

# A Holistic Approach to DE-Stressing and Happy Aging

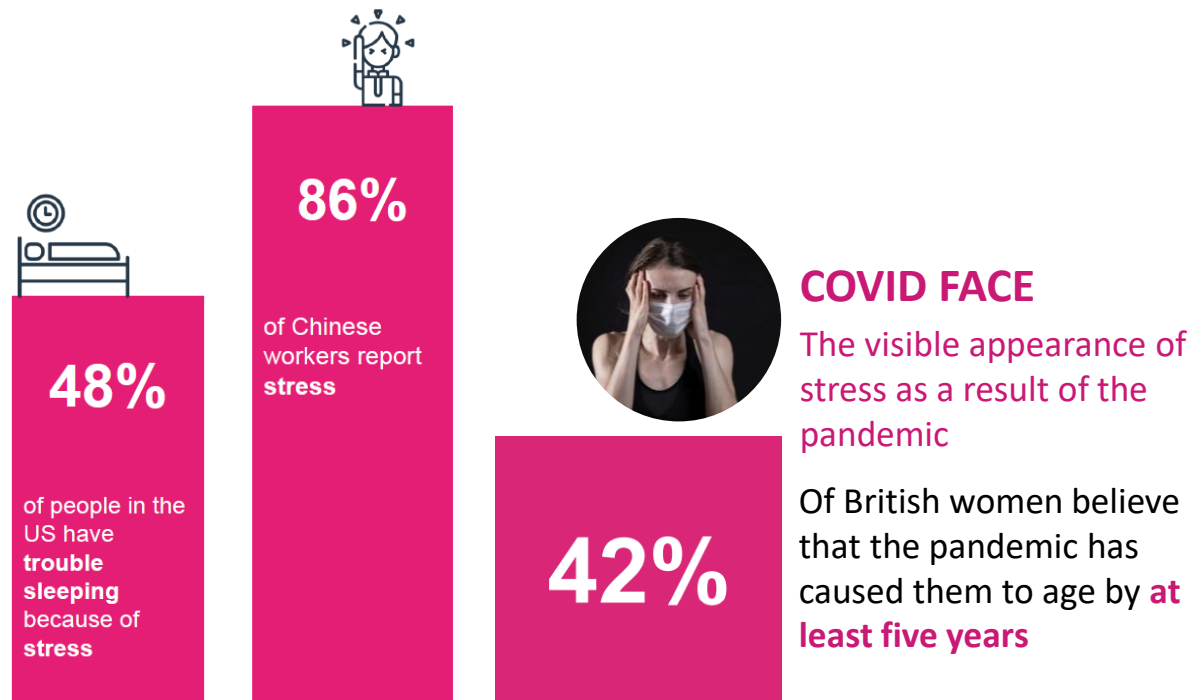






## STRESS & ANXIETY

Are physiological responses



## BRANDS MAKE STRESS-RELIEF A KEY SELLING POINT

- Stress can be acute or chronic and can lead to fatigue, headaches, upset stomach, nervousness, and irritability or anger.
- Ingredients that may affect brain functions to lower stress and anxiety are in demand.



# SEATRACE



## SEATRACE

Concentrated seawater powder

- Magnesium > 10% - Potassium > 2%

## INGREDIENT DESCRIPTION

Rich in magnesium and minerals. It is a powder made up of seawater mineral elements the most interesting for health because most of the sodium chloride has been eliminated. Sea water actually contains minerals and trace elements that our body needs.

Obtained by a process of concentration, crystallization, atomization.

## APPLICATIONS



### Stress and Sleep Management

Magnesium contributes to normal psychological function \*



### Joints and Bones

Magnesium contributes to the maintenance of normal bones \*



### Energy, Cognition and Digestive Health

Magnesium contributes to electrolyte balance \*

Magnesium contributes to a reduction of tiredness & fatigue \*





# BAMBOO SILICA



## BAMBOO SILICA

POUDRE DE BAMBOU

Bamboo sap powder -  $\text{SiO}_2 > 75\%$

## INGREDIENT DESCRIPTION

Obtained by grinding dry residue of a white translucent substance. Comes from the nodes of several Bamboo species. Rich in silica, it is a great remineralizer for joints. Effective on hair, skin and nails health.

Obtained by a process of drying, grinding, sieving.

## APPLICATIONS



Happy Aging



Joints and Bones



Nutricosmetic

Supports healthy hair, skin and nails



# SPIRULINE



## SPIRULINE

100% Spirulina Platensis

Phycocyanin > 10 %

Protein > 50 %

## INGREDIENT DESCRIPTION

Spirulina is a spiral microalgae that contains a large amount of protein, antioxidants (carotenoids and phycocyanine) and gamma linolenic acid.

It has antioxidant and immunostimulant properties. It also helps to reduce blood lipid levels.

## APPLICATIONS



### Joints and Bones

Protein contributes to the maintenance of normal bones \*



### Immunity and Energy



# LITHOTHAMNIUM



## LITHOTHAMNIUM

100% Lithothamnium Calcareum

Calcium > 30 %

## INGREDIENT DESCRIPTION

A red algae in deep sea, having a stony-looking aspect (coral).

High content of calcium and magnesium. Used as a remineralizer and also for its rebalancing action on acids and heartburns.

## APPLICATIONS



### Happy Aging



### Joints and Bones

Calcium is needed for the maintenance of normal bones \*



### Energy and Cardiovascular Health

Calcium contributes to normal blood clotting \*

\* Claim authorized according to the regulation commission (EU) 432/2012 of 16/05/2012





# Antioxidants



## ASCOTHIN

Dry extract of Ascophyllum Nodosum -  
Phlorotannins > 6%

This ingredient is objectified in vitro on the inhibition of 3 digestive enzymes: amylase, lipase and glucoidase.

A natural **digestive enzyme inhibitor** for slimming.  
Iodine contributes to normal energy-yielding metabolism. \*



## ASTAXANTHIN

Natural carotenoïde –  
Astaxanthin > 10% (Liquid)

Obtained from **Haematococcus pluvialis** microalgae, Astaxanthin is a powerful antioxidant. **Improves the immune system.** Its content in Carotenoids is also used for the beauty of the skin. Antioxidant, immunity, nutricosmetics



## WAKAME

Powder of the brown seaweed Wakame  
Fucoxanthin > 10 %

This seaweed is **rich in fiber and is a source of antioxidants** helps fighting against oxidative stress. It **helps to reduce appetite and control weight** thanks to alginates, known as good thickeners, fucoxanthin and its polyphenols also used for slimming applications.



