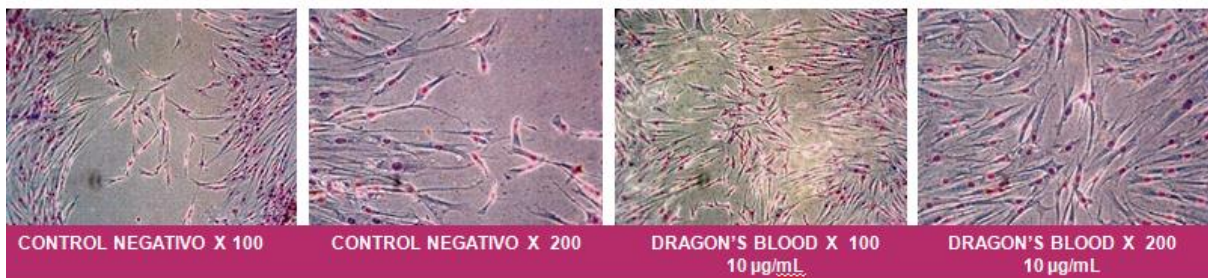
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## ▪ Skin regenerating activity

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**DRAGON'S BLOOD** skin's regenerative activity was evaluated by **in-vitro efficacy assays**. Specifically it was tested its healing ability **DRAGON'S BLOOD** on a wound induced in a layer of **human dermal fibroblasts**.

**DRAGON'S BLOOD** induced a significant increase in the migration of fibroblasts, thus achieving a faster healing:



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## ▪ Epigenetic activity

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

It is the study of the mechanisms involved in the regulation of gene activity: the biological mechanisms that will switch genes on and off without altering their sequence.

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 methylation

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## What are miRNAs?

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MicroRNAs (or “miRNAs) are **chemical “switches”**. They are small fragments of RNA responsible for protein synthesis. These control mechanisms are key elements of epigenetic regulation. Its production is constantly modified by the environment and living conditions,

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

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## Epigenetics and the future of skin care

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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, etc.

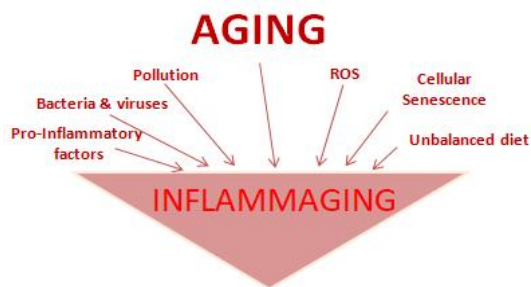
During aging and other external aggressions, chromatin ( the genetic material in the nucleus of our cells) becomes senescent and disorganized contributing to premature aging.

**DRAGON'S BLOOD 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.**

By **in vitro assays in human keratinocytes** (skin cells), **DRAGON'S BLOOD** has shown its ability to **modulate the expression of miRNAs** and **Genes** involved in:

- ✓ **Cell Defense: Anti-pollution**
- ✓ **Skin's regeneration**
- ✓ **Antioxidant and anti-inflammatory activities**
- ✓ **Skin's Immuno-modulating activities**

- **Anti-inflammaging & wound healing activity**



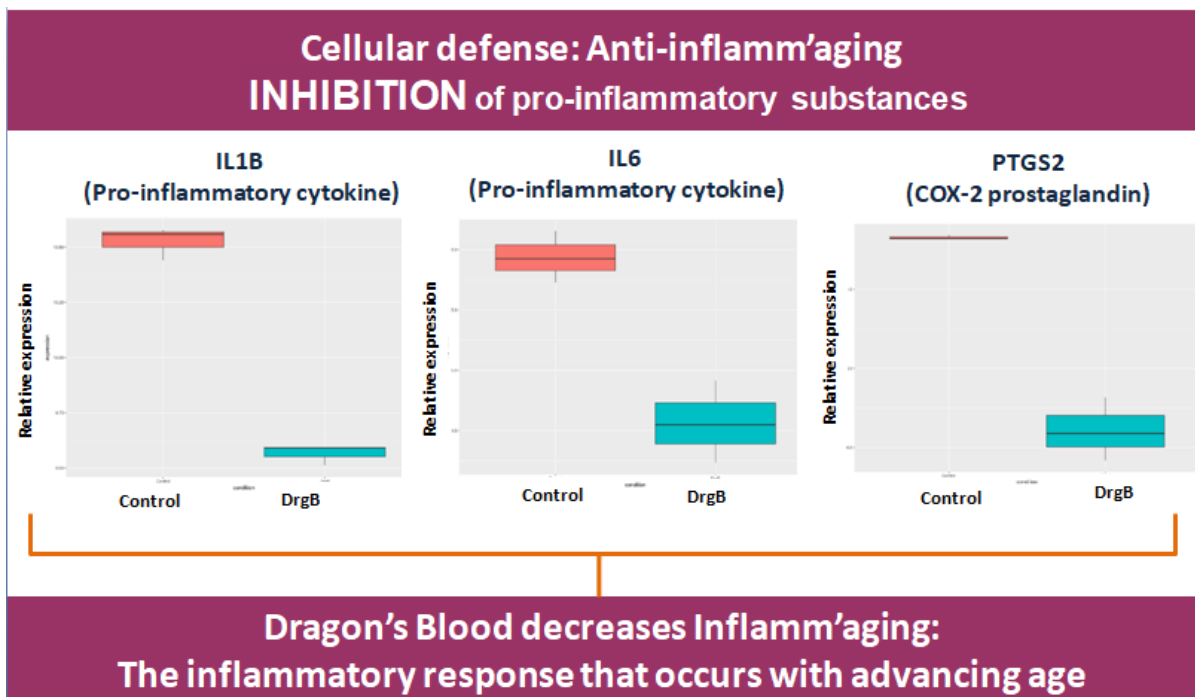
**INFLAMMAGING** is characterized by the upregulation of the inflammatory response and is one of the main causes of ageing.

