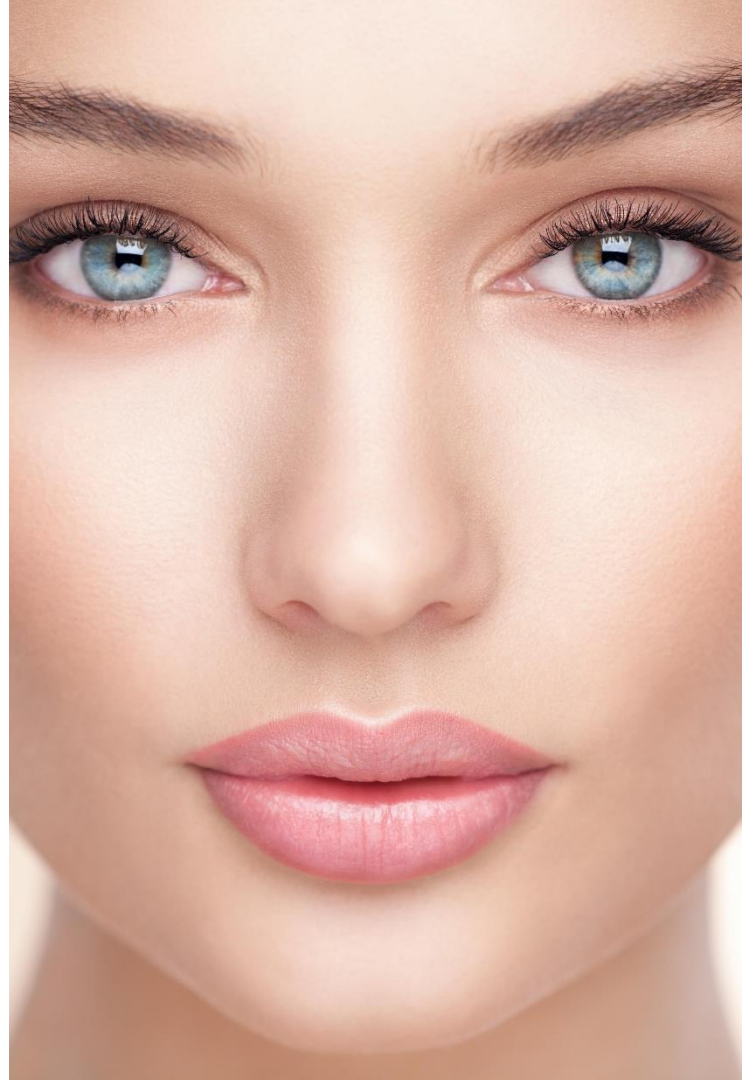


ROELMI•HPC
Health & Personal Care



EXCEPTIONHYAL® STAR

ENCHANTING BEAUTY
FROM THE INSIDE-OUT



ROELMI HPC – Company

ROELMI HPC is now the global expert for actives and functionals in Health & Personal Care.

But its roots date back to 1946 in the Mediterranean area, where the company still finds concepts and innovation-driven technologies, in full respect of nature and people.

Its high quality products are developed thanks to avant-garde research, scientific approach and true passion.



**NO IMPACT
IN PROGRESS®**

*NIP, your P.I.N.
to sustainability*

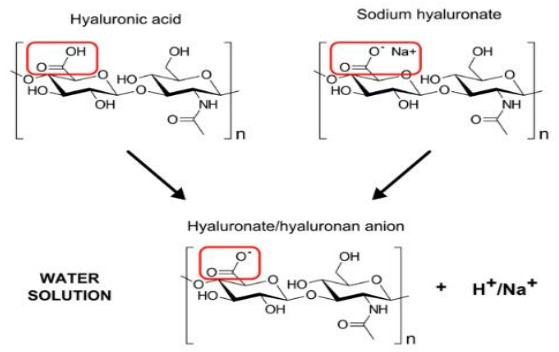


Sustainable values



Hyaluronans

Biopolymers made of linearly linked repeating units consisting of *N*-acetyl-*D*-glucosamine and *D*-glucuronic acid



Animal origin Obsolete



Bio-fermentation origin Purity

Signaling and space-filling molecules involved in human body biology. Highly hygroscopic polymers, which concur in cellular matrix remodeling and inflammatory processes regulations, tissues repair and homeostasis control.

