

Care
Creations™

Speci'Men™

 **BASF**
We create chemistry

1 | The Challenge

2 | The Solution

3 | Efficacy Data

4 | Conclusion

Men's skin differs from women skin

- Signs of aging are **delayed for men** compared to women, but when these changes begin, **they happen faster**
- **Loss of skin density is higher** for men which leads to **slackness**, loss of **elasticity**, and loss of **firmness**
- Appearance of **eyebags**, **sagging of the eyelids**, and **nasogenian fold wrinkles** are deeper, which gives a **“tired”** appearance
- Men are **less concerned** by **wrinkles** but they are unhappy with **unhealthy-looking** skin
- **The issues behind aging male skin** are different than women's and must be treated appropriately



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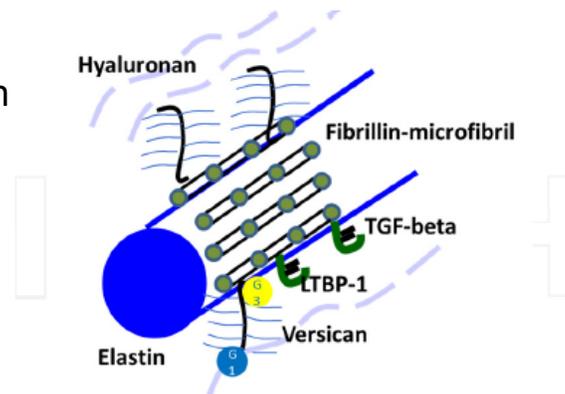
4 | Conclusion

Versican - State of the art

Versican is critical for dermal viscoelasticity because it constitutes the **fibrillin-versican-hyaluronan network**

- **Versican** is a large tridomain Chondroitin Sulfate ProteoGlycan (CSPG), **abundant in the ECM (dermis)**
- **Connects microfibrils (elastin) to the HA-rich matrix for viscoelasticity**

Binds to Hyaluronic acid, which holds water



Connects with elastic microfibrils through binding to fibrillin-1, fibulin-1 & 2

Figure 4. Schematic presentation of the dermal viscoelastic network linked by versican. Versican links elastic fibers to ground substance.

 Nemoto T et al. 2012.

Speci'Men Concept

To address men's specific skin aging concerns / for men's skin health

Targeting **Versican** ... Functional Versican is critical for dermal viscoelasticity because it is an essential element of the fibrillin-versican-hyaluronan network in the ECM



WHY

- Specifically for men, Versican **increases** with aging
- Non functional (degraded by MMP-12) **Versican protein accumulates** in the dermis of chronically **sun-exposed skin** with elastotic material (extrinsic aging)

HOW

- By **modulation of Versican gene expression** in fibroblasts from aged male donors
- By **inhibition of MMP-12**

Sustainable sourcing of baobab leaves from **Burkina Faso** is ensured through good practices collection

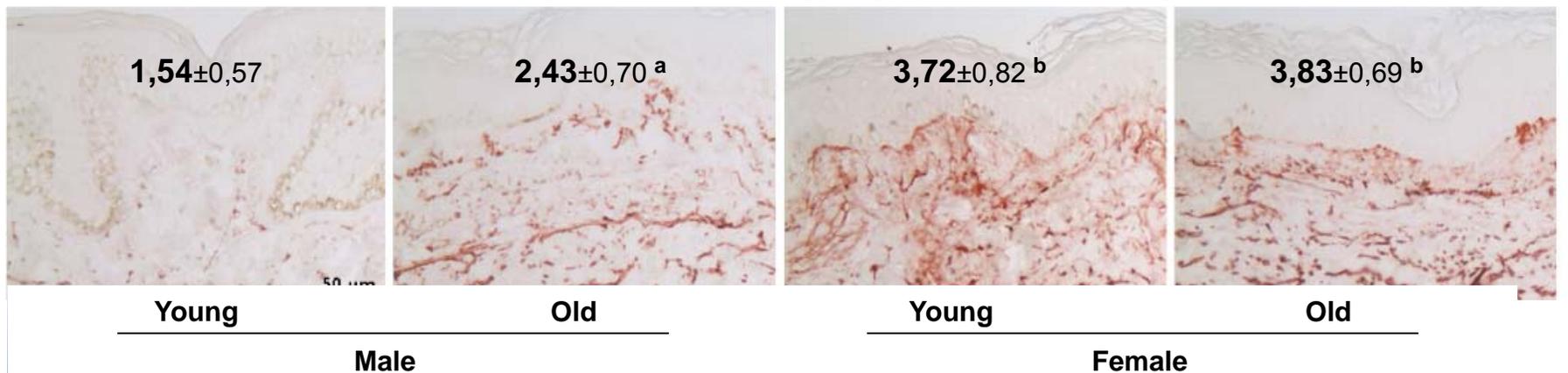
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Versican - State of the art

