

TRENDS

“Hair care is the new skincare”

Nicolas Hieronimus, L'Oréal Group CEO

Increasingly, consumers are realizing that hair care goes far beyond the strands. It starts at the root.



And yes, aging is a primary motivation when it comes to hair care

Consumers want their hair to age healthily and stay naturally beautiful. They're looking for proactive solutions for this purpose.

Top global hair concerns (2022)*

58%

Aging hair

54%

Damaged hair

42%

Scalp problems

TRENDS

When it comes to cellular processes, it's impossible not to mention senolytic science

And, following the latest trends in skin care, there is still space to explore senolytic science in hair care.

“Formula inspired by the science of cellular reprogramming, which integrates the revolutionary field of senescence for the first time in a night cream”

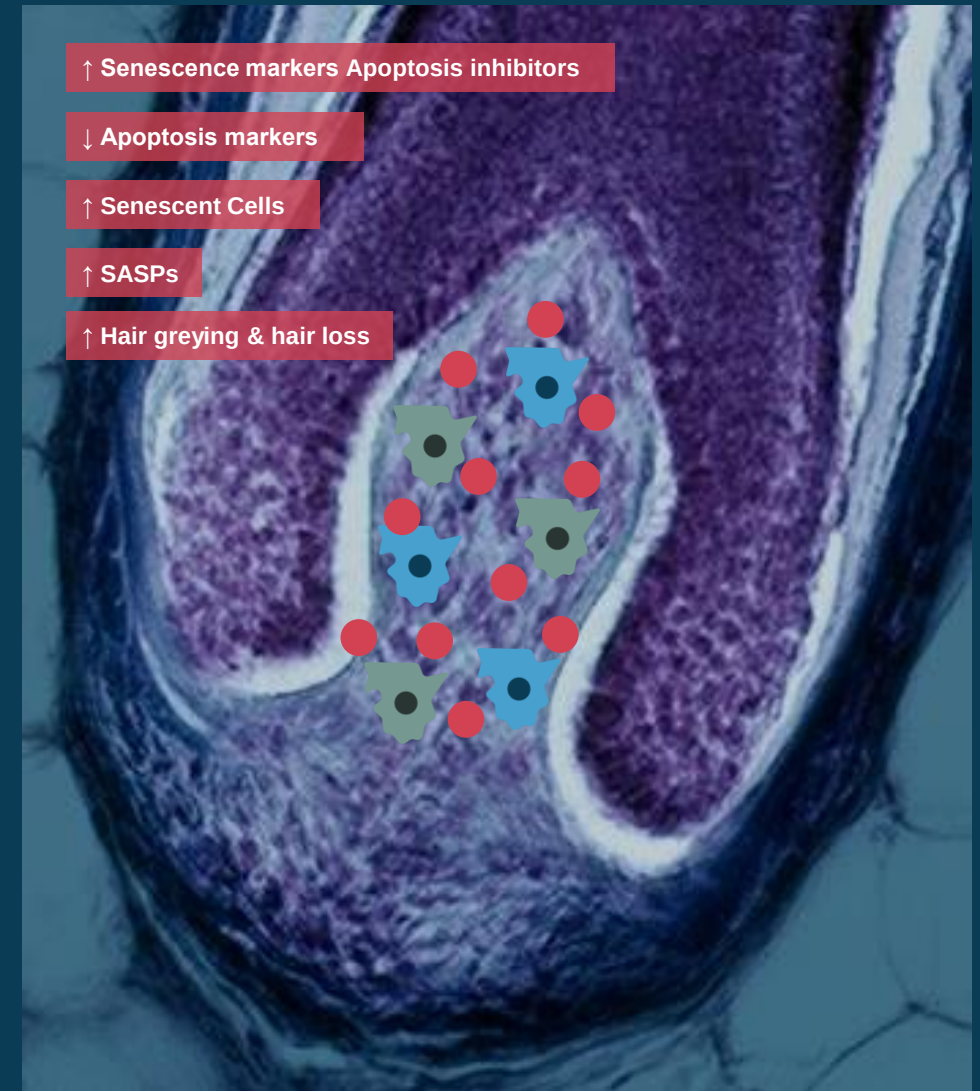


WHAT'S NEXT

Let's take a closer look at the process of senescence and how it impacts hair health

Senescent cells lose their ability to divide and properly produce key proteins like melanin, keratin, and KAP. As a result, they release SASPs (senescence-associated secretory phenotype), which also push surrounding cells into an undesirable senescent state.

