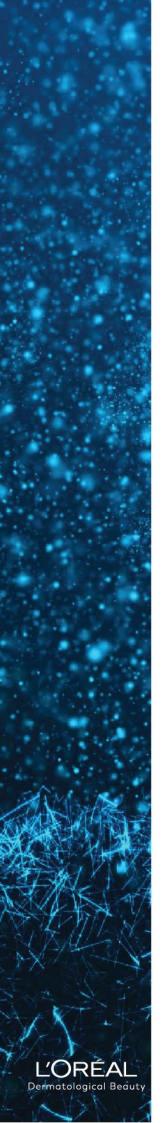


## ABSTRACT BOOK

L'OREAL'S DERMATOLOGY BREAKTHROUGHS:
A SYNOPSIS OF ABSTRACTS







## Foreword



#### Dear Colleague and partner Doctors,

It is my great pleasure to share this curated collection of 50 abstracts submitted by L'Oréal Dermatological Beauty medical teams and accepted by the EADV Congress 2023 in Berlin.

Please find 10 content categories, addressing topics from pigmentation and anti-aging, scalp and hair issues, acne, skin cancer toxicities, sun protection, sensitive skin concerns, pigmentary disorders, and their societal impacts, as well as insights into atopic dermatitis, psoriasis, and xerosis, among other miscellaneous subjects in dermatology. These achievements have been made possible through collaborations with leading researchers, scientists, and dermatologists from around the globe.

Each abstract reflects our shared mission to pioneer health and beauty and provide life-changing and sustainable dermatological solutions to all that enhance the lives of over two billion individuals with dermatological issues worldwide.

Whether you were able to attend the congress in Berlin or not, I hope you find this abstract book useful in your daily practice.

My best wishes

Bertrand Chuberre, MD Vice President Medical Affairs L'Oréal Dermatological Beauty



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# EVALUATION OF THE ANTI-PIGMENTING EFFICACY OF THE ASSOCIATION OF VITAMIN B3, VITAMIN C AND AHA IN A TOPICAL SERUM, COMPARED TO THE REFERENCE INGREDIENT IN THE MANAGEMENT OF MELASMA

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#### **INTRODUCTION & OBJECTIVES**

The management of melasma remains challenging. Despite therapeutic options that act at different stages of melanogenesis, results are sometimes disappointing, and relapses are common. For hydroquinone, the ingredient showing the most effective results, there is a concern regarding its tolerability and the possibility of prolonged use. The study aimed at evaluating the anti-pigmenting efficacy of a topical serum (B3) containing an association of 5% vitamin B3, vitamin C and 8% AHA in the treatment of melasma for 5 months and its comparison with hydroquinone 4% (HQ4).

#### **MATERIALS & METHODS**

The study consisted of a prospective monocentric, double-blind randomized trial, including 65 women between 20 and 50 years old, of multiple ethnicities, phototypes II to VI and presenting melasma for more than 1 year. In the first 2 weeks of the study, subjects used face moisturizer and SPF 50+ sunscreen daily. From the third week onwards, subjects were randomized into 2 groups. One group applied the B3 serum daily in the morning and at night for 5 months. The other group applied HQ4 at night for 3 months. At the end of the 3 months, this group interrupted the treatment with HQ4 and started the treatment with the B3 serum twice a day for 2 additional months. Both groups applied SPF 50+ sunscreen daily throughout the study. At initial visit and during the 5 months, subjects were monitored monthly by a dermatologist. Melasma was evaluated by MASI scale, which quantifies the affected area, pigmentation darkness and skin homogeneity. mMASI, disregarding the homogeneity parameter, was also measured. Erythema was assessed using IGA scale and clinical tolerability, by a skin reaction scale. To illustrate the efficacy of the treatment, standardized photographs were taken. In addition, reflectance confocal microscopy was performed.

#### **RESULTS**

Reduction in MASI score was observed after 3 months for both treatments (3.47 for the B3 serum and 3.71 for HQ4). Reduction of the mMASI score was also similar for both groups (1.97 for the B3 serum and 2.05 for HQ4). After replacing HQ4 in the third month, the efficacy was maintained and improved with the daily application of the B3 serum at the end of the 5 months (5.68 for MASI and 3.31 for mMASI [full treatment with the B3 serum] and 5.38 for MASI and 2.81 for mMASI [HQ4 3 months and B3 serum 2 months]).