Biopsies from young & elderly Korean **male** (21-30 yrs, n=8 & 70-78 yrs, n=8) and female (20-33 yrs, n=8 & 70-80 yrs, n=8) - **sun-protected** skin

Semiquantitative versican grading for immunohistochemistry (antibody: 2B1), scale 1-5, with increase by 0,5

Statistics : non-parametric Mann-Whitney U test - ^a : p<0,05 vs corresponding young, ^b: p<0,05 vs corresponding male



Oh JH et al. 2011

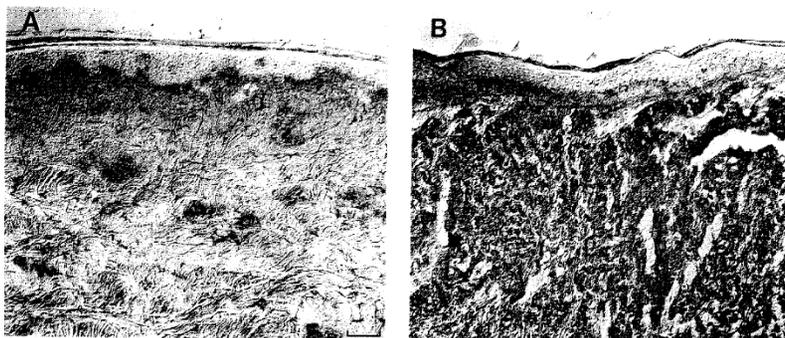
Versican protein increases in male intrinsic skin aging

Versican - State of the art

Versican protein accumulates in the dermis of chronically sun-exposed skin

Biopsies from chronically sun-exposed (posterior neck) vs sun-protected (upper buttock) skin (n=9 males, 49-62 yrs) - Samples analyzed in pairs from the same individual

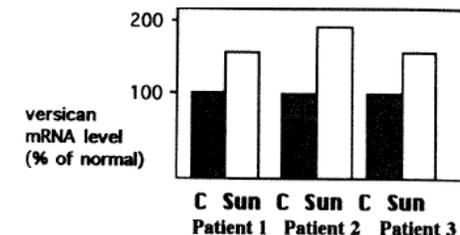
Immunohistochemistry (n=6, antibody LF-99)



Sun-protected

Sun-exposed

First passage fibroblasts culture from sun-exposed and sun-protected biopsies
Northern analysis of versican mRNA



📖 Bernstein EF et al. 1995.

→ **Increase in versican immunostaining in sun-damaged skin vs protected skin**

Colocalization with elastin in solar elastosis

→ **increase of versican gene expression x1,7**

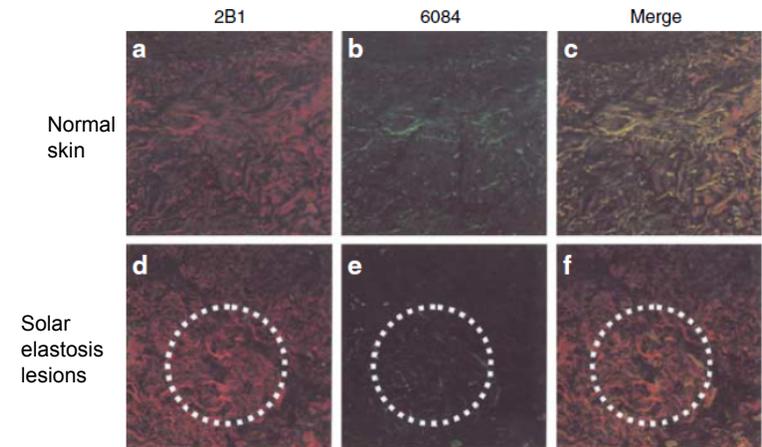
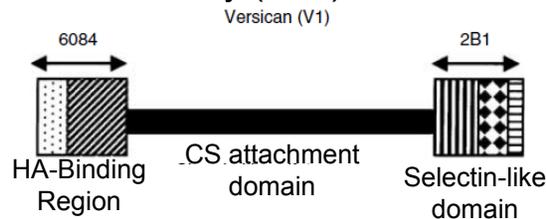
on cultured NHDF from sun-exposed skin vs sun-protected skin

