SCC78

DECEMBER 11-13, 2024 | LOS ANGELES, CALIFORNIA

Speaker Abstracts

Session K: Skin Care Technologies

SCC 78TH ANNUAL SCIENTIFIC MEETING & SHOWCASE
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Recover, Better, Faster: Neurocosmetic Post-Procedure Cream Interrupts the Pain Cycle to Relieve Patient Discomfort and Provide Faster Recovery Post-Radiofrequency Microneedling

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Revision Skincare

ABSTRACT

Microneedling, especially when combined with radiofrequency (RF), enhances skin rejuvenation but often causes patient discomfort, potentially discouraging patients from completing the full treatment series.

This study assessed the impact of a Neurocosmetic Post-Procedure Cream (NPPC) on facial discomfort following RF Microneedling and compared its effectiveness to that of a comparator anhydrous cream (CAC). The NPPC was found to be safe, tolerable, and reduced discomfort while promoting faster recovery. Specifically, the NPPC reduced erythema and stinging 24-hrs post-procedure and was 3-times and 2-times more effective at reducing skin redness 24-hour and 7-days post-procedure compared to the CAC.

Neurocosmetic ingredients in the NPPC modulate communication between the skin and the brain to alleviate patient discomfort commonly experienced after RF microneedling. The NPPC addresses an unmet need by reducing post-procedure discomfort, enhancing patient recovery, and enabling patients to successfully complete a full series of skin rejuvenation treatments

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Antioxidant RoxP Protein from Cutibacterium Acnes Secretome May Contribute to Skin Defense

Allison Garlet

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ABSTRACT

Cutibacterium acnes is the most dominant bacterial species on healthy skin. To survive in aerobic conditions, it secretes an antioxidant protein called RoxP (Radical oxygenase of Propionibacterium acnes) also shown to protect human cells. In this study, we evaluated the protein expression in different C. acnes phylotypes from healthy skin and we stimulated its secretion to help protect the skin from oxidative damage. We developed methods to evaluate RoxP protein in bacterial secretome or microbiotic reconstructed epidermis. Using a droplet-based microfluidic method, we isolated bacteria from healthy skin and build a C. acnes community more representative of a healthy skin profile than single strains. We were able to induce a stimulation of RoxP secretion by oxidative stress in such a model. Ingredients favoring RoxP secretion from skin-native C. acnes were screened and provided keratinocytes protection from lipid peroxidation. These ingredients will be helpful to protect the skin from oxidative damage.

New Skin Cell Culture Model With Stratum Corneum - Like Layer

Geovani Quijas

Sunny BioDiscovery, Inc.

ABSTRACT

Two-dimensional (2D) cell culture is an important tool for the discovery of skin-active agents, however, it is suboptimal because it lacks the stratum corneum component. Here, we propose a model, where the simplicity of the 2D cell culture is combined with the advantage of a hydrophobic barrier resembling skin horny layer. The incorporation of such stratum corneum–like barrier reduces the cytotoxicity of solvents and preservatives, and modifies the bioactivity of tested compounds, which becomes dependent on their ability to penetrate through a lipidic layer. These results herald a breakthrough in the design of cell culture models used for the discovery and analysis of skin-active compounds.

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Multifunctional Preservation System

Pascal Yvon, PharmD, MBA

Sharon Personal Care

ABSTRACT

Today's consumers are educated and informed and it's reflected in their expectations of cosmetics preservation. The conflicting approach is that while consumers want safe and stable cosmetics, the blacklist is continuously growing.

For years the industry was challenged to address those expectations while not compromising on safety and efficacy. Addressing these considerations into a science-based solution is complex and requires an expert and innovative approach.
We will present Sharon AquaVita®, the first and only multifunctional vitamin-based preservation platform with skin health benefits. We will demonstrate how Sharon's quest for synergistic interactions was one of the key elements to turn a practically inert substance into a mild, safe, and sustainable antimicrobial preservative solution, how a single system delivers a broad-spectrum protection along with clinically proven skin benefits. This synergistic platform features an enhanced hydro-solubility with a unique mode of action. It is globally compliant and ideal for skin and hair applications.

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Fluorescence Microscopy Reveals the Impact of Skin Pollutants on Permeation of Peptides with Varying Molecular Weights

Jessica Cardenas Turner

TRI Princeton

ABSTRACT

Skin penetration is challenging, and traditionally only peptides under 1 kDa were considered for penetration given that molecular size is a significant limiting factor. Research advancements show how external factors perturb the skin barrier function and increase permeability. This work uses fluorescence microscopy to observe peptides of varying molecular weight labeled with a fluorescence probe penetrating inside damaged human skin. The skin was compromised by external factors including solar or ozone exposure, heat, chemical penetration enhancers, or tape stripping in realistic and extreme conditions. The results show that 10 kDa peptides could penetrate deep into the stratum corneum when the skin barrier function was disrupted and, in some cases, far below the stratum corneum. These findings support how changes in the skin barrier function caused by external factors associated with climate change make it easier for larger molecules, small particulate matter (PM), and allergens to penetrate the skin.

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Microneedling with a Novel, n-3-PUFA-Rich Formulation Accelerates Inflammation Resolution to Improve Skin Recovery Outcomes in Adults with Healthy Skin

Robert J. Bianchini, PhD

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ABSTRACT

Microneedling is a cosmetic procedure which leverages the skin's natural ability to heal in order to promote collagen formation and skin rejuvenation. To provide improved outcomes, the technique can be combined with topical treatments and formulations. A new, well-designed formulation with multiple actives, including omega-3 (n-3) polyunsaturated fatty acids (PUFAs), was created to accelerate the resolution of inflammation and healing following microinjury treatments such as occurs with microneedling and fractal lasers. Our results demonstrate enhancements in the visible appearance of skin, post procedure, including erythema, luminosity, skin tone and texture.