



WELLHOUSE

HEALTHCARE

**WE ARE SERIOUS ABOUT
YOUR WELLBEING!!**

**WELLHOUSE
HEALTHCARE'S
LATEST ADDITION
TO OUR UNIQUE
PRODUCT BASKET**



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CONTAINS THE NOVEL

**HMRLignan™
Phyto-Oestrogen**

72mg PER CAPSULE

NORWAY SPRUCE LIGNAN

HMRLignan™ : 7-hydroximatearesinol in aglycone form,
co-crystallized with potassium acetate.

PLANT: Picea abies L. (Norway Spruce)

PART OF THE PLANT USED: Wood knots



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UNDERSTANDING LIGNANS

Power of nature

Lignans role in the plant is to
increase longevity

Phytoestrogens are plant-derived
compounds that are structurally
similar to mammalian oestrogens.

PHYTOESTROGENS

LIGNANS

Iso flavonoids

Others

UNDERSTANDING LIGNANS CONVERSION

During the past years over 400 lignans, both in glycoside and non-glycoside form, have been reported

Human's lignan absorption vary considerably due to:

- **Glycoside form** (slow absorption)
- Difference in intestinal transit time
- Gut microflora composition
- Intestinal inflammation



**USUALLY LIGNANS Are Converted
100% into ENTEROLACTONE**

BIOLOGICAL EFFECT



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WHY HMRLignan™ is superior to the other 400 lignans that have been reported over the years.

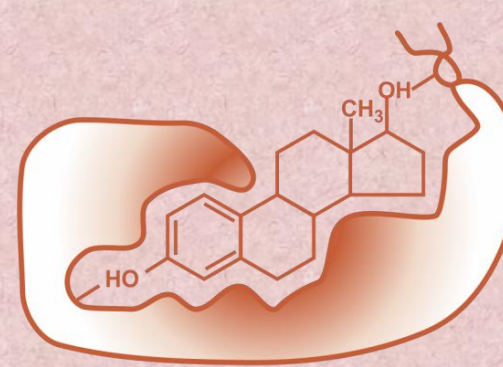
- ✓ **HMRLignan™** : Being already in the Aglycone form will yield higher levels of both Enterolactone & Active HMRLignan™ in the blood after the HMRLignan™ conversion.¹
- ✓ **Enterolactone** Once digested a portion of the HMRLignan™ is converted to enterolactone and are present in the blood. The Enterolactone can however not pass the blood brain barrier and therefore cannot add any therapeutic effect in the brain.⁶
- ✓ **HMRLignan™ Brain Activity:** The novel chemical structure of this Phyto-Oestrogen, once available in the blood, penetrates the blood brain barrier and have a positive therapeutic effect in the brain.⁶



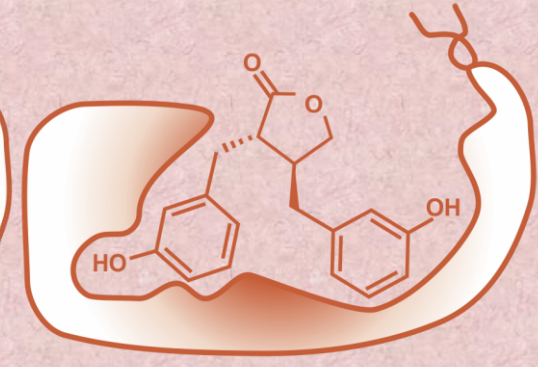
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The Oestrogen Receptor

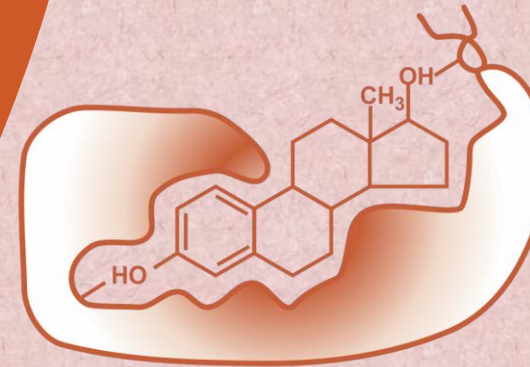
CHEMICAL STRUCTURE OF
ENTEROLACTONE & HMRLignan™



