StandStill Rose from Damas

Modulating the activity of the dermis

A STORY

The Rose from Damas | *Rosa damascena, Rosaceae*

A symbol of beauty, love and renewal

Cultivated since the Ancient times, in Rome and in the Middle-East, that ancient rose, that flowers twice a year, has an exceptional fragrance, that made it one of the most important component in the perfume industry: it is the mother of Bulgarian roses, the roses dedicated to make perfumes. As a universal symbol of beauty, it was associated to the goddess of beauty Venus a long time. Then the legend of Adonis associated it to renewal, like gothic rose windows and its etymology («rosa» from dew and rain in Latin) remind us. Since the Ancient times, it is considered as a medicinal plant, thanks to the well known properties of its oil and its petals: they are told to be tonic, antiseptic and astringent.

Key points

An active plant cell
Developed to deliver the highest amount of original active molecules.

A high tech natural ingredient
Created to preserve and improve the identity and the benefits of a natural product.

A general anti-ageing action
Decreases the skin cell senescence, reduces the development of wrinkles.

Because dermis is at the origin of a firm skin, it is necessary to modulate its activity by extending the life of its essential components: cells. To get a skin smooth and firm, still looking young.

PRODUCT BENEFITS

Anti-ageing

Anti-wrinkle

Decreases deep and superficial wrinkles on the face, including mature skins, especially crow's feet.

Retructurating

Restores higher levels of the synthesis of fiber and glycoproteins in the extra cellular matrix.

Firming

Contributes to densify the dermis. Helps to improve or restore the dermis functions, skin resistance.

To be used in skincare or make-up products like cream, fluid, serum, balm, lotion, milk, foundation, concealer, etc., in any cosmetic or skincare product dedicated to limit skin cell ageing.

NAOLYS

Related products | KEEP SMOOTH WHITE WATER LILY AND INDIAN JASMINE | ALL EVEN SWEET IRIS | ALL FIBER BOOSTER CHINESE HIBISCUS

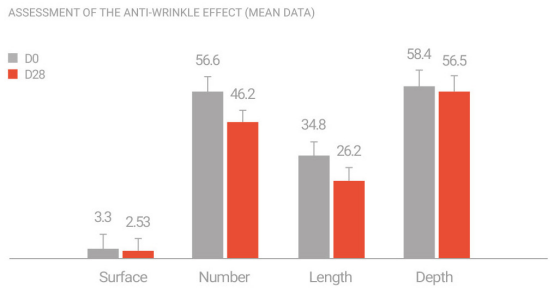
HOW IT WORKS

StandStill Rose from Damas: increasing dermis cell activity

StandStill Rose from Damas acts mainly on the dermis and its components. First it acts on the lifetime of cells, of fibroblasts, by limiting their ageing, meaning by limiting the natural phenomenon of senescence. Second it reinforces the activity of cells by boosting the synthesis of fibres, collagens and proteoglycans, which support skin and constitute extra-cell matrix. Third, it helps to decrease the quantity of an enzyme responsible for the degradation of those fibres.
Thanks to that action of extending cell life therefore cell activity, dermis can keep creating highquality components.

Clinical testing results

Decrease of wrinkles (crow's feet)



Results of the study

Decrease of the total surface of wrinkles by 22%
Decrease of the number of wrinkles by 18%
Decrease of the lenghth of wrinkles by 23%

Declaration of the women in the panel

90% declared that dry wrinkles are smoothed
85% declared that wrinkles seemed reduced

Day 0

Day 28

Conditions of the study

→ Survey made on 20 women during 28 days, with crow's feet
→ Emulsion with 0.5% of StandStill Rose from Damas (dispersion form)
→ Assessment made by analysis of cutaneous prints (Quantirides)

Technical information Formulating StandStill Rose from Damas

INCI name of cells	form	aspect	concentration	dispersible
rosa damascena leaf cell extract	cells (20%) in glycerin or sunflower oil (80%)	liquid	starting at 0.5%	in any formulation

In vitro testing results

Study of the fibroblasts senescence - dermis level

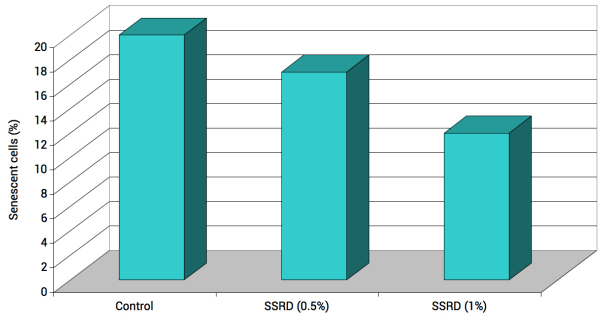
Identified in the 60s, the cell senescence is a phenomena of cell ageing that appeared especially important for skin because it induces some alterations in the dermis, when fibroblasts are senescent.

The cell senescence is declared when a cell doesn't proliferate anymore, meaning when it doesn't divide itself anymore. That state of senescence is due to ageing or to environmental factors, for instance, it can go off when cells are hit by stress. However even if a senescent cell doesn't divide itself anymore, it doesn't die but keeps on acting metabolically a very long time. We noticed that fibroblasts seemed really resistant to apoptosis (cell death). The «senescent» state comes with a change in cell functions and not a lost.

The senescent cell shows an increase of its volume and a modification of its morphology, becoming flat regarding fibroblasts. The senescent fibroblasts can also degrades the extra cellular matrix by an increase of metalloproteases (interstitial collagenase and the stromelysine - MMP3), associated with other modifications. The senescent cells are then caracterizied by an active metabolism with a surexpression of the beta-galactosidase due to an increased enzymatical activity.

Therefore Naolys measured the beta-galactosidase rate in the fibroblastes in culture to assay the number of senescent cells. Then the activity of StandStill Rose from Damas appears towards the state of cell senescence.

Study of senescent cells in the dermis



Decrease of the senescent cells rate

→ At concentrations of 0.5% and 1%, decrease of the senescent cells rate: 17% and 12% of presence of senescent cells compared to untreated cells (20% of senescent cells)

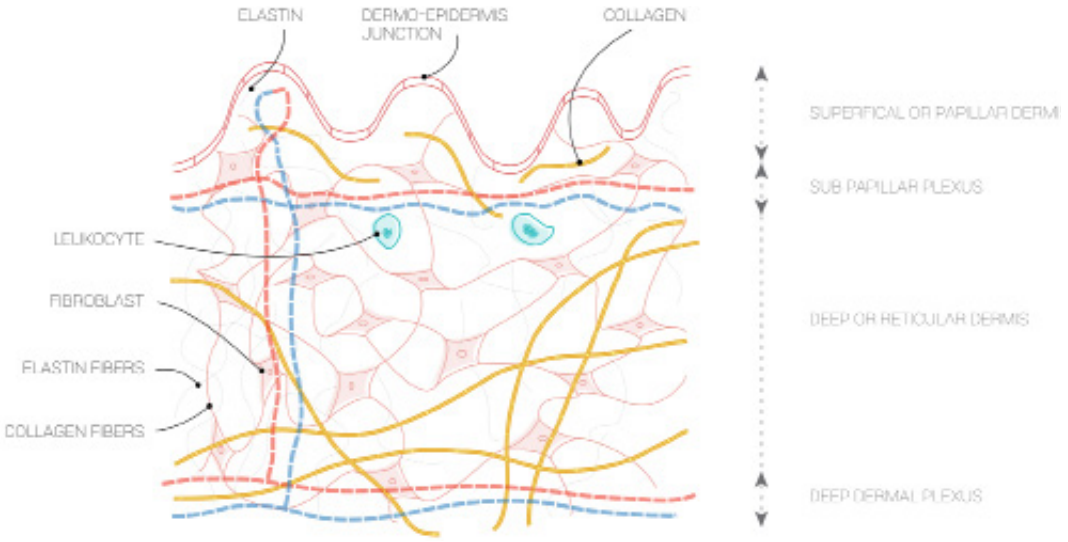
Study of the extra-cellular matrix - dermis level

In the dermis, the extra cellular matrix (ECM) is made of different non cellular components, and provides not only essential physical scaffolding for the cellular constituents but also initiates crucial biochemical and biomechanical cues that are required for tissue morphogenesis, differentiation and homeostasis. It is made of water, polysaccharids and proteins; the two main classes of macromolecules are proteoglycans and fibrous proteins like collagens, elastins, fibronectins and laminins synthetized by fibroblasts, the dermis cells.
Actually the ECM is a highly dynamic structure that is constantly being remodeled, either enzymatically or non-enzymatically. The ECM generates the biochemical and mechanical properties of skin, such as its tensile and compressive strength, elasticity, and also mediates protection by a buffering action that maintains extracellular homeostasis and water retention.
With ageing, the synthesis of the different macromolecules made by fibroblasts decreases, then the biochemical cues in the ECM are modified, therefore its properties decrease too.

Studies about 3 components of ECM: proteoglycans, collagen and MMP3

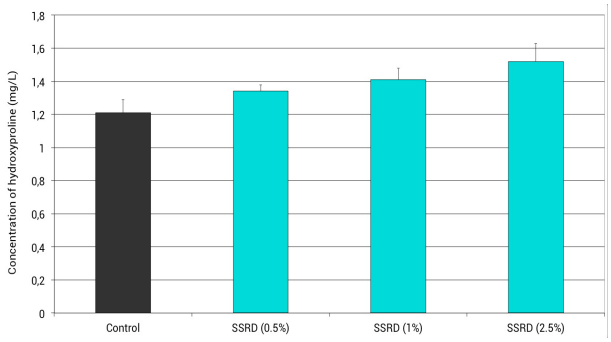
The different studies on the components of the ECM run by Naolys have been made on culture of fibroblasts.
Naolys studied the synthesis of the 3 types of proteoglycans made by fibroblasts, which is a very precise study.

Proteoglycans are made of a combination of a protein and a GAG. As they are made of long O-glycolized chains, they are like «water traps». They have buffering, hydration, binding and force-resistance properties.
Collagen is the most abundant fibrous protein within the interstitial ECM and constitutes the main structural element of the ECM; collagens provide tensile strength, regulate cell adhesion, support chemotaxis and migration, and direct tissue development.
MMP3 (or Stromelysin-1) is an enzyme of the ECM that is involved in the breakdown of the ECM and tissue remodeling. It degrades collagen types II, III, IV, IX and X, proteoglycans and other fiber proteins.



INSIDE THE DERMIS

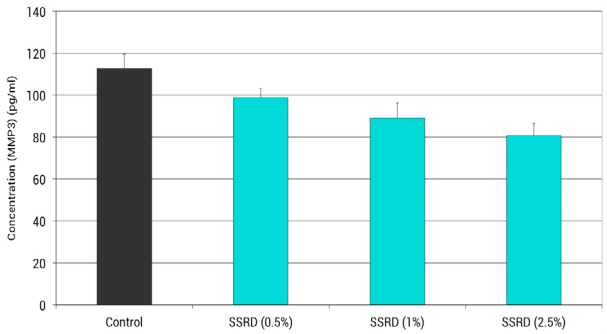
Study of the synthesis of collagen



Increase of collagen rate

→ At concentrations of 0.5%, 1% and 2.5%, increase of collagen rate respectively by 11%, 17% and 26%

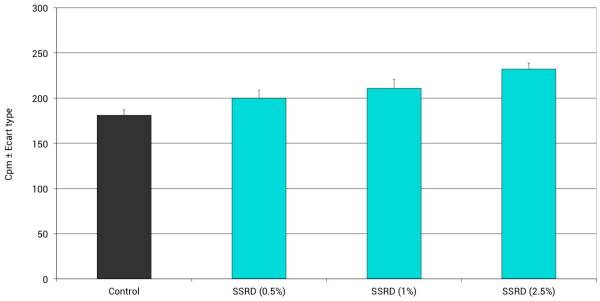
Study of the MMP3



Decrease of MMP3

→ At concentrations of 0.5%, 1% and 2.5%, decrease of the MMP3 rate respectively by 12%, 21% and 28%

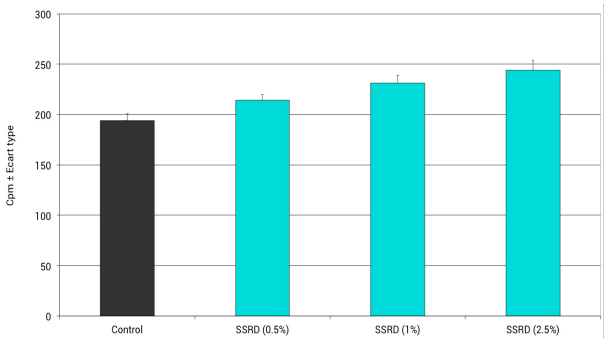
Study of the synthesis of proteoglycans



Increase of the peri-membrane proteoglycans rate

→ At concentrations of 0.5%, 1% and 2.5%, increase of the peri-membrane proteoglycans rate respectively by 10%, 17% and 28%

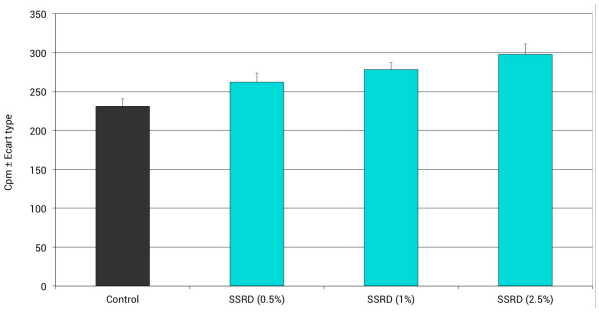
Study of the synthesis of proteoglycans



Increase of the trans-membrane proteoglycans rate

→ At concentrations of 0.5%, 1% and 2.5%, increase of the trans-membrane proteoglycans rate respectively by 10%, 19% and 26%

Study of the synthesis of proteoglycans



Increase of the matrix proteoglycans rate

→ At concentrations of 0.5%, 1% and 2.5%, increase of the matrix proteoglycans rate respectively by 13%, 20% and 29%

NAOLYS