





IN SILICO & BIOMIMETIC DESIGN OF PEPTIDES

*Highly specific peptides by in silico design.
Discovery of peptides through biomimetic design,
inspired by nature's masterpieces, mimicking
genius patterns*



MARINE BIO-RESEARCH

*Unique species from the ocean's depth and sea
breeze, to the marine cnidarians and onshore
halophyte plants*



WILD PLANTS AS BIOFACTORIES

*Plant-based transient expression system for
the production of highly active and pure proteins*

In silico & biomimetic design of peptides



MUNAPSYS™
#CHOOSEYOUREXPRESSION

in-cosmetics north america
Innovation Zone
Best Ingredient Award 2013
BRONZE

PRE- & POST-SYNAPTIC
EXPRESSION WRINKLES
SMILING



LIGHTENING
3 WAY CELL COMMUNICATION
SHINING IN 5 STEPS

STELLIGHT™
A LIGHTENING CONSTELLATION




VERSILLIN™
REPOSITIONING YOUR BEAUTY

APPLICATIONS
HOW IT WORKS




NEOCLAIR PRO™
COME TO THE CLEAR SIDE

Marine Bio-research




ARCTALIS™
FOLLOWING THE NORTHERN LIGHTS




SIRTALICE™
A FREEZING BEAUTY FROM THE DEEP SEA

V-lift in 30 min!



SEADERMIUM™
NOURISHING PREMIUM FILLER



PAUSEÏLE™
A RETREAT FOR YOUR SKIN

Wild Plants as biofactories



SCELLEYE™
DETOXIFYING EYE CONTOUR PLANT-IGF1

TOPE ACTIVE



EPITENSIVE™
INTENSIVE ANTIAGING PLANT-EGF



PUREOXIN™
ILLUMINATING PLANT-TRX1



ANARGY™
LET YOUR HAIR BLOOM



***In silico* & biomimetic
design of peptides**

MUNAPSYS™

#CHOOSEYOUREXPRESSION



PRE- & POST-
SYNAPTIC



EXPRESSION
WRINKLES



SMILING



Pre- & post-synaptic



Expression wrinkles



Smiling



IN-SILICO & BIOMIMETIC
DESIGN OF PEPTIDES

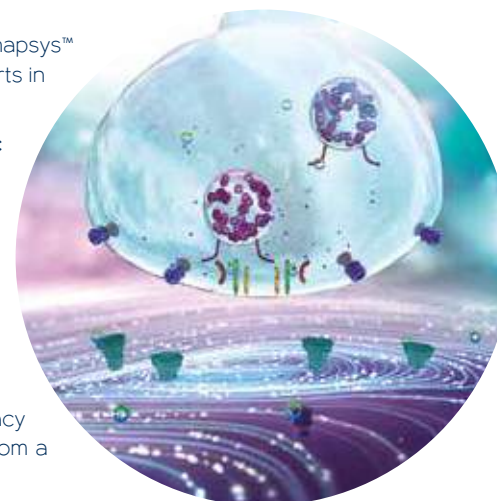
- INCI name of the active ingredient: Acetyl Hexapeptide-1
- Recommended dose: 2-5%
- Solubility: Water soluble

DESCRIPTION & MECHANISM

Laugh, cry, enjoy and be free to live. Do not let **fine lines** #chooseyourepression. Munapsys™ is a **botulinum toxin-like peptide** obtained by *in silico* design in collaboration with experts in **neuroscience**.

It is the first cosmetic ingredient able to act both in the **pre- and post-synaptic pathways** of muscle contraction and in a new SNARE protein (**Munc-18**). Munc-18 binds to syntaxin allowing the assembly of the SNARE complex. **Pre-synaptic:** Munapsys™ competes with Munc-18 for its position in syntaxin, obstructing SNARE complex assembly and the release of the acetylcholine (ACh) neurotransmitter into the synapse. **Post-synaptic:** ACh activates clustered AChR, inducing a depolarization and opening Ca²⁺ channels allowing actomyosin cross-bridge and sliding for muscle contraction. Munapsys™ modulates AChR clustering, depolarization, Ca²⁺ mobilization, and actomyosin cross-bridge and sliding.

Munapsys™ mechanism is a **real upgrade** in the **expression lines field**, with proven efficacy compared with a benchmark combination even at a lower dose. Let yourself enjoy from a new generation of botulinum-like ingredients. **A safe, real beauty filter.**

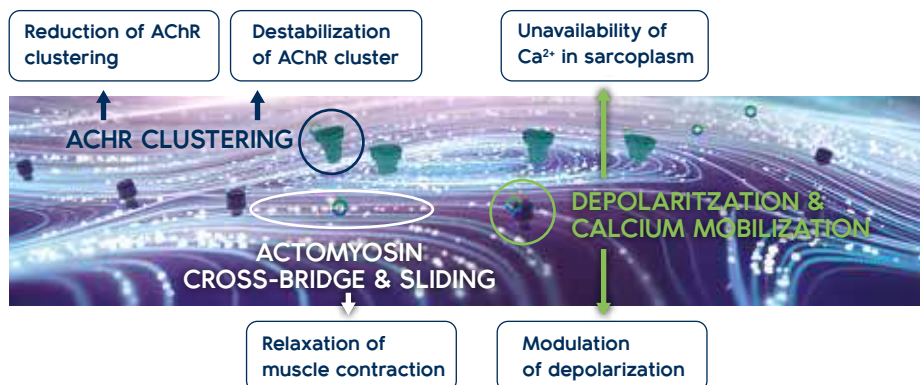


IN VITRO EFFICACY

Pre-synaptic efficacy

- ✓ **-37% Munc-18/syntaxin binding** vs non-treated
- ✓ **-29% and -16% ACh release** vs depolarized cells and **benchmark¹**
¹Benchmark: Acetyl Hexapeptide-8

Post-synaptic efficacy

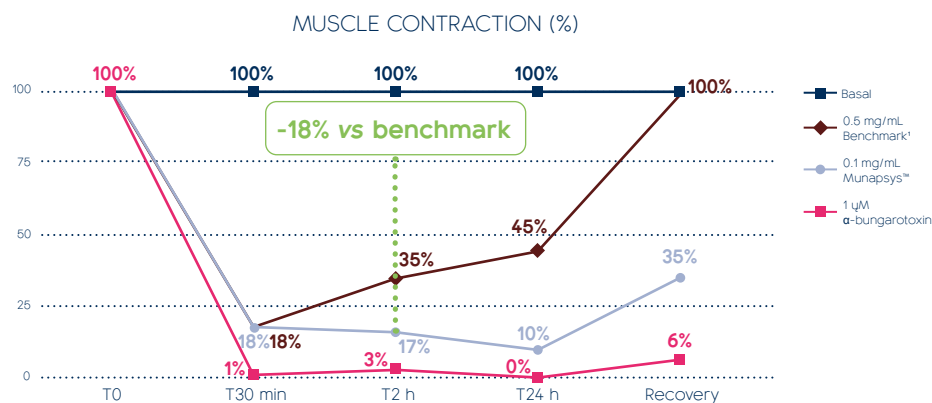


Efficacy in chronological wrinkles

- ✓ **+16% collagen I** vs basal

Modulation of muscle contraction

Motor neurons derived from hiPS cells and human muscle cells



¹Benchmark: Acetyl Hexapeptide-8

B1803OL1

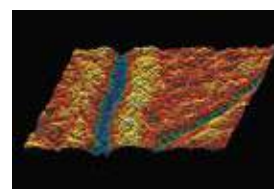
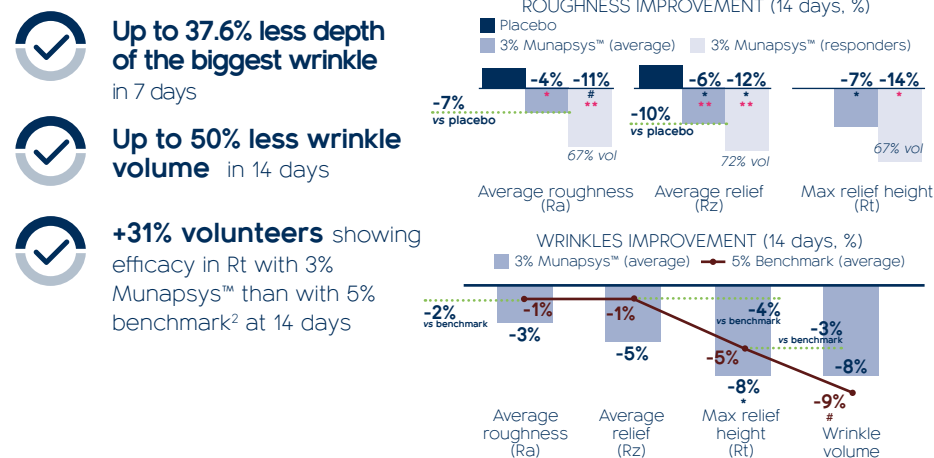
www.lipottrue.com | info@lipottrue.com

IN VIVO EFFICACY

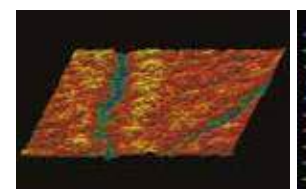
#chooseyourepression

2 panels of 18 women (35-55 years old) applied a cream with **3% Munapsys™** on half face, twice daily for 14 days. A placebo or 5% benchmark² was applied on the other half of the face

²Benchmark: 3% Acetyl Hexapeptide-8 + 2% Dipeptide Diaminobutyryl Benzylamide Diacetate



T0 days



T7 days

T7 days (3% Munapsys™)

- 25.5% average roughness (Ra)
- 14.2% average relief (Rz)
- 16.6% max relief height (Rt)
- 25.5% maximum wrinkle depth



T0 days



T14 days

T14 days (3% Munapsys™)

- 10.4% average roughness (Ra)
- 10.3% average relief (Rz)
- 13.6% max relief height (Rt)
- 21.1% wrinkles volume

Happy smile

10 women (with a sad smile, 35-65 years old) applied a cream with **3% Munapsys™** on the whole face, twice daily for 28 days.