# PHYTOFLORAL®

## MULTIPLE PHOTOPROTECTION ACTION - NATURAL PROTECTION FOR HEALTHY, GLOWING SKIN



### ORIGIN

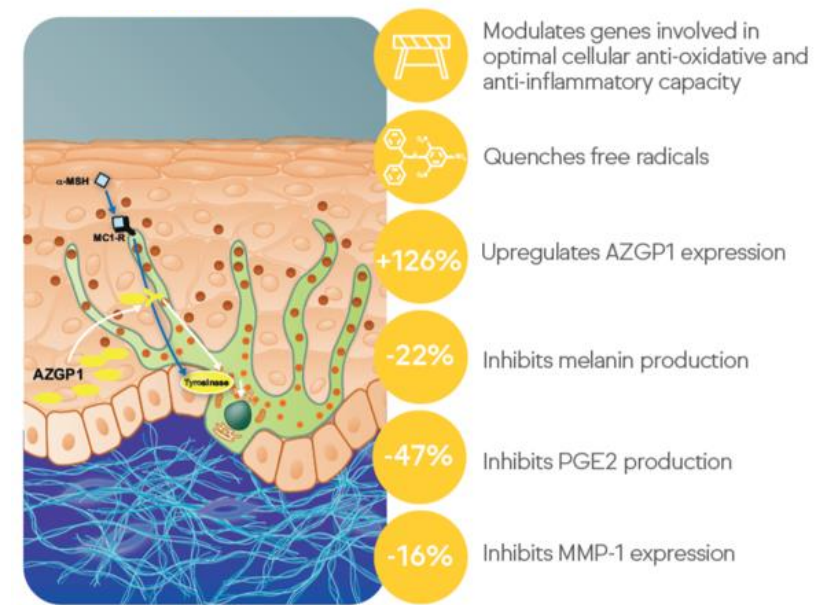
Proprietary, 100% non-GMO tomato powder rich in phytoene and phytofluene

### COMPOSITION

Solanum lycopersicum (tomato) fruit; dehydrated, powdered

### BENEFITS

- Illuminates the appearance of skin tone
- Enhances photoprotection of skin
- Improves skin quality



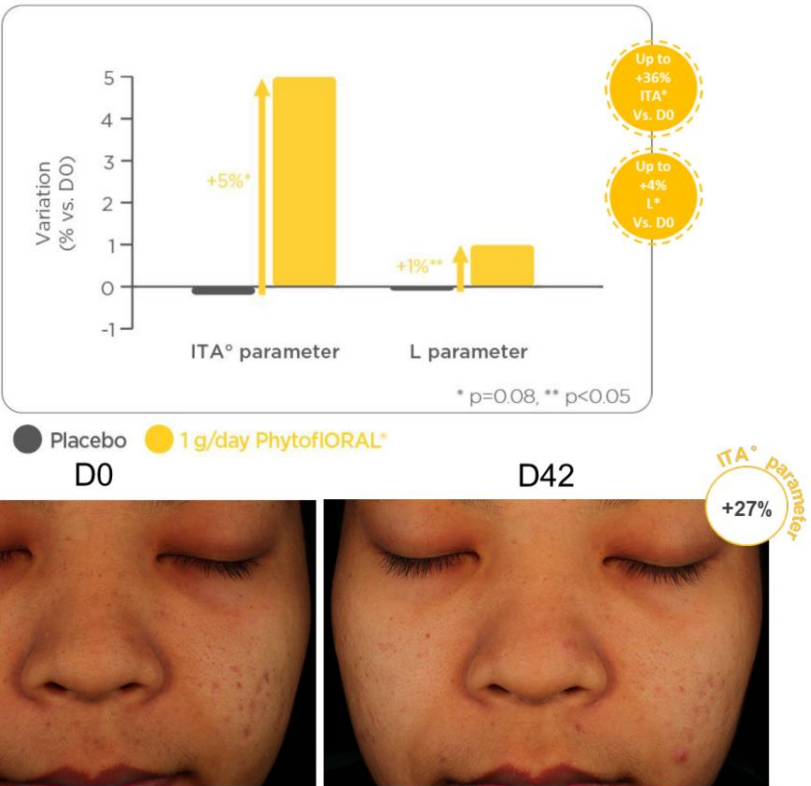




# PHYTOFLORAL®: CLINICAL STUDIES

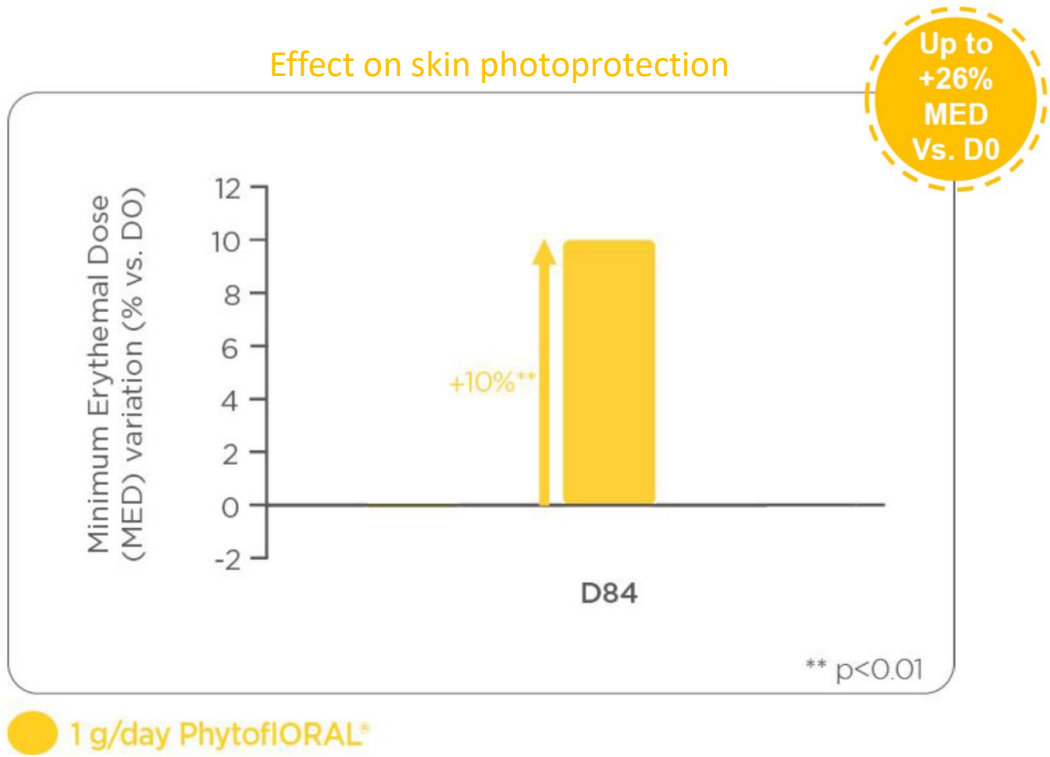


Effect on skin glow



Improves skin tone for a healthy skin radiance

Effect on skin photoprotection



Phytofloral® enforces the skin's natural protection against photodamage



# SUPERFOOD



## STRESS & SLEEP MANAGEMENT

### ORANGE PEEL

Orange peel powder is traditionally used to improve the sleep



## ANTIOXIDANTS & IMMUNITY

### RED GRAPE POWDER

Red grape pomace powder



## DIGESTION & DETOX



### LEMON PEEL

Pectins contribute to the maintenance of normal blood cholesterol levels \*



### HIMANTHALIA

100 % himantalia elongata powder



### CHLORELLA

Chlorophyll > 1 %





# ANXIETY & STRESS

## ANXIETY AND STRESS MAKE US AGE FASTER

It is estimated that extreme stress causes us to age twice as fast

- The link between **anxiety**, psychological **stress** and **skin aging** is well known
- They activate skin immune cells, which produce **stress hormones** resulting in a vicious cycle of **stress induced inflammatory** events
- **Inflammation** results in **cellular aging and deterioration** in healthy skin function





