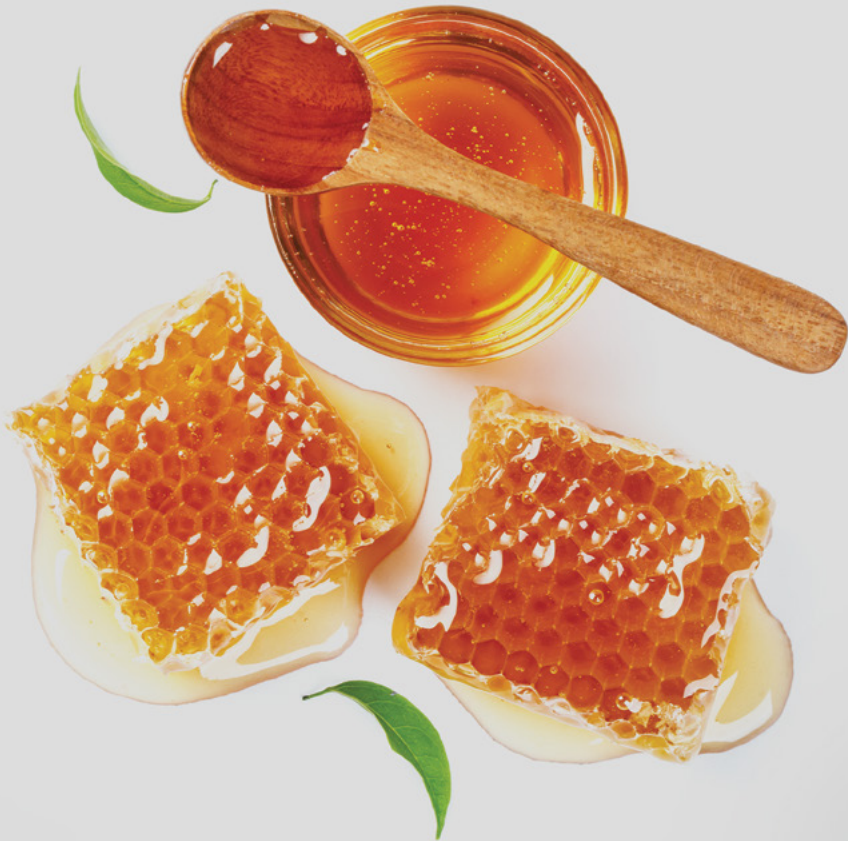


Anti-Ageing Solutions



Celcode's Anti-Ageing Solutions

Rejuvenation and staving off ageing has long been a goal in dermatological R&D. Here at Celcode, we have spent a significant amount of time formulating solutions for this.

These range from antioxidant blends to formulations promoting cellular growth, and include products like a new, biologically active peptide that stimulates epigenetic skin rejuvenation.

Discover some of our anti-ageing ingredients

Royalactin

Salmon
Caviar DNA

Tri-coated
Retinol

V-Tox

EGF
Complex

DuoQ
Power

ROYALACTIN

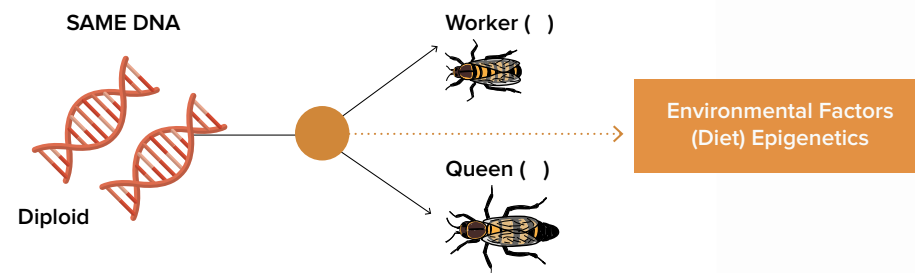
Rejuvenation at the cellular level

Royalactin is a new biologically-active peptide that activates skin regeneration and glow, inspired by **epigenesis**.

Epigenesis is a process by which the environment influences and alters genetic expression, causing our genes to change. An example of this can be seen in honeybees.