T0 days



T28 days

SMILING

- +16.7% happier smile (lifting of commissures)

STELLIGHT™

A LIGHTENING CONSTELLATION



LIGHTENING



3 WAY CELL
COMMUNICATION



SHINING
IN 5 STEPS



Lightening



3-way cell communication



Shining in 5 steps



IN-SILICO & BIOMIMETIC
DESIGN OF PEPTIDES

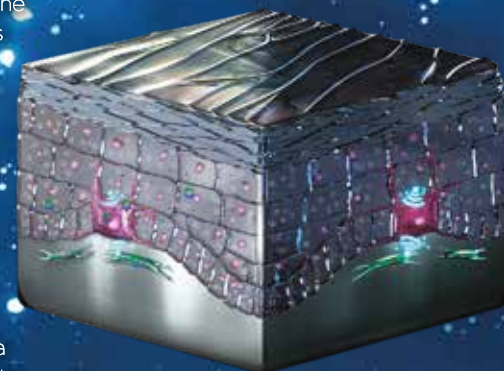
- INCI name of the active ingredient: Acetyl hexapeptide -1
- Recommended dose: 1-3%
- Solubility: Water soluble

DESCRIPTION & MECHANISM

Like the most beautiful shining star seen before the dawn, allow yourself to have the most luminous skin and join the **lightening constellation**. Its name is **Sirius**, and comes from the Greek "Seirios" which means **luminous** and **glowing**. It is a **white star** that shines 20 times more powerfully than the Sun in the darkest night.

Stellight™ is a smart creation of a **synthetic hexapeptide** based on deep knowledge of amino acid and skin properties. With a novel full action on melanogenesis, Stellight™ has a unique activity on **melanocytes**, **keratinocytes** and **fibroblasts**, inhibiting their **three-way communication**. Indeed, modulation of SCF liberation, secreted by keratinocytes and fibroblasts contributes to regulate fibroblasts-melanocytes-keratinocytes network. Moreover, it inhibits the **production of melanin**, reduces the **number of dendrites** and has an **antioxidant effect**. Thanks to its effectiveness against melanogenesis, Stellight™, enhances **ITA** and **luminosity value**, providing a **highlighter efficacy**.

Draw your own constellation and restore your skin's **brightness** and **clearness** for a radiant skin without imperfections to help you to obtain a **captivating** and **glowing** beauty.

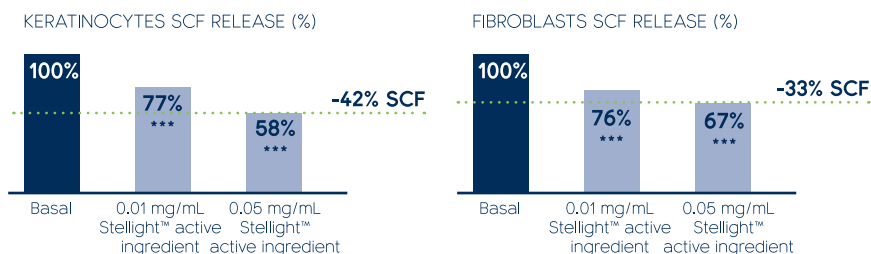


IN VITRO AND EX VIVO EFFICACY

Modulation of 3-way cell communication

✓ **Downregulation of KITLG/SCF, EDN1, PTGS1, MC1R, C-KIT and HGF genes**, decreasing cell communication

✓ **Modulation of the SCF/C-KIT pathway decreases paracrine communication** (*in vitro*)



Reduction of existing melanin

✓ **Downregulation of DCT-TYRP2, TYRP1, TYR, MITF, MLANA and PMEL17**

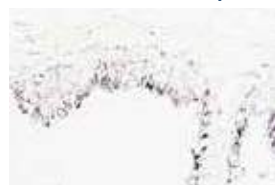
✓ **-20% melanin** vs Kojic acid (*in vitro*)

✓ **-67% tyrosinase** vs basal (*in vitro*)

✓ **-38% melanin** content in suprabasal layer of human skin explant (*ex vivo*)



Placebo
(melanin in brown, T10 days)



2% Stellight™
(melanin in brown, T10 days)



Placebo + UV exposure
(melanin in brown, T10 days)



2% Stellight™ + UV exposure
(melanin in brown, T10 days)

Reduction of melanin transfer

✓ **Downregulation of PAR2 genes and up regulation of DKK1 gene**

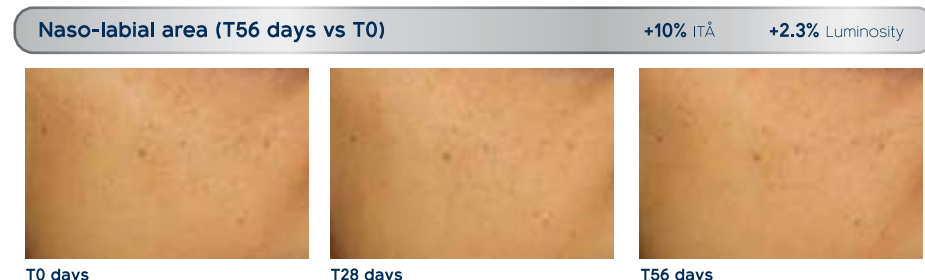
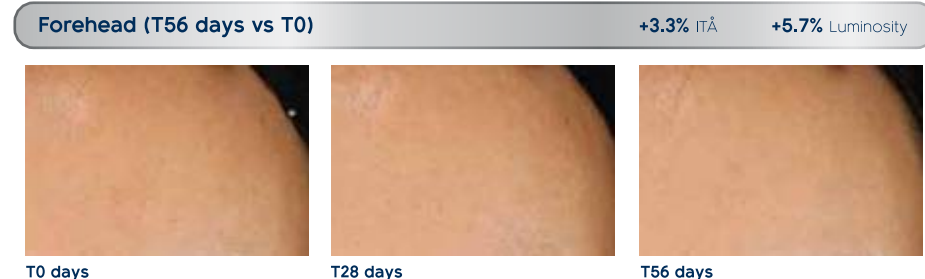
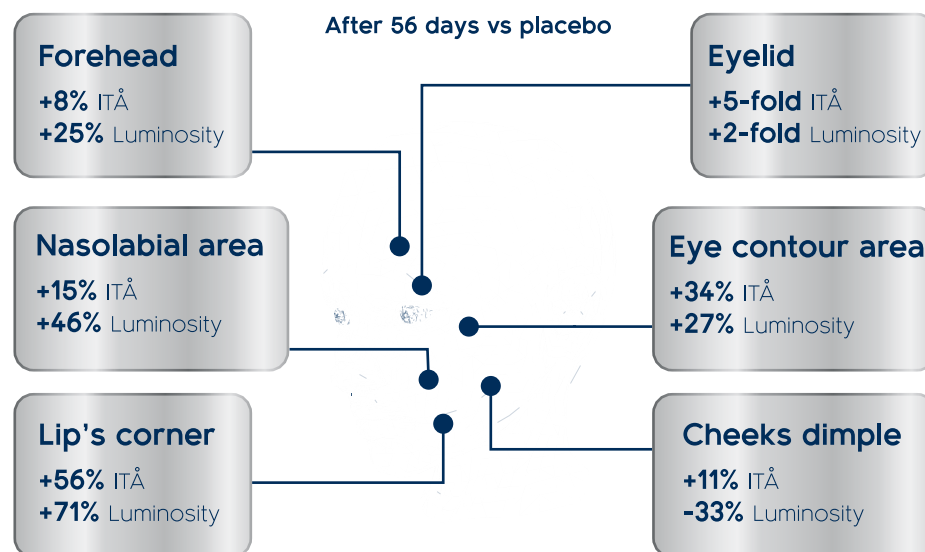
✓ **Reduction of melanocyte's dendricity** similar to β -arbutin (*in vitro*)

✓ **-53% melanin** transfer in suprabasal layer of human skin explant (*ex vivo*)

IN VIVO EFFICACY

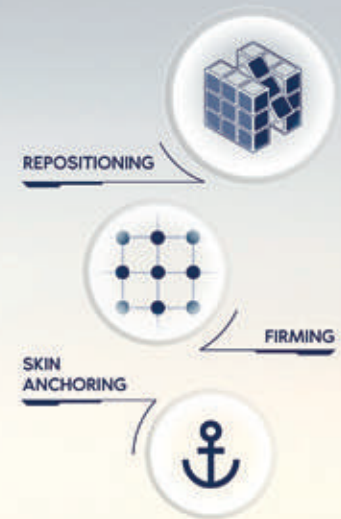
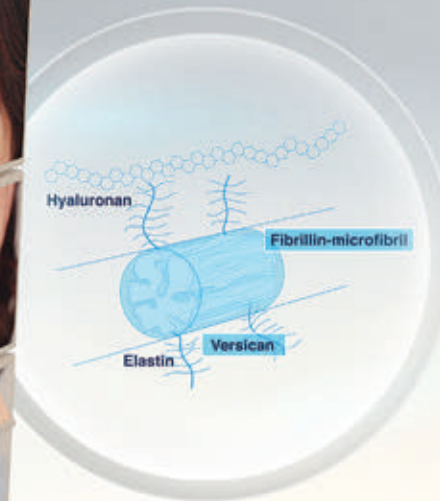
A lightening constellation to highlight your beauty

24 Asian women (30-50 years old with a phototype III to IV) applied a cream with **2% Stellight™** on half face, twice daily for 56 days. A placebo was applied on the other half of the face