# WHAT IS ANXI-AGING™?



**LET'S  
DISCOVER**





# WHAT DO THESE CELEBRITIES HAVE IN COMMON?

Meditators very often look decades younger



Tom Brady, age 45



Gisele Bündchen, age 42



Gwyneth Paltrow, age 50



# IBR-Chill™

## Meditation in a bottle to fight Anxi-Aging™



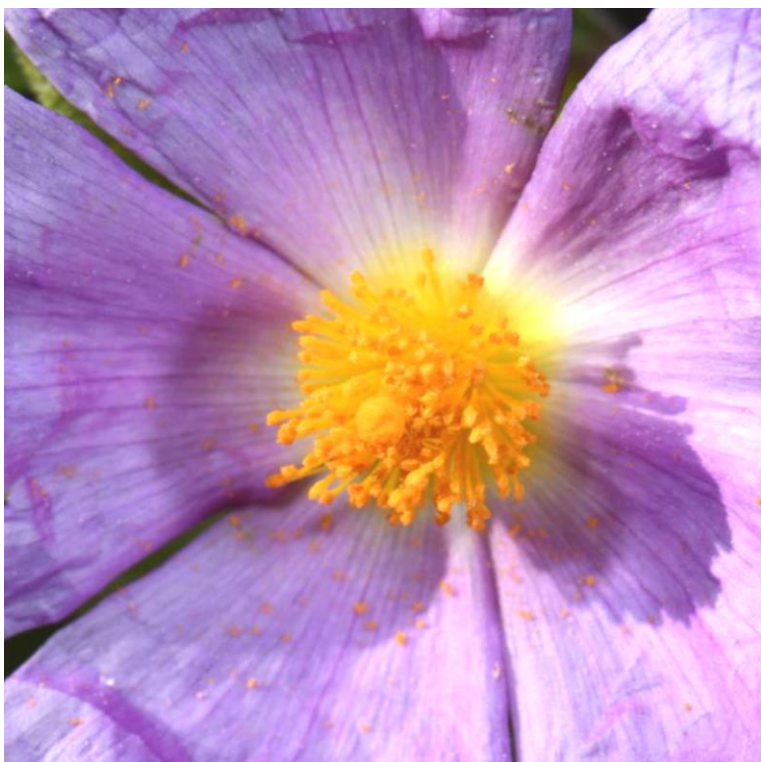
VERTAL  
Innovations







# PINK ROCK-ROSE: Mediterranean evergreen shrub



## PLANT ID

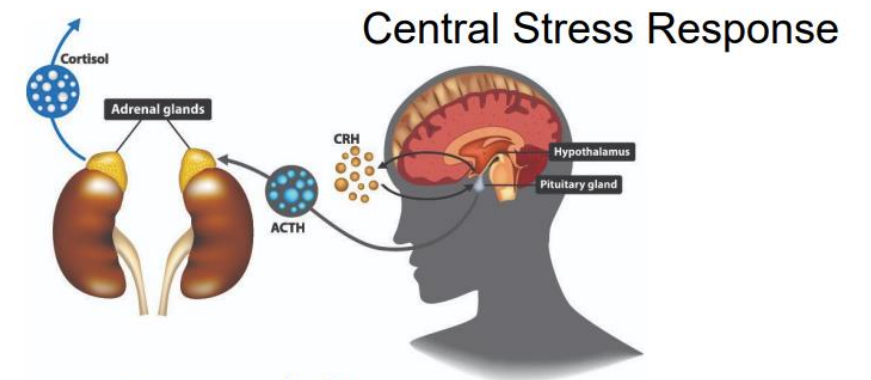
- **Botanical name:** Cistus incanus
- **Origin:** Israeli desert (native to the Mediterranean)
- **Naturally rich in flavanols** - an excellent source of bioactive compounds for cosmetic use
- Standardized for **myricitrin** content
- **Myricitrin** is a flavonoid glycoside, reported to have **anti-anxiety effect**.
- Pink rock-rose branches, are a source of labdanum, a sticky brown resin, historically used as **an ingredient for incense and in herbal medicine**. Used today in the preparation of some perfumes. Labdanum's odor is variously described as amber, sweet, fruity, woody, dry musk, or leathery
- Labdanum is used for **spiritual purposes and aroma guided meditation** for its relaxing properties



# IMPACT OF PSYCHOLOGICAL ANXIETY & STRESS ON SKIN

## The skin is both a target of key stress mediators and a local source for these factors

- Anxiety and stress conditions exert their effects on skin mainly through the central stress response
- Resulting in systemic cortisol level increase
- Cortisol circulate to the skin and initiate a local peripheral stress response



Anxiety & Stress

Hypothalamus

↓ CRH (Corticotrophin Releasing Hormone)

Pituitary gland

↓ ACTH (Adrenocorticotrophic hormone)

Adrenal gland

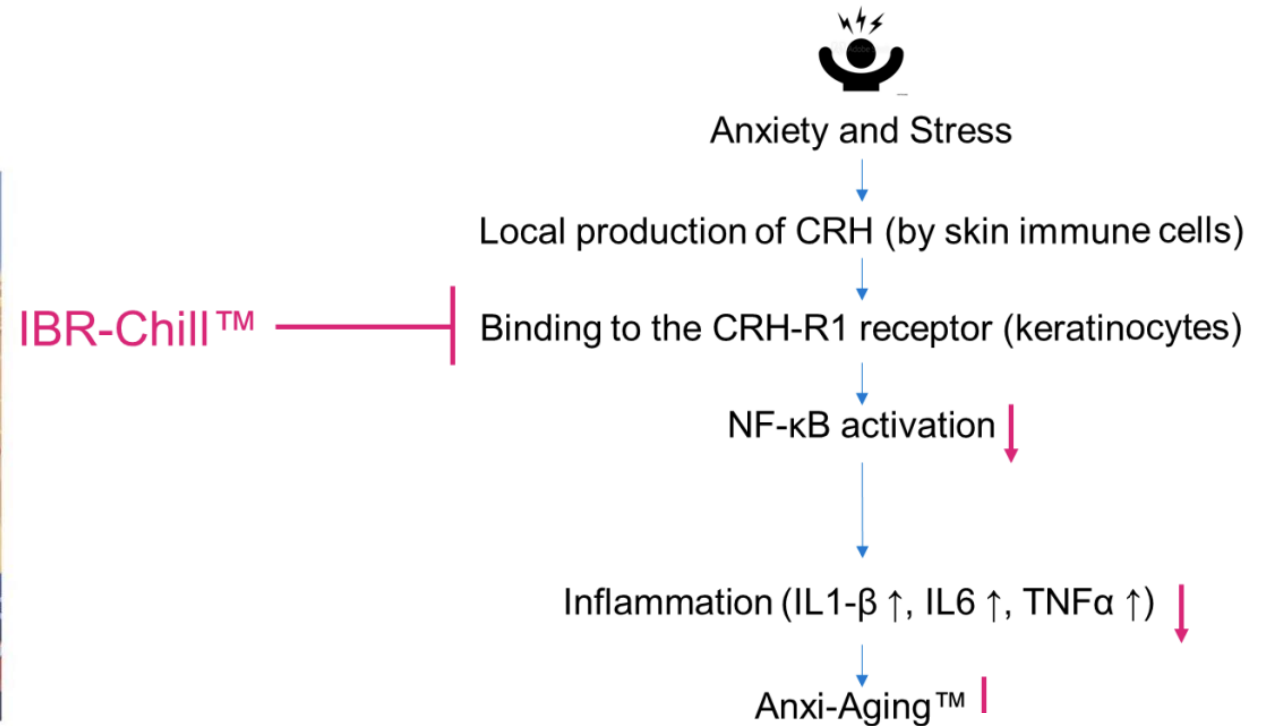
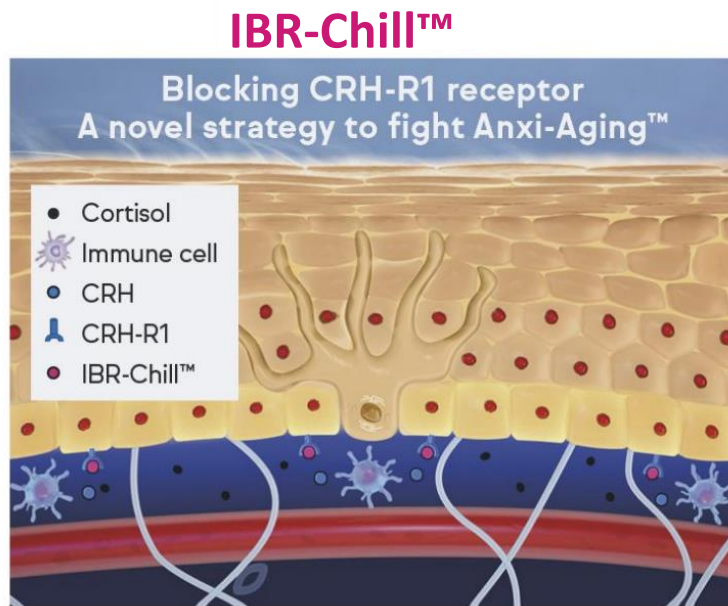
Cortisol