This corresponds to more than 40% decrease in the MASI score in the 2 groups after 5 months of treatment compared to baseline. No statistical significance was found in treatment comparison. Regarding the erythema, more promising results (statistical difference, p value=0.05) were observed with the B3 serum, especially in 1 month of treatment. Skin tolerance was better in B3 serum group compared to the HQ4 group (85% improvement versus 59%) during the first 3 months of treatment. Reflectance confocal microscopy showed decrease in keratinocyte pigmentation from beginning to the end of the treatment for both products in more than 90% of subjects.

#### **CONCLUSION**

The serum containing combination of 5% vitamin B3, vitamin C and 8% AHA demonstrated superior results in





tolerance and erythema assessment after 1 month when compared to Hydroquinone 4%, suggesting a better compliance to the treatment. Both treatments showed, after 3 months, a parity in melasma improvement based on MASI assessment and confocal microscopy methodology, with no statistical difference, ie, the B3 serum is a safe and efficacious alternative for melasma management in monotherapy and/or as an adjuvant.

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#### A DERMOCOSMETIC SERUM CONTAINING 15% OF PURE VITAMIN C AND AN ANTI-OXIDANT COCKTAIL, HAS LONG-LASTING ANTI-OXIDANT PROPERTIES, SIGNIFICANTLY IMPROVES SKIN QUALITIES AND **SENSITIVITY**

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#### **INTRODUCTION & OBJECTIVES**

The skin is exposed to exposome factors that aggress the skin and trigger oxidative stress resulting in skin ageing. In sensitive skin characterized by impaired skin barrier function and increased vascular reactivity, cosmetic solutions to reduce oxidative stress can go along with irritation. A dermocosmetic serum (VC serum) containing 15% pure Vitamin C and a cocktail of Vitamin E, maritime pine polyphenols, neohesperidin and fragmented hyaluronic acid was developed to limit the impact of exposome factors on sensitive skin.

#### **MATERIALS & METHODS**

Two studies were conducted.

Study 1 assessed in 35 subjects with sensitive skin confirmed by lactic acid stinging test (LAST), skin brightness and radiance (ITA°, L\*, a\* and b\* values, melanin (M\*) value), skin moisture, and sensitivity as well as the skin haemoglobin content (e\*-value) and TEWL during 4 weeks of daily use of VC serum in the morning.

Study 2 assessed the antioxidant benefit of VC serum on the sebum metabolite malondialdehyde from facial skins samples of subjects with sensitive skin proved by LAST. Half faces were treated with VC serum. Samples were obtained from treated and untreated sides at T0h, 4h and 6h.

#### **RESULTS**

Study 1: ITA° had significantly (p<0.001) increased as early as after 1 week, from 54.7 at baseline to 57.8 and reached 62.9 after 4 weeks (14.9% change from baseline). The L\* value had increased and a\* value had decreased significantly (p≤0.05) after 2 weeks (4.1% and 5.0%, respectively); the b\* value had significantly (p<0.001) decreased at Week 4 (16.2%); The M value had decreased by 3.6% (p<0.05) at Week 2. The skin moisture content had significantly (p<0.001) improved by 27.4%, 31.1% and 31.4%.

The skin was significantly (p<0.001) less sensitive as early as after 1 week (36.8% decrease), and after week 4 (59.6% decrease). The e\*-value had significantly decreased after 1 week (5.7%, p<0.05) and 2 weeks (7.1%, p<0.01). TEWL had decreasing trends.

Study 2: The malondialdehyde concentration had significantly (p<0.0001) decreased in samples from the VC serum-treated side after 4 and 6 hours compared to TO and the control side. In treated sides, the inhibitory rates of sebum oxidation to malondialdehyde were 65.8% after 4 and 54.1% after 6 hours.

#### **CONCLUSION**

In facial skin, this 15% pure VC serum significantly prevents oxidation, has brightening and moisturizing effect, and may improve skin sensitivity.