Versican - State of the art

Versican accumulated in areas of solar elastosis **is unable to bind HA**, due to enzymatic degradation by **MMP-12** → non functional

Biopsies from advanced solar-elastosis skin (n=13, mean age 77.2 yr, from forehead, cheek and nose) and normal sun-protected skin (n=8, mean age 73.0 yr, from abdomen, thigh, back and chest) – Gender not precised

- Double-immunofluorescence staining of sun-protected skin and solar elastosis regions with N-terminal HA-Binding region antibody (6084) and C-terminal Selectin-like domain antibody (2B1)



Hasegawa K al. 2007.

- **MMP-12** (localized in solar elastosis lesions, and is induced at mRNA level by UV in vivo) **abrogates the HA-binding activity of Versican**

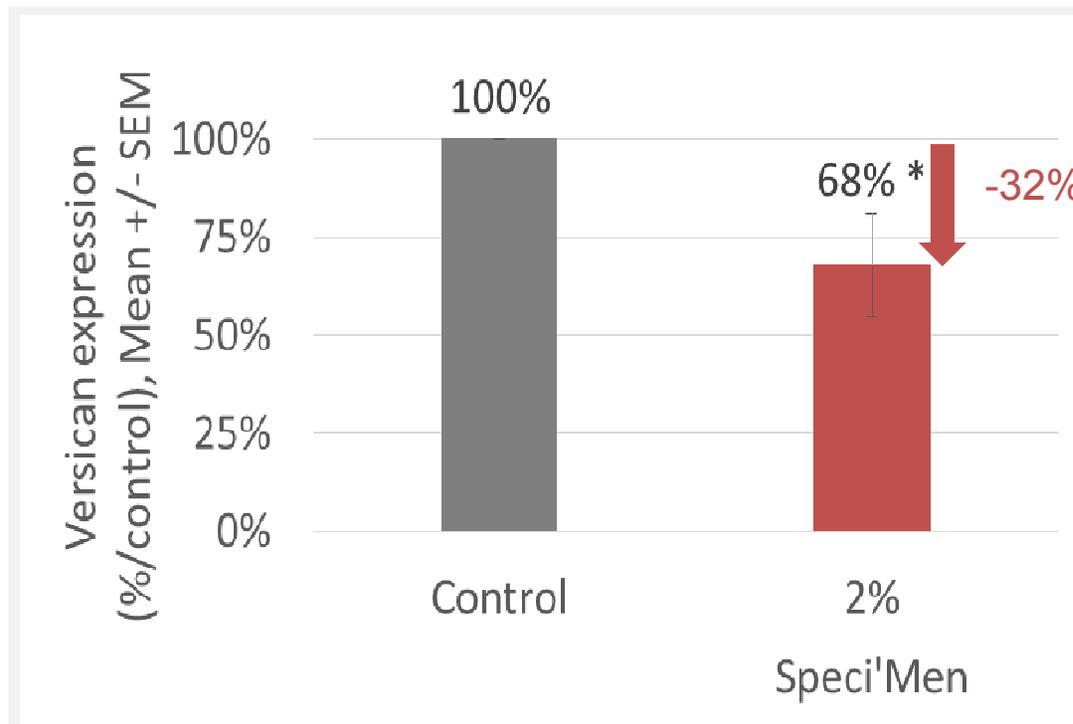
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Speci'Men - Inhibition of Versican mRNA expression



Mean +/- SEM of 5 assays for > 50 yrs (male NHDF, 2 donors, 53 & 62 yrs)