VERSILLIN™

REPOSITIONING YOUR BEAUTY



SMART DATA
INSIDE



Repositioning & anchoring



Deep firming



Scalpel-free retouch



IN-SILICO & BIOMIMETIC
DESIGN OF PEPTIDES

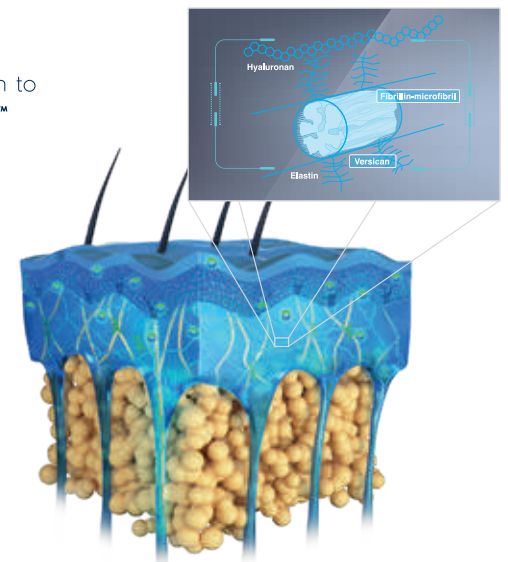
- INCI name of the active ingredient: Acetyl sh-Hexapeptide-5 Amide Acetate
- Recommended dose: 1-3%
- Solubility: Water soluble

DESCRIPTION & MECHANISM

Envisioning design through Nature's eyes, we apply our **expertise** in peptide design to develop novel active ingredients that mimic biological activities and structures. **Versillin™** is a **versican-derived** and **biomimetic** peptide to give you the power to design your *true beauty*

Versican is a versatile proteoglycan that holds great amounts of water and it binds to fibrillin and HA forming the **fibrillin-versican-hyaluronan elastic-hydrated matrix**. Versican is also involved in the formation of collagen fibers, in regulating fibrillogenesis and in the assembly of fibrils into fibers. **Fibrillin** is a glycoprotein that forms microfibrils which are the scaffold for **tropoelastin** deposition

Versillin™ boosts the fibrillin-versican-hyaluronan elastic-hydrated matrix, **reinforcing the connective tissue** of the dermis and the beauty columns (skin ligaments) to **anchor** and **fasten** the skin. The overall benefit is an increase in **firmness** and **viscoelasticity** to reposition the **beauty columns** into their original position. Dare to **reposition your beauty** for a secret **scalpel-free retouch**



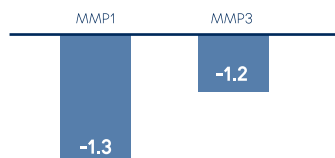
LIPOTRUE

science & biotechnologies

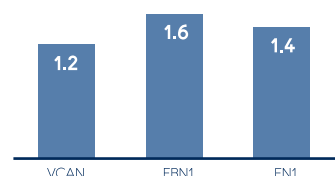
IN VITRO & EX VIVO HUMAN EXPLANTS EFFICACY

Boosting the fibrillin-versican-hyaluronan elastic matrix

PROTECTION OF ELASTIC & COLLAGEN FIBERS
(GENE EXPRESSION, FOLD CHANGE VS BASAL)



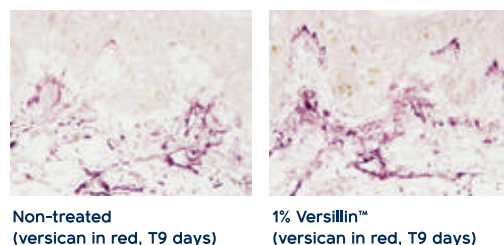
VISCOELASTIC COMPONENTS GENE EXPRESSION
(FOLD CHANGE VS BASAL)



Reinforcement of connective tissue in dermis and beauty columns

+62% **versican** vs basal
(in vitro)

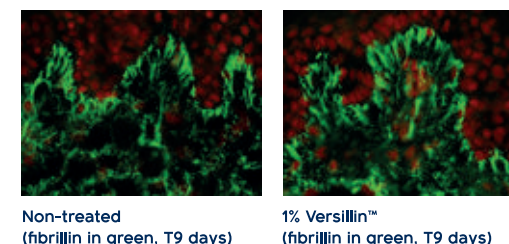
+29% **versican** vs
non-treated explants



Enhancement of flexibility & viscoelasticity in dermis and beauty columns

+41% **fibrillin** vs basal
(in vitro)

+24% and +44% **fibrillin**
vs non-treated explants and
placebo



Restoring and protecting viscoelasticity & elasticity

+20% **tropoelastin** and +10% **HA** vs basal

+39% **elastase inhibition** vs basal

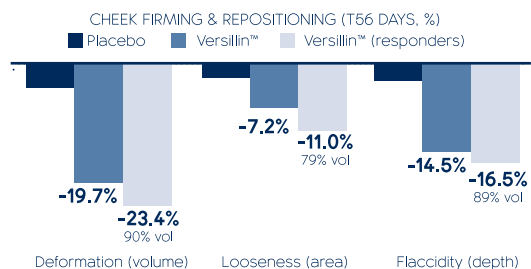
IN VIVO EFFICACY

Repositioning your beauty

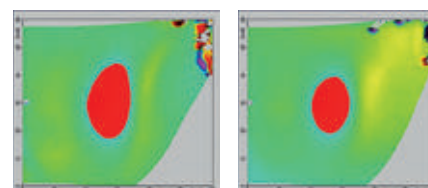
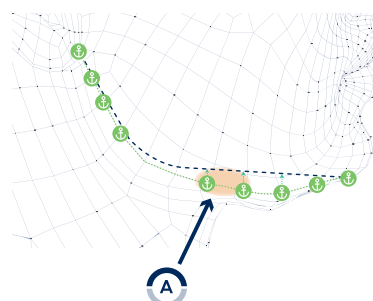
22 Caucasian women (50-65 years old) with saggy skin applied a cream with **3% Versillin™** on half face, twice daily for 56 days. A placebo was applied on the other half of the face

Up to 43% and 50% less cheek deformation in 7 and 56 days

Up to 62 and 84 mm² less cheek looseness in 7 and 56 days



Up to 52 and 48 mm³
less jowls sagging at 14
and 28 days



T0 days

T14 days

-21.7 mm³, -50.6% cheek deformation (volume)
-94.9 mm², -33.6% cheek looseness (area)
-0.097 mm, -26.6% cheek flaccidity (depth)



T0 days

T56 days

-17.6 mm³, -2.7% jowls sagging



T0 days

T56 days

-2.3 mm³, -0.6% jowls sagging

NEØCLAIR PRO™

COME TO THE CLEAR SIDE



Brighten & clear skin tone



Antioxidant booster



360° pollution protection



IN-SILICO & BIOMIMETIC
DESIGN OF PEPTIDES

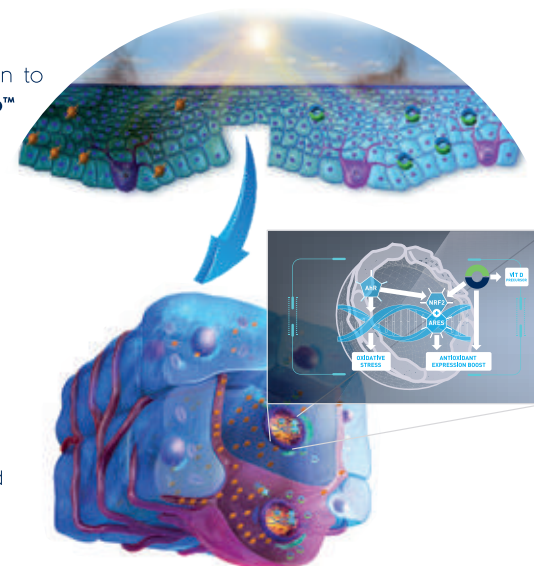
- INCI name of the active ingredient: Acetyl Tetrapeptide-2
- Recommended dose: 2%
- Solubility: Water soluble

DESCRIPTION & MECHANISM

Envisioning design through Nature's eyes. we apply our expertise in peptide's design to develop novel active ingredients that mimic biological activities and structures. **Neøclair Pro™** is inspired by the powerful cosmetic benefits of green tea such as antioxidant, brightening and antiaging

Epigallocatechin-3-gallate (EGCG), in green tea, is a primary antioxidant and an antioxidant amplifier since it inhibits Aryl Hydrocarbon Receptor (AHR) and up-regulates Nuclear Factor-Erythroid 2-Related Factor-2 (NRF2). **AHR** is activated by pollutants leading to oxidative damage and **NRF2** is a master switch of detoxification, antioxidation and anti-inflammation

Detoxified skin is clear, while too many toxins lead to dark spots/ hyperpigmentation, aging signs, inflammation, dullness and loss of elasticity. **Neøclair Pro™** is a **primary antioxidant peptide** which also acts as an **antioxidant amplifier** via NRF2/ARE pathway. Neøclair Pro™ offers **360° antipollution protection and repair** (outdoor, indoor, internal), visibly **lightening dark spots** and improving **brightening** and **aging** and **inflammaging** signs. Come to the clear side and **escape the city** within the city



IN VITRO & EX VIVO HUMAN EXPLANTS EFFICACY

Antioxidant amplifier



Up-regulates endogenous **antioxidant** genes: NFE2L2, HMOX1, TRX, GSS, GSTP1, GPX1, CYP2R1



+69% antioxidant activation (HO-1) vs non-treated non-polluted explants



+23% protection against **internal pollution** vs non-treated polluted explants

Protection of skin proteins, lipids & DNA by heavy metals & smoke

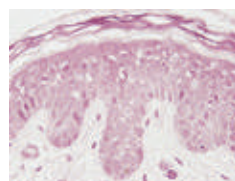


-62% AGEs, **-22% DNA oxidative damage** and **-14% lipid peroxidation** vs cells exposed to pollutants

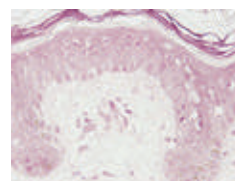
Restoring damage due to pollution (anti-inflammaging)



+40% cell membrane integrity after damage



Non-treated + pollutants
(HO-1 in red, T5 days)

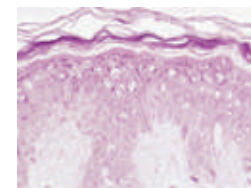


2% Neoclair Pro™ + pollutants
(HO-1 in red, T5 days)

