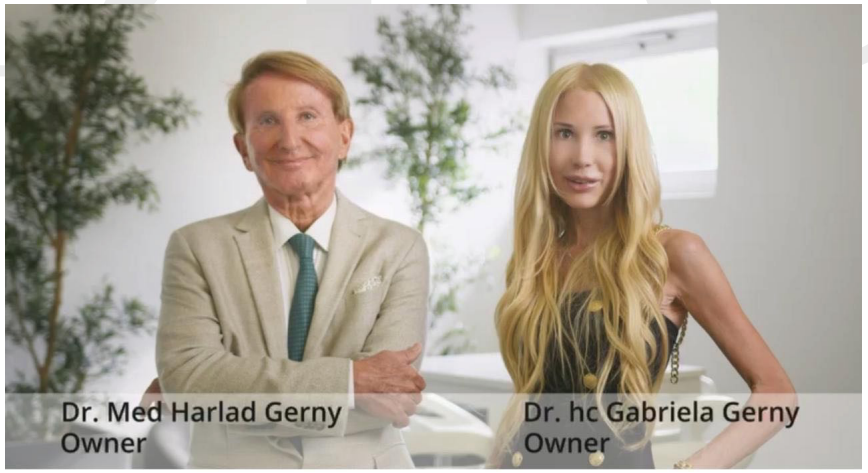
BEST OF SWITZERLAND

# OPUS

SWISS MOST LUXURY SKINCARE




A masterpiece of Swiss quality and the power of nature combined with the latest science and long experience from star dermatologist Dr.Gerny and Gabriela Gerny


# Revolutionary skin care

New scientific findings in epigenetics, long-standing dermatological experience and a skin-soothing formulas by Dr. Gerny and Gabriela Gerny.
Alpine Rose Active is a purified extract of organic alpine rose leaves, which rejuvenates the skin through the novel anti-aging concept of senolytics.
Alpine Rose Active is COSMOS approved and ECOCERT certified.

# Clearing Age-Promoting Cells for Youthful Skin

Alpine Rose Active is a natural active ingredient based on an organic Swiss alpine rose leaf extract. It is the first cosmetic ingredient to act as a so-called senolytic. That means it specifically eliminates senescent cells to rejuvenate the tissue. Clinical studies demonstrate a decrease in skin redness, increased elasticity and photoprotection, rejuvenating the skin from the inside-out.

Alpine Rose Active is based on the leaves of Rhododendron ferrugineum, which is also known as alpine rose. This is one of the most typical and iconic plants of the Swiss Alps. This evergreen plant, which grows at high altitudes (up to 2,800 m) in the Alps but also in the Jura, Pyrenees, and Apennines, in acidic and nutrient-poor soils, can live for more than 100 years. Like other alpine plants, the alpine rose has developed diverse strategies in order to cope with extreme environmental conditions, such as large variations in temperature, UV and dryness, and a nutrient-poor soil.

# Cream

Opus cream is the newest and most effective cream with Alpine Rose Active and Perfection Peptide P3. Developed by Swiss star dermatologist Dr. Gerny and Gabriela Gerny. This high effect cream activates collagen production and regenerates the skin Wrinkles, lines and light-induced changes in the skin arevisibly alleviated. The skin becomes more radiant

Free from: mineral oils, PEG/PPG emulsifiers silicones,preservatives,octocrylene, ethylhexyl methoxycinnamate.


# Serum

Opus serum is the newest and most effective cream with Alpine Rose Active and Perfection Peptide P3. Developed by Swiss star dermatologist Dr. Gerny and Gabriela Gerny. The intensive anti-aging treatment works wonders to rejuvenate the skin. lt has a proven protective and vitalizing effect and achieves an increase in skin firmness and density.

Free from: mineral oils, PEG/PPG emulsifiers silicones,preservatives,octocrylene, ethylhexyl methoxycinnamate.

# Eye cream

Developed for the delicate, sensitive area around the eyes, This eye cream counteract specifically the visible signs of skin aging. give your eyes that special fresh look. Within minutes, the skin's appearance is significantly improved with fewer visible lines and wrinkles. Eye contours appear more relaxed and fresh. The precious substances counteract the skin's chronological aging for a smoother, more radiant look. An ideal freshness boost for tired and severely stressed eyes with a cooling effect to reduce swelling.

Free from: mineral oils, PEG/PPG emulsifiers silicones,preservatives,octocrylene, ethylhexyl methoxycinnamate.


# Eye elixir

This best anti-aging Eye treatment works wonders to bring a sparkle into your face. It helps to filling fine lines, reduce puffiness, fading signs of stress and dark circles. This OPUS Eye Elixir is the most effective and from newest technology with best, effective ingredients. You will see and feel an immediate effect. The skin is tightened.
Skin type: Ideal for the very demanding dry skin, that tends to wrinkles and lines.