**Inflammaging is a complex chain of events** that leads to deep wrinkles, hyper-pigmentation, inelastic tissue and gradually causes tissue damage resulting in collagen and elastin degradation.

**DRAGON'S BLOOD** also contributes to the skin's wound healing process by stimulating genes involved in the structure and healing of the

epidermis: FRK, WNT and NRG4.

By in vitro tests **DRAGON'S BLOOD** has shown to inhibit the expression of pro-inflammatory cytokines by means of epigenetic mechanisms:



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## ▪ Anti-pollution activity

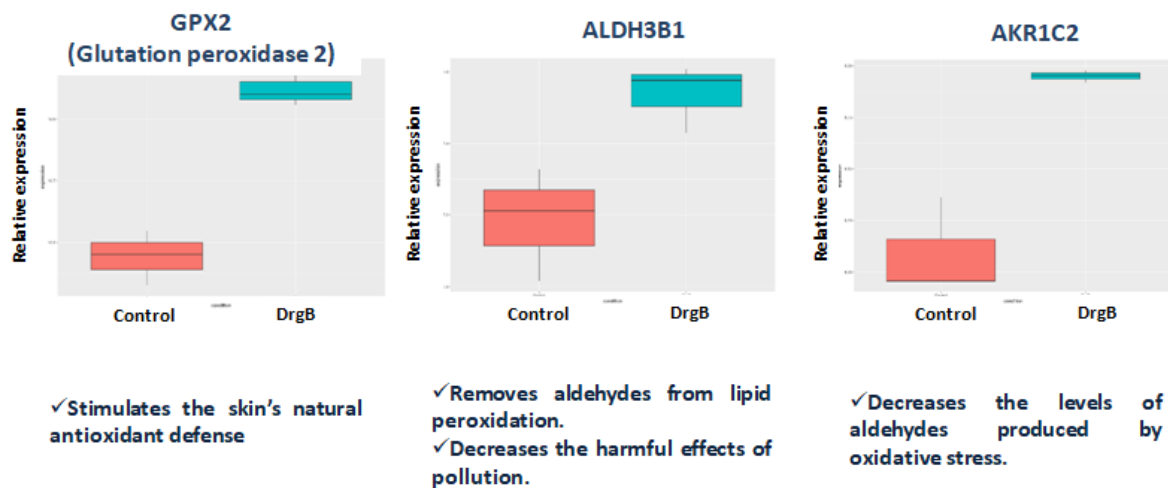
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DRAGON'S BLOOD stimulated the synthesis of antioxidant defense genes such as:

- GPX2 (Glutation peroxidase 2)
- ALDH3B1
- AKR1C2

They are involved in the **detoxification of hydrocarbons** acting as an **Anti-pollution active ingredient**:

### Cellular defense: Anti-pollution STIMULATION of antioxidant and cell detoxification systems



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## Dragon's Blood stimulates cell detox

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### ▪ Skin's Immuno-modulating activity

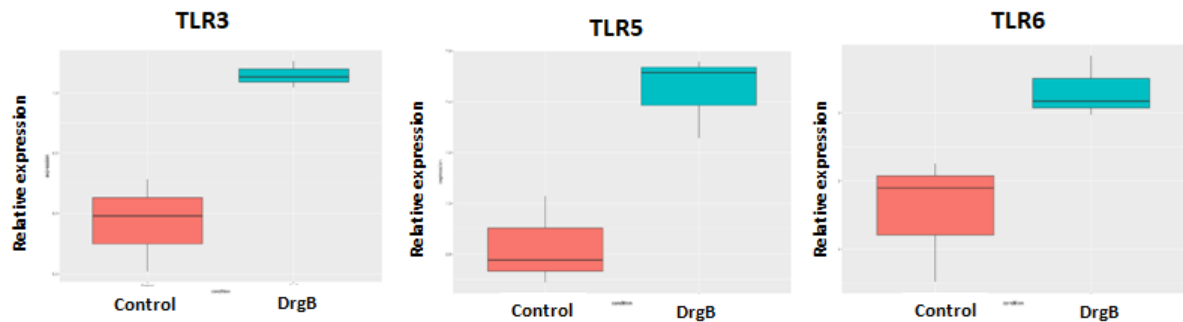
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The skin has an '**innate immunity**' provided by its **barrier function**.