Skin Peripheral Stress Response



# TARGETING THE SKIN PERIPHERAL STRESS RESPONSE

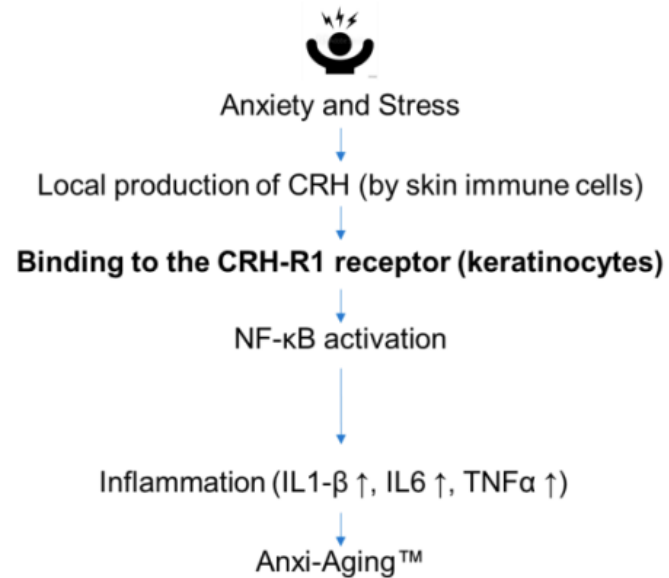
Blocking CRH-R1: a novel, efficient strategy to block stress and fight **Anxi-Aging™**



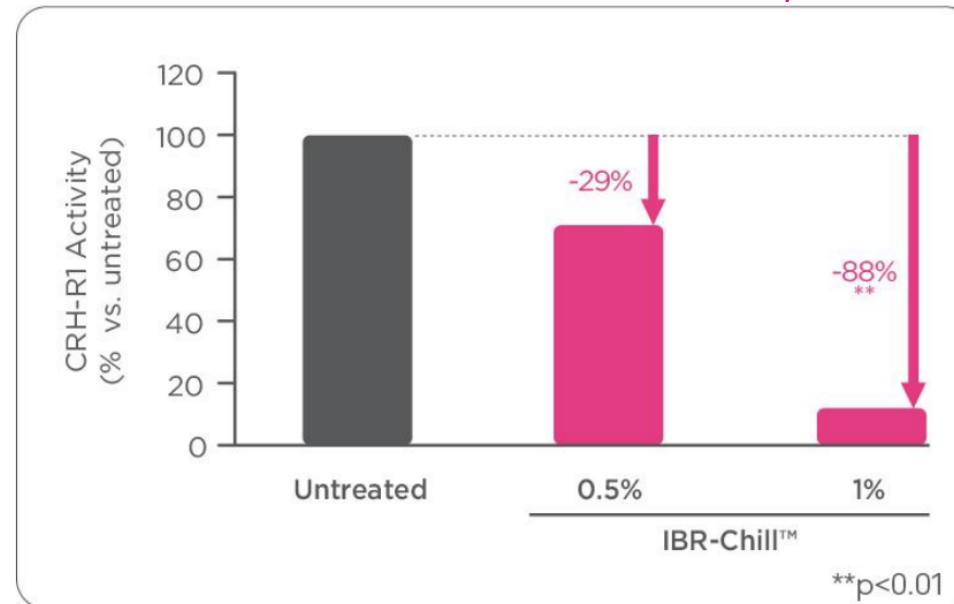
# EVALUATION OF CRH-R1 INHIBITOR EFFECT

## IN-VITRO PROTOCOL

- Epithelial cells expressing human CRH-R1, stress induced by 30 nM CRH
- Application of 0.5-1% IBR-Chill™
- Quantification of CRH-R1 receptor activity



Evaluation of CRH-R1 inhibitor activity



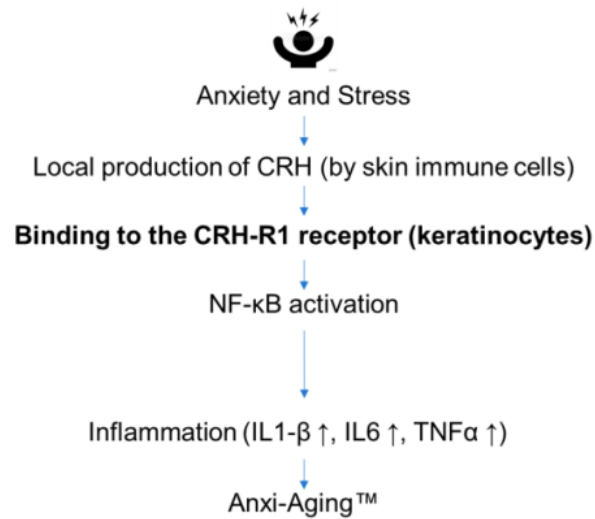
IBR-Chill™ blocks stress-induced CRH-R1 receptor activity to keep stress away