Free from: mineral oils, PEG/PPG emulsifiers silicones,preservatives,octocrylene, ethylhexyl methoxycinnamate.


# Benefits

**Eliminates senescent skin cells**

**Reduces redness and increases skin elasticity**

**Rejuvenates the deep layers of the skin**

**Protects skin proteins from oxidative stress**

# Maximum dosage for more effect

- Advanced Biochemistry- Total rejuvenation
- activates longevity factors in skin cells
- Stimulation of Cell to Cell/skin layers communication
- Innovative and powerful anti-aging complex
- Increase of collagen + elastin - promotes skin firmness
- Stimulates natural growth factors
- Intense skin matrix repair formula


*The power of nature*
*combined with newest*
*technology from science*

For sophisticated ladies
Who only wants the best for skin

OPUS

# INTRODUCTION

Oxidative stress damages skin proteins and accelerates the formation of carbonylated proteins. Environmental stress factors such as UV light, infrared radiation, tobacco smoke and pollution generate reactive oxygen species (ROS). ROS oxidize proteins and lipids, the main components of cell membranes. The oxidation of proteins leads first to carbonylation, an irreversible and unrepairable modification of protein structure (Fig. 1).

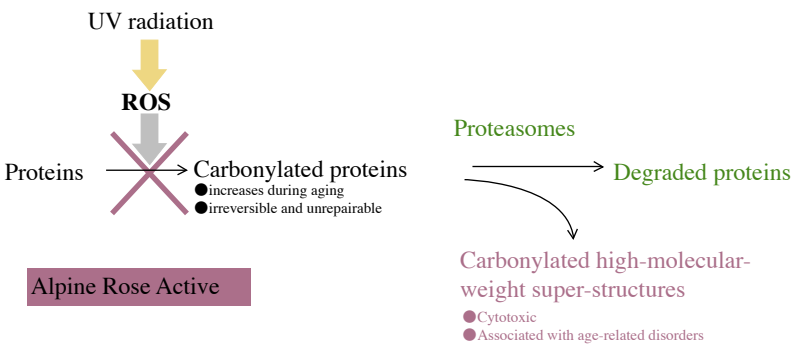


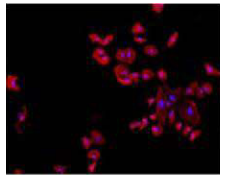

*Fig 1: Alpine Rose Active Inhibits the Formation of Carbonylated Proteins*

## PROTEIN CARBONYLATION

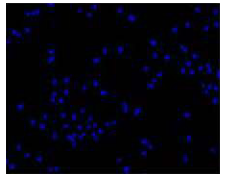
Normally, the resulting carbonylated proteins are recycled by the proteasome, the cell's own cleaning system which degrades damaged and oxidized proteins. But age and an increase in oxidative stress factors impair the proteasome activity, leading to an accumulation of carbonylated proteins, a marker of aging. Because they are highly reactive, carbonylated proteins aggregate and form high-molecular-weight super-structures which resist degradation. These cytotoxic structures accumulate with time and accelerate skin aging and have been associated with a large number of age-related disorders including Parkinson, Alzheimer's disease and cancer. Therefore, the content of carbonylated proteins is the major indicator of oxidative damage and a marker of aging.

Herpes is a viral disease caused mainly by herpes simplex virus type 1 (HSV-1). Most individuals are carrier of the herpes simplex virus, staying in a dormant status. Distress, caused by an unhealthy lifestyle, is immune-suppressing as is UVB, able to cause an outbreak of a herpes simplex infection on the skin or around the lips.

The Alpine Rose (Rhododendron Ferrugineum) is one of the most typical and prominent Swiss alpine plants. It grows at high altitudes in acidic and nutrient-poor soils and has developed impressive strategies to protect itself against dehydration and the attack of radicals and pathogens. The Alpine Rose is very difficult to cultivate, a reason that this plant is not used in cosmetics so far.



Cells incubated with virus (HSV-1) that adhere to the surface of the cells (control)



Cells incubated with viruses pretreated with 0.02% Alpine Rose Active - no adherence to cells

Viruses in red (HSV-1 Cy3 staining), cell nuclei in blue (DAPU staining)

*Fig 4: Alpine Rose Active Inhibits Adhesion of the virus*

## Conclusion

Alpine Rose Active is a Ecocert certified extract oforganic alpine rose leaves, which inhibits the formation of carbonylated proteins and protects the skin against herpes occurrence.

The activity of Alpine Rose Active was demonstrated in several in vitro and in vivo studies.The extracts inhibits the carbonylation of cutaneousproteins, an irreversible, and age-related oxidative process induced by reactive oxygen species.