This barrier protects it against the invasion of microorganisms that would otherwise cause **inflammation or skin redness**.

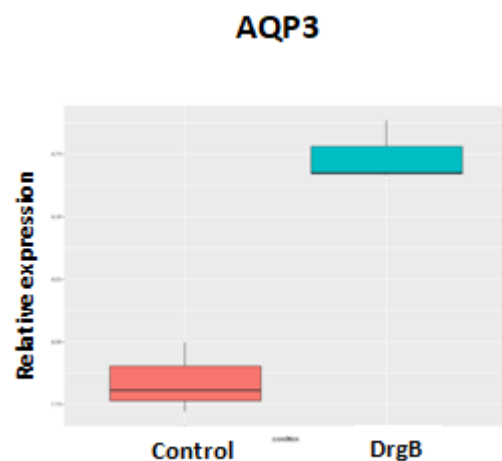
This wall effect is achieved thanks to the **Tight junctions: Proteins** arranged **like a belt** around cells, **holding them together**, sealing them and preventing the entry of substances through the gaps.

## Skin regeneration. Improvement of the skin's barrier function



## Dragon's Blood improves the skin's barrier function acting as an immunomodulator active ingredient

- **Natural moisturizer**



**DRAGON'S BLOOD** stimulates the synthesis of the AQP3 gene encoding for Aquaporin3 (AQP3).

AQP3 functions as a water channel facilitating the transport of water inside the cell.

It is known that a deficit of AQP3 in keratinocytes leads to increased skin dryness, decreased elasticity and delayed barrier function repair and wound healing

## The Hallmarks of Aging

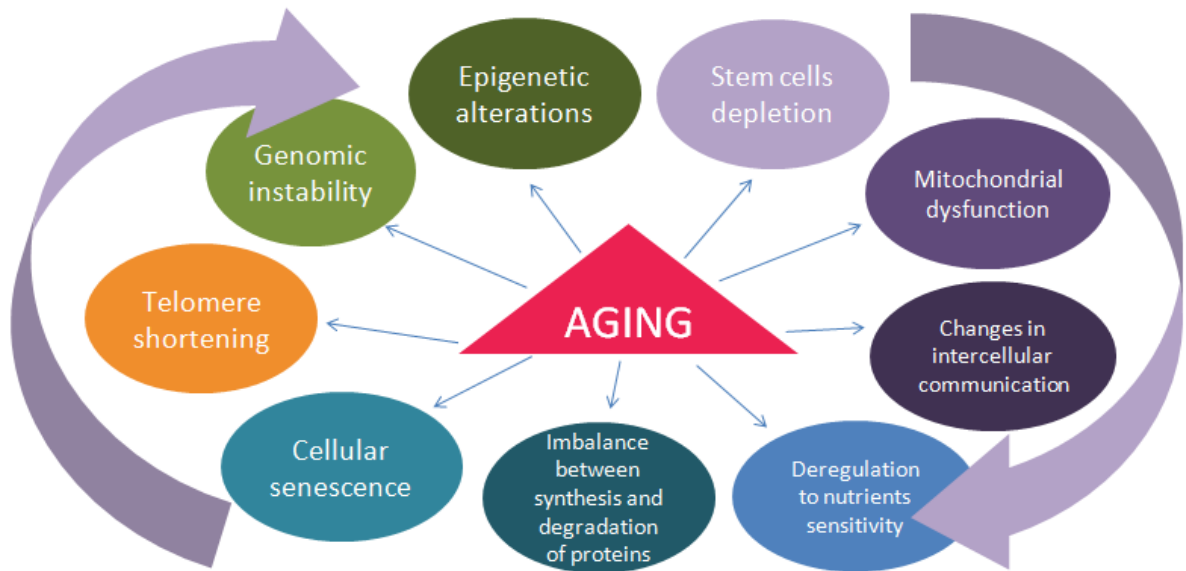
There are many theories about the **mechanisms responsible for aging**.

However, a milestone in the investigation of cell aging was the publication in 2013 of a review by Dr. Carlos López-Otín, a biochemist and most cited **Spanish scientist** in the field of **European cell biology**, in which there were established "nine marks of aging"

**In this work, all the molecular indicators of aging in mammals were collected for the first time.**

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In "The Hallmarks of Aging" the authors stated that the primary causes of aging are 9:



Once identified the genes on which the microRNAs act by DRAGON'S BLOOD, we characterized the molecular routes in which they participate, with the objective of linking the microRNAs to the molecular marks of aging.

The results confirmed that DRAGON'S BLOOD participates in key control processes in 8 of the 9 molecular marks of cellular aging.