All honeybees are clones of each other as they share the same DNA. The evolution of the bee larvae into either a queen bee or a female worker bee depends fully on its diet:

- A female larva that is destined to become a queen bee is fed exclusively with large quantities of royal jelly during her entire life.
- In comparison, the larva of a worker bee is fed royal jelly only during its first three days, and thereafter with pollen and nectar.



Royal jelly modifies the honeybees epigenome and in turn their genetic expression. Scientists have found that the effect of royal jelly on evolution of larvae was due to a specific protein called royalactin.

How Royalactin Works

With age, our epidermal growth factor (EGF) activity decreases, which leads to reduced wound healing capacities.

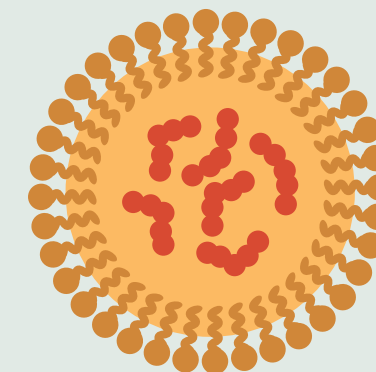
Royalactin interacts with EGF and activates the EGF receptor to maximise positive effects on the skin in 28 days. With Royalactin's encapsulation technology, it can:

- Increase its penetration into the skin
- Enable a controlled-release delivery
- Protect the peptide molecules in the formulation against degradation



Pentapeptide

Encapsulation



Soft sphere - Shea butter based carrier system

Benefits of Royalactin

12.6%
improvement in
skin tone evenness

Versus initial conditions
after 28 days

Over 16%
smoother skin
than a placebo

Following treatment
for 28 days

2.7 days
faster skin renewal

Compared to untreated skin

**Accelerated skin
regeneration**

Compared to untreated skin

SALMON CAVIAR DNA

A pigment-fighting antioxidant

Salmon Caviar DNA is a bioactive placental lipophilic extract from the roe of wild Alaskan salmon.

With innovative patented technology, this ingredient is delicately extracted not from the caviar eggs directly, but the fatty membrane that generates life in a similar manner to the human placenta.

How Salmon Caviar DNA Works

Salmon Caviar DNA is naturally rich in Astaxanthin, a potent carotenoid which possesses high antioxidant and anti-inflammatory properties. It contains the rarest and most valuable Omega 9 and 7, including Omega 3 and 6, Retinol and Vitamin E.

These antioxidants protect the skin from extrinsic factors that lead to aging, resulting in triple benefits: Whitening, Repairing and Protecting.