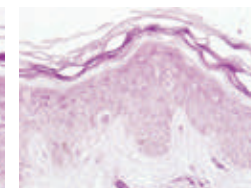
Indoor/outdoor antipollution protection



-16% AHR activation



Non-treated + pollutants
(AHR in red, T5 days)

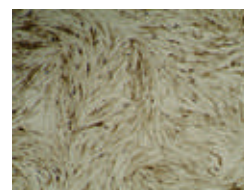


2% Neoclair Pro™ + pollutants
(AHR in red, T5 days)

Brightening hyperpigmentation



-41% melanin with Neoclair Pro™



Basal



0.001% kojic acid



0.001% Neoclair Pro™
active ingredient

IN VIVO EFFICACY

Come to the clear side

20 Asian women (ITA° 41-55, 30-50 years old) with dark spots were exposed to Beijing pollution 1-2 h/day and applied a cream with **2% Neoclair Pro™** on half face, twice daily for 28 days. A placebo was applied on the other half of the face



Up to 28% and 38% less melanin and **occupied surface** in dark spots in 7 days



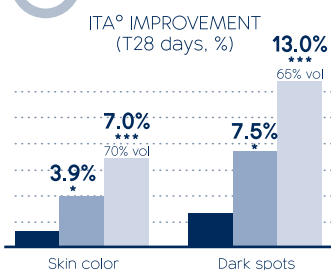
Up to 20% less lipid peroxidation in 1 month



Up to 44% more luminosity in 7 days

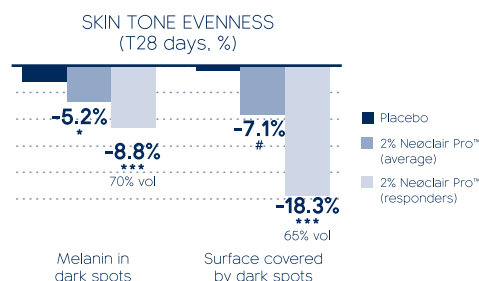


Up to 7 ΔITA° in skin color and **12 ΔITA°** in dark spots in 28 days

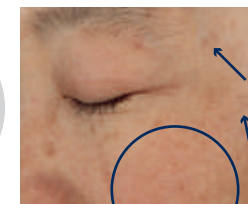


B1802

www.lipottrue.com | info@lipottrue.com



+19.6% ITA° in dark spots
-2.9% melanin in dark spots
+5.7% ITA°
+21.7% radiance
-16% lipid peroxidation (MDA)



T0 days



T28 days

-31.4% melanin in dark spots
+7.2% ITA°
+45.4% radiance
-20.2% lipid peroxidation (MDA)



T0 days



T28 days



**Marine
Bio-Research**

ÅRCTALIS™

FOLLOWING THE NORTHERN LIGHTS



SMART DATA
inside



Wrinkle smoothing



Hydration & natural glow



Digital antiaging



MARINE
BIORESEARCH

- INCI name of the active ingredient: *Pseudoalteromonas* Ferment Extract
- Recommended dose: 2%
- Solubility: Water soluble

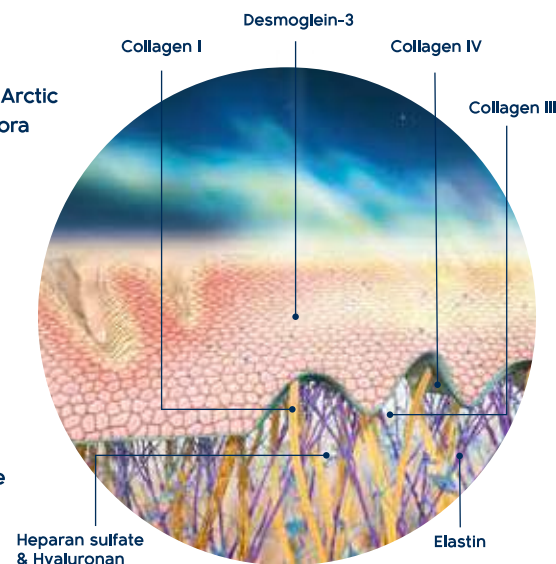
LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

Under the Northern Lights' skies, Årctalis™ has surfaced from **2,700 m** depth from an **Arctic expedition** in international waters near Greenland. Northern Lights are also known as **Aurora Borealis** which draws a soft mantle of lights from green to violet in flowing Arctic waters

Årctalis™ is a marine active ingredient with high content in proteins and **exopolysaccharides, EPS**, which have the ability of **forming a film**. Årctalis™ increases essential extracellular matrix components, reinforcing structural integrity and flexibility. It also induces **desmoglein-3 (Dsg-3)**, enhancing skin cell **hyper-adhesion**, boosting epidermal cohesion and barrier function. Årctalis™ protects skin from blue light, reducing MMP1 levels

Årctalis™ is a unique marine ingredient from deep cold waters with an excellent **wrinkle smoothing** and **firming** effect. Årctalis™ restores the skin's **hydration** and **natural glow** while also protecting skin from **digital pollution** (blue light). **Take in the aurora** and let your skin **daydream** following the Northern Lights



IN VITRO & EX VIVO HUMAN EXPLANTS EFFICACY

Regeneration activity



Basal
T0 hours



0.01 mg/mL Arctalis™
active ingredient
T18 hours

Rejuvenation

✓ **+193% collagen III** vs non-treated explants

Reinforcing dermal and dermo-epidermal structural integrity

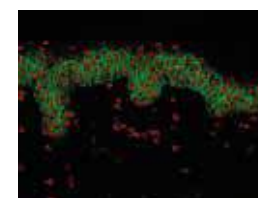
✓ **+18% and +22% epidermal and dermal adhesion** vs basal

✓ **+19% collagen IV** vs basal

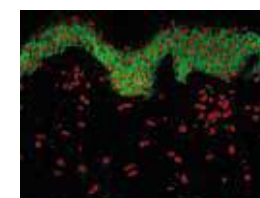
✓ **+36% and +21% collagen I** vs basal and benchmark (Palmitoyl Pentapeptide-4)

Boosting hyper-adhesion

✓ **Desmoglein-3**
synthesis induction



Placebo
(Desg-3 in green, T7 days)



2% Arctalis™
(Desg-3 in green, T7 days)

Viscoelasticity & hydration enhancement

✓ **+14% HA** and **+28% elastin** vs basal

✓ **+66% heparan sulfate** vs non-treated explants

Protection against blue light

✓ **-53% MMP1**
preventing digital aging



Non-treated + Blue light
(MMP1 in red, T4 days)



2% Arctalis™ + Blue light
(MMP1 in red, T4 days)

IN VIVO EFFICACY

26 Caucasian women (45-50 years old) applied a cream with **2% Arctalis™** on half face, twice daily for 28 days. A placebo was applied on the other half of the face

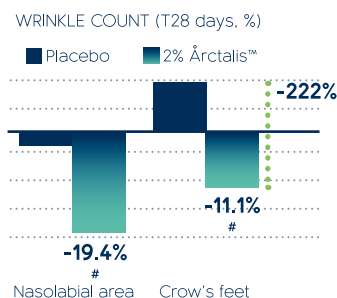
✓ **Up to 150% more moisture** in 7 days

✓ **Up to 67%, 52% and 24% decrease in crow's feet wrinkle count, volume and roughness** in 7 days

✓ **+11% and 21% firmness** in **crow's feet** and **nasolabial** area in 1 month

✓ **Up to 65% and 52% elasticity** increase in **crow's feet** and **nasolabial** area in 28 days

✓ **Up to 15% eyelid lifting** in 7 days

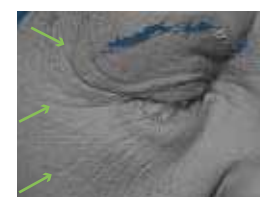


-49.5% wrinkle volume
-24.1% roughness
-3.9% upper eyelid sagging
+2.0% luminosity

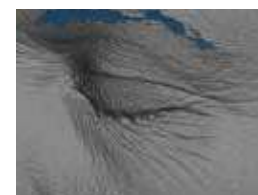
-44.4% wrinkle count
-22.8% wrinkle volume
-11.0% roughness
-1.7% upper eyelid sagging
+71.3% firmness
+75.1% hydration
+5.8% luminosity



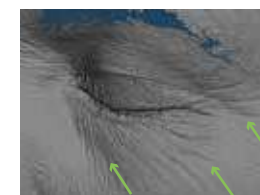
T0 days



T7 days



T0 days

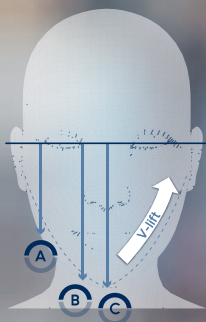


T28 days

SIRTALICE™

A FREEZING BLAST FROM THE DEEP SEA

V-lift in
30 min!