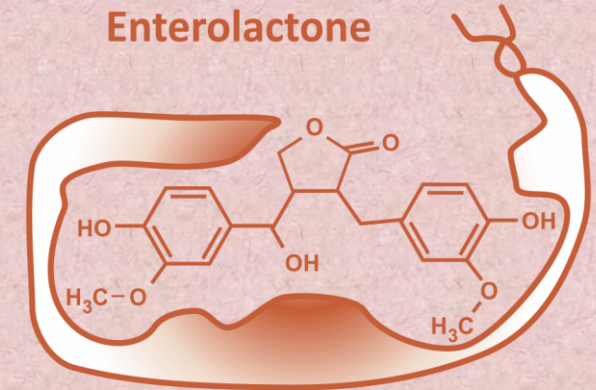
17β-estradiol



Enterolactone



17β-estradiol



HMRLignan™

X CH₃C OOK

The Chemical structure of Enterolactone & HMRLignan™ resembles the women's own oestrogen chemical structure, and mimic what the body's own oestrogen would do, but in a much less potent way.

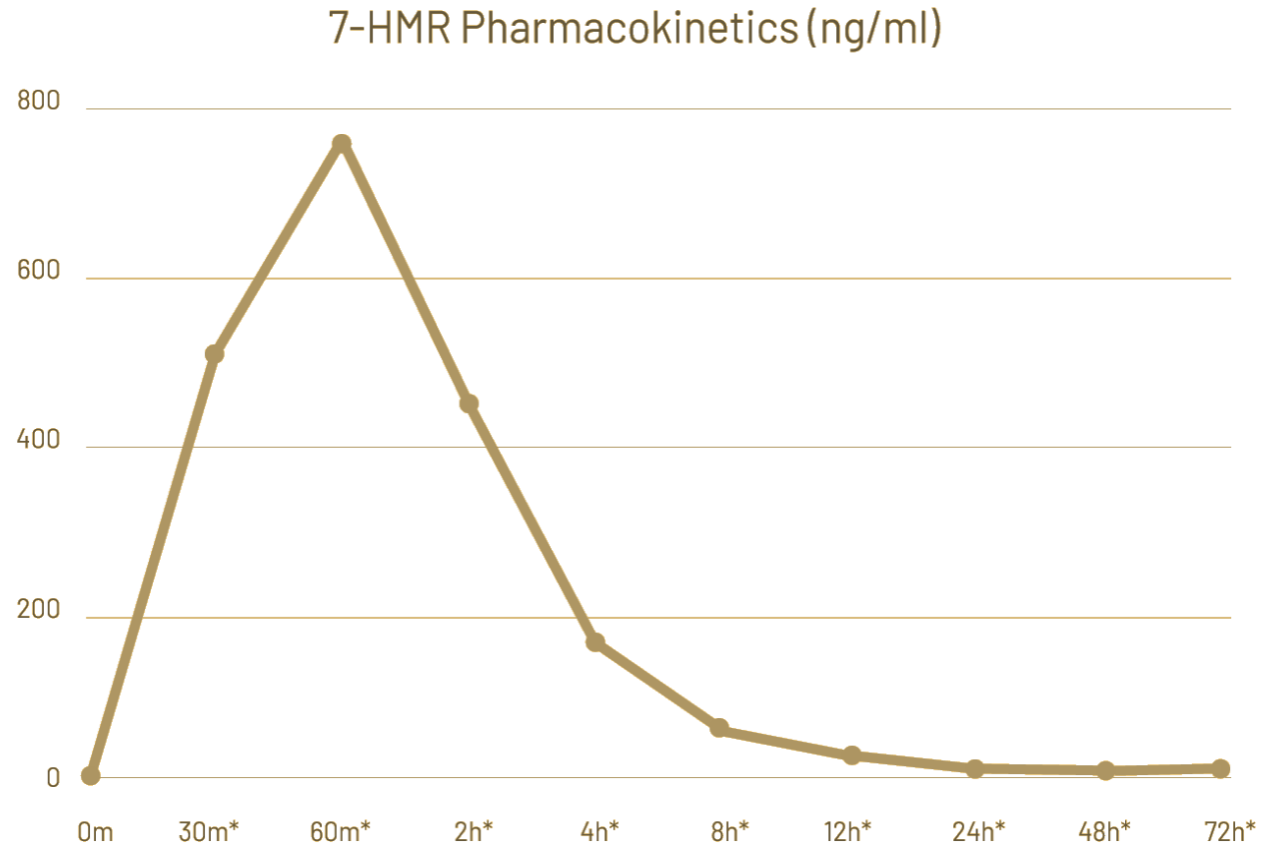
Differently from other lignans, **HMRLignan™** can be **directly absorbed** and is rapidly detected in the blood.