Benefits of Salmon Caviar DNA

**Increases
epidermal
thickness**

Smoother, younger
appearance of skin

51 ± 11%
**decrease in surface
roughness**

Following treatment
for 56 days

44 ± 11%
reduction in wrinkles

Following 28 days of
treatment with 0.5% extract

50 ± 11%
**skin pigmentation
reduction**

After 56 days of treatment
with 0.5% extract

**Reduces
UV-induced
microinflammation**

Prevents the formation
of new age spots

31 ± 11%
**reduction in
skin redness**

After 56 days of treatment
with 0.5% extract

**Neutralise harmful effects
of external ageing factors**

Specifically UVA, UVB, HEV and
infrared rays



Non Toxic



Allergen Free



**Vector-borne
Diseases Free**



**For
Pescetarians**



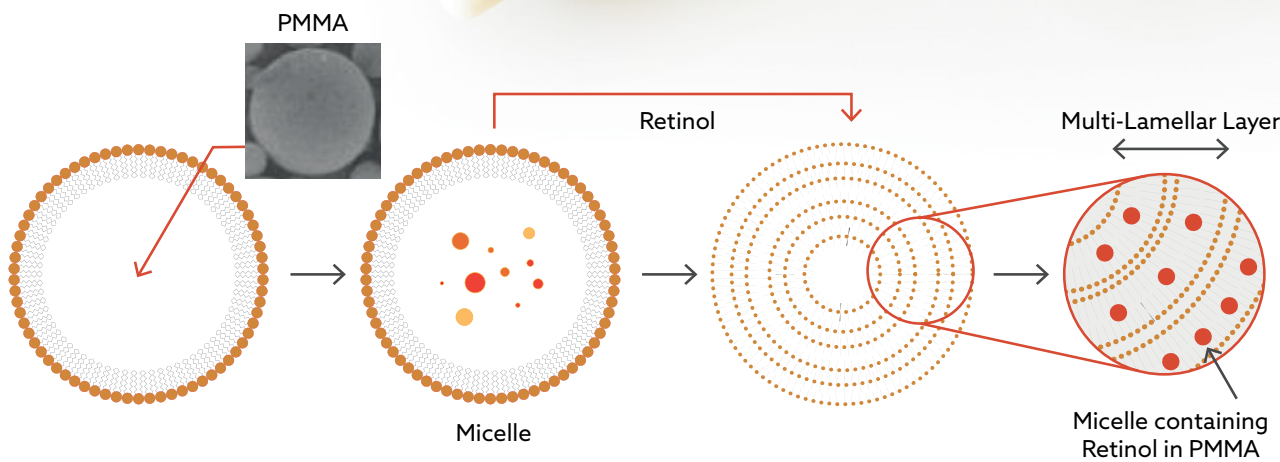
**Certified
Halal**

TRI-COATED RETINOL

An improved, hyper-effective version of retinol

Tri-coated Retinol offers a more improved version of the classic skincare ingredient. More deeply penetrating, it has more powerful results on skin health and is also safer to use.

How Tri-coated Retinol Works



This retinol formulation uses a triple-protection system that keeps retinol more stable, even up to 45°C.

The formulation also reduces skin side effects from retinol usage. Moreover, the formulation offers higher skin penetration and collagen production results than typical retinol formulations.

Benefits of Tri-coated Retinol

Higher thermal stability than typical retinol

Retains 97% retinol at 25 °C and 92% retinol at 45 °C for 9 weeks

45.28% less skin side effect expression

Compared to retinol in liposome

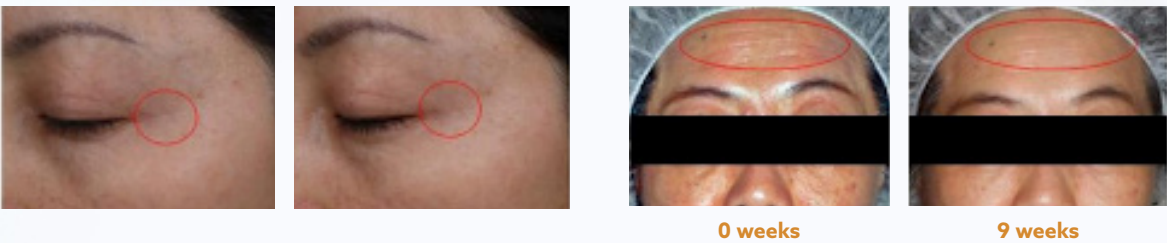
15% better efficacy than typical retinol in liposome

115.27% better than control group in collagen synthesis tests

Higher skin moisture and elasticity

After in vivo study of 9 weeks

An example of anti-wrinkle effects of retinol cream on crow's feet wrinkles and transverse forehead rhytide



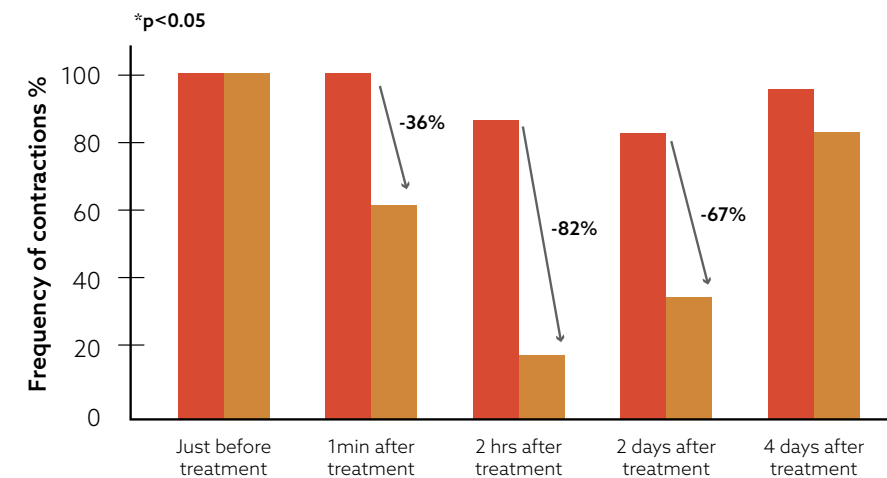
V-TOX

Botox-like skin smoothing

V-Tox refers to a patented tripeptide that mimics Waglerin-1, a polypeptide found in Temple Snake venom. Its ability to relax muscles makes it an excellent solution for deep wrinkles.