Recharges your skin



Reinforces skin cohesion



Instant lifting
& V-shape effect



MARINE
BIORESEARCH

- INCI name of the active ingredient: Bacillus Ferment
- Recommended dose: 2%
- Solubility: Water soluble

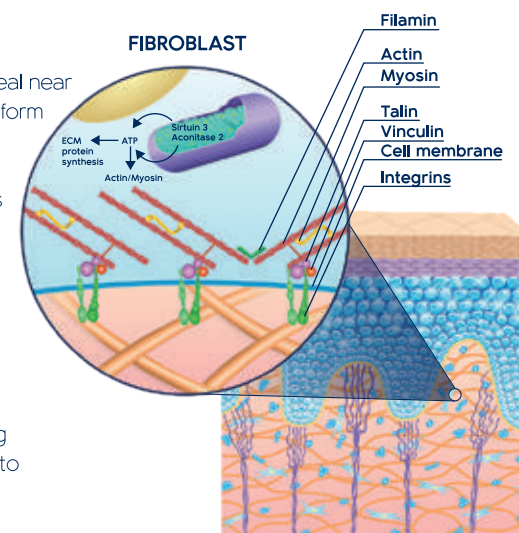
LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

During the Malaspina expedition in the Indian ocean, the vessel had the opportunity to seal near the Reunion Island. Cliffs and rocky beaches are eroded by the waves, and coral barriers form shallow lagoons of turquoise waters that provide shelter to thousands of marine species

Driven from the **deep cold ocean**, Sirtalice™ has emerged from 3,400 m and 1.5°C as a freezing blast for **tired and urban skin**. Sirtalice™ is an active marine biotechnological ingredient that can help to **recharge skin energy** and, hence, induce skin protein synthesis improving **strength and contraction**. Sirtalice™ stimulates the synthesis of proteins involved in mitochondrial respiration and energy production. It also induces key proteins for focal adhesions and cell interactions

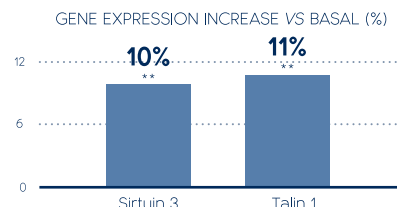
Sirtalice™ offers an **instant lifting** and a **V-reshape** in only **30 minutes**. Its long-lasting efficacy provides a more **luminous and firmer** skin. An on-the-go freezing blast to help you to breathe out your *true* beauty



IN VITRO EFFICACY

Blast of energy and contraction

Up-regulates genes of proteins involved in **longevity, energy production and focal adhesions**



Breaking the skin aging feedback loop

+32% ATP vs basal, **recharging cellular energy** while maintaining **ROS homeostasis**

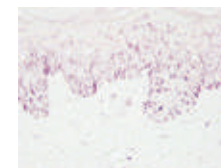
Strengthening skin

-69% elastase and **+129% procollagen I**, preventing degradation of **ECM proteins** and enhancing their synthesis

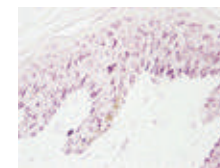
HUMAN SKIN EXPLANTS EFFICACY

Stimulating mitochondrial respiration and protecting mtDNA

+58% aconitase 2 vs placebo



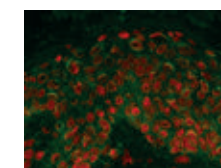
Placebo
(aconitase in red, T7 days)



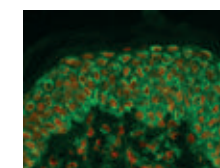
0.002% Sirtalice™
active ingredient
(aconitase in red, T7 days)

Boosting focal adhesions for skin cohesion

+120% vinculin than placebo



Placebo
(vinculin in green, T7 days)



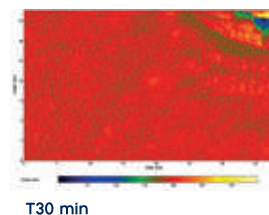
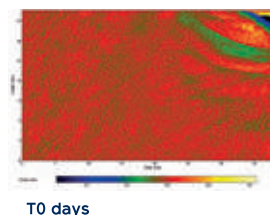
0.002% Sirtalice™
active ingredient
(vinculin in green, T7 days)

IN VIVO EFFICACY

A freezing blast from the deep sea

20 Caucasian women (35-45 years old) applied a cream with **2% Sirtalice™** on half face, twice daily for 28 days. A placebo was applied on the other half of the face

V-reshape lifting effect in 30 min

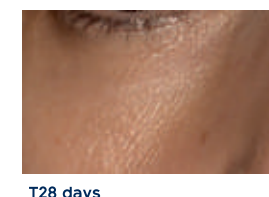
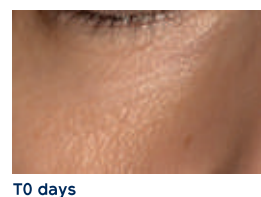
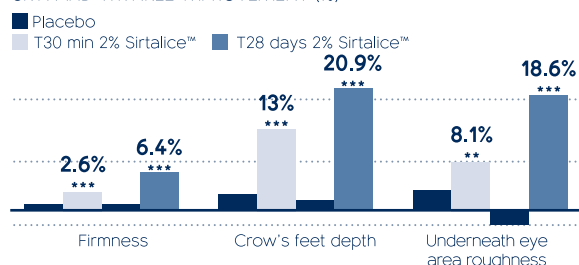


-22.3% crow's feet wrinkle depth
-32.6% under eye wrinkle depth

Instant and long-lasting wrinkle efficacy

+10% and +14% radiant and hydrated skin in 28 days

SKIN AND WRINKLE IMPROVEMENT (%)



-23.9% crow's feet wrinkle depth
-4.5% crow's feet roughness
-33.9% under eye wrinkle depth
-11.6% under eye roughness
+12.1% elasticity
+7.8% firmness

SEADERMIUM™

NOURISHING PREMIUM FILLER



Plumps deep wrinkles



Restores & strengthens skin integrity



Moisturizes & smooths golden skin



MARINE
BIORESEARCH

- INCI name of the active ingredient: Bacillus Ferment
- Recommended dose: 2-4%
- Solubility: Water soluble

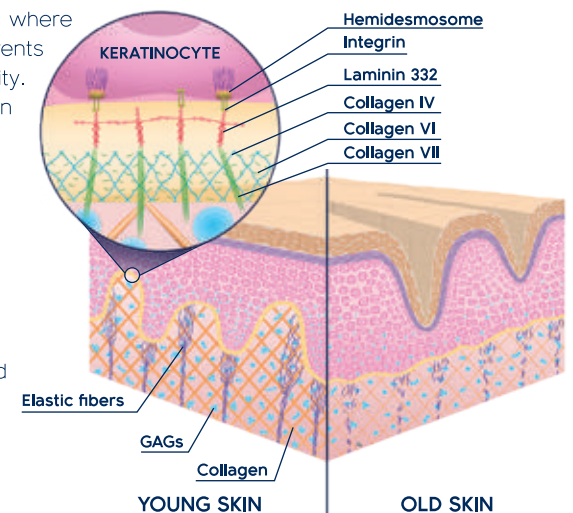
LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

Where fire meets the ocean, the Reunion Island is a **young active volcanic island**, where burning rivers flow down the hillsides **redefining** the **coastlines**. Nearby ocean currents flow **nourishing** the 20 km length coral reef, **filling** and **sustaining** the rich biodiversity. **Seadermium™** is a marine active ingredient erupted from the Malaspina expedition around the World

Seadermium™ is addressed at golden skin, helping to visibly **plump deep wrinkles**. By increasing Dermo-Epidermal Junction (DEJ) proteins and **DEJ length**, **Seadermium™** reinforces **skin integrity and cohesion**. Also, **Seadermium™** helps to thicken epidermis and stimulate collagen and glycosaminoglycans, important for **skin fullness and moisturization**

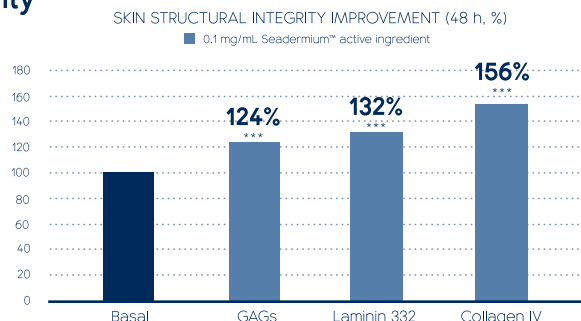
Outside skin appearance reflects on your inside. **Seadermium™** restores and **strengthens dermoepidermal cohesion** to help you to bring out your *true best*



IN VITRO EFFICACY

Strengthening skin integrity

- Up-regulation of **collagen IV** and **collagen VI** gene expression reinforcing skin structure
- Boosting of key components for dermal and DEJ structural integrity

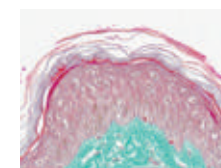


- +69% hyaluronidase inhibition, preventing volume loss

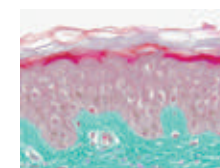
HUMAN SKIN EXPLANTS EFFICACY

Skin replenishment and thickening

- +4% thicker epidermis vs placebo
- +7% GAGs and collagen network density vs placebo in papillary dermis



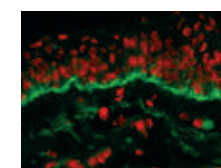
Placebo
T6 days



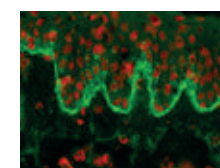
0.002% Seadermium™
active ingredient
T6 days

Cohesion reinforcement

- +9% DEJ relief index vs placebo (DEJ less flat)
- Noticeable laminin 332 induction



Placebo
T6 days



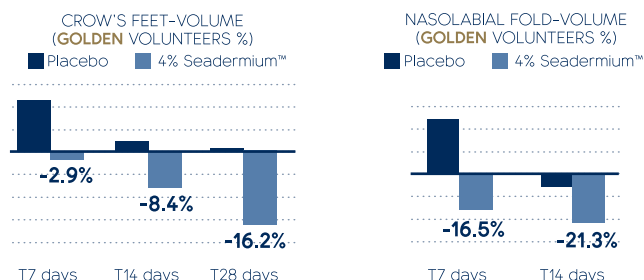
0.002% Seadermium™
active ingredient
T6 days

IN VIVO EFFICACY

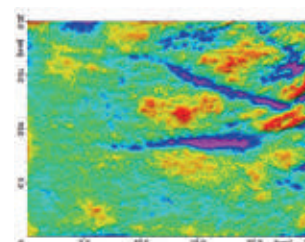
Nourishing premium filler

20 Caucasian women (50-70 years old) applied a cream with **4% Seadermium™** on half face, twice daily for 28 days. A placebo was applied on the other half of the face