#### Summary of DRAGON'S BLOOD activity:

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- ✓ **Anti-inflamm'aging: Decreases Inflammaging reducing the synthesis of pro-inflammatory cytokines.**
- ✓ **Improvement of skin's barrier function:** Stimulates the synthesis of tight-junctions improving the innate immunity of the skin's barrier function.
  - Promotes collagen formation
  - Improves and accelerates the cicatrization process
- ✓ **Anti-pollution: Stimulates cell detox genes**
  - **Stimulation of antioxidant and cell detoxification systems**
  - **Strong anti free-radical**
- ✓ **Natural moisturizer: Stimulates the synthesis Aquaporin 3:**
  - **Natural moisturizer**
  - **Improves hydration**



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## ACEITE DE SEMILLAS DE CHÍA: Calmante inmediato. Restauración de la barrera cutánea

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**Certificado Cosmos – Ecocert**, se trata de un **aceite extra virgen, de origen botánico**, extraído mediante presión en frío de las semillas de **Salvia hispanica**, planta cultivada en algunas partes de la costa y montañas de Perú, históricamente conocida como "Chian" o "**Chía**".



**COSMOS  
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Durante siglos las antiguas civilizaciones indígenas incas y mayas de América del Sur sabían de los increíbles beneficios terapéuticos de la Chía. Entre el 1500 y 900 antes de Cristo, la Chía ya se cultivaba en el centro de México.

Era un alimento sagrado para ellos, de hecho, "**Chía**" es una **palabra maya que significa "fuerza"**. Los guerreros Apache y Aztecas se mantenían gracias a sus semillas durante sus aventuras de conquista.

**Today, Chia seed is being re-discovered and known as a "Superfood" for the skin.**

It is loaded with very high levels of phyto-nutrients (vitamins and minerals), PUFA's (60% Omega-3, and 20% Omega-6) and anti-oxidants. In fact, it has much higher cell-protecting antioxidants than blueberry.

CHÍA SEED OIL is a powerful source of antioxidants: Phytosterols, Flavonoids and Phenolic acids, Tocopherols (especially  $\gamma$ -Tocopherol), and other Poly-phenolic antioxidants, such as Myricetin, Caffeic acid, Kaempferol and Quercetin.

Flavonoids are known to exhibit antioxidant, cytoprotective, and anti-inflammatory activities [1]. They can influence endogenous defence mechanisms in the skin, potentially modulating the response to environmental agents, such as UVR. Exposure to ultraviolet (UV) radiation has many negative effects on skin, including erythema, edema, sunburned cells, inflammation and/or photoaging.

Several studies demonstrate that topical application of certain polyphenolic antioxidants can minimize adverse skin reactions caused by UVR [2]. These botanical antioxidants are considered photochemoprotectors: agents capable of ameliorating the adverse effects of UVR on the skin [3]. Quercetin has exhibited both antioxidant and anti-inflammatory

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properties [4]. It was found to significantly protect the own cutaneous antioxidant systems (glutathione peroxidase, glutathione reductase, catalase, and superoxide dismutase activities) against UV damage irradiation [5].

In addition, when topically applied, the PUFA's found in CHÍA SEED OIL induce the synthesis of anti-inflammatory and anti-vasoconstrictive substances.

- **Soothing properties**



The prevalence of skin diseases in Europe and the United States is increasingly growing: Allergic diseases, atopic dermatitis, itching, skin discomfort, sensible skin...

Discomfort sensation can appear as a result of a lack of moisture or skin lipids, or after the application of some cosmetics. It can be expressed in several signs such as stinging, burning, itching and tingling sensations,

associated or not with erythema.

Scientific evidence has shown a strong relationship among total fat intake and composition and a number of diseases, and in particular, skin diseases.

Our diets are deficient in omega 3 fatty acids, and those are key elements in skin health maintenance. Omega 3 and 6 are eicosanoids precursors: prostaglandins, prostacyclins, thromboxanes, leukotrienes, and epoxyeicosatrienoic acids.

Omega 3 decreases the production of pro-inflammatory eicosanoids, cytokines, and ROS (reactive oxygen species) inducing the synthesis of anti-inflammatory mediators [6]. Thus,  $\omega$ -3 PUFAs are potentially potent anti-inflammatory agents.

### **CHÍA SEED OIL helps calming itching skin due to its high anti-inflammatory effect**



Oils extracted from the seed of Chia (*Salvia hispanica* L) have been used for long time as a dietary supplement by American Indians and Mexican natives.

Recently, it has been reported that Chia seed oil is the richest botanical source of 18 : 3  $\omega$ -3 fatty

acid currently known. In addition, china seed oil also contains natural  $\alpha$  -linolenic acid and flavonol, which can act as lipid antioxidants. Flavonol has anti-oxidant, anti-inflammatory, anti-thrombotic and anti-cancer effects.

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At over 90% of dermatological consultations, patients say they have itching skin.

Itchiness or pruritus is one of the first consequences of dry skin, and old people are especially affected as their glandular system is slowed down, and the fatty acid content of their skin is greatly diminished.

This condition aggravates in the winter, because of the heaters, that create inside low humidity air. The skin loses moisture and may become irritated, or inflamed. In addition, frequent bathing, especially with harsh soaps, may contribute to dry skin.