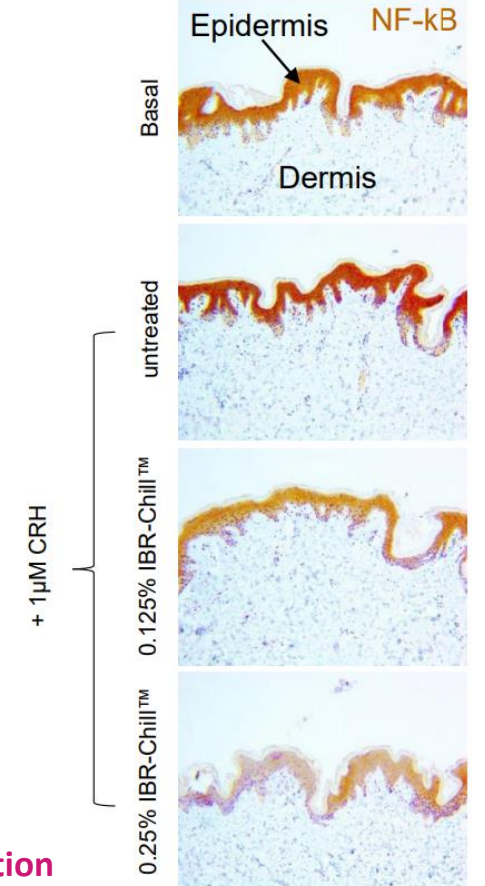
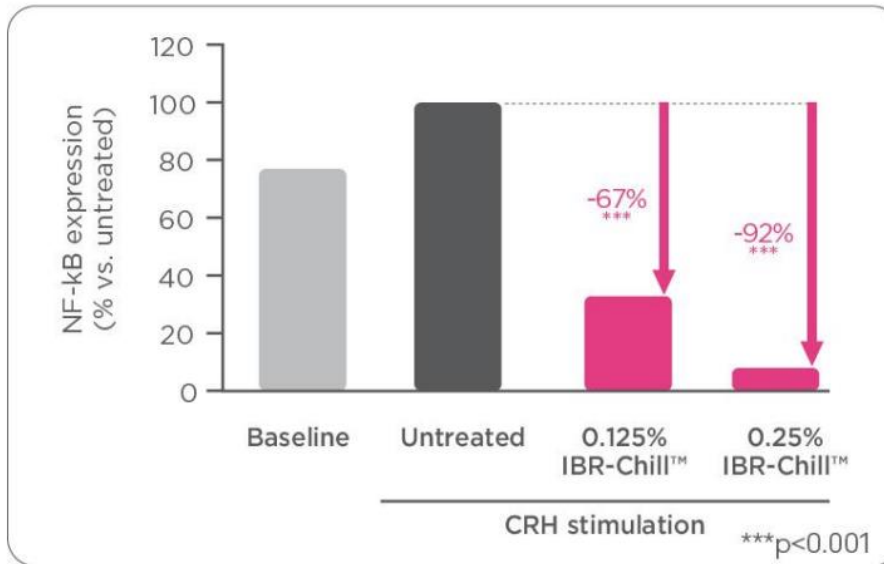
# EVALUATION OF ANTI-INFLAMMATORY EFFECT

## EX-VIVO PROTOCOL

- Human skin explant cultures, stress induced by 1 $\mu$ M CRH
- Application of 0.125%, 0.25% IBR-Chill™
- Immuno-histochemical staining of NF- $\kappa$ B



## Evaluation of anti-inflammatory activity

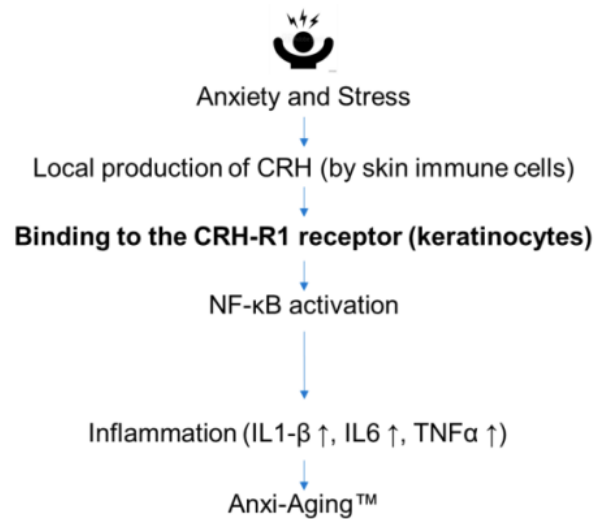


IBR-Chill™ blocks stress-induced NF- $\kappa$ B activation – biomimicking meditation

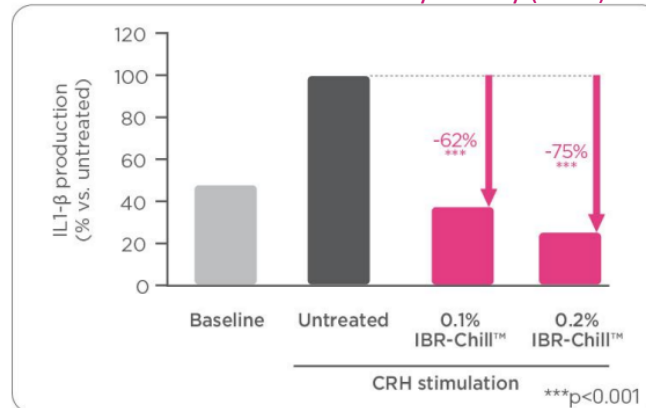
# EVALUATION OF ANTI-INFLAMMATORY EFFECT

## IN-VITRO PROTOCOL

- Keratinocytes, stress induced by 100 nM CRH
- Application of 0.1-0.2% IBR-Chill™
- Quantification of IL1- $\beta$ , IL6, TNF- $\alpha$  protein levels in culture medium by ELISA analysis I

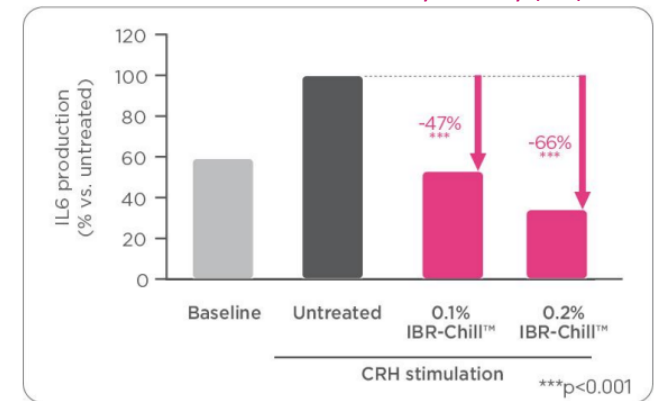


Evaluation of anti-inflammatory activity (IL-1 $\beta$ )