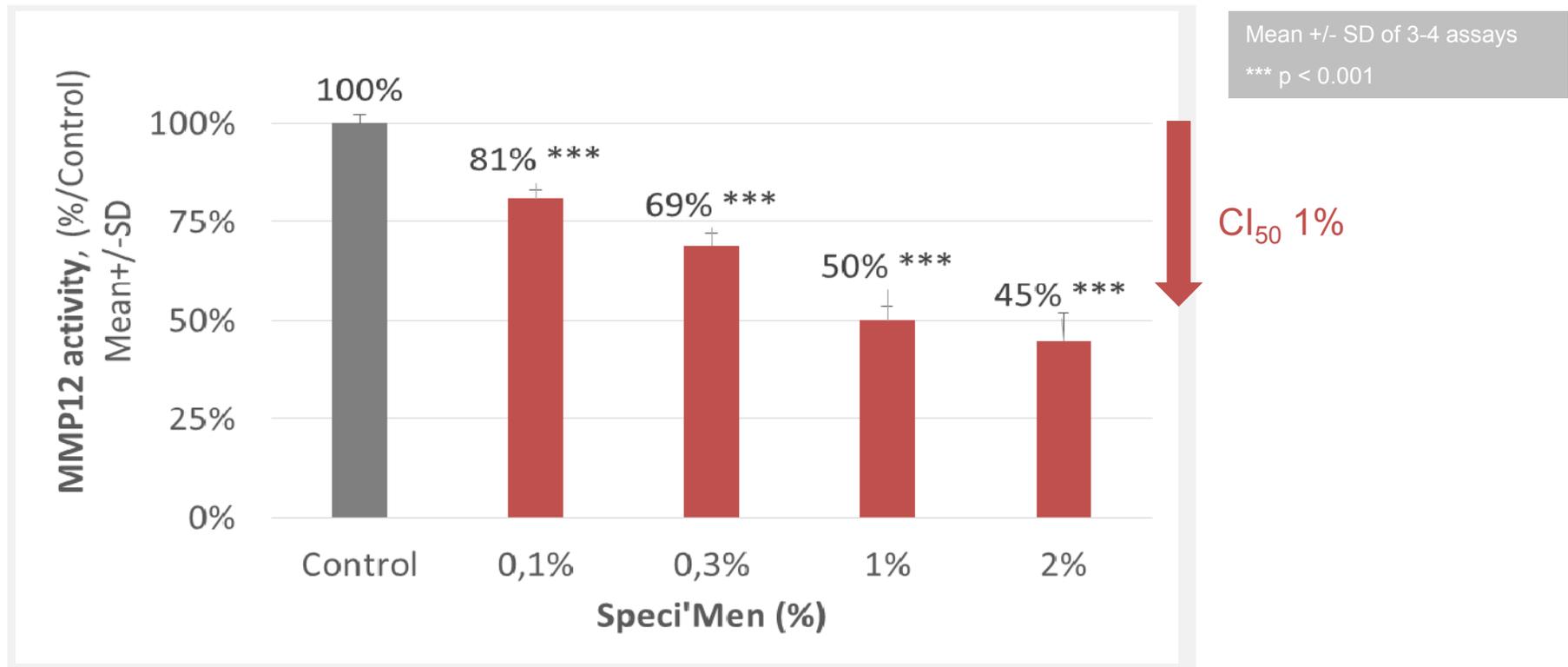
By RT-PCR at 24h

• $p < 0.05$

Assays realized with active matter at 0,02% equivalent to 2% Speci'Men BC10001

32% inhibition of Versican mRNA expression by fibroblasts from aged men donors (without negative effect on total sulfated GAGs and on number of cells (DNA level))

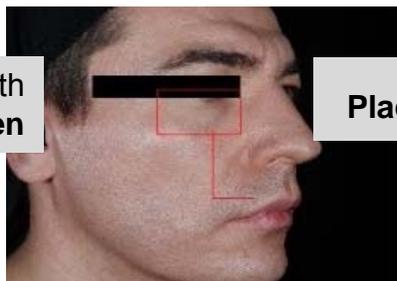
Speci'Men - MMP12 Inhibition



55% Inhibition of MMP12 involved in breakage of the fibrillin-versican-hyaluronan network