### **Mechanism of action:**

When topically applied, the PUFA's found in CHÍA SEED OIL induce the synthesis anti-inflammatory and anti-vasoconstrictive substances [8].

- ✓ Calms itching sensation
- ✓ Soothes redness and irritation
- ✓ Provides exceptional hydration
- ✓ Restores the skin barrier

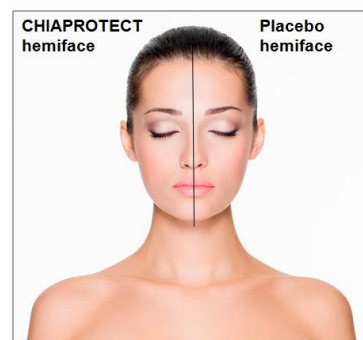
### **In-vivo evaluation of the anti-itching and anti-redness effect of 4% CHÍA SEED OIL vs. placebo, in 15 volunteers with sensitive skin:**

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This study intends to evaluate the anti-itching and anti-redness efficacy, as well as skin barrier, and elasticity improving effects of CHÍA SEED OIL vs. placebo.

A 4% CHÍA SEED OIL emulsion vs. Placebo (same formulation without active ingredient) were tested in the malar areas (left and right) of each volunteer. The same area was evaluated at D0 and D28.

In addition, immediate calming/ anti-itching and anti-redness effect measurements were performed at t=2' and t=8'.



### **Assessment of the immediate anti-itching effect using a capsaicin test:**

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Discomfort sensation can appear as a result of lack of moisture or decreased skin lipids, or after the application of some cosmetics.

It can be expressed in several signs such as stinging, burning, itching and tingling sensations, associated or not with erythema.

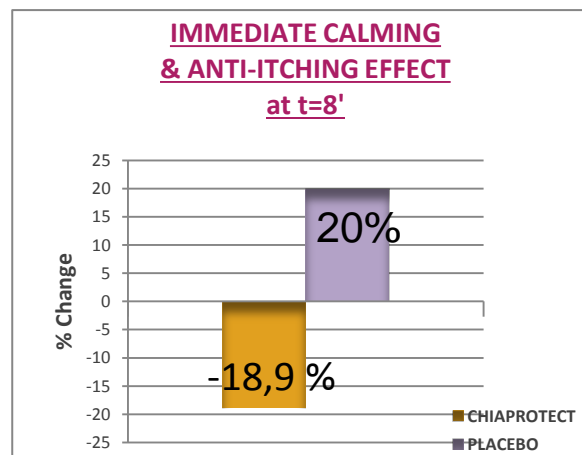
The goal of this test is to induce a discomfort sensation by applying a 10% Capsaicin solution on the nasolabial fold, with a symmetrical side as a control. Capsaicin is an active component of chili peppers. It is irritant and produces burning sensation on skin.

The anti-itching efficacy was evaluated using a PGA (patient global assessment) score.

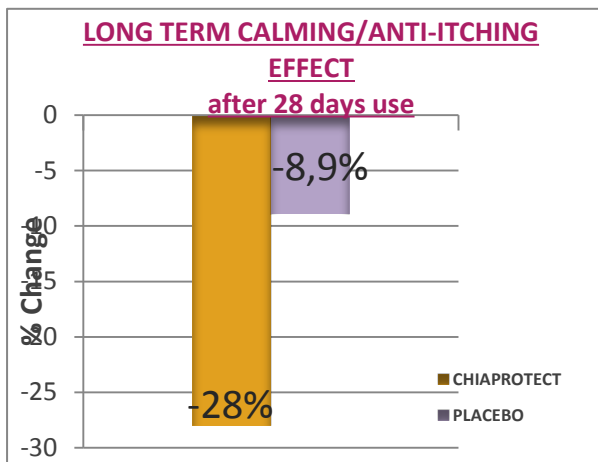
To evaluate the immediate calming effect of 4% CHIAPROTECT, a solution of 10% Capsaicin was applied.

Right after, 4% CHIAPROTECT and placebo were applied, and the feeling was assessed at t=2' and t=8'.

*Figure 1 Shows how immediately after the 4% CHIAPROTECT application, there is a significant decrease in burning sensation: -18,9% while the placebo*



### Assessment of the long-term anti-itching effect using a capsaicin test:

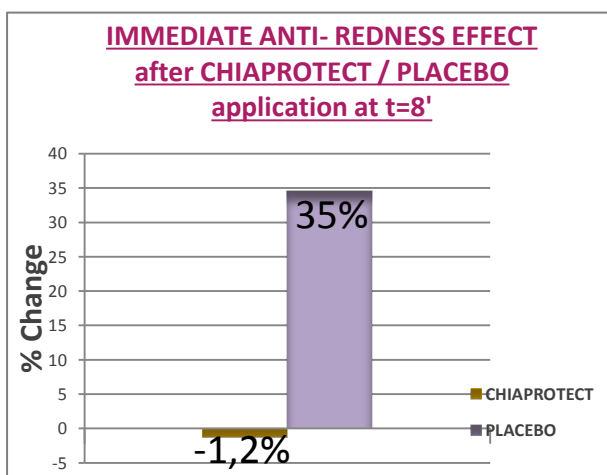


To evaluate the long term preventive effect of CHÍA SEED OIL, the capsaicin test was performed again after 28 days of CHÍA SEED OIL use.

Measurements were performed at t=2min and t=8min after capsaicin application.

*Figure 2 Shows how after 28 days of 4% CHIAPROTECT application, the skin decreases its reaction in term of itchiness -28% .*

### Assessment of the immediate anti-redness capacity:

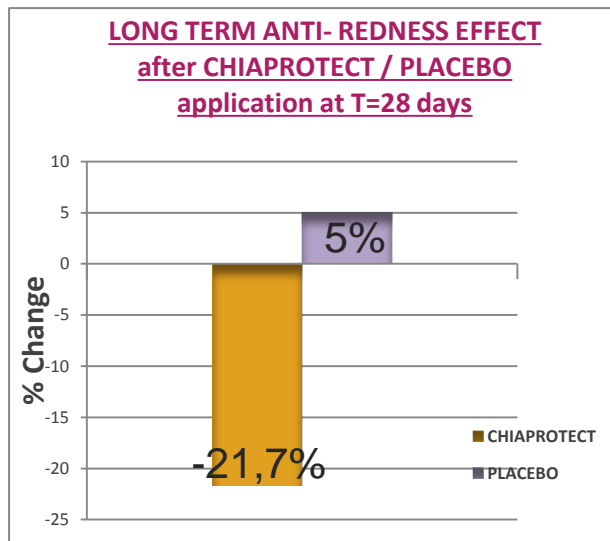


Skin microcirculation (redness) was measured by Laser Doppler flowmetry (LDF) to evaluate the protection capacity of CHÍA SEED OIL immediately after the application of capsaicin (Acute effect).

*Figure 3 Shows the immediate protection effect of 4% CHIAPROTECT decreasing 1,2% the redness in the measured area.*

*This translates into an immediate anti-redness effect. CHIAPROTECT protects the skin reducing immediate redness reaction.*

## Assessment of the long term anti-redness capacity:

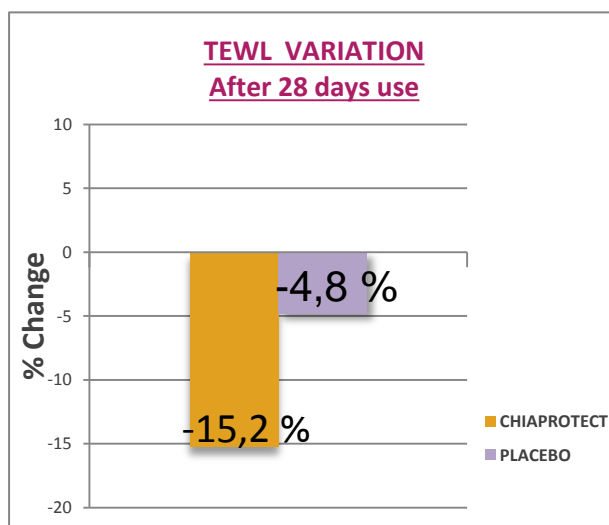


Long term anti-redness effect was measured to evaluate the protection capacity of CHÍA SEED OIL after 28 days of use.

*Figure 4 Shows that when repeating the capsaicin test after 28 days of 4% CHIAPROTECT application, the skin was less reactive.*

*CHIAPROTECT prevents itching and discomfort reactions after 28 days of use a -21,7 %.*

## Assessment of the skin barrier effect by TEWL estimation:

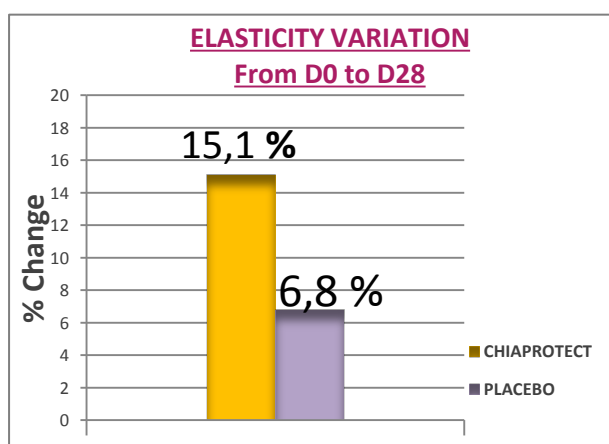


The TEWL was assessed by Tewameter ® TM 300 (Courage - Khazaka Electronic GmbH, Koln, Germany) equipment before and after the application of the products.

Measurements were performed on D0 and D28.

*Figure 5 Shows 4% CHIAPROTECT performed a -15,2 % improvement in TEWL inducing a reinforcement of the skin barrier after 28 days of use, having a significant effect on TEWL improvement*

## Assessment of the elasticity variation: de la mejora de la elasticidad:



Skin elasticity was assessed by a Cutometer ® dual MPA 580. This system is used to measure elasticity of the upper skin layers using negative pressure which deforms the skin mechanically.