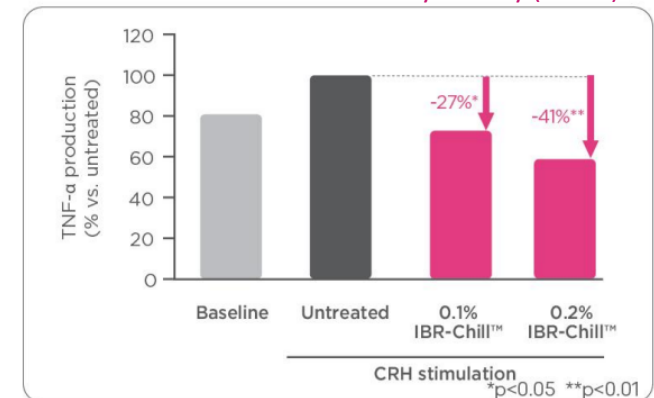


**IBR-Chill™ blocks stress-induced inflammation**

Evaluation of anti-inflammatory activity (IL6)



Evaluation of anti-inflammatory activity (TNF- $\alpha$ )

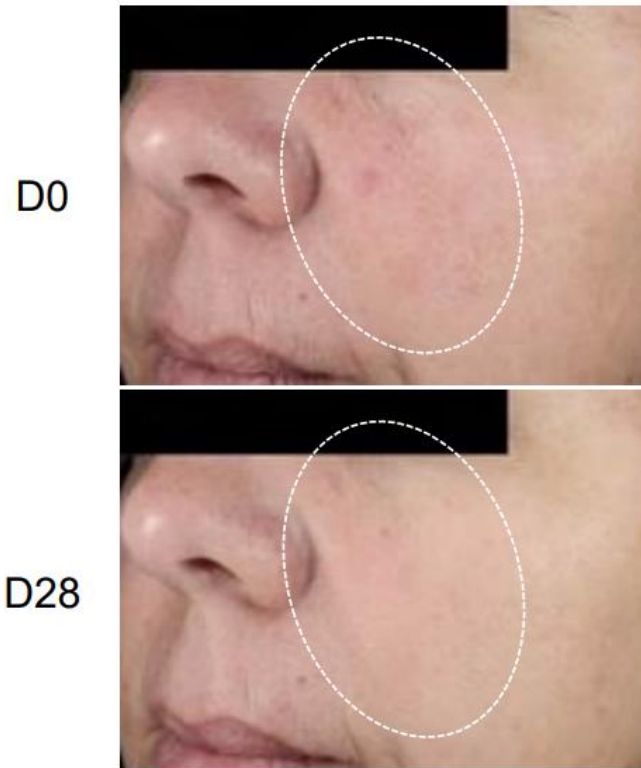






# EVALUATION OF ANTI-INFLAMMATORY EFFECT

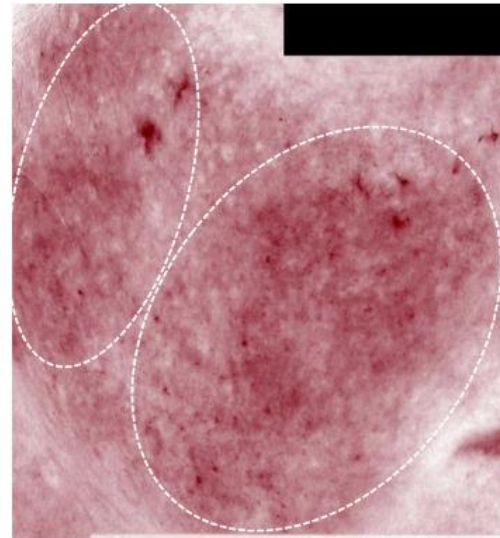
Vol. #2 (age 41)



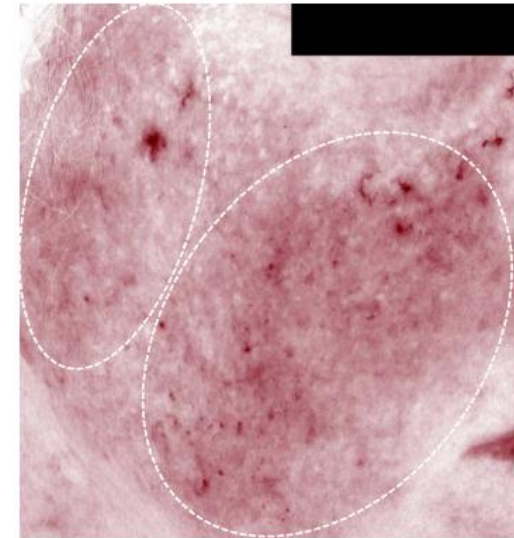
a\* variation  
-30%  
Vs. D0

Vol. #11 (age 49)

D0



D28

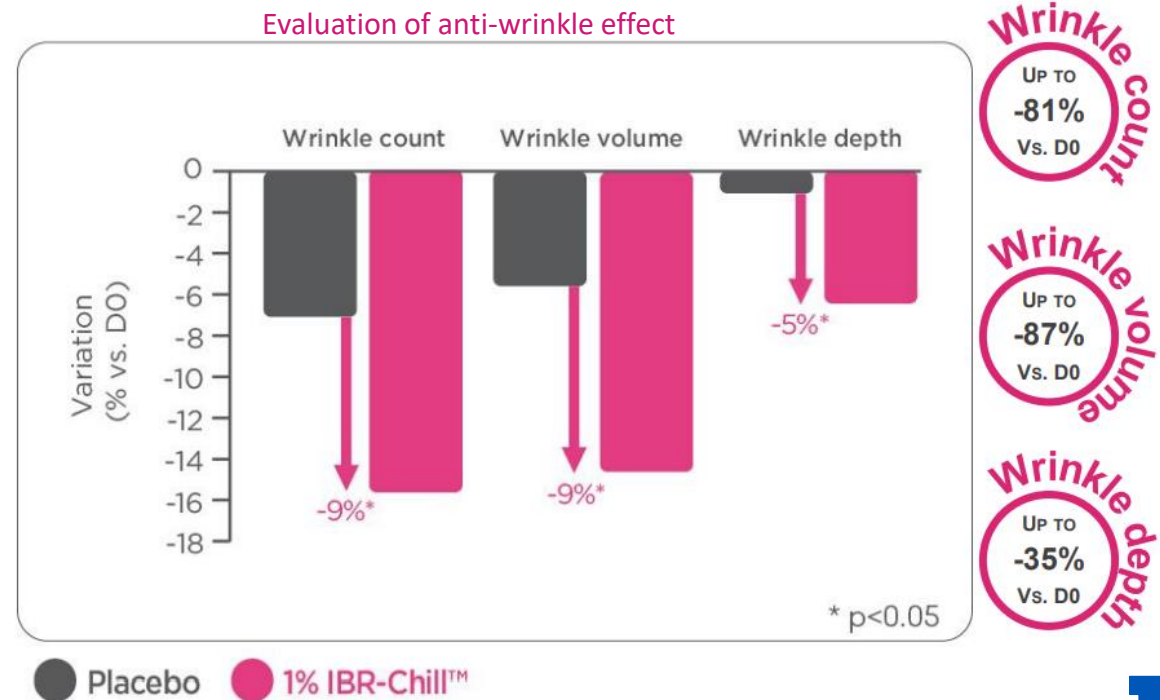


Red spots count  
-55%  
Vs. D0

# EVALUATION OF ANTI-WRINKLE EFFECT

## IN-VIVO PROTOCOL

- 30 women, Caucasian, (ages 35-60) - selected for high stress levels, on the basis of a psychological questionnaire as well as cortisol levels measurement
- Application of 1% IBR-Chill™ in gel-cream, 2Xday, on a split face vs. placebo for 4 weeks
- Evaluation of wrinkle reduction (crow's feet area) by AVEA 3D imaging at D0,D28