This is possible thanks to the unique product properties:

- **High content of 7-HMR**
- **Aglycone form**
- **Crystalline complex with potassium acetate**

HMRLignan™ ABSORPTION

7-HMR Plasma levels

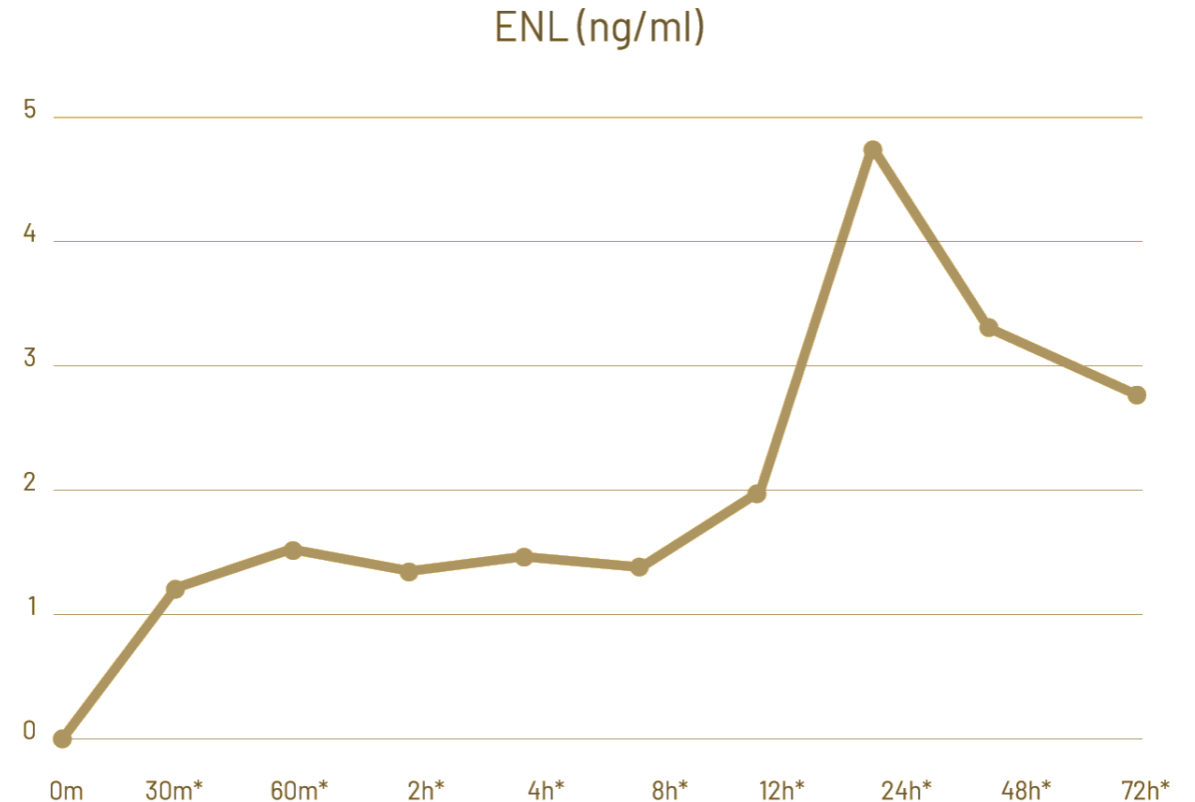


Pharmacokinetic profile of plasma 7-HMR (ng/mL) after supplementation of 36 mg HMRLignan. C_{max} was reached 1 hour after administration (757.1 ng/mL). *All time points from 30 minutes to 72 hours demonstrated a statistically significant increase compared to baseline.

- Lignans are transformed by gut flora into enterolactone
- Thanks to the **aglycone form**, enterolactone from HMRLignan™ shows a high absorption rate
- This creates a **prolonged lignans release**

HMRLignan™ ABSORPTION

Enterolactone Plasma levels



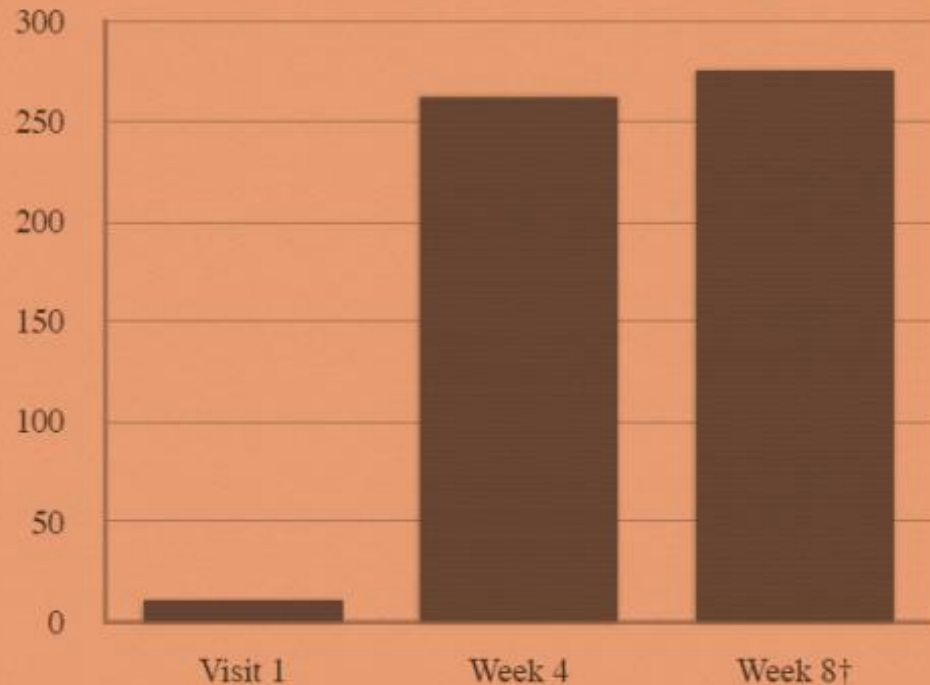
Pharmacokinetic profile of plasma ENL (ng/mL) after supplementation of 36 mg HMRLignan.

C_{max} was reached 24 hours after administration of 36 mg HMRLignan (4.8 ng/ml). *All time points from 30 minutes to 72 hours demonstrated a statistically significant increase compared to baseline.

HMRlignan™ AVAILABILITY

8-weeks administration plasma levels

7-HMR (ng/ml) 36mg group



Plasma 7-HMR level after supplementation of 36 mg HMRlignan. 7-HMR level demonstrated an increase of 191% above baseline by week 8 (†p = 0.006).

- Basal 7-HMR plasma levels were very low
- After 8-weeks of administration, 7-HMR levels remains steady

HMRlignan™ naturally gather within the body

USES AND DOSAGES

HMRLignan™, the natural solution for young and elder people to prevent and help fighting body aging.



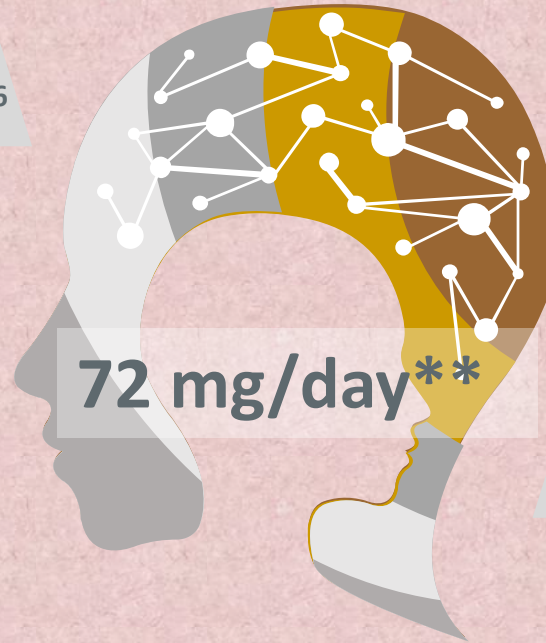
Neuroinflammation - Cerebral aging.⁶

Helps fight neuroinflammation.