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#### AN ENLARGED PHOTOPROTECTION COVERING THE WHOLE UV SPECTRUM DURING 1 MONTH: CLINICAL CHANGES IN PIGMENTATION AND WRINKLES VISIBILITY THROUGH A REAL LIFE SPLIT-FACE STUDY

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#### INTRODUCTION

The current sunscreens can efficiently filter UV-wavelengths up to 370/380 nm but have limited absorption in the 370/380-400 nm range. Recently, a new cyclic merocyanine UVA1 absorber, Methoxypropylamino Cyclohexenylidene Ethoxyethylcyanoacetate (MCE), exhibiting a maximal peak of absorption at 385 nm has been developed and was further approved by the scientific Committee on Consumer Safety (SCSS) for use. Formulations containing MCE have demonstrated a higher UVA1 protection in vitro and anti-pigmentation efficacy in vivo under controlled UV exposure.

#### **OBJECTIVES**

To evaluate in vivo anti-aging benefits of this broader UVA1 protection with the daily application of a sunscreen enriched with MCE for one month.

#### **METHODS**

A double-blind, split half-face clinical study was conducted in Brazil during summer season with healthy females (35-65y) phototypes I to III. After 2 weeks of wash-out, a sunscreen with 1% MCE (SPF 50+) and a reference sunscreen (SPF 50+ without MCE) were applied twice daily with controlled applications for one Volunteers were sun-exposed up to two hours daily and had standard pictures acquisition. Dermatologists graded the pictures at baseline and after one month of applications based on reference standardized scales of Skin Aging Atlas.

#### **RESULTS**

Clinical assessment on pictures showed that, after one month, the MCE-enriched sunscreen significantly improved wrinkles (crow's feet, upper-lip, ptosis wrinkles), texture of the mouth contour, upper-lip texture, whole face pigmentation and vascular disorders when compared to baseline and to the reference formula. In addition, MCE sunscreen presented significantly better results vs the reference for other pigmentation signals (forehead, lateral facial and upper-lip pigmentation).

#### **CONCLUSION**

For the first time, in real life conditions, a broad spectrum photoprotection including long-UVA provided by the MCE UV filter, is shown offering an added efficacy in the prevention and correction of facial skin aging signs of Brazilian women with Phototypes I to III.

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## DISCOVERY OF 2-MERCAPTONICOTINOYL GLYCINE, A NEW POTENT LIGHTENING AGENT EXHIBIT, INVESTIGATED VITRO & VIVO

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#### INTRODUCTION

Most of the melanin production inhibitors on the market inhibit tyrosinase. However only few of them have demonstrated clinical efficacy. Other compounds display unsafe profiles. Also, environmental respect is rarely taken into consideration. Research on lightening agents considering efficacy, safety but also being ecofriendly is of great importance to significantly improve existing actives on the market, avoid unwanted side-effects with a low environmental impact.

#### **METHODS**

A high-throughput screening test evaluating melanin production on a large chemical diversity and in silico predictive methodology were used to eco-design original and performant chemical structures. Then efficacy was checked via topical application on 3D organotypic skin models. Performance and mechanism of action studies were carried out in tubo, in vitro on melanocyte, as well as in vivo following UV-daylight exposures on volunteers with phototype III/IV/V originate from Southeast Asia. 4-n-butylresorcinol, a tyrosinase inhibitor, was chosen as a reference on the market.

#### **RESULTS**

In vitro screening combined with in silico methodologies gave access to 2-mercaptonicotinoyl glycine, an innovative technology for hyperpigmentation management exhibiting high efficacy and low environmental impact, while being favorable for melanocyte safety. Its potent efficacy was confirmed via topical application by using pigmented reconstructed epidermis and ex vivo human skin explants with an efficacy superior to 4-n-butylresorcinol. Also it has been demonstrated that 2-mercaptonicotinoyl glycine has a unique mode of action consisting in conjugating with melanin precursors, avoiding their integration into growing eumelanin and pheomelanin.

In vivo dose effect (0.5 & 1%) of this new active has been revealed versus vehicle to prevent immediate darkening, either to reduce neo-melanin production. No side effects were reported all along the clinical trial.

#### **CONCLUSION**

This new technology significantly improves the overall performance of lightening agents on the market such as 4-n-butylresorcinol.