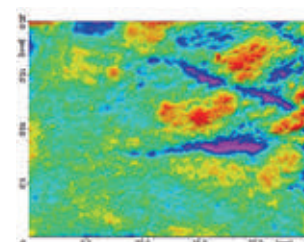
- Excellent **wrinkle plumping** and **smoothing** efficacy
- Up to **45% wrinkle reduction** in 4 weeks (51 years old)
- 10% marionette lines volume in 7 days
- Outstanding results in **golden volunteers** (60-70) in **7 days**



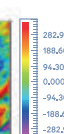
- Up to **20%** and **49%** crow's feet **depth** and **volume** decrease in 1 month (67 years old)



T0 days



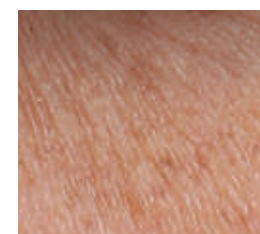
T7 days



-17% crow's feet roughness
-47% crow's feet volume
65 years old



T0 days



T28 days

-45% under eyes wrinkles
51 years old

PAUSEÎLE™

A RETREAT FOR YOUR SKIN



SMART DATA
inside



Resets radiance



Seals skin barrier & boosts hydration



Retrieves tonicity



MARINE
BIORESEARCH

- INCI name of the active ingredient: Bacillus Ferment
- Recommended dose: 1-2%
- Solubility: Water soluble

LIPOTRUE

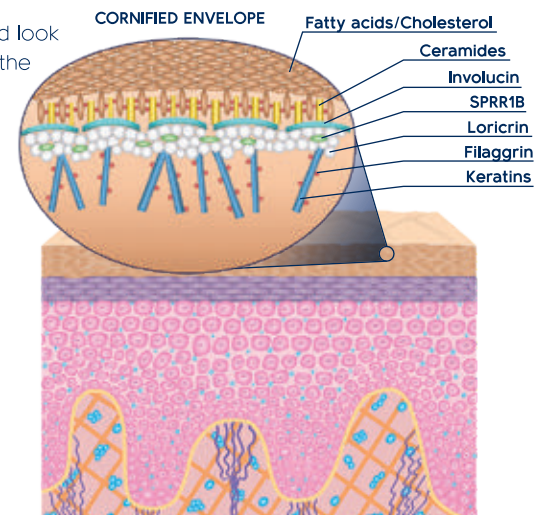
science & biotechnologies

DESCRIPTION & MECHANISM

Day-to-day lifestyle, stress and seasonal changes cause your skin to lose water and look dry, rough and flaky. **Take a pause with Pauseîle™** in the turquoise waters of the Mauritius Island and let you be seduced by its enchanting underwater waterfall

From the Malaspina expedition, a marine active ingredient has emerged to target **stressed, dry and dull skin** for an indulging hydrating reset. **Pauseîle™** induces lipids and proteins from the cornified envelope to tight and **reinforce skin barrier** and keep skin moisturized, soft and flexible. Moreover, **Pauseîle™** enhances filaggrin, precursor of the Natural Moisturizing Factor (NMF) molecules, helping to retain moisture and maintain skin pH for a **healthy glow and softer skin**

Allow yourself to **reset your true beauty** with **Pauseîle™** through a moisturizing experience that **seals skin water** while restoring its **softness and radiance**

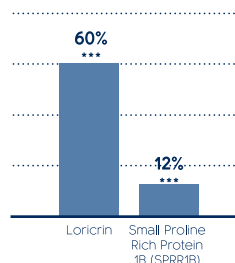


IN VITRO EFFICACY

Strengthening the skin structure & barrier function

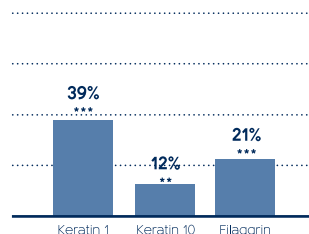
- Up-regulation of **loricrin** and **SPRR1B** genes, which form the cornified envelope

REINFORCEMENT OF THE CORNIFIED ENVELOPE
(GENE EXPRESSION INCREASE VS BASAL)



- Up-regulates **genes** of proteins that bind to water and provide the scaffold for the formation of the cornified envelope

FLEXIBILITY & MECHANICAL RESILIENCE
(GENE EXPRESSION INCREASE VS BASAL)



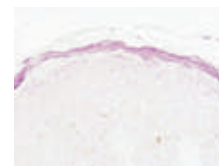
Boosting moisture retention

- +36% **flaggrin** protein, whose breakdown originates NMF molecules
- 69% **hyaluronidase** activity **protecting hyaluronic acid**

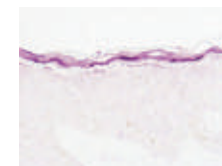
HUMAN SKIN EXPLANTS EFFICACY

Sealing the skin against water loss

- +39% **ceramide** levels, which could translate into **water sealed**, **luminous** and **silky skin**



Non-treated
(ceramides in red, T6 days)



1% Pauseîle™
(ceramides in red, T6 days)

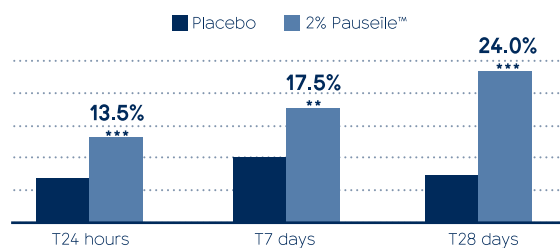
IN VIVO EFFICACY

A retreat for your skin

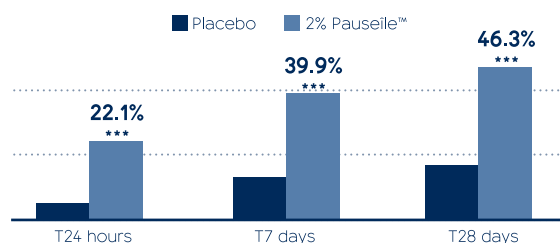
20 Caucasian women (30-50 years old) applied a cream with **2% Pauseîle™** on half face, twice daily for 28 days. A placebo was applied on the other half of the face

- Up to **65% more hydration** in 28 days
- 5% and -7% **TEWL** and **desquamation** in 24 hours
- +7% **firmer** skin in one month
- Up to **69%** and **90%** **luminosity** improvement in 24 hours and 28 days

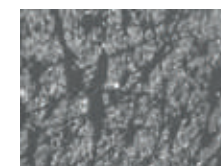
MOISTURIZING (%)



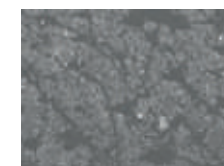
RADIANCE (%)



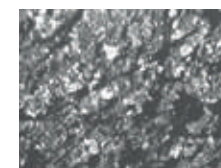
DESQUAMATION (%)



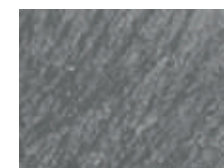
T0 days



T24 hours
-31% desquamation



T0 days



T28 days
-32.2% desquamation



**Wild plants as
biofactories**



EPITENSIVE™

INTENSIVE ANTIAGING PLANT-EGF



Skin regeneration & restructuring



Roughness & wrinkle improvement



Elasticity increase



WILD PLANTS
AS BIOFACTORIES

- **INCI name of the active ingredient:** Nicotiana Benthamiana Hexapeptide-40 sh-Oligopeptide-1
- **IECIC list INCI name:** Oligopeptide-1
- **Non-GMO**
- **Recommended dose:** 1-2%
- **Solubility:** Water soluble

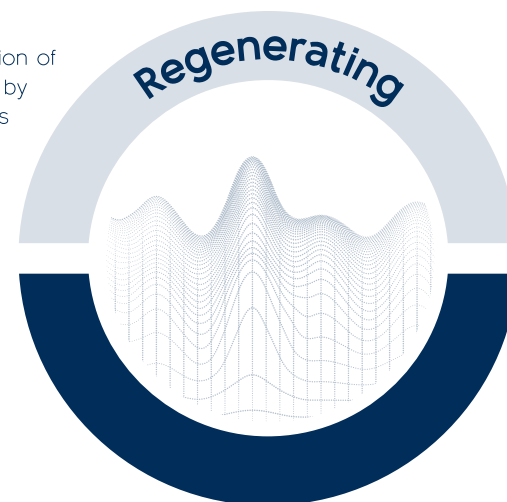
LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

N. benthamiana is a historical **plant-based model system** for the transient expression of high purity proteins in a **non-GM** system. As opposed to recombinant production by Gram(-) bacteria which may contain endotoxins, synthesis of proteins in plants allows to obtain **safe** plant-based biotechnological ingredients with proper modifications and **high activity**

The **aging process** on the skin resembles a **chronic injury**. The combination of intrinsic and extrinsic factors in the aging process leads to an oxidative imbalance, damage to proteins structure and the induction of inflammation, just like a wound

Epitensive™ contains plant-Epidermal Growth Factor (**plant-EGF**), a protein able to activate the **ERK** and **AKT pathways**. These paths are involved in **protein synthesis** and **cellular regeneration** to provide **mature skin** with the right extracellular matrix content and **regenerative capacity** lost with age

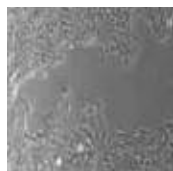


IN VITRO EFFICACY

Epidermal regeneration



+100% regeneration of 1 mm wound on human keratinocytes



Basal



1 ng/mL protein

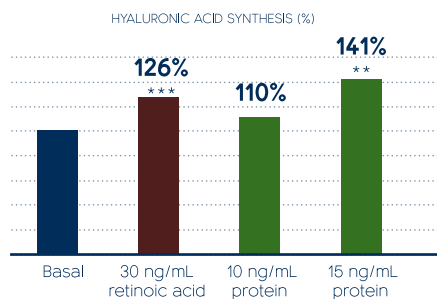


5 ng/mL protein

Hyaluronic acid synthesis



+41% and +12% HA vs basal and retinoic acid

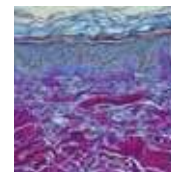


HUMAN SKIN EXPLANTS EFFICACY

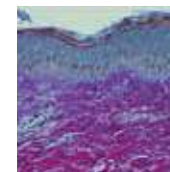
Increase of young & mature collagen



+123% and +26% young and mature collagen vs placebo



Placebo
T7 days



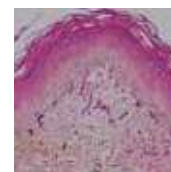
1.5% Epitensive™
T7 days

Young collagen in blue
and mature collagen in red

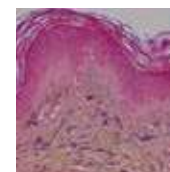
Elastin increase



+45% elastin vs placebo



Placebo
T7 days



1.5% Epitensive™
T7 days

Elastin in purple

IN VIVO EFFICACY

Intensive antiaging

20 Caucasian women (55±2 years-old) applied a gel cream with **1.5% Epitensive™**, twice daily for 28 days. Hemiface application vs placebo