Anti-Oxidant & Tumour Effects.²

Systemic protection from free-radicals, chronic diseases and degeneration.



72 mg/day**

Hot Flashes in Menopause.⁴

Normal and severe events reduction.



Improves BodyWeight & Sugar Metabolism.³



Tissue aging.⁵



Stimulates hyaluronic acid, collagen and elastin production.



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**HOT FLASHES in
MENOPAUSE**

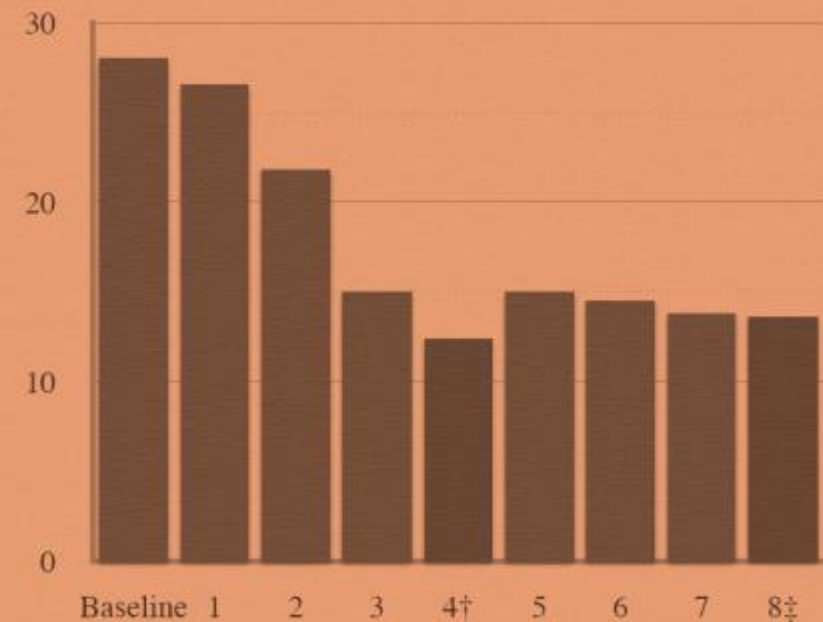


HOT FLASHES FREQUENCY

Episodes reduction

- Pilot study on 12 postmenopausal women
- After 1-week poor lignan diet (wash-out phase), **72 mg HMRLignan™** were administered daily, for 8 weeks
- **50% decrease in hot flashes frequency**, compared to baseline

Hot Flashes/Week-72mg Group



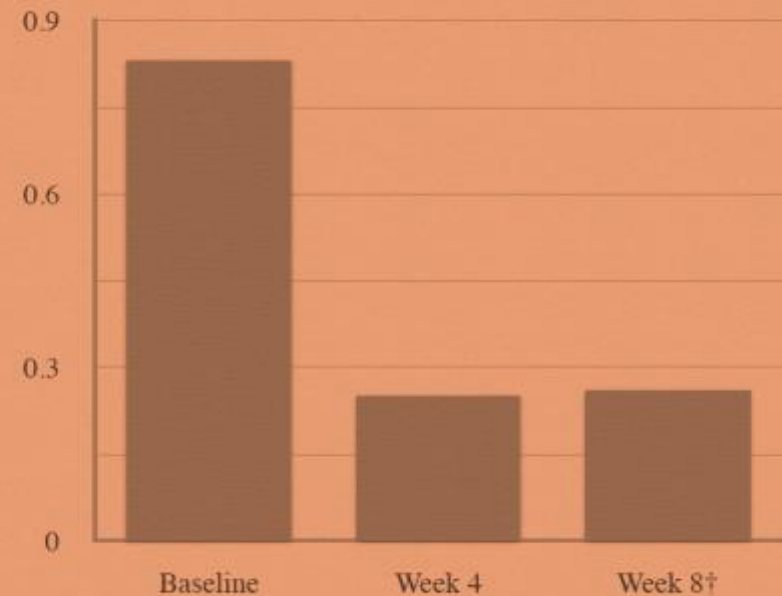
Hot flash frequency decreased by 55% from baseline to week 4 ($\dagger p = 0.009$) and by 50% from baseline to week 8 ($\ddagger p = 0.025$).