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#### SKIN GLYCATION INHIBITION PROPERTIES OF TWO FLAVONOID-RICH FRUIT EXTRACTS AND A CREAM WITH THESE EXTRACTS

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#### INTRODUCTION

Glycation is a gradual, non-enzymatic reaction between sugar and an amino acid (Lys, Arg) of a protein like collagen, which induces the formation of Advanced Glycation End Products (AGEs) on the proteins and is a multi-phase process. AGEs provoke biomechanical and biological modifications of cellular functions and induce inflammatory pathways which contribute to skin aging. Exogenous factors like UV rays are known to accelerate the formation of AGEs in skin, which further exacerbates the signs of skin aging.

#### **OBJECTIVES**

The goal of this research was to evaluate the glycation inhibition efficacy of blueberry and pomegranate fruit extracts and a new cream containing these extracts.

#### **MATERIALS AND METHODS**

Blueberry extract and pomegranate fruit extract were studied as potential inhibitors of glycation in a 4-week collagen-ribose model (in tubo) and a 7-day UV-glycation model (ex vivo). In addition, a cream containing both extracts was evaluated in a 5-day, double-blind clinical trial with 20 healthy females aged 50-67 years' old. After 4 days of daily product treatment versus no treatment, 2 minimal erythema doses (MED) of UVA/UVB were irradiated on respective test sites. Skin punch biopsy samples were collected for pentosidine immunohistochemical analysis at Day 5.

#### **RESULTS**

In the collagen-ribose study, AGEs fluorescence of collagen was reduced after 1 and 4 weeks of incubation with blueberry (-46%, p<0.05 and -80%, p<0.05), pomegranate fruit (-19%, p>0.05 and -44%, p<0.05), and combo (-45%, p<0.05 and -80%, p<0.05), respectively. In the UV-irradiated ex vivo skin study, pomegranate fruit extract and the blueberry-pomegranate fruit extract combo led to a significant reduction of AGEs by 41% (p<0.05) and 38% (p<0.05), respectively. Finally, in the clinical study, UV-induced pentosidine increase in epidermis was reduced 34% (p<0.05) by test cream treatment.

#### **CONCLUSION**

Taken together, these results demonstrated the efficacy of blueberry extract, pomegranate fruit extract, combo, and a cream containing these extracts to inhibit glycation under multiple conditions, including, for the first time, a UV-induced glycation clinical model. The cream containing these 2 flavonoid-rich fruit extracts is expected to be a promising treatment for skin aging impacted by glycation.

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## CLINICAL EVALUATION OF A NEW WRINKLE CORRECTING CREAM CONTAINING TWO FLAVONOID-RICH FRUIT EXTRACTS

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#### INTRODUCTION

Both the dermal and epidermal function of chronologically aged skin can be impacted by the formation and accumulation of endogenous Advanced Glycation End Products (AGEs). AGEs cause extracellular matrix (ECM) proteins to become brittle, weaken their reparative abilities, and degrade their overall integrity. The degradation of the ECM proteins manifests as signs of skin aging such as wrinkling and laxity. AGEs can also affect epidermal structural proteins like filaggrin and damage skin barrier function.

#### **OBJECTIVES**

This research was designed to evaluate the anti-aging benefits of a new cream containing blueberry and pomegranate fruit extracts, known glycation inhibitors, in human clinical trials.

#### **MATERIALS AND METHODS**

Three separate clinical trials were conducted. First, a 12-week clinical study was conducted on 77 females ages 38-70, with Fitzpatrick skin types I-VI, and mild to moderate facial wrinkles and fine lines. The cream was used twice daily on the face, neck and chest in conjunction with a sunscreen. Clinical efficacy, tolerance, and skin punch biopsy analysis for filaggrin protein (n=9) were performed at baseline and week 12. In addition, a double-blind, randomized clinical study was conducted on the forearm of 40 females. The test zones were treated with or without the cream for 4 hours followed by dermal torque meter (DTM) measurement of skin mechanical properties. Finally, a double-blind, randomized clinical study was conducted on 29 subjects with or without application of the cream on the forearm. Corneometer readings were conducted at baseline, immediately after application, and 24 hours after application.

#### **RESULTS**

After 12 weeks, compared to baseline, the cream significantly reduced (p<0.05) the appearance of global fine lines (14%), forehead wrinkles (11%), nasolabial folds (11%), marionette wrinkles (7%), glabellar wrinkles (7%), and crow's feet wrinkles (7%). The cream increased (p<0.05) filaggrin protein expression by 92% as quantified by immunostaining on biopsies. After 4 hours, compared to untreated control, the cream significantly increased (p<0.05) the skin extensibility, tonicity, and elasticity/firmness. In addition, the cream also showed (p<0.05) immediate and 24-hour lasting skin hydration benefit.