-233% and -149% roughness and wrinkles vs placebo after 28 days



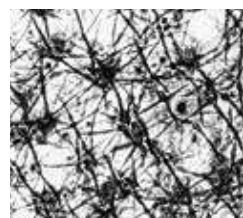
13% more elasticity at 14 days (**+65%** vs placebo)



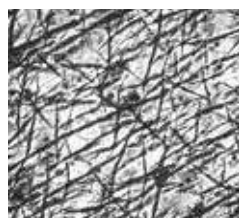
Up to 39% and 32% reduction of **wrinkle volume** and **depth** after 28 days



Up to 10 years of skin **physiological rejuvenation** after 28 days



T0 days



T28 days



T0 days



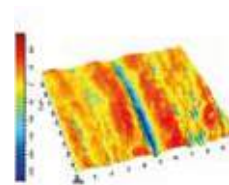
T14 days



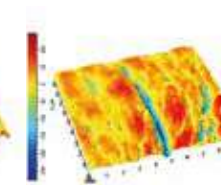
T28 days

T14 days
-23% wrinkles

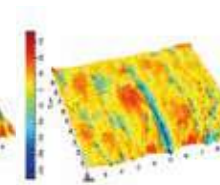
T28 days
-24% roughness
-51% wrinkles



T0 days



T14 days



T28 days

T14 days
-21% depth
-20% volume

T28 days
-32% depth
-39% volume

SCELLEYE™

DETOXIFYING EYE CONTOUR
PLANT-IGF1



Cosmetics
design



Skin regeneration & redensification



Protection, detoxification &
clearance of UV damaged proteins



Elasticity increase



WILD PLANTS
AS BIOFACTORIES

- **INCI name of the active ingredient:**
Nicotiana Benthamiana
Octapeptide-30 sh-Oligopeptide-2
- **IECIC list INCI name:** Oligopeptide-2
- **Non-GMO**
- **Recommended dose:** 1-2%
- **Solubility:** Water soluble

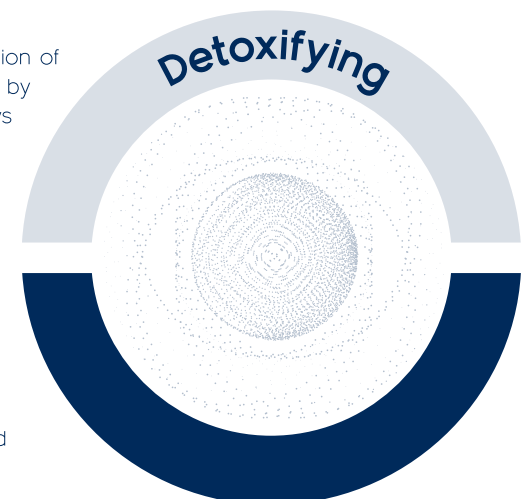
LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

N. benthamiana is a historical **plant-based model system** for the transient expression of high purity proteins in a **non-GM** system. As opposed to recombinant production by Gram(-) bacteria which may contain endotoxins, synthesis of proteins in plants allows to obtain **safe** plant-based biotechnological ingredients with proper modifications and **high activity**

Skin around the eyes is 1/10 thinner and is more exposed to external aggressors and free radicals due to UV radiation or pollutants that can affect protein structure and functions. One of the most general indicators of oxidative damage is **protein carbonylation** and the main proteolytic system involved in the removal of damaged proteins is the **Ubiquitin Proteasome System (UPS)**

Scelleye™ contains plant-Insulin-like Growth Factor-1 (plant-IGF1), a protein able to **restore the activity of the skin basal layers**, as well as to **activate the proteasome** and decrease carbonylation, for an effective **clearance of damaged proteins**

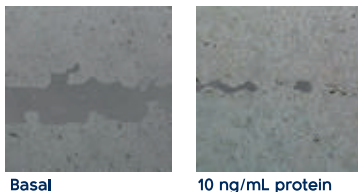


IN VITRO EFFICACY

Epidermal regeneration



+80% regeneration of 1 mm wound



Proteasome activation



+59% UPS activity vs basal, **activating intrinsic detoxicating mechanisms**

Clearance of carbonylated proteins



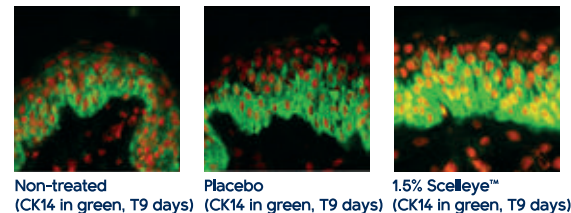
-67% UVB-induced carbonylated proteins, reaching basal levels thus **showing a protective effect**

HUMAN SKIN EXPLANTS EFFICACY

Reactivation of epidermal basal layers



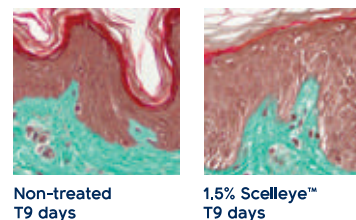
+68% and +100% cytokeratin 14 vs non-treated explants and placebo



Epidermis redensification



+33% thicker epidermis



IN VIVO EFFICACY

Detoxifying eye contour

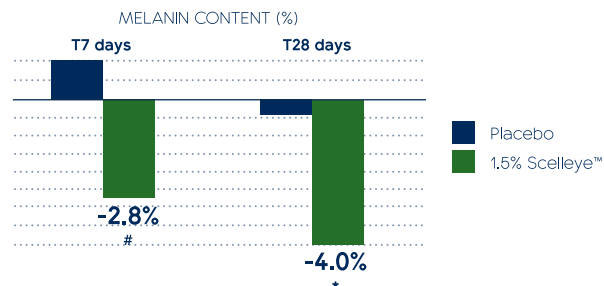
20 Caucasian women (51±6 years-old) showing dark circles applied a gel cream with **1.5% Scelleye™** around one eye, twice daily for 28 days. A placebo was applied around the other eye



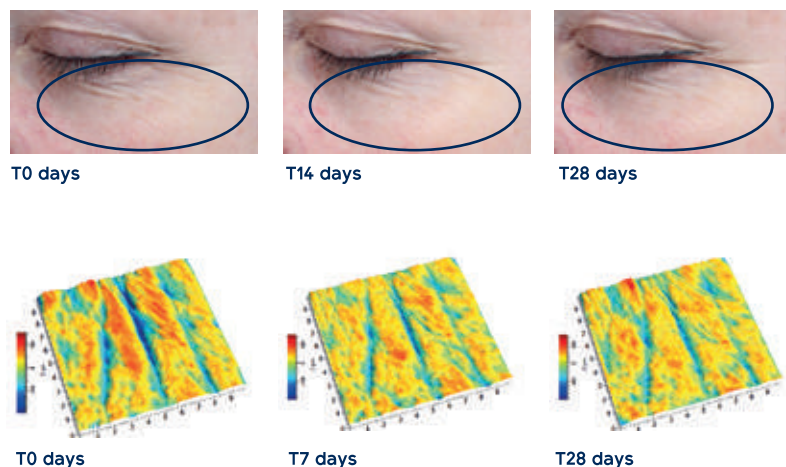
-7% crow's feet wrinkles after 14 days



Quick and long-lasting melanin reduction in dark circles lightening them



Up to 54% and 36% reduction in wrinkle volume and depth after 28 days



T14 days
-35.5% wrinkles

T28 days
-31% wrinkles

T7 days
-33% depth
-43% volume

T28 days
-36% depth
-54% volume



PUREOXIN™

MORE THAN AN ILLUMINATING PLANT-TRX1



Protection against photo & inflammaging



Prevention from radiation damage



Illuminating effect



WILD PLANTS
AS BIOFACTORIES

- INCI name of the active ingredient: Nicotiana Benthamiana Hexapeptide-40 sh-Polypeptide-2
- IECIC list INCI name: Oligopeptide-4
- Non-GMO
- Recommended dose: 1.5-4%
- Solubility: Water soluble

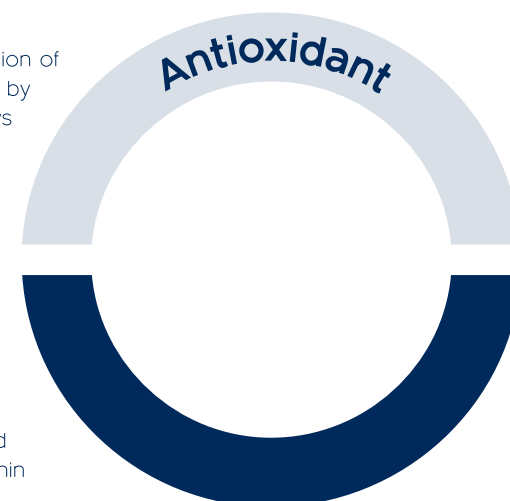
LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

N. benthamiana is a historical **plant-based model system** for the transient expression of high purity proteins in a **non-GM** system. As opposed to recombinant production by Gram(-) bacteria which may contain endotoxins, synthesis of proteins in plants allows to obtain **safe** plant-based biotechnological ingredients with proper modifications and **high activity**