HOT FLASHES SEVERITY

Less severe episodes

- Pilot study on 12 postmenopausal women
- After 1 week poor lignan diet (wash-out phase), **72 mg HMRLignan™** were administered daily, for 8 weeks
- **79% fewer severe hot flashes,** compared to baseline

Severe Hot Flashes/Week- 72mg Group



Frequency of severe hot flashes decreased by 79% from baseline to week 4 ($p < 0.001$) and by 80% from baseline to week 8 ($p < 0.001$)



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NEUROINFLAMMATION

CEREBRAL AGING

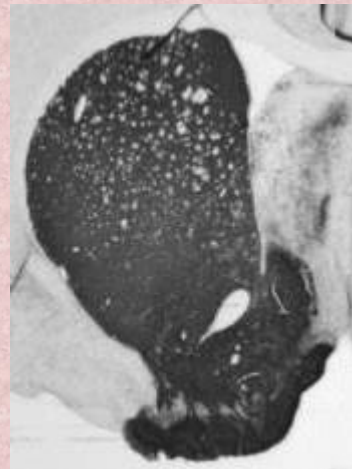
CEREBRAL AGING DELAY

A leading strategy to prevent age-related brain issues

HMRlignan™ consumption showed neuronal loss reduction up to 30%.

An important tool to prevent neurodegenerative age-related issues.

NORMAL BRAIN



NEUROINFLAMMATION



NEUROINFLAMMATION+7-HMR



STUDY DESCRIPTION: The toxin 6-OHDA induces a considerable loss of neuron terminals and cell bodies. Animals treated with HMRlignan™ showed a 30% significant reduction of dopaminergic terminal loss in the nigrostriatal pathway (basal ganglia region). The nigrostriatal lesion was assessed by immunohistochemistry for the dopaminergic marker tyrosine hydroxylase (TH) on coronal sections of both central nervous system and striatum after 28 days of treatment with HMRlignan™.



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TISSUE AGING

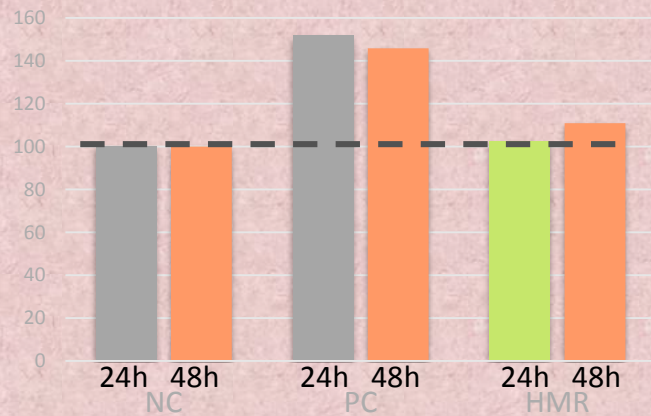


TISSUE AGING DELAY

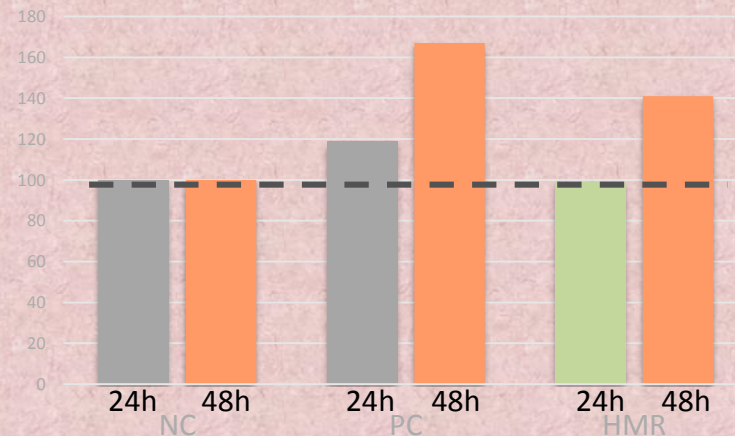
Effects on Structural Fibers - Cells

In vitro investigation performed on human skin fibroblast, incubated for 24 hours and then treated with HMRLignan™ or insulin (positive control).