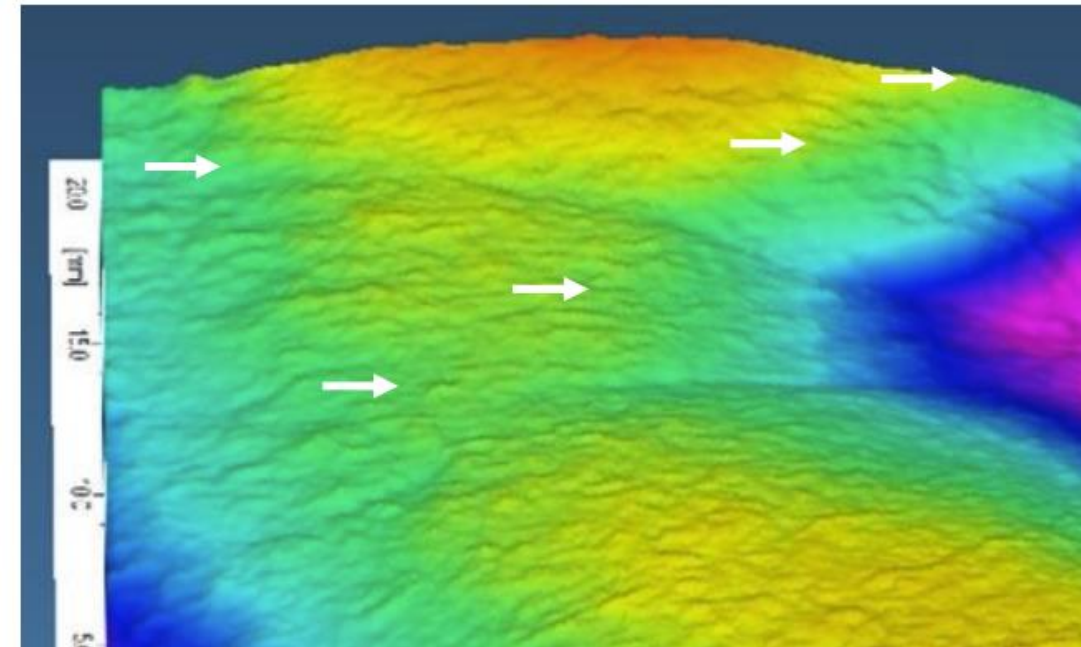
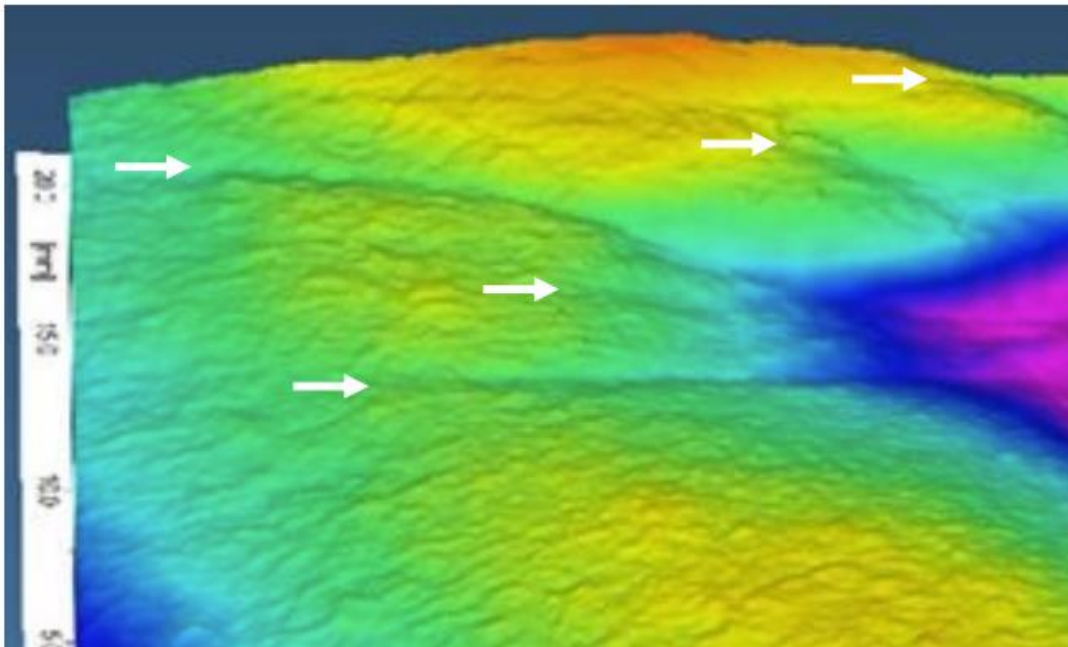
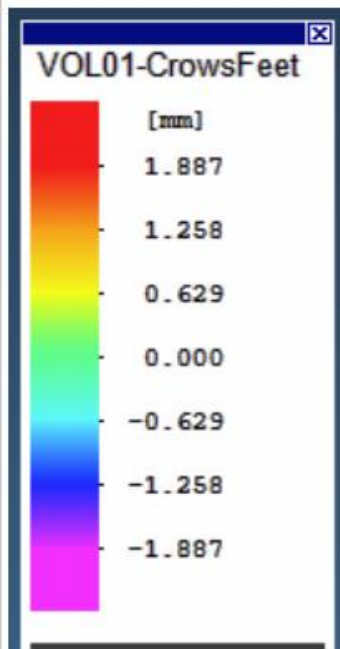


# EVALUATION OF ANTI-WRINKLE EFFECT

Vol. #1 (age 58)