HW
(1800 - 2200 kDa)

MW
(1000 - 1800 kDa)

LW
(200 - 600 kDa)

XLW
(50 - 200 kDa)

H⁺

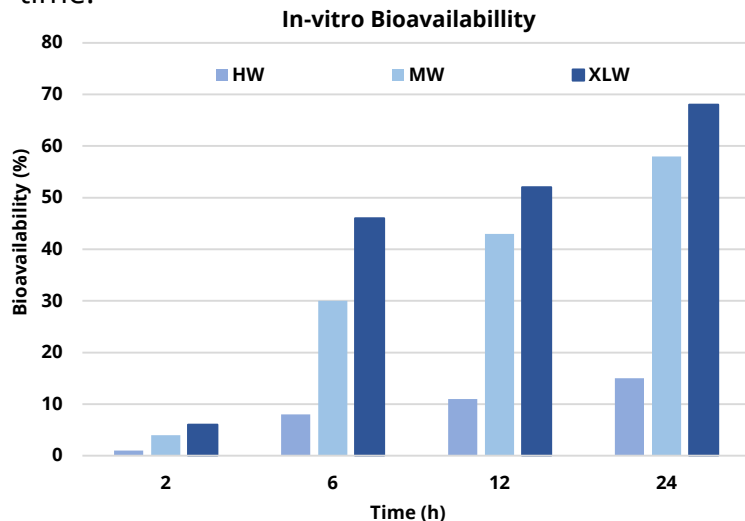
Oligo
(<10 kDa)

Cross-linked
(various)



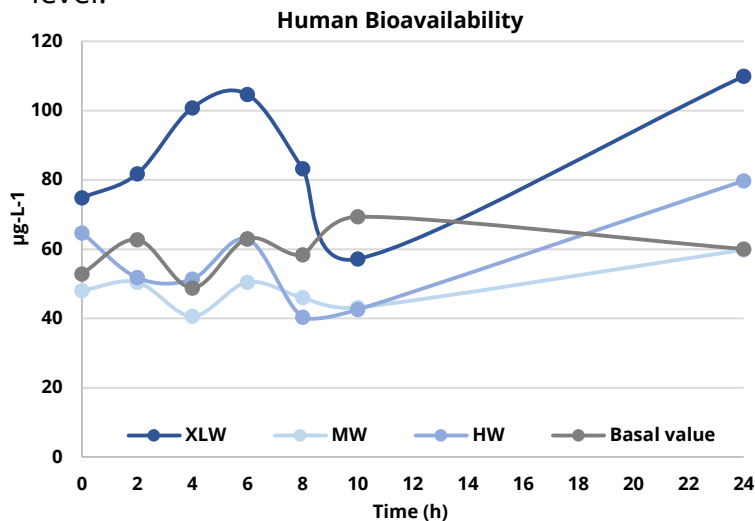
Hyaluronans MW & Effectiveness

In-vitro bioavailability inversely increases with molecular weight (MW). Thanks to enzymatic activity, higher MWs bioavailability develops over time.



Protocol: Spectrophotometric evaluation of digested hyaluronans in gastric/intestinal simulating fluid

Bioavailability in human model confirms the early absorption of lower MWs at gastric level, with later assimilation of higher MWs over time at intestinal level.

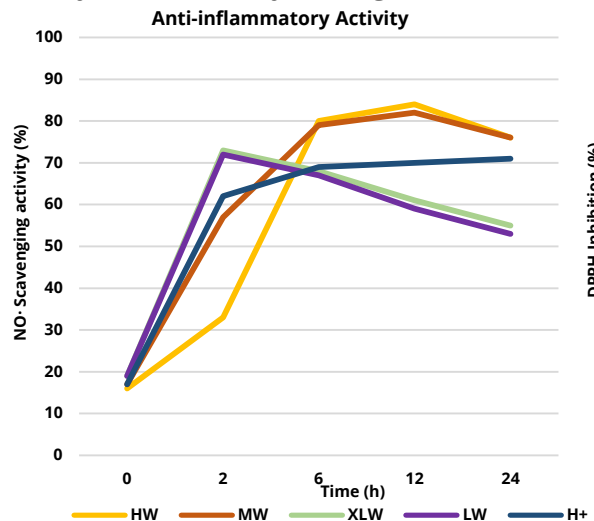


Protocol: Serum level evaluation after the administration of 200mg of different hyaluronans MWs