Alpine Rose Active strongly inhibited the adherence of the HSV-1 virus on cells, meaning that the antiviral effect of Alpine Rose Activeagainst herpes relies on its capacity to prevent theadhesion of this virus on cells.

Alpine Rose Active can thus protect skin proteinsagainst damage induced by oxidative stress as wellas reinforce its defense against pathogens.

This innovative active based on the extremophileAlpineRose can beused in various cosmetic applications as anti-aging formulas, photo-aging prevention, sun care products, protective skin careand lipcontour treatments.

## RESULTS AND DISCUSSION

### STUDY: PROTECTION AGAINST PROTEIN OXIDATION (IN VIVO)

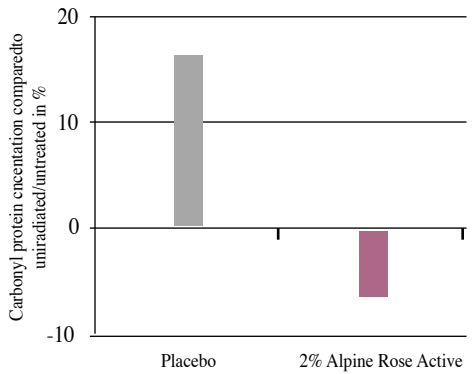



*Fig 2: Inhibition of Carbonyl Protein F ormation*

***Study: Antiviral Effect against Herpes Simplex (in vitro)***

**Oral herpes is a viral disease caused mainly by herpes simplex virus type 1 (HSV-1). The visible symptoms of this infection are cold sores which infect the face and mouth.**

Oxidative stress was evaluated in vivo by measuring the carbonyl protein content in human skin after exposure to UVA radiation. The suction blister technique was used to perform this measurement. Skin blisters are produced with a vacuum device on the forearm and then the blister fluid is collected. It represents the interstitial fluid of the skin and can be used for analysis of skin biomarkers.

The test products (cream with 2% Alpine Rose Active and placebo cream) were applied twice daily for 14 days on the inner side of the forearms of 12 volunteers aged from 40 to 54. After the last product application, the test sites were irradiated with 10 J/cm2 UVA-light.

Subsequently, suction blisters were induced, the suction blister fluids were collected and their content of protein carbonyls was analyzed with an ELISA-kit.

Results showed that the carbonyl protein content was significantly reduced in the suction blister fluid of the test site treated with Alpine Rose Active compared to the placebo-treated skin area, indicating a protective effect against the oxidative stress induced by UVA (Fig. 2).

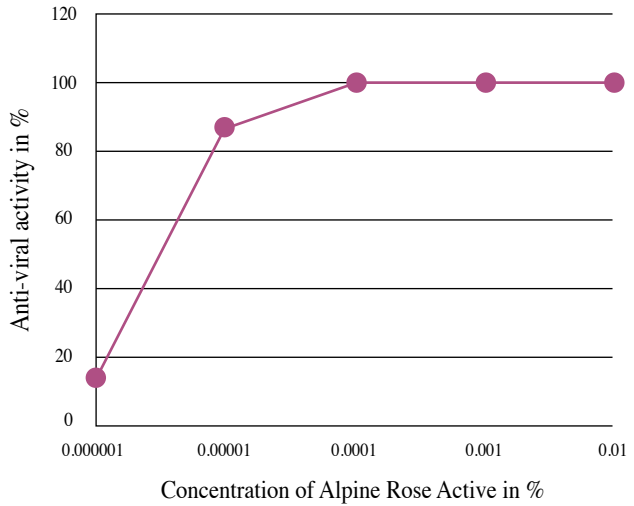



*Fig 3: Inhibition of HSV-I Activity*

The general antiviral effect of Alpine Rose Active was tested on Vero cell cultures (epithelial kidney cells). The Vero cells were seeded in plates. The virus was preincubated with different concentrations of Alpine Rose Active and then added to the cell monolayer. To evaluate the anti- viral activity of Alpine Rose Active, the incubated cells were stained with crystal violet, a reagent that only interacts with living, not-infected cells. Thus, infected cells form plaques in the violet monolayer that can be counted and are an equivalent for the anti-viral activity of an active.
Results showed that Alpine Rose Active strongly inhibited the activity of herpes simplex virus type 1 (HSV-1) (Fig. 3).

In order to understand the mechanism of Alpine Rose Active, an adsorption assay with an immune- fluorescence staining was performed.
Vero cells were cooled down to reduce the permeability of their cell walls. Then the virus was pre-incubated or not with 0.02% Alpine Rose Active and added to the Vero cell cultures. After incubation, the Vero cells were washed. To investigate the capacity of the virus to adhere to the cell membrane, viruses were stained with a specific antibody.
Microscope analysis showed that Alpine Rose Active strongly inhibited the adherence of the HSV-1 virus on cells, meaning that the antiviral effect of Alpine Rose Active against herpes relies on its capacity to prevent the adhesion of this virus on cells (Fig. 4).

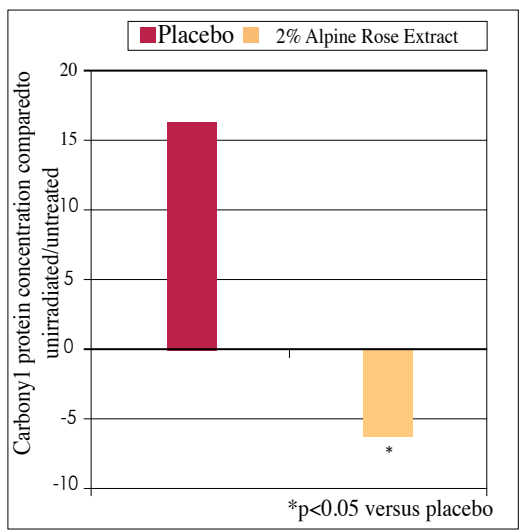
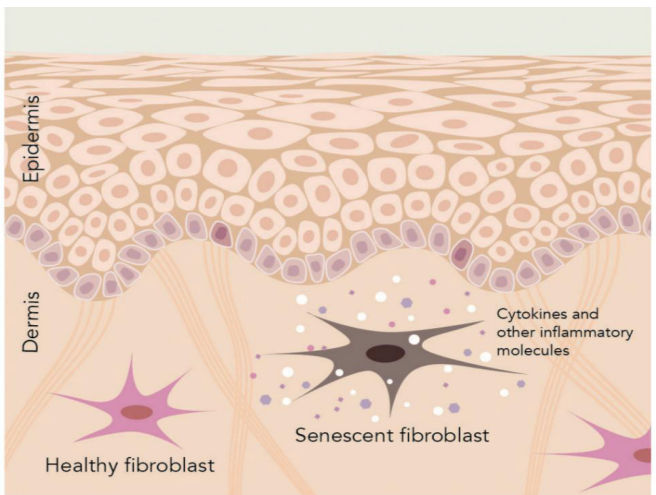



*Figure 4: Prevention of protein carbony formation by the alpine rose extract upon UVAI stress in vivo*

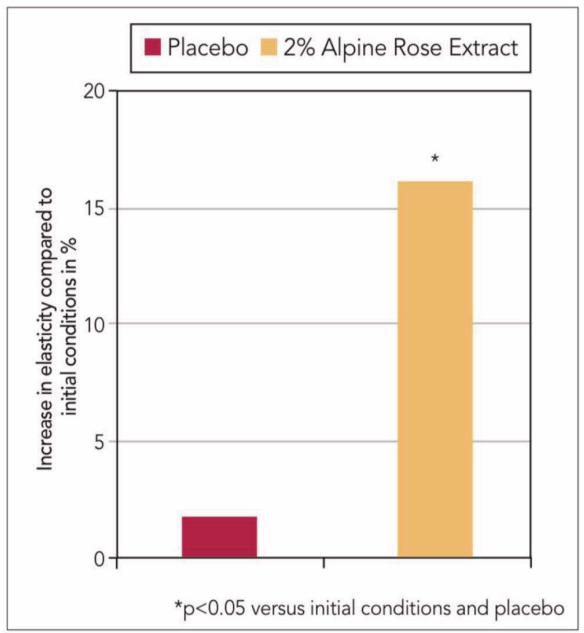
*ANTI-AGEING CONCEPT*

This novel concept, known as “senolytics,” helps to clear tissues of senescent cells without affecting healthy cells in order to reduce inflammation and rejuvenate the tissue. For the first time, this concept has been adapted for cosmetics. In vitro testing demonstrated a clear senolytic activity of the Alpine Rose Active on senescent fibroblasts. That means it helps to eliminate senescent fibroblasts without negatively affecting healthy fibroblasts to rejuvenate the deep layers of the skin.




# CLINICAL STUDIES OF PHOTOAGEING PROTECTION AND SKIN REJUVENATION

Figure 6: Increase in skin elasticity after 28days treament with 2% alpine rose extract.



## SWISS VALUES

**High quality, innovation,reliability and tradition**

## Seal of quality

This high luxury product is developed and produced in Switzerland.With the newest technology,best selected ingredients and our experience since 1991,we guarantee most luxury medical skincare


Elite Switzerland

Our dermatological experience is a guarantee for the success of your skin.

Dr med.Harald Gerny
Star Dermatologist

Gabriela Gerny

# OPUS

**Your skin is our priority**

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