Protocol

Cream with
3% Speci'Men



Placebo cream

Evaluation at D0, **D28**, **D56**

Volunteers panel:

33 Caucasian men, 40-60 years old, with

- marked eye-bags linked to the age
- a cutaneous slackening of the inferior eyelid
- nasogenian fold wrinkles

Application:

Double-blind, randomized, split face, twice daily during **56 days**

METHODS

Instrumental evaluation

- Visco-elastic properties on cheekbones (**Cutometer**)
- Nasolabian fold (**Fringe projection**)

Clinical evaluation

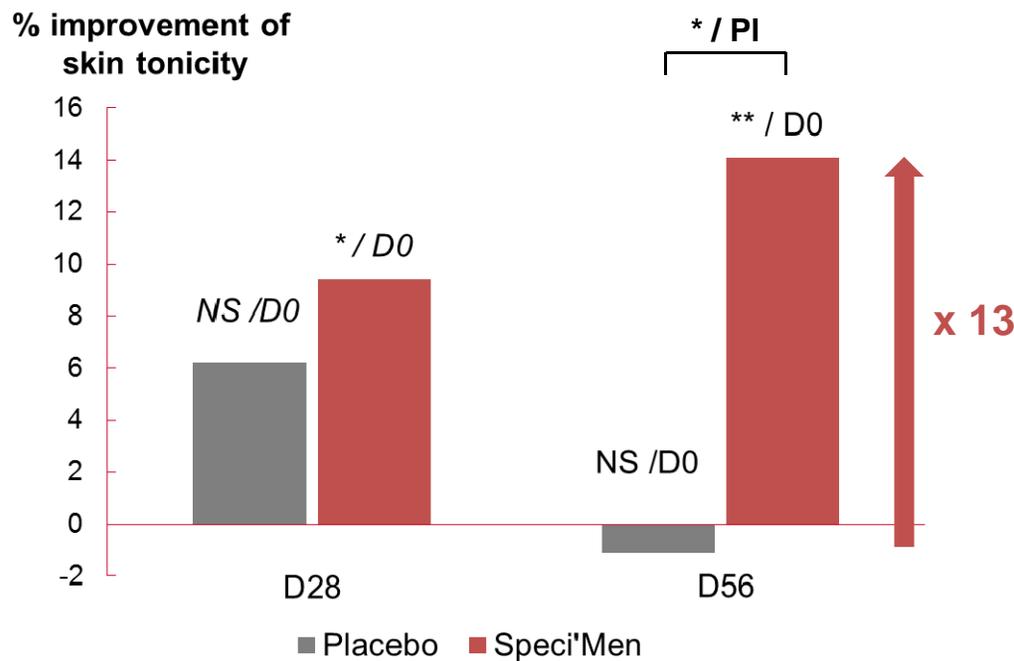
- Volume of the **eyebags**
- Cutaneous **slackening** of the inferior **eyelids**

Self assessment by volunteers

- **Self-assessment questionnaire** filled by a **close relation** to the volunteer

High resolution digital photographs

Results on Visco-elasticity (Cutometer)

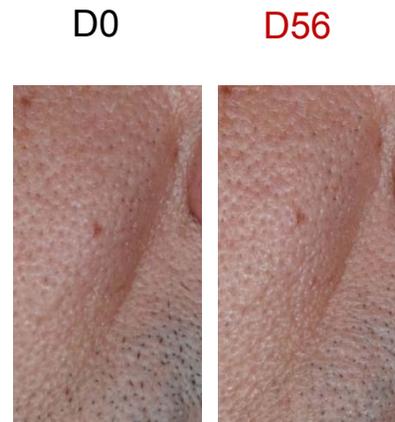
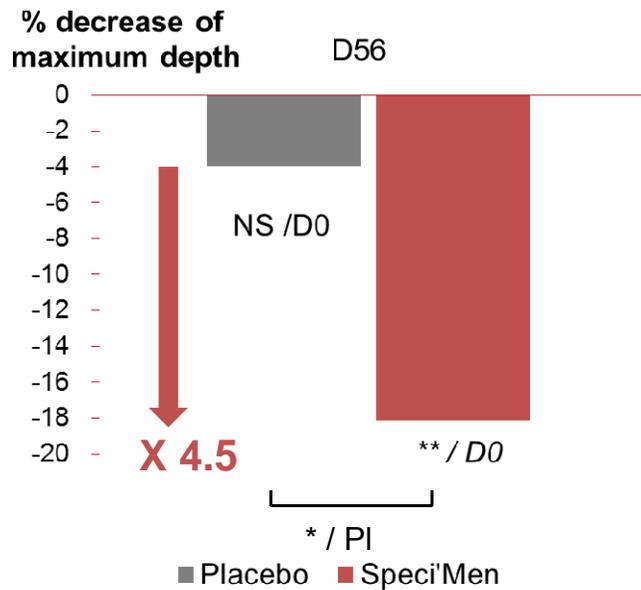