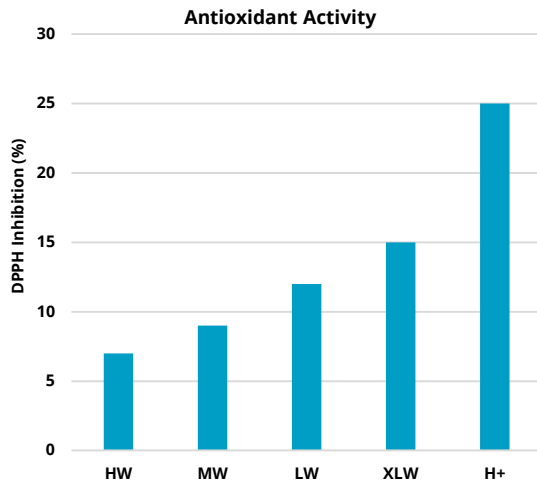


Hyaluronans MW & Effectiveness

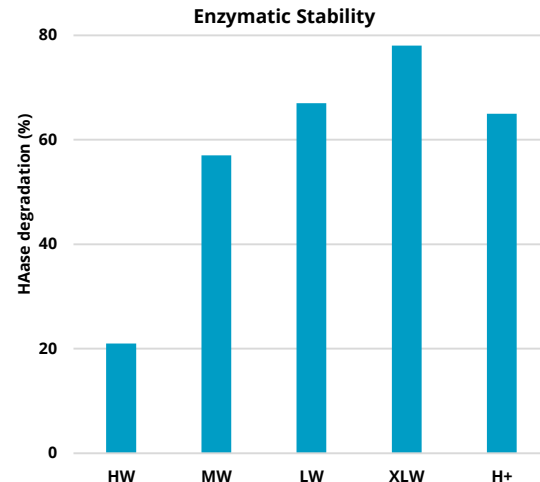
In-vitro anti-inflammatory, antioxidant and enzymatic degradation of hyaluronans result inversely proportional to MW, with later activation of higher-sized polymers. A greater steric hindrance, indeed, delays enzymatic activity on higher MWs.



Protocol: Nitric oxide radical (NO⁻) scavenging assay



Protocol: Colorimetric evaluation of DPPH free radical (2,2-diphenyl-1-Picrylhydrazil) inhibition



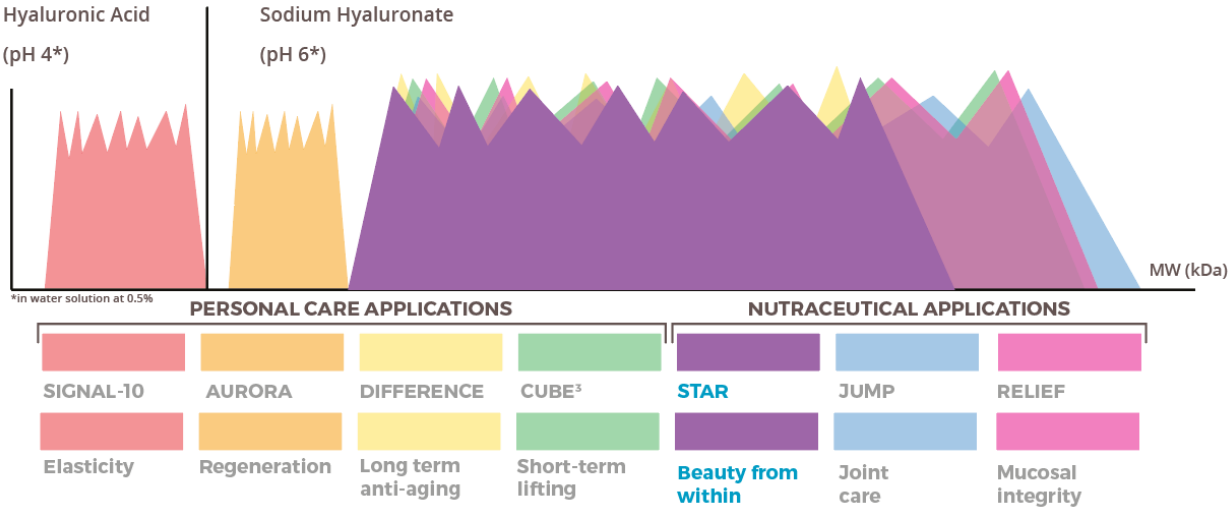
Protocol: Evaluation of weight loss percentage after hyaluronidase degradation