#### **CONCLUSION**

In our clinical trials, the cream statistically improved skin biomechanical properties and demonstrated antiaging and moisturization benefits.

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#### EFFICACY OF A DERMOCOSMETIC ACNETREATMENT IN REDUCING POST-INFLAMMATORY HYPERPIGMENTATION IN SUBJECTS WITH **PHOTOTYPES IV TO VI**

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#### **INTRODUCTION & OBJECTIVES**

Post-inflammatory hyperpigmentation (PIH) represents a significant burden for individuals with dark phototypes (IV to VI), as it can lead to long-lasting, highly visible, and aesthetically disfiguring skin alterations. In this study, our objective is to evaluate the efficacy of a novel acne-dedicated dermocosmetic (DC) treatment in reducing PIH in subjects with phototypes IV to VI suffering from mild to moderate acne.

#### **MATERIALS AND METHOD**

In this 8-week, single-arm clinical study, subjects with phototypes IV to VI and mild to moderate acne were treated with a DC containing Salicylic acid, Lipohydroxy acid, Niacinamide, Procerad, Mannose, and the preand post-biotic Aqua Posae Filiformis (a biomass of Vitreoscilla Filiformis grown in Thermal Spring Water culture medium), alongside an acne dedicated cleanser. An independent dermatologist, blinded to the study design, reviewed D0 and D56 face profile images to score global PIH severity, hyperpigmentation intensity, and the number of PIH.

#### **RESULTS**

The study involved 43 subjects including 60% females (mean age 19.1 years, range 11-42 years) with phototypes IV to VI (IV: 31%, V: 51% and VI: 18%).

The results indicated a reduction of 19.7% in the number of PIH at day 56 compared to baseline (mean difference = 7.0, p-value < 0.001). However, the 5% decrease in global PIH severity (mean difference = 0.24, pvalue = 0.174) and the 6% decrease in pigmentation intensity (mean difference = 0.2, p-value = 0.081) showed a trend towards improvement but were not statistically significant at D56.

#### **CONCLUSION**

The DC treatment, combined with a cleanser, effectively reduced PIH in subjects with phototypes IV to VI and mild to moderate acne. Evaluating global PIH severity and hypopigmentation intensity can be challenging due to the highly subjective nature of the available scales. Further research should be performed to improve the assessment methods for global PIH severity and hyperpigmentation intensity.

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# A COMPARATIVE RANDOMIZED CLINICAL STUDY ASSESSING THE EFFECT OF A 1% SELENIUM DISULFIDE-BASED SHAMPOO VERSUS 2% KETOCONAZOLE SHAMPOO IN SUBJECTS PRESENTING WITH MODERATE TO SEVERE SCALP SEBORRHEIC DERMATITIS

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#### **INTRODUCTION**

Scalp seborrheic dermatitis (SSD) greatly impacts the quality of life. In this study, we aim to evaluate both the efficacy and the effect on quality of life of a shampoo (Shampoo A) containing 1% Selenium disulfide and 1% salicylic acid in patients with moderate to severe seborrheic dermatitis, compared to a reference shampoo containing 2% ketoconazole (Shampoo B).

#### **MATERIAL AND METHODS**

This multi-centric double-blinded randomized study was conducted on 2 parallel groups of subjects presenting with moderate to severe seborrheic dermatitis (SSSD score had to be >6).

Subjects were monitored at day 3, 7, 14 and 28. Before D0, a wash-out period of 3 weeks was required. The products were randomly allocated to the subjects, applied on scalp and hair 3 times a week for 2 minutes for Shampoo A and 2 times a week for 5-10 minutes for Shampoo B as per its label's usage recommendation. The clinical examination of the scalp consisted of the Symptom Scale of Seborrheic Dermatitis assessment (SSSD), evaluations of total scales (sum of adherent and non-adherent), erythema, pruritus, and greasiness. Self-evaluations included a Quality-of-Life questionnaire (QoL Scalpdex), discomfort evaluations and self-assessment of hair quality. The efficacy of Shampoo A was compared to Shampoo B using an analysis of covariance on the change from baseline as response variable.