The accumulation of senescent cells leads to aging with the aging phenotype.



Normal Follicle
Dermal Papilla
Cells



Senescent
Follicle Dermal
Papilla Cells

● SASP

We developed the first and only test model for hair senescent cells



By testing our bioactives on hair follicles*, we discovered an ingredient that goes beyond consumer expectations!

We present a groundbreaking solution that will redefine the concept of anti-aging hair care.

*Senescent Follicle Dermal Papilla Cells

ETERWELL™

*Hair longevity powered
by senolytic science*

HAIR



MODE OF ACTION

ETERWELL™ HAIR

Key benefits

- Hair care healthy aging acting at the cellular level
- Helps reboot the natural hair revival processes
- Increases hair longevity impaired by folliculo-destructive senescent cells*
- Helps prevent hair loss**
- Significantly improves hair density** by average 5% in 5 months and up to 28% for the best volunteer
- Helps slow down the premature ageing of hair
- Calms sensitive, irritated, and dry scalp
- Reduces inflammaging (reducing the expression of inflammatory cytokines induced ICAM-1)*
- Efficient at low concentration***



**A truly senolytic active
ingredient, with complete
proof of action *in vitro*
and *in vivo***

IN VITRO RESULTS

Less senescent cells, more longevity for hair

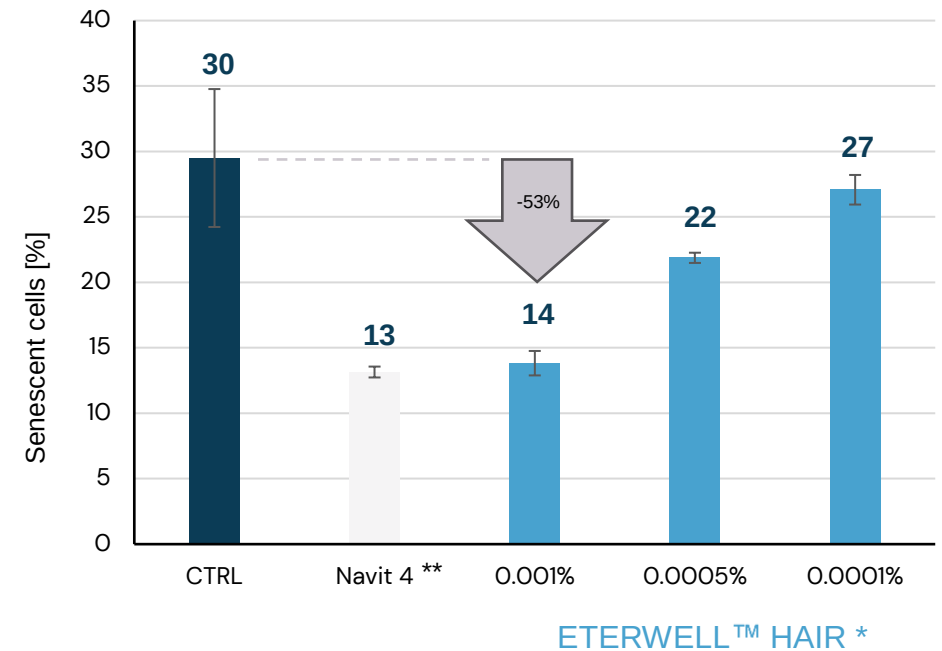
- Highly potent in our in vitro model mimicking aged hair follicles
- Model uses H₂O₂-induced senescent Follicle Dermal Papilla Cells
- Significant and dose-dependent senolytic activity

Treatment of Follicle
Dermal Papilla Cells

70% normal
30% senescent

Flow cytometer
+ Senescence-
associated beta-
galactosidase
marker

53% less senescent cells
with 0.001%* ETERWELL™ HAIR



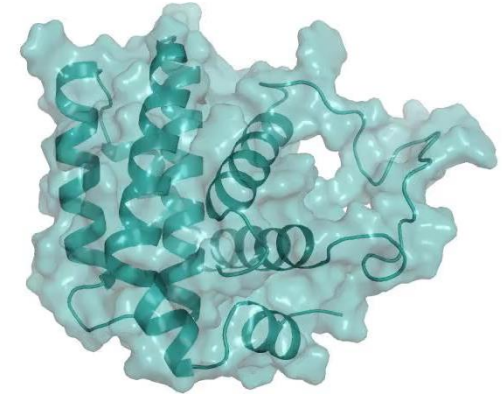
With a clear Senolytic mode of action

BCL-2 is a protein that inhibits apoptosis, the natural process that occurs when a cell intentionally “decides” to die after being damaged or becoming senescent.

This anti-apoptotic protein will keep senescent, “zombie cells” alive.

BCL-2 needs to be inhibited or neutralized to unlock the apoptotic process and clear the senescent cells from the cellular environment.

BCL-2 inhibition demonstrates a clear Senolytic process.

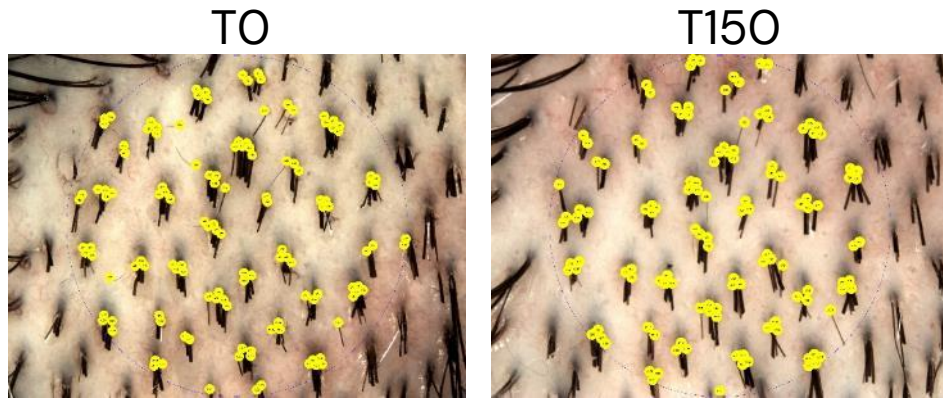


0.001%* of
ETERWELL™ HAIR
inhibits 66% of
BCL-2 In Vitro

Time Resolved
Fluorescence Resonance
Energy Transfer
(TR-FRET assays)

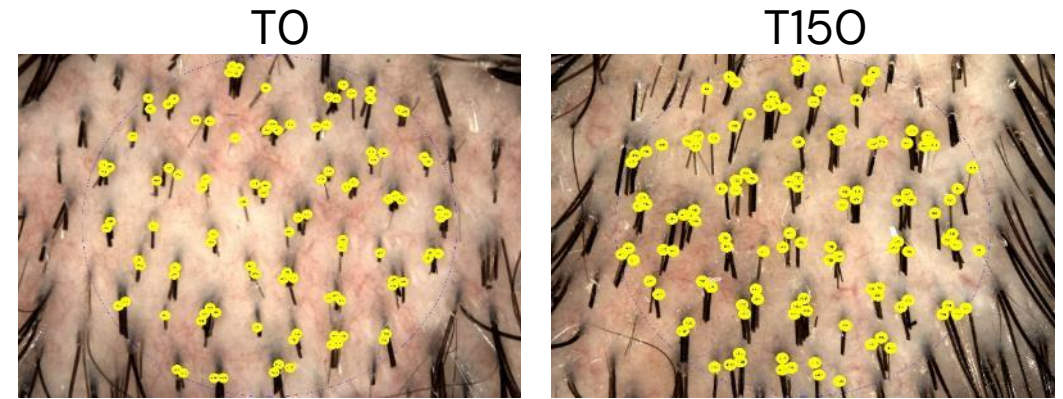
IN VIVO RESULTS

Showing highly significant hair density increase
with proven photographic evidence