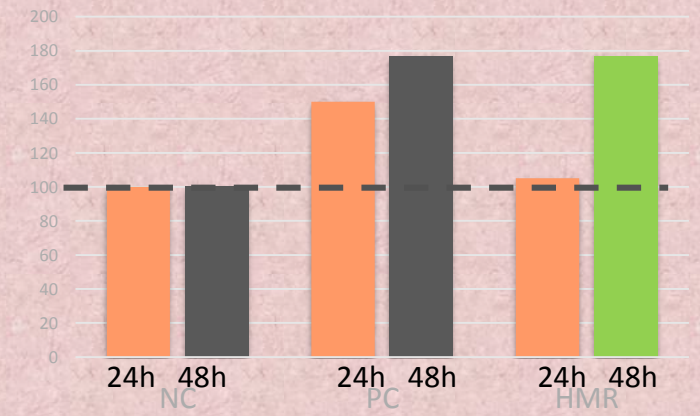
Hyaluronic acid production:



Collagen I production:



Elastin production:



In vitro investigation performed on human skin fibroblast, incubated for 24 hours and then treated with: nothing (NC), human insulin 100 µg/mL (PC), **HMRLignan™** 0.08 mg/mL (HMR). Measurements are referred to the assembled macromolecules, values are measured with ELISA+UV after 24 and 48 hours of incubation. Cut-off 10%.

Linnea internal report.



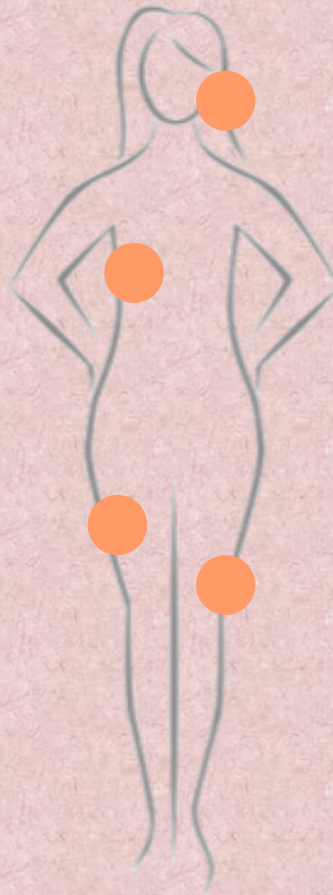
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HMRLignan™ improves the production of the three main structural components of connective tissues, present in **skin, joint and bones**.

Tissues are correctly nourished despite the flow of time.

TISSUE AGING DELAY

Effects on Structural Fibers - Cells



ELASTICITY, STRENGTH

Elastin production: **+77%**

SUPPORT, SHAPE

Collagen I production: **+41%**

HYDRATION, REGENERATION

Hyaluronic acid production: **+10.85%**



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LILIA MENOPAUSE CAPSULES 72mg HMRLignan™ / CAPSULE LEGISLATORY

HMRLignan™ has been registered as a New Dietary Ingredient (NDI) with the US FDA since 2004. The recommended daily ratio is – for any indication - 72 mg/day

LILIA MENOPAUSE is marketed in accordance with the criteria laid down by SAHPRA and is Manufactured in a GMP SAHPRA accredited manufacturing plant.



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ADDITIONAL PROMINENT ACCREDITATION OF HMRLignan™



Allergen, Gluten,
Lactose, Melamine free



GMO
free



Halal
certified



Kosher
certified



Vegan
certified



Irradiation,
Nanomaterials, Latex



Standardized
botanicals



Manufactured
in Switzerland



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THANK YOU

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