D0

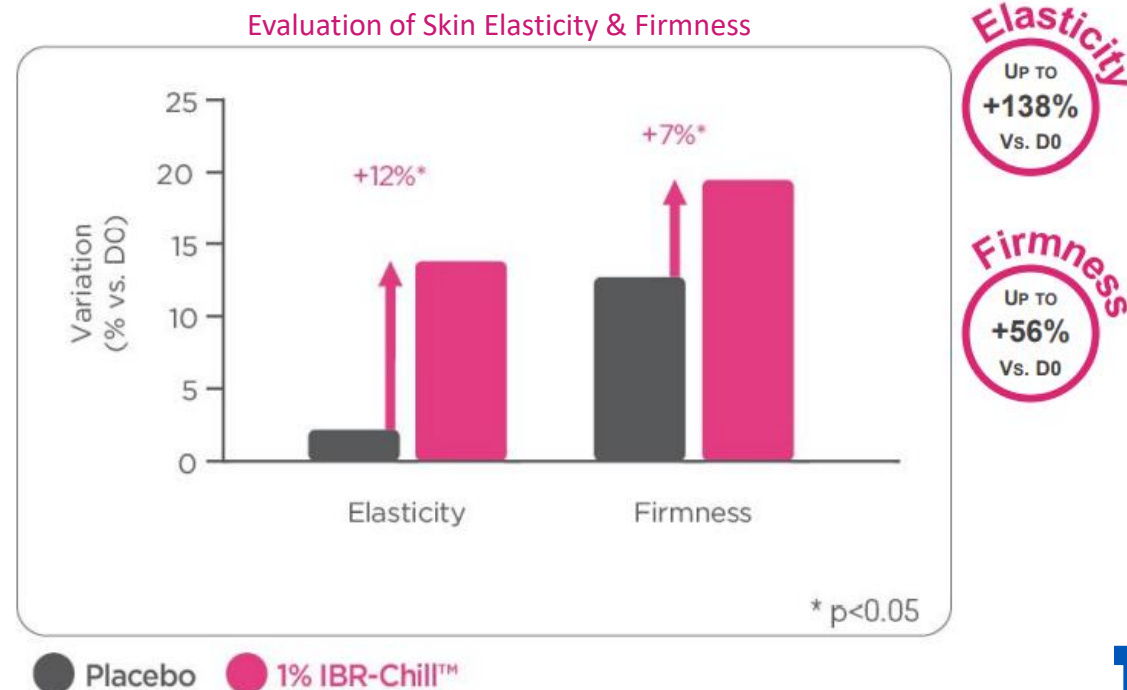
D28



# EVALUATION OF SKIN ELASTICITY AND FIRMNESS

## IN-VIVO PROTOCOL

- 30 women, Caucasian, (ages 35-60) - selected for high stress levels, on the basis of a psychological questionnaire as well as cortisol levels measurement
- Application of 1% IBR-Chill™ in gel-cream, 2Xday, on a split face vs. placebo for 4 weeks
- Evaluation of skin elasticity and firmness by cutometer analysis at D0, D28





# SUSTAINABILITY

## Meditation in a bottle to fight Anxi-Aging™



### Naturalness

- Key ingredient: Cistus Incanus (Pink rock-rose) Extract
- Preservative free
- ISO 16128: >98.8% (natural origin content)
- Vegan compatible\*

### Key ingredient Sourcing

- Traceability: Full visibility on supply chain
- Responsibly sourced\*\*
- Commercially cultivated in the Israeli desert
  - Certified organic crop by Agrior (PPIS standard)
  - Non-GMO
  - Hand harvested
  - Typical harvest season: March-June
- Local sourcing
- Parts used: Flower/Leaf/Stem
- CITES compliant

### Environmental Footprint

- Process: Extraction
- Solvent: Water only
- Organic agricultural practices
- All biomass waste is recycled as compost
- Ecotoxicological data
  - Aquatic toxicity EC50>100mg/L

# KALIBIOME

POSTBIOTIC RESEARCH FOR **MICROBEAUTY**

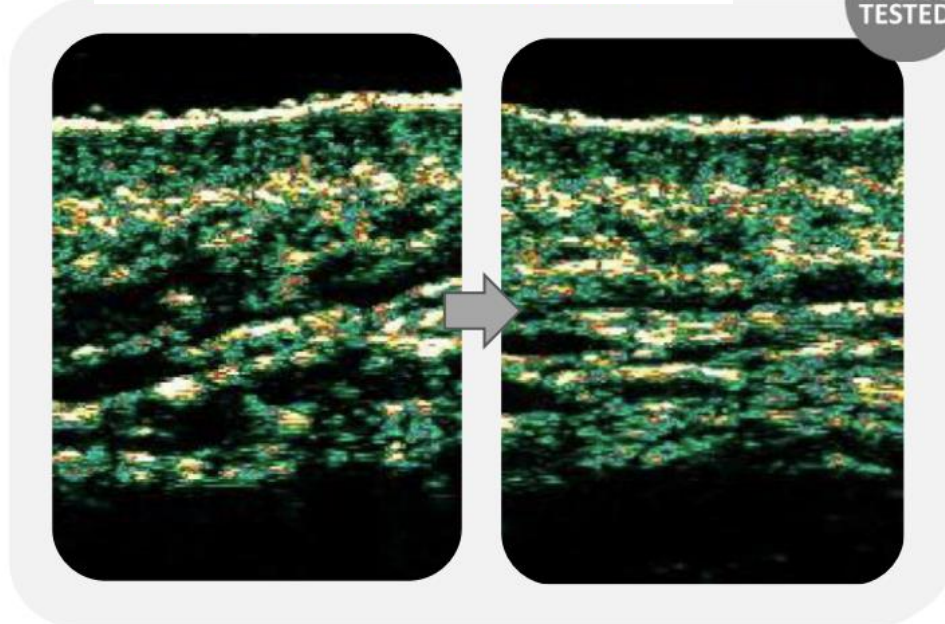


# KALIBIOME ECOGENETIC

## Skin microbiota care and wellness

Dermis Redensification (@0.2%)

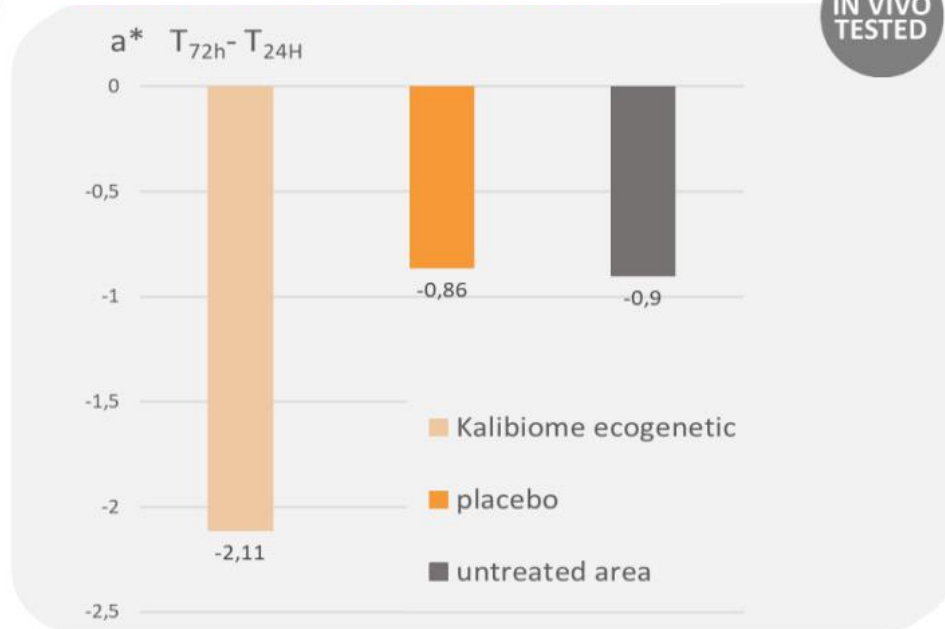
IN VIVO TESTED



Kalibiome Ecogenetic replenishes skin dermis and epidermis, increasing compactness and skin density in 6 weeks

Skin Redness Reduction (@0.2%)

IN VIVO TESTED



Kalibiome Ecogenetic reduces skin redness better than control after a treatment on 20 volunteers. Its activity is linked to the modulation of IL-12, IL-10 and TNF- $\alpha$



A photograph of a person's hands gently touching purple flowers in a greenhouse. The person is wearing a gold bracelet. The background shows the structure of the greenhouse with white plastic covering and metal supports. The scene is brightly lit, suggesting daytime.

THANKS!

VERTAL  
*innovations*