2.0 Full Spectrum Hyaluronans

HA TECH 2.0® FULL SPECTRUM TECHNOLOGY

Full Spectrum Hyaluronans mimic what naturally occurs in human targeted tissues, ensuring a quick efficacy and long-term biological positive results.



**CLICK & DISCOVER
OUR NEW WEBSITE**

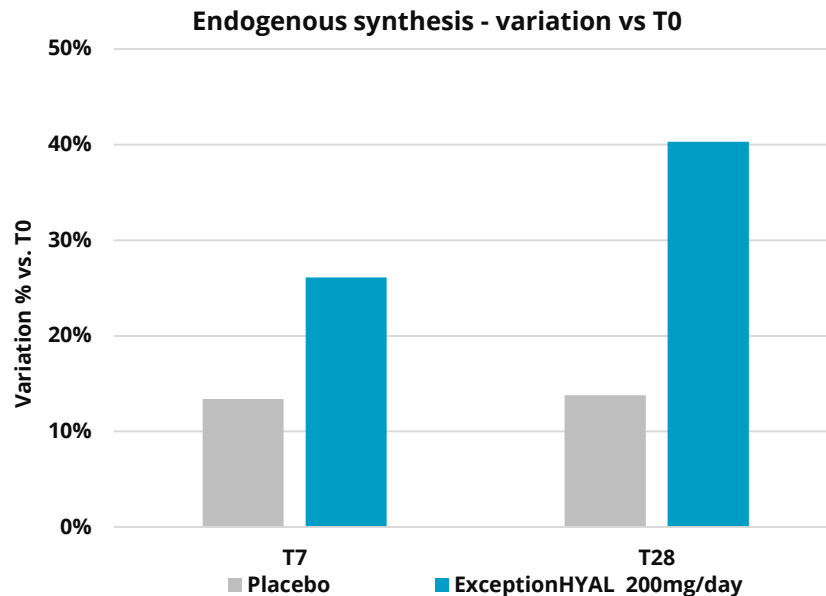


Endogenous HA synthesis

HA SERUM LEVELS

ExceptionHYAL® hyaluronans administration leads to a relevant increase of hyaluronic acid in the blood, already after 7 days. A growth of **over 40%** was positively achieved at the end of the treatment (T28).

- Quick biological efficacy
- Long-lasting enhanced HA synthesis



Protocol: Randomized, double-blind, placebo controlled clinical trial on 60 subjects. 200mg/day of ExceptionHYAL® hyaluronans for 28 days. Evaluation of HA serum levels by blood sampling at T0, after 7 days (T7), 14 days (T14), 21 days (T21) and 28 days (T28).



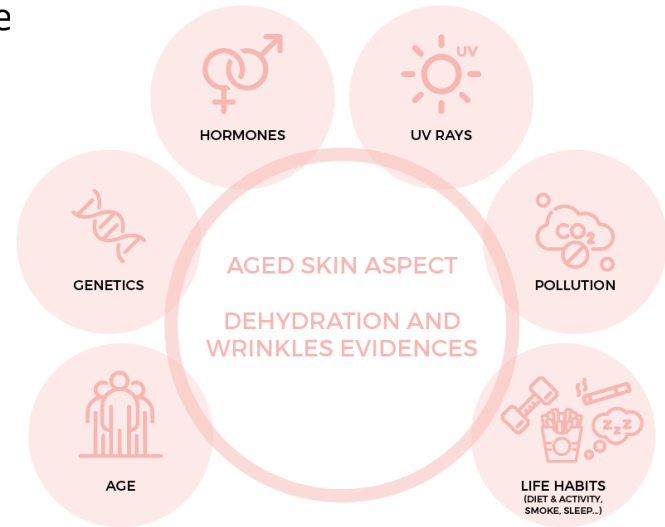
ExceptionHYAL® Star

- Full effective spectrum of 2.0 generation Hyaluronans complex
- Skin tonicity for mature, damaged or specific skins
- Improvement of skin moisturization & elasticity from within
- Decrease of wrinkles depth & volume
- Promotion of endogenous HA synthesis