How V-Tox Works

V-Tox copies Waglerin-1 by relaxing muscle contractions. As muscle contractions are responsible for wrinkle formation, it serves as a preventative measure against future lines.



This unique tripeptide also takes effect almost immediately for quick but long-lasting results, based on in vitro studies.



Benefits of V-Tox

Nearly 1/2cm reduction on crow's feet

Measured vs. baseline after 4 weeks

13.6% lower wrinkle volume after 4 weeks

Using 4% V-Tox concentration vs. placebo

20% fewer forehead wrinkles after 4 weeks

Compared to only up to -4% wrinkle reduction in competing hexapeptide

Can delay wrinkles for up to 5 years

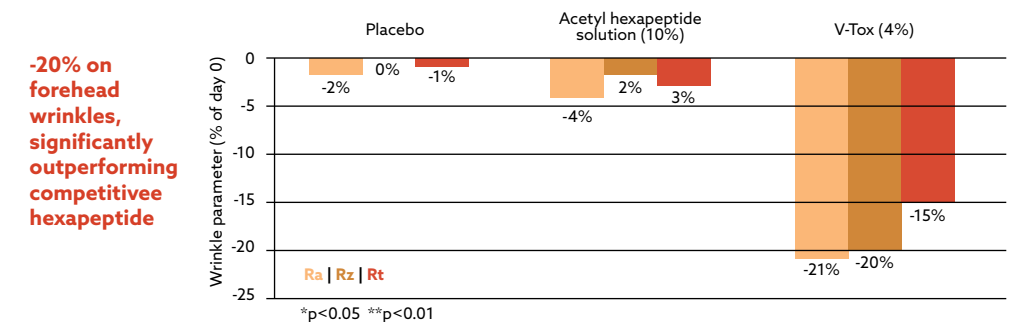
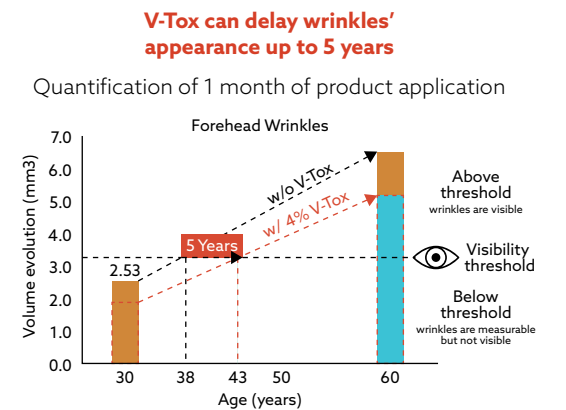
In 1-month-use projections assuming linear wrinkle progression



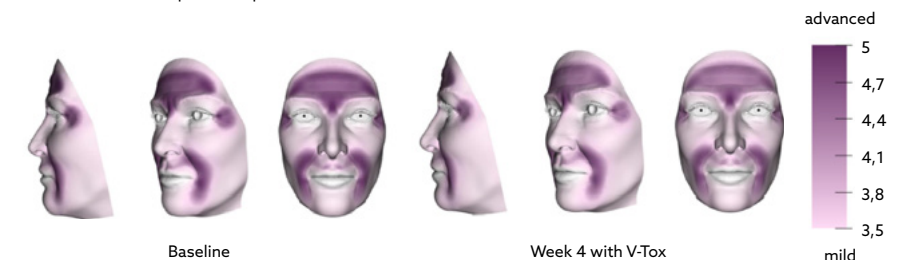
* p<0.05 vs. baseline
o p<0.1 vs. baseline



o p<0.1 vs. baseline



"Wrinkles Grading Map" - Before vs After



EGF COMPLEX

A rejuvenating pseudo-placenta

EGF Complex is a pseudo-placenta with five carefully synthesised growth factors. All five synergise to produce a rejuvenating, anti-ageing effect on the skin.