Metabolism, pollution, or UV light induce ROS and RNS, as well as inflammation, affecting the skin. The **thioredoxin** system is a major antioxidant system containing Thioredoxin-1 (TRX-1) which acts as a **thiol/disulfide redox** controller, scavenging ROS for photoaging protection and reducing human tyrosinase for a decrease of melanin synthesis

Pureoxin™ contains plant-Thioredoxin-1 (**plant-TRX-1**), a multifunctional protein able to **protect** the skin from **inflammaging and photoaging** caused by ROS, MMP-9 and TNFα induced by radiation. Moreover, it can decrease the content of superficial melanin helping to **lighten and illuminate skin tone**

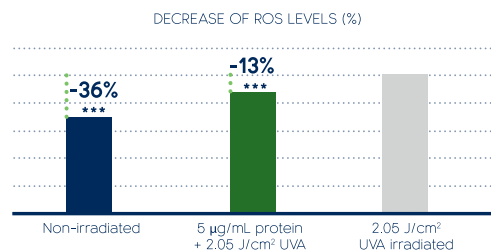


IN VITRO EFFICACY

Prevention from oxidative stress



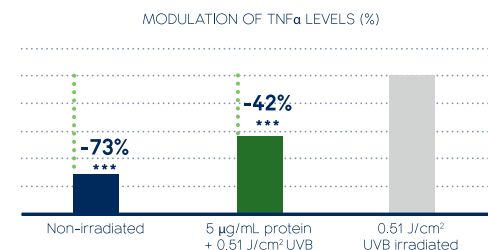
-13% UVA-induced intracellular ROS levels **protecting cells**



Decrease of inflammation induced by radiation



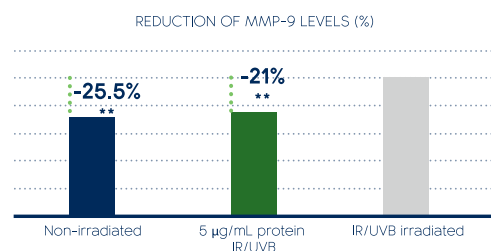
-42% TNFα levels induced by UVB with Pureoxin™ pre-treatment, **protecting skin against inflammaging**



Dermal proteins protection



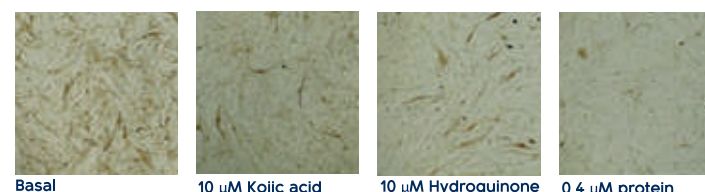
-21% MMP-9 levels induced by IR/UVB with Pureoxin™ pre-treatment, **preventing dermal proteins degradation**



Melanin content reduction



-60% and **-42%** melanin vs basal and kojic acid



IN VIVO EFFICACY

More than illuminating

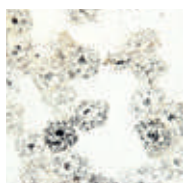
20 Korean women (41±8 years old) applied a gel cream with **4% Pureoxin™** twice daily for 56 days. Hemiface application vs placebo



-124% superficial melanin than placebo, showing an improved even skin tone effect



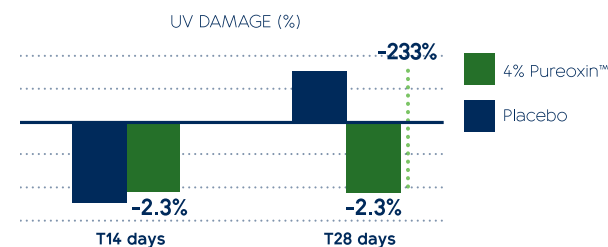
Up to 74% reduction of superficial melanin after 56 days



-48% melanin



3.8-fold UV damage reduction vs placebo, helping to protect against photoaging signs





ANARGY™

LET YOUR HAIR BLOOM



Reactivated & revitalized hair roots



Strengthened & redensified hair locks



Protection & detoxification



WILD PLANTS
AS BIOFACTORIES

INCI name of the active

ingredient: Nicotiana Benthamiana
Octapeptide-30 sh-Oligopeptide-2,
Nicotiana Benthamiana
Hexapeptide-40 sh-Polypeptide-9,
Nicotiana Benthamiana
Hexapeptide-40 sh-Polypeptide-86

Non-GMO

Recommended dose: 1-2.5%

Solubility: Water soluble

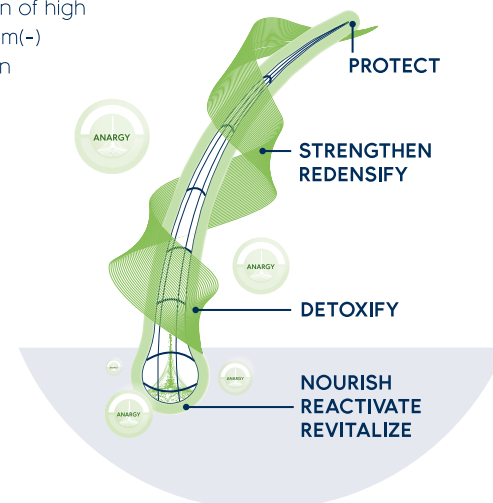
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Hair plays a role in social relationships. Different haircuts, brows and eyelashes styles or beards and moustaches in men are forms of self-expression. Aging, stress, hormonal changes, unbalanced diets, and pollution are able to alter normal hair growth cycle accelerating **hair loss** and slowing down new hair growth

Anargy™ contains proteins able to **nourish, protect and detoxify** hair root, helping to **reactivate hair growth cycle** for a redensifying and strengthening of hair locks



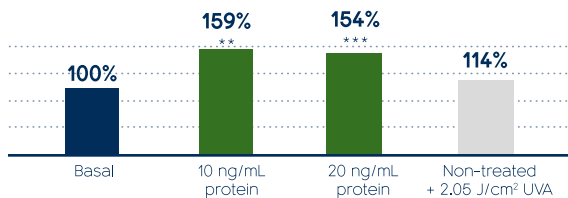
IN VITRO EFFICACY

Detoxification through proteasome activation



Activation of intrinsic detoxification mechanisms

CHYMOTRYPSIN-LIKE (UPS) ACTIVATION (%)

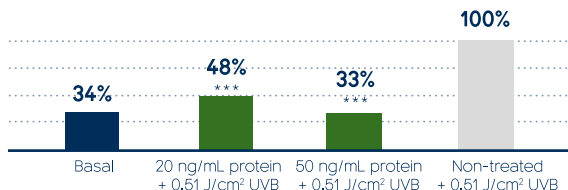


UVB protection



Same levels as non-irradiated cells

PROTECTION FROM CELL PROTEIN CARBONYLATION (%)

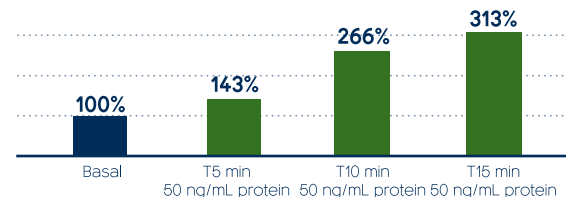


Growth stimulation



Anagen phase extension, increasing hair growth phase

DELAY OF CATAGEN PHASE (BCL-2 INCREASE, %)



Vascularity & reactivation

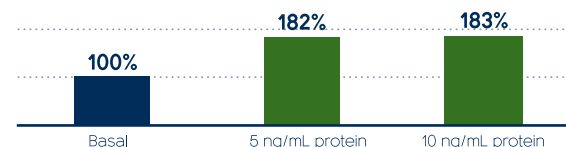


Increases vascularity covering nutritional needs of hair root



Reactivates and revitalizes hair follicle development

VASCULARITY IMPROVEMENT (HUVEC GROWTH, %)



IN VIVO EFFICACY

Letting hair bloom

20 volunteers (17 women and 3 men, 21-62 years old) with hair loss applied a lotion with **1% Anargy™** on hair scalp, once daily for 150 days



Up to 21,480 new hairs in the whole scalp in 150 days



Up to 23% hair redensification after 45 days



Up to 76% less hair loss after combing and washing in 150 days



Reactivation of the bulb



Stronger and thicker hair



T0 days



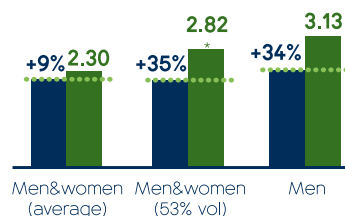
T45 days



T150 days

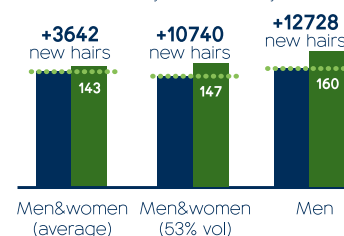
ANAGEN PHASE INCREASE VS TELOGEN (ratio)

■ A0/T0 ■ A150/T150

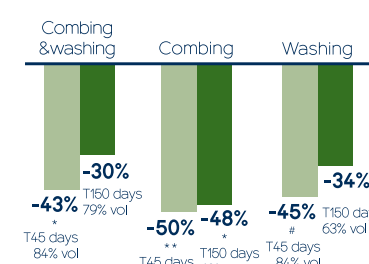


HAIR REDENSIFICATION (hairs/cm²)

■ T0 days ■ T150 days



SLOWING DOWN HAIR LOSS (men&women, %)



+25% A₁₅₀/T₁₅₀

+7% A₁₅₀ -14% T₁₅₀

+26% density

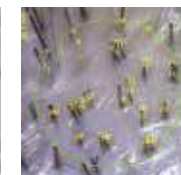
-41% hair loss (combing&washing)

-57% hair loss (combing)

-25% hair loss (washing)



T0 days



T150 days

LIPOTRUE

science & biotechnologies

info@lipotrue.com | www.lipotrue.com