Measurements were performed on D0 and D28.

*Figure 6 Shows that 4% CHIAPROTECT performed a 15.1% improvement in skin elasticity.*

*At the same time, the placebo presented a 6.8% improvement (p<0,05)*

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## Chia oil helps calming itching skin because of its high anti-inflammatory effect

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Chía seed oil is a powerful source of chemoprotective agents. It calms the skin, and is a moisture-holding. It is non-greasy and fast absorbing. It is especially beneficial for dry, sensitive and imbalanced skin, and can be used on face and body.

- ✓ Preventive anti-age activity thanks to its anti-free radical property
- ✓ Skin calming and anti-redness effect. Balance skin to reduce inflammation in eczematous, itching and uncomfortable skin
- ✓ Restores moisture, improving cutaneous barrier
- ✓ Nutritive for dry, tight skin
- ✓ Prevents sun damage
- ✓ In body care, very pleasant in massage
- ✓ Improvement of skin softness and elasticity

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## COBIOPHYTONIC: Decongestivo. Anti-inflamatorio. Anti-ojeras. Anti-bolsas. Drenante

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**COBIOPHYTONIC** is a botanical active ingredient combining the extracts from 5 plants and bio-flavonoids having positive activity on eye bags, dark circles and wrinkles, clinically probed.

**COBIOPHYTONIC** combines:

- **Arnica montana**

**Decongestive, anti-inflammatory, venotonic and vessel-protective activity.** Mainly due to its sesquiterpene lactones and flavonoids content.

**Flavonoids** are vein-active and vessel-protective agents, reducing the permeability and increasing the resistance of blood capillaries.



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- **Hesperidin Methyl Chalcone**

Bioflavonoid derivative of the flavonoid hesperidin.

HMC has antioxidant properties, which helps combat the inflammation and cell damage caused by free radicals.

Its benefits include improved blood flow and integrity of blood vessels, it is decongestive and tonic.

HMC improves the appearance of the characteristic bluish-black circles under the eyes.



- **Hamamelis virginiana**

Powerful vasoconstrictive action activity by its high **flavone heterosides**.

Phlebotonic and vasoprotective. Reduces blood capillaries permeability. These effects are reinforced by the hamamelis **leucoanthocyanidins**.



- **Aesculus Hippocastanum**

**Anti-inflammatory** and **anti-edema** properties, due mainly to the presence of **triterpenic saponins** (10%), and particularly to that of **escin**.

**Escin** works on the connective tissue and the cell membranes.



- **Ruscus aculeatus**

Phlebotonic and anti-inflammatory properties. Mainly due to its phenolic acids and flavonoids content.

Ruscogenin potent vein-constrictor that exerts anti-oedema actions.

Mircetol, quercetol and kaemferol (phenolic acids) are inhibitors of different mediators at inflammatory process.

Rutin and Hesperidin Methyl-chalcone (Flavonoids)



improves venous insufficiency.

**Anti-inflammatory** and **anti-edema** properties, due mainly to the presence of **triterpenic saponins** (10%), and particularly to that of **escin**.

**Escin** works on the connective tissue and the cell membranes.

- **Malva Silvestris (Mallow)**

Very rich in polysaccharides (mucilages), 15-20% and **uronic mucilages** with **moisturizing**, **emollient**, **soothing**, **calming** and **decongestive** properties .

Vessel-protection and venotonic activities attributed to its flavonoids content.



### **Clinical Efficacy: In-vivo evaluation of the Anti-Eye bags and Anti-Dark Circles effect of 3% COBIOPHYTONIC:**

Evaluación, In-vivo, de la **eficacia anti-bolsas y anti-ojeras** de **COBIOPHYTONIC al 3%**  
15 female volunteers, 42 - 79 years old.

›Tired look characterized by wrinkles, eye bags, and dark circles.

›Twice daily application for 28 days of a gel-cream dosed with 3% COBIOPHYTONIC in the area around the eyes of an hemiface (vs placebo in the other hemiface).

#### **Assessment of the eye bags and roughness reduction:**

After 28 days there was a significant decrease in the eye bags volume and roughness compared with placebo:



