

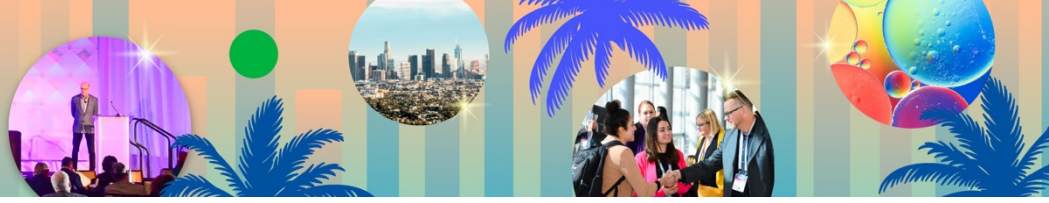
# SCC78

DECEMBER 11-13, 2024 | LOS ANGELES, CALIFORNIA

## Speaker Abstracts

Session F: Skin Health Science





# Hypodermis - The Missing Link in Antiaging Strategies

Krys Bojanowski, PhD

Sunny BioDiscovery, Inc.

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## ABSTRACT

Hypodermis is a major structural component of the skin responsible for the youthful plumpness of the face and hands. It is also a reservoir of stem cells and growth factors that rejuvenate the upper layers of the skin. Loss of subcutis is a key driver of aging, and is reflected in the altered appearance of body surface in terms of contour, as well as biophysical parameters, such as firmness, tone, pores, texture, elasticity, hydration and luminosity. Despite its importance, the knowledge of hypodermis in the industry is scant and cosmetic actives capable of supporting this compartment are rare. Here, we provide a review of subcutis in aging skin and discuss the importance of including it as a target in the design of antiaging strategies. An example of such hypodermis-targeting strategy completes this presentation.



## **A Marine Biotech Megasugar to Improve Skin Appearance and Activate "Well-being and Happiness" Signaling Pathways**

**Richard Leroux, PhD**

**Seqens Personal Care**

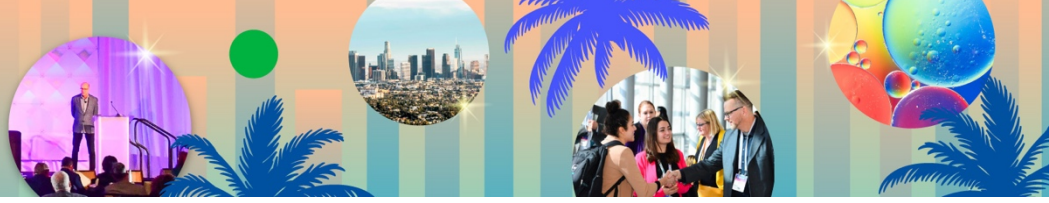
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### **ABSTRACT**

Psychodermatology is rising in the skincare industry because a complex relation between brain and skin has been highlighted. The mood can impact skin condition and appearance through biological messengers.

Demonstration of such impact is not easy, so the purpose of this study was to create a methodology to evaluate the performance of active ingredients on volunteers. Skin condition improvements can be measured by specific devices, but will it be perceived by volunteers and impact their well-being and happiness? What about skincare actives impact on the sensory neurons?

These questions were illustrated by studying G278, an exopolysaccharide (EPS), obtained from a micro-organism biofermentation, through different specific techniques: in vivo versus placebo on volunteers measuring skin condition quality (moisturization, texture) but also emotional parameters with the mirror test, ex vivo using proteomic study and in vitro thanks to a specific keratinocytes-sensory neurons culture.



## **Multi-action of a Schisandra Active on Longevity Hallmarks is a Potent Natural Solution to Extend Skin Healthspan**

**Christophe Toumit**

**Greentech**

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### **ABSTRACT**

Geroscience showed that by targeting specific biological hallmarks, longevity extension is possible. A source of inspiration to identify these markers are the centenarians who overexpress longevity genes. Despite numerous studies on longevity mechanisms, solutions are still needed to extend skin longevity. The objective is to fill this gap and develop a natural active able to extend skin healthspan. Schisandrins are lignans acting on longevity hallmarks. An active enriched in these was developed from Schisandra chinensis berries. In vitro results showed that Schisandra extract (SchE) significantly increases longevity genes expression, autophagy and mitochondrial markers. In stressed 3D models, SchE restores skin barrier, reduces oxidation and inflammation. Clinically vs. placebo on multi-ethnic panels, SchE significantly increases skin microcirculation, elasticity and brightness and prevents wrinkles. As longevity is the result of the optimal functioning of interconnected biological activities, thanks to its multi-action on these, SchE is a potent solution to extend skin healthspan.





## Cell Surface Glycoseylation of Epidermal Stem Cells as New Target for Cosmetic Research

Fred Zuelli

Mibelle AG

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### ABSTRACT

Cells' surfaces are covered by the glycocalyx, a sugar coat composed of complex carbohydrates (glycans) on membrane lipids and proteins. Due to their prominent location at the outermost surface of the cell, these glycans participate in many cellular processes, such as cell-cell communication, cell adhesion and differentiation. We examined the glycosylation profiles of young and aged epidermal stem cells using a lectin array. The study revealed major changes in the cell surface glycosylation of human epidermal stem cells during cell aging. A plant stem cell extract identified in this study was capable of rejuvenating the glycan profile of aged stem cells, thus potentially protecting skin stem cells from aging. The analysis of skin cells' glycosylation patterns could also potentially be used to develop a skin aging clock.



## **Harnessing the Neuro-Immuno-Cutaneous System in the Treatment of Sensitive Skin**

**Melissa Bergman**

**Solabia Group**

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### **ABSTRACT**

Sensitive skin is a prevailing concern in today's beauty landscape. By targeting the latest innovation of sensitive skin, the Neuro-Immuno-Cutaneous System (NICS), as a cellular tryptic between the skin's nerve cells, immune response, and overall skin aspect, we proposed to evaluate the biological efficacy of an active ingredient through a global approach towards neurocosmetics. Firstly, we used a co-culture model of keratinocytes and dendritic cells under inflammatory condition to study the release of pro resolving lipid mediators. We then used Sodium Lauryl Sulfate (SLS), a detergent known to induce irritation and erythema in volunteers to study the restoration of skin barrier function and the redness reduction. Then, we evaluated the soothing effect on human re-innervated skin explants stressed with lactic acid, but also on the face of volunteers having dry sensitive skin and prone to scratching in winter, by measuring electrodermal response reflecting skin sensitivity by using a polygraph.