Placebo – Volunteer #10P

Placebo



0.5% ETERWELL™ HAIR –Volunteer #19A

Average 5% hair density increase after 150 days
Up to 28% increase for the best volunteer

ETERWELL™ HAIR

Outstanding Results

DIRECT SENOLYTIC EFFECT BOOSTING HAIR LONGEVITY

- **53% less senescent Follicle Dermal Papilla Cells** with 0.001%* ETERWELL™ HAIR *in vitro*
- Inhibition of Arginase 1 expression *in vivo*
- **Increase of Keratin and Keratin associated proteins** markers *in vivo*
- **Inhibition of Alopecia promotor JAK2** *in vivo*
- **Inhibition of Apoptosis inhibitors** *in vitro* and *in vivo*
- **Increase of Apoptosis promotor MTCH1** *in vivo*
- **Reduction of senescence inducing markers** *in vivo*

SCREENED WITH dsm-firmenich's FIRST IN CLASS SENOLYTIC MODEL

- Using Senescent Follicle Dermal Papilla Cells
- Relevant for hair care

A CLEARLY SELECTIVE MODE OF ACTION

- Specific re-programming of Zombie cells via specific modulation of Apoptosis markers
- Demonstrated direct Senolytic effect

SIGNIFICANT RESULTS AT LOW CONCENTRATION *IN VIVO* (0.5%, 150 DAYS)

- Average 5% hair density increase after 150 days. Up to 28% for the best volunteer.
- 70% positive response to ETERWELL™ HAIR with an increase of Anagen phase (growth phase)
- A/T ratio increased by 5.2 vs placebo
- Correlation between hair density and efficacy of ETERWELL™ HAIR
- Results strongly validated by Proteome analysis

*dry extract

Organic, ethical and fully traceable bioactive

Plant: *LINUM ALPINUM* – Alpine blue flax

Parts of the plant: aerial parts

Harvest: May, July, September, full blooming

Standardization in Flavonoids: 40mg/100g
(UHPLC calculated as saponarin)

INCI Name: Glycerin, Water, *Linum Alpinum* Flower/Leaf/Stem
Extract, Citric Acid

INCI name China listing: *Linum Alpinum* Extract

China listing: IECSC listed, IECIC listing*

Natural origin content: 100% according to ISO16128

Suggested concentration: 0.5–3% ETERWELL™ HAIR

*Safe use level from 0.2 to 2% according to the Final list published to support China Safety Assessment issued in February 2025 without further regulatory requirements



2 THE ROOT

Hair longevity,
starting from the cells

Don't Mist Out

Leave on
anti-aging mist

Featuring
ETERWELL™ HAIR

With 97% natural-origin ingredients, this Leave On Hair Mist reinvigorates your hair and scalp by combining the power of ETERWELL™ HAIR, an eco-conscious solution powered by cutting-edge senolytic science, with a dream team of Hair Vitamins – Panthenol for deep hydration, Vitamin B3 for fuller, thicker hair, and Vitamin B6 for strength and nourishment. The formulation also contains PENTAVITIN®, our star moisturizer that acts like a Keratin magnet, locking in moisture while strengthening the scalp barrier.

Featuring Rejuven Hair, a science infused fragrance with emotiwaves® energy and clearsense® beauty technologies, designed to evoke emotions and provide a lasting feeling of freshness.



Rejuven Hair

A science
infused fragrance

emotiwaves® energy

dsm-firmenich neuroscience-
based fragrance technology
designed to drive emotions
through scents

+

clearsense® beauty

dsm-firmenich cutting-edge
technology designed to defend
against the perception of
unpleasant odors on hair & body

TOP NOTES

clean efficacy



Grapefruit - orange - ozonic accord

HEART NOTES

blooming & radiant



Peach - freesia - lily of the valley

BASE NOTES

caring & comforting



Musk - praline - soft woods

Beauty & Care

A House of Science beyond Wellbeing.

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We bring progress to life