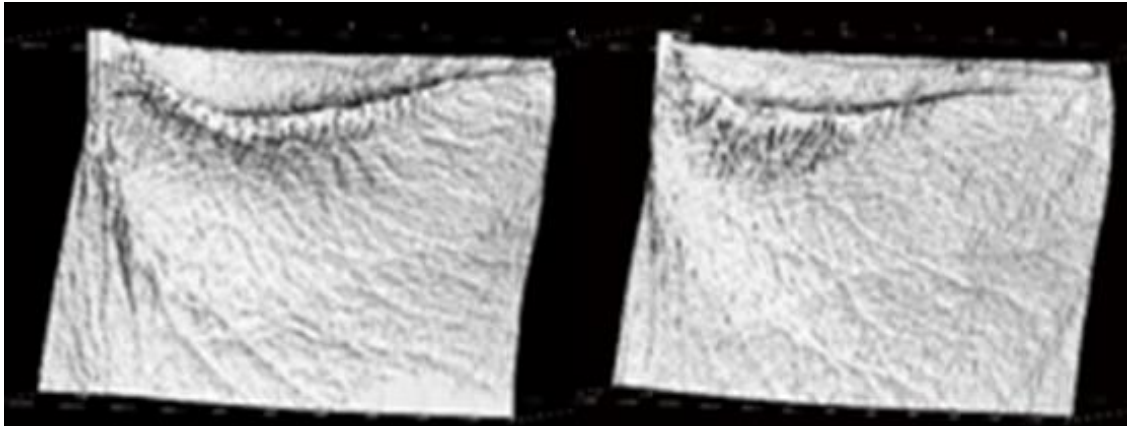


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**COBIOPHYTONIC has the capacity to induce, significantly, a smoother skin:**

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3D images of the eye bag area evolution where COBIOPHYTONIC was applied:



T=0

T=28 días

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**Assessment of the Dark-circles by chromameter evaluation:**

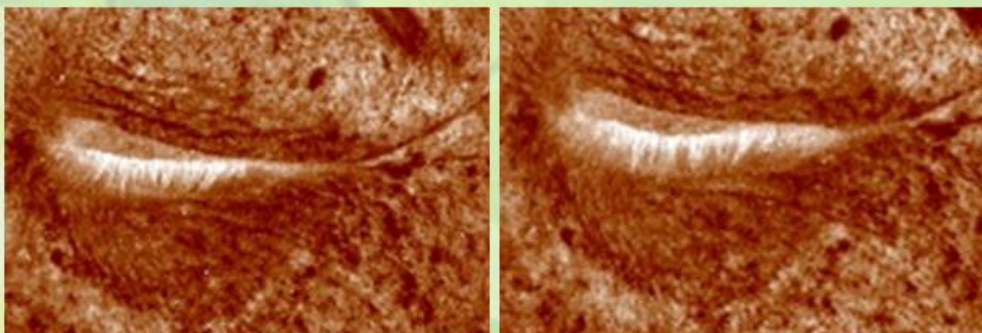
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Skin color is obtained using a color analyzer that measures reflected color (Minolta Chromameter CR-400).

- › The system provides data for the Luminance ( $L^*$ ),  $a^*$  (red-green) and  $b^*$  (blue-yellow) color distribution.
- › The measurements were performed on D0 and D28.
- › After 28 days, there was a **statistically significant change in skin Luminance,  $a^*$ , and  $b^*$  parameters for COBIOPHYTONIC.**

COBIOPHYTONIC presented a 2.1% increase in Luminance ( $L^*$ ), a 22.8% decrease in redness aspect ( $a^*$ ) and a 13.7% increase in skin yellowish aspect ( $b^*$ ), therefore, reducing bluish aspect (the vascular component) of dark circles.

**Pigmentation evolution in the COBIOPHYTONIC application area:**



**COBIOPHYTONIC reduced the bluish aspect of dark circles by 23%**

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## ACTIVATED CHARCOIL: Detoxifying.Eliminates impurities.Absorbent

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**Activated charcoal** is a **plant-based substance** that has the **property of absorbing chemicals, gases, heavy metals, proteins, wastes and toxins,** being a **great ally for detoxification.**

The first records in which we are aware of the **benefits of activated charcoal** and its use as a **therapeutic or natural remedy** date back to 1,550 years before Christ.

Before being added to the formula, **charcoal undergoes an oxidation process** that enhances its **ability to extract toxins** to its surface and increases its porosity. That is why it is said that **coal is activated.** This allows, with its application, to function as a **powerful eliminator of impurities and bacteria.**

Its absorption capacity is very useful especially in **oily skin as it helps the absorption of excess sebum.**

Being a toxin gauge is also effective in acne prone skin.



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## References:

- [1] Chia seeds: The Aztec Wonder Food. Larry Trivieri, Jr. The National University System. Center for integrative health.
- [2] Flavones inhibit proliferation and increase mediator content in human leukemic mast cells (HMC-1).Alexandrakis M1, Letourneau R, Kempuraj D, Kandere-Grzybowska K, Huang M, Christodoulou S, Boucher W, Seretakis D, Theoharides TC. Eur J Haematol. 2003 Dec;71(6):448-54.
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- [4] Photochemoprevention by botanical antioxidants. Skin Pharmacol Appl Skin Physiol. 2002 Sep-Oct;15(5):297-306.Afaq F1, Mukhtar H.
- [5] Quercetin is more effective than cromolyn in blocking human mast cell cytokine release and inhibits contact dermatitis and photosensitivity in humans. Weng Z1, Zhang B, Asadi S, ismanopoulos N, Butcher A, Fu X, Katsarou-Katsari A, Antoniou C, Theoharides TC.
- [6] Erden Inal M. Kahraman A. Köken T. Beneficial effects of quercetin on oxidative stress induced by ultraviolet A. (2001) Clin. Exp. Dermatol. 26,536-9