Biological Target – Nutricosmetics

- Skin beauty is the result of the efficiency of biological processes occurring through all its different layers
- Aging processes negatively affect skin biology, leading to dehydration, viscoelastic properties impairment and wrinkles appearance
- *Skin fundamental constituents are Hyaluronans (HA), Collagen and Elastin*
- *HA content starts decreasing from 20s, resulting in lowered hydration status and reduced tone, with fine lines emergence*
- *Through aging, fibroblasts and keratinocytes cellular activities slow down, advancing aging signs*
- *Skin structure slowly, but inevitably, deteriorates, resulting in an aged and unhealthy aspect*



ExceptionHYAL® Star - Efficacy dossier



INCLUSION CRITERIA:

- Age = from 35 to 70 years
- Mild to moderate signs of skin aging

MEASURED PARAMETERS:

- Skin profilometry
- Skin hydration and TEWL
- Skin elasticity and firmness
- Blood HA levels

CHECKING TIMES:

- T0 (baseline)
- After 7 (T7), 14 (T14), 21 (T21) and 28 (T28) days

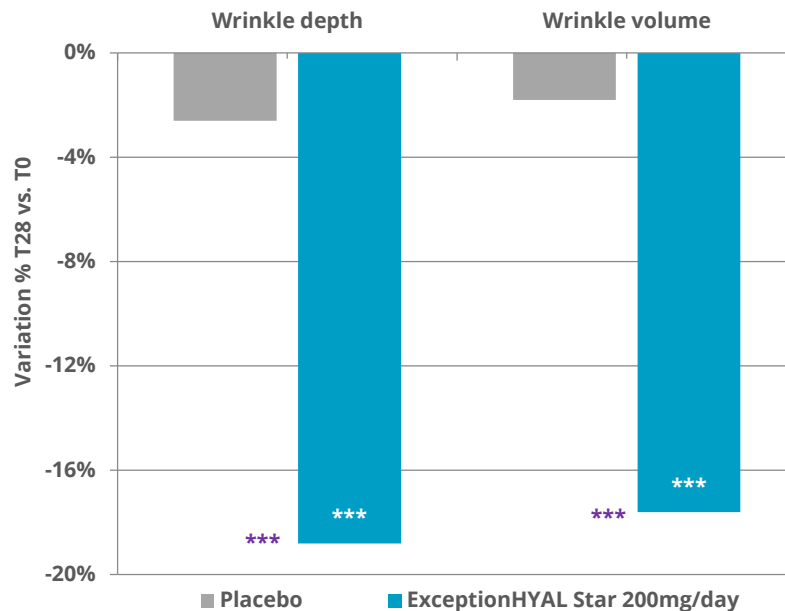
Michelotti, A., Cestone, E., De Ponti, I., Pisati, M., Tursi, F. "Oral intake of a new hyaluronan improves skin profilometry and ageing factors: a randomized, double-blind, placebo controlled clinical trial". The European Journal of Dermatology (EjoD), 2021



ExceptionHYAL[®] Star - Efficacy dossier

SKIN PROFILOMETRY

- ExceptionHYAL[®] Star demonstrates a significant improvement of skin profilometry in terms of both wrinkles depth and volume.
 - Less marked wrinkles (-17.6%)
 - Less deeped wrinkles (-18.8%)



** $p < 0.01$, *** $p < 0.001$

Material: Primos 3D (GFMesstechnik GmbH).