#### **RESULTS**

The panel consisted of 64 male and fe≥male subjects of European, Hispanic, Asian, and African origins aged between 18 and 64 years, covering all different hair types.

For both groups, a significant improvement was observed as early as from D3 in terms of SSSD. This improvement was very significant at D28 (p-value<0.001 for both groups; -71% and -69% for Shampoo A and B). Decrease of total scales was also significant at D28 (p-value<0.001 for both groups; -75% and -68% for Shampoo A and B). After 28 days, all the subjects presented with mild severity of SSD.

Erythema levels were significantly reduced from first use for both Shampoo A and B, while improvements in greasiness from D7 onwards were only obvious for Shampoo A.

Moreover, subjects from both treatment groups reported significant improvements in itching, stinging, and burning sensations. Significant improvements for itching were achieved from D3 for Shampoo A and from D7 for Shampoo B. Quality-of-life assessments showed significant improvements for Shampoo A as from D7 and as from D14 for Shampoo

B. No significant difference was found between the treatments.

Respondents from both treatment groups rated the various aspects of the hair (hair was soft, glossy, easy to disentangle, voluminous and scalp was less sensitive). Favorable responses ranged between 67.6% (easy to disentangle) and 91.2% (less sensitive scalp) for A, and between 51.7% (gives volume to hair) and 79.3% (less sensitive scalp) for B.

Overall, both treatments were very well tolerated without any significant side effect.





#### **CONCLUSION**

Shampoo A, composed of 1% selenium disulfide and 1% salicylic acid, is well tolerated and has been shown to be a reliable alternative to a 2% ketoconazole shampoo (B), in terms of efficacy, ease of use and ability to quickly improve itching and quality of life in patients suffering from moderate to severe scalp seborrheic dermatitis.

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# EFFICACY AND TOLERANCE OF A SELENIUM DISULFIDE-BASED SHAMPOO IN CHINESE SUBJECTS WITH MILD-TO-MODERATE SCALP SEBORRHEIC DERMATITIS: RESULTS FROM A DOUBLE-BLIND, RANDOMIZED, VEHICLE-CONTROLLED STUDY

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#### **INTRODUCTION & OBJECTIVES**

Scalp seborrheic dermatitis (SD) is a chronic, relapsing inflammatory condition characterized by dandruff, erythema, and pruritus. Studies indicate a global microbiota shift of scalp SD compared to healthy scalp, especially fungal colonization of Malassezia spp.. Selenium disulfide (SeS<sub>2</sub>) is clinically beneficial in scalp SD. The aim of this study was to assess the efficacy and tolerance of a 1% selenium disulfide-based shampoo (SeS<sub>2</sub> shampoo, also containing 0.9% Salicylic Acid, Vitamin E and Ceramide-R) in Chinese subjects with mild-to-moderate scalp SD.

#### **MATERIALS & METHODS**

Single-center, randomized, double-blind, vehicle-controlled study conducted in 58 subjects with mild-to-moderate scalp SD. After a 4-week washout period, subjects applied the tested shampoo (randomized into the SeS<sub>2</sub> or vehicle group) 3/week from Day 0 to Day 28 (treatment phase) and 1/week until Day 42 (maintenance phase).

At Day 0, Day 7, Day 14, Day 28 and Day 42, subject-assessed scores of flaking, itching and greasiness were measured with visual analogue scale (VAS, ranging from 0 to 10). SD score (0-9) including erythema, dandruff, and lesion extent (% scalp area) using a dermoscopic device and ASFS score were assessed by dermatologists, instrumental measurements included sebum quantity and TEWL rate at all time points. Scalp fungal colonization was detected by fungal fluorescence staining at Day 0, Day 28 and Day 42.

#### **RESULTS**

30 subjects in the SeS<sub>2</sub> group and 28 subjects in the vehicle group were included, with 63.8% females and 36.2% males, and a mean age of 29.9 years. The baseline SD score was 4.4.

SeS<sub>2</sub> shampoo significantly (p<0.05) reduced the SD score by 18.2%, 25.8%, 27.3% and 31.2% after 7, 14, 28 and 42 days of use, respectively compared to a 0%, 6.5%, 2.5% and 4.1% decrease with the vehicle. The ASFS score was also significantly (p<0.05) reduced with the SeS<sub>2</sub> shampoo by 43.5%, 50.7%, 43.5% and 49.5% at Day 7, 14, 28 and 42 respectively.