How EGF Complex Works

The components of EGF Complex are very similar to the components of a real human placenta.

The placenta is rich in growth factors (GFs) that encourage cell growth and cell reproduction. As we lose GFs and produce less of them over the years, we age.

EGF Complex provides safely synthesised replacements for key growth factors found in the human placenta to combat this. These are EGF, IGF, acidic FGF, basic FGF, and VEGF.

Synergic Effect

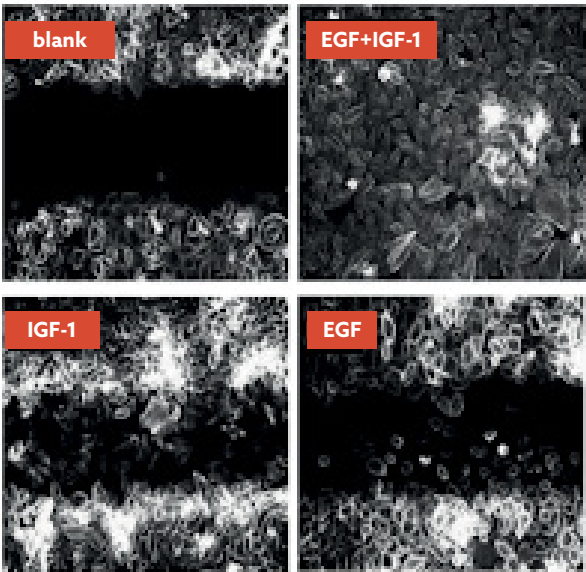
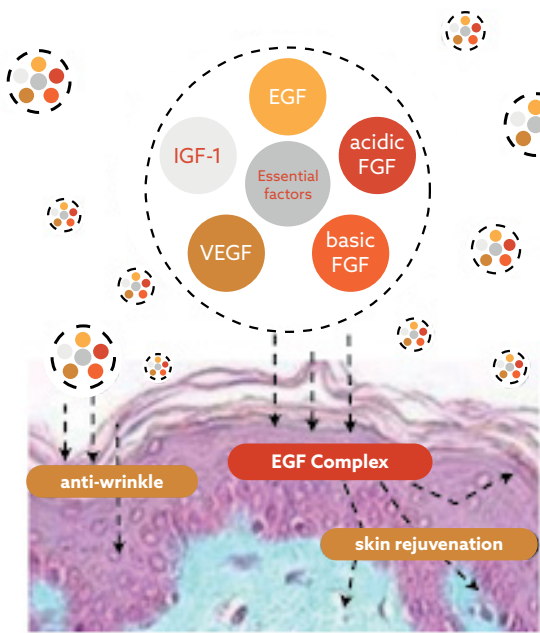


Fig. Effect of growth factor singling on wound epithelialization
Ref. Journal of Cell Science 116, 3227-3248

Benefits of EGF Complex

In vivo assay

13.2%
crow's feet reduction in 2 weeks
Plus 16% crow's feet reduction in 4 weeks through in vivo assay

32%
better skin elasticity in 2 weeks
Based on an elasticity probe in an in vivo assay

38%
wrinkle reduction below the eyes in 2 weeks
Plus 46% reduction below the eyes in 4 weeks through in vivo assay

Anti-wrinkle

Test Area	Crow's feet	Crow's feet	Below eyes
Detection method	PRIMOS Lite 3D face and skin Scanner Analyzing System, GFMeasstechnik	Robo Skin Analyzer CS50, Inforward, Inc	Robo Skin Analyzer CS50, Inforward, Inc
Before			
After			
Reduces wrinkles by 13% in 2 weeks and 16% in 4 weeks on crow's feet		Total length of wrinkle: 47mm Total length of wrinkle: 21mm	Wrinkles 10 6 Wrinkles 2 1 Reduces wrinkles by 38% in 2 weeks and 46% in 4 weeks on below eyes

In vitro assay

Increased wound healing effect
Based on migration assay testing 0.1% EGF Complex

32%
more moisturised skin immediately after application
With 50% improvement in 2 weeks and 64% in 4 weeks

Synergistic effect of growth factors speeds cell production
Compared to single-GF tests on wound epithelialisation



DUOQ POWER

A powerful new synthetic antioxidant

The mitochondrion is a factory for energy (ATP) production in cells, which helps to kickstart several critical mechanisms that keep our skin young and healthy.