Statistics on 31 volunteers
/D0 /PI : Student t test or Wilcoxon test
NS: Not significant; * : $p \leq 0.05$; ** : $p \leq 0.01$

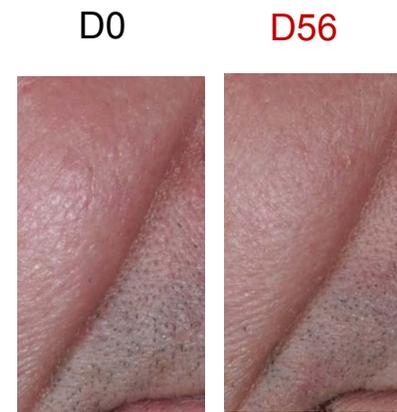
- Skin Visco-elasticity and tonicity by Cutometric measurement
- **Improvement** of Uv/Ue vs Placebo

Significant improvement of skin visco-elasticity and tonicity vs placebo

Results on main wrinkle (Fringe projection)



« Mean volunteer »
↘ 18% maximum depth



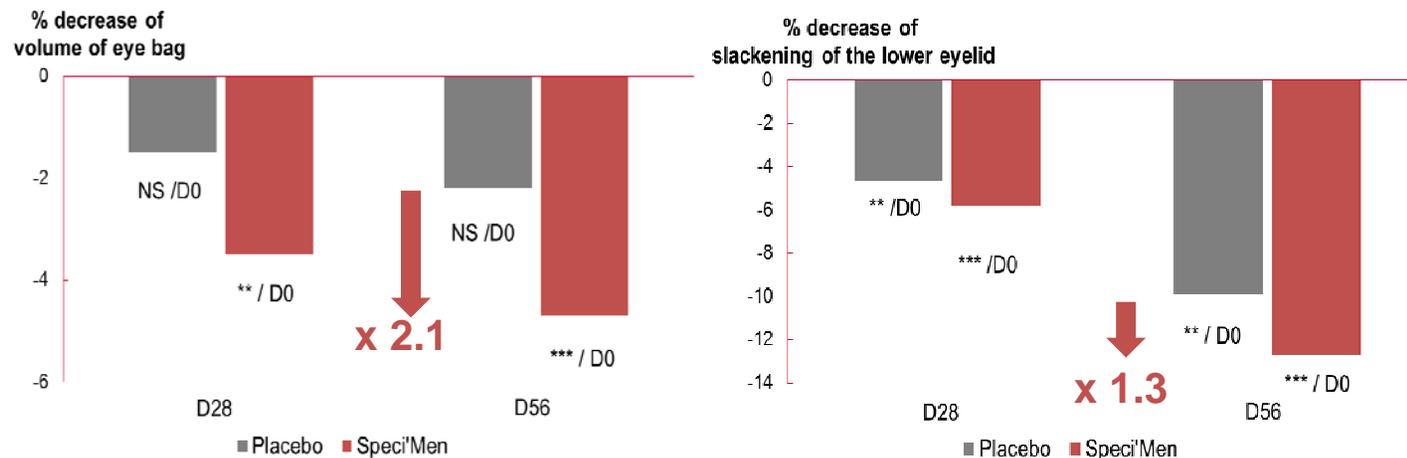
« Best volunteer »
↘ 52% maximum depth

Statistics on 26 volunteers
/D0 /PI : Student t test or Wilcoxon test
NS: Not significant; * : $p \leq 0.05$; ** : $p \leq 0.01$

- **14% decrease of maximum depth (mm) vs placebo on nasolabian fold**

Significant decrease of main wrinkle depth vs placebo

Results under eye area (Clinical evaluation)



- **5% reduction** of volume of the **eyebags** vs D0 : (whereas placebo is NS at D28 & D56)
- **13% decrease** of cutaneous **slackening of the lower eyelids** vs D0

Statistics on 30 volunteers
/D0 : Wilcoxon test
NS: Not significant; ** : $p \leq 0.01$; *** : $p \leq 0.001$

Decrease of 5% eyebag volume & **13%** lower eyelid slackening

Consumer and partners assessment

by volunteers

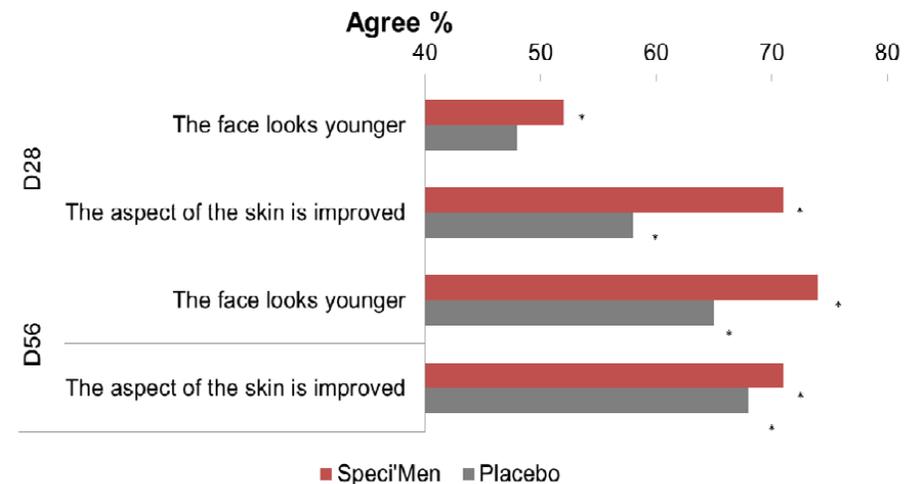
Self-assessment D56



Statistics : Chi-2 test; * : p < 0.05

- **Efficacy perceived, better than placebo**
- **Specificity : 94% * of volunteers agree at D56 with “This product is particularly suitable for men”**

by a close relation



- **Efficacy perceived, better than placebo**

Spec'i'Men is perceived with an efficacy **better than placebo** and **specific for Men**

Test Summary

In Vitro Results

- **Inhibition of Versican mRNA expression:** 32% inhibition by fibroblasts from aged men donors
- **MMP12 Inhibition:** 55% inhibition of MMP12 involved in breakage of the fibrillin-versican-hyaluronan network

In Vivo Results

- **Skin ViscoElasticity:** 15% improvement vs Placebo
- **Nasogenian fold:** 14% decrease of maximum wrinkle depth vs Placebo
- **Reduction of eyebags & slackening of the lower eyelid:**
 - 5% reduction of volume of the eyebags vs D0
 - 13% decrease of cutaneous slackening of the lower eyelids vs D0
- **Self assessment by volunteers:** 94% of volunteers agree that “This product is particularly suitable for men”
- **Assessment by partner:** Skin improvement and youthful effect perceived

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Speci'Men™



Product Properties

Dose of use: 1-3%
Solubility: water-soluble
Preservatives: none

INCI: Hydrolyzed Adansonia
Digitata Extract

Formulation Instructions

Incorporate at the end of the formulation at room temperature under gentle stirring.

Benefits & Unique Selling Points

- Specifically for **men's skin care**
- Reduces **over-production of Versican**
- Inhibits **MMP-12** production
- Clinically proven to **improve viscoelasticity**, reduce **eyebags** and **eye slackening**, and decrease the appearance of **deep wrinkles**
- **Visible improvement** by volunteers' partners and self-assessment

Applications



Men's Face Care

PCPC	IECSC 2013	IECIC 2014	JP cosmetic	QD additive	REACH
✓	✓	✓	✓	X	< 1 ton active matter /yr

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We create chemistry