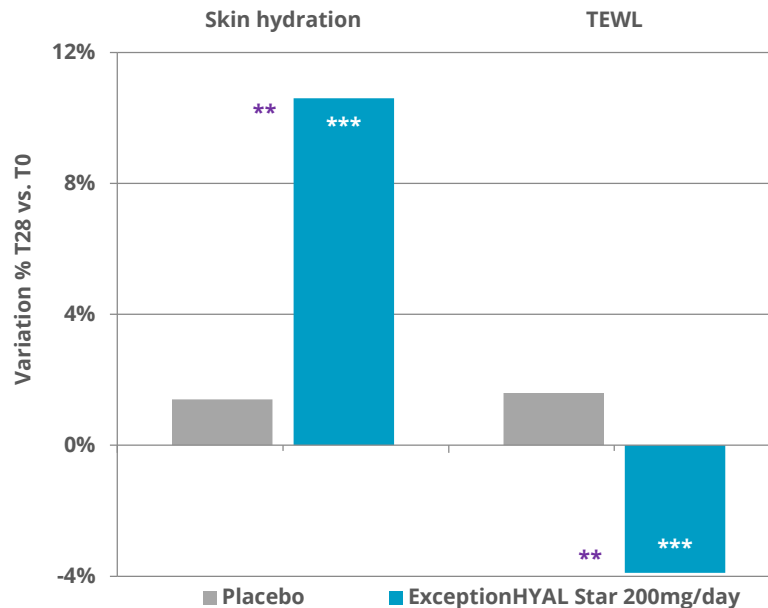
Human model



ExceptionHYAL[®] Star - Efficacy dossier

SKIN HEALTH

- ExceptionHYAL[®] Star shows a significant effect on skin moisturization (hydration & TEWL)
 - Skin is more hydrated (+10.6%)
 - Skin is more protected from dehydration (-3.9% transepidermal water loss)



** $p < 0.01$, *** $p < 0.001$

Material: Corneometer[®], Tewameter 300[®].

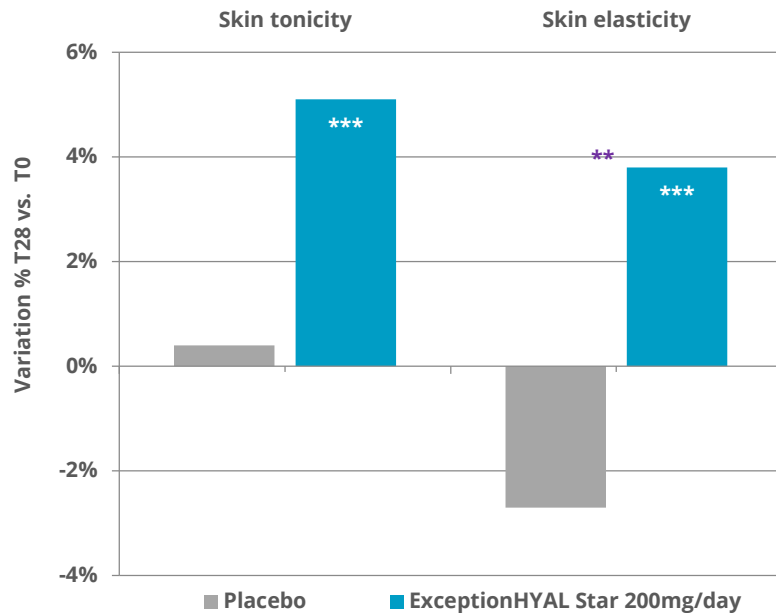
Human model



ExceptionHYAL[®] Star - Efficacy dossier

SKIN APPEARANCE

- ExceptionHYAL[®] Star provides important benefits to skin beauty in terms of:
 - Skin tonicity (+5.1% in skin firmness vs T0)
 - Skin elasticity (+3.8%)



** $p < 0.01$, *** $p < 0.001$

Material: Cutometer[®] MPA 580, Courage + Khazaka).

Human model



Take-home message

ROELMI HPC's HA Tech 2.0[®] Technology & Full Spectrum Hyaluronans

Supportive and preventive approach to skin aging and beauty from within for all ages:

- Reduction of wrinkle appearance
- Enhancement of skin hydration, preventing dehydration
- Improvement of skin elasticity and tonicity
- Endogenous HA synthesis

HA[™]
Tech 2.0 



ExceptionHYAL[®] Star - Summary

Description: Sodium Hyaluronate from 2.0 generation

Origin: *biotechnology, biofermentation*

Aspect: white powder

Solubility: slightly soluble in water

Typical dosage: from 100 to 200 mg/day

Tested dosage: 200 mg/day

TYPICAL APPLICATIONS:

- ✓ Skin hydration, recovering effect
- ✓ Skin suppleness, elasticizing effect
- ✓ Anti-wrinkle applications
- ✓ Improvement of skin health & beauty from within



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