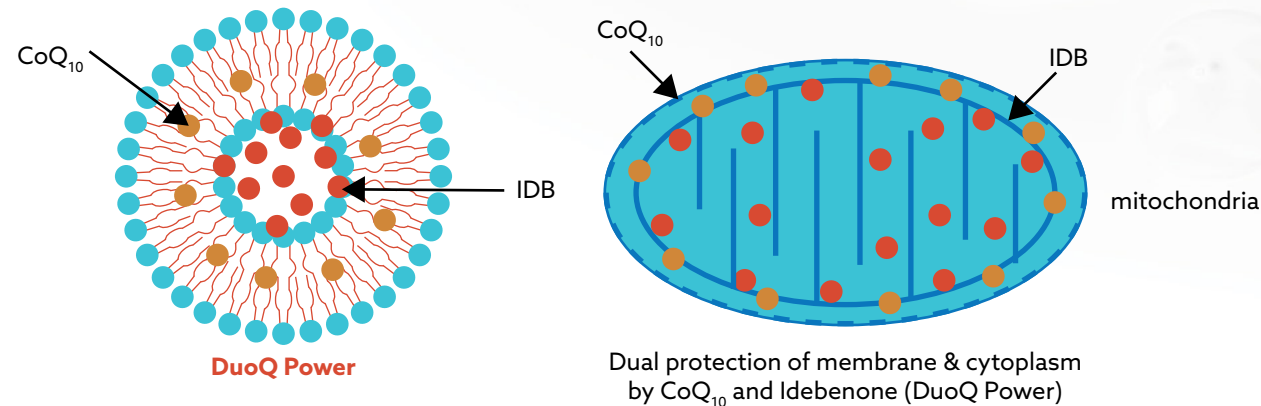
However, high energy levels can result in mitochondria being exposed to oxidative stress (ROS), consequently leading to skin ageing, inflammation and pigmentation.

DuoQ Power can neutralise ROS, thereby protecting mitochondria and cells.



How DuoQ Power Works

DuoQ Power is a combination of CoQ10 and Idebenone (IDB). IDB is a synthetic analogue of CoQ10 that has a shorter side chain and increased solubility. It can therefore boast a stronger anti-ageing effect thanks to improved efficacy.



Compared to CoQ10, which works and functions only in the membrane of the mitochondria, DuoQ Power protects both the cell membrane and cytoplasm.

Benefits of DuoQ Power

Total EPF (Environment Protection Factor)

Score of 95

Vs. CoQ10's 55, Ascorbic Acid's 52, Lipoic Acid's 41, and Tocopherol's 80

Over 25%

improvement on skin roughness or dryness

After 6 weeks of use on photodamaged skin

Almost 30%

improvement in fine lines and wrinkles

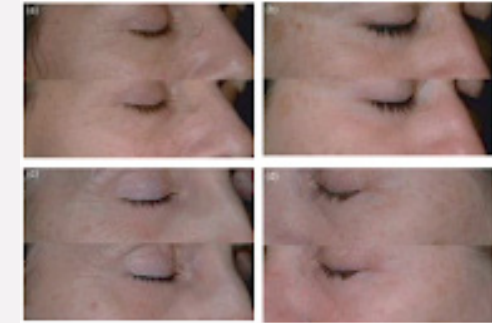
After 6 weeks of using a lotion with 1.0% Idebenone

Over 35%

better skin hydration

After 6 weeks of use by subjects aged 30 to 65

McDaniel et al. (2005)



Fifty female subjects with moderate photoaging between the ages of 30 and 65 were enrolled in.

Subjects were given a commercial emulsion lotion containing either 1.0% or 0.5% DuoQ Power in blinded containers.



Beauty is an art, we make it into science

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