Scalp fungal colonization was greatly reduced to "negative or absence" in the SeS<sub>2</sub> group while no change (still in active multiplication) in the vehicle group at both Day 28 and Day 42.

In terms of sebum and TEWL, a mild decrease of sebum was observed after using  $SeS_2$  shampoo for 7 days, while in the vehicle group a trend of increase was observed for both parameters during the study.

According to the subjects flaking and itching had significantly (p<0.05) reduced with SeS<sub>2</sub> shampoo at all visits. Greasiness also improved continuously with SeS<sub>2</sub> shampoo compared with the vehicle. Subjects were highly satisfied with SeS<sub>2</sub> shampoo.

#### CONCLUSION

The tested 1% SeS<sub>2</sub>-based shampoo was beneficial and well tolerated in mild-to-moderate scalp SD of Chinese subjects and significantly reduced scalp fungal colonization compared with the vehicle, with a significant anti-dandruff, anti-erythema, anti-itchiness effect observed as early as the first week and up to 6 weeks of use.





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## A SELENIUM DISULFIDE-BASED SHAMPOO IS BENEFICIAL IN THE MANAGEMENT OF VARIOUS HAIR AND SCALP CONDITIONS: RESULTS FROM A REAL-WORLD STUDY CONDUCTED IN CHINA IN 759 SUBJECTS

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

Different scalp and hair conditions such as seborrheic dermatitis (SD)/dandruff, hair loss including androgenetic alopecia (AGA), scalp folliculitis, as well as inflammatory skin conditions, such as scalp psoriasis, impact, due to clinical signs and symptoms, the individuals' quality of life (QoL). The aim of this study was to assess in real-world clinical practice in subjects with any scalp and/or hair condition, the clinical benefit, satisfaction and improvement of QoL with a 1% Selenium Disulfide based shampoo (SeS2 shampoo) also containing, 0.9% Salicylic Acid, Vitamin E and Ceramide–R.

#### **MATERIALS & METHODS**

A real-world, observational study was conducted in 759 Chinese subjects with any scalp and hair condition who used the SeS2 shampoo as indicated by their dermatologist. Dermatologists assessed clinical signs at baseline. At the end of the study, dermatologists rated the product performance and satisfaction while subjects rated product satisfaction and QoL using a modified DLQI.

#### **RESULTS**

A total of 759 subjects were included. 55.2% were women, 84.2% were aged between 18 and 50 years, 90.2% had an oily or mixed skin type.

A total of 967 diagnoses were made: 80.8% had SD/dandruff, 23.3% had AGA, 5.1% had scalp folliculitis and 4% scalp psoriasis; 151 subjects had multiple diagnoses whereas 84.8% had SD. Most subjects had moderate to very severe scaling (59.8%), pruritus (71.7%), or scalp greasiness (78.9%).

SeS2 shampoo was applied in average during 3 weeks, 3 times/week. It was used alone by 74.6%, or as an adjunct to medication especially in those who had multiple diagnosis/conditions, such as hair loss patients along with SD/dandruff.

Dermatologists agreed that SeS2 shampoo is beneficial (89.6%) and very well tolerated (95.3%) with subjects being highly compliant to treatment (94.8%). Dermatologists highly recommended SeS2 shampoo (97.5%).

Overall, 87.1%, 87.2%, and 84.3% of the subjects, respectively reported that their dandruff, itching, and greasy scalp had improved or disappeared; 90.9%, 89.6% and 81.6%, respectively stated that, based on the DLQI, their scalp itch/pain or stinging, embarrassed or self-conscious feeling, problems with partner/close friends / relatives, had improved or totally relieved; 93.3% of the subjects were highly satisfied with the SeS2 shampoo, 91.4% were willing to continue its use.

#### **CONCLUSION**

The tested 1% SeS2-based shampoo is beneficial and highly appreciated by both dermatologists and subjects of various, common scalp and hair disease.

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# THE BENEFIT OF A DERMOCOSMETIC (DC) CONTAINING THE KERATOLYTIC AGENT SALICYLIC ACID AT 2%, SARCOSINE AND AN EXTRACT OF HYDROLYSED ALGINON, ON THE ACNE LESION COUNT, SEBUM LEVELS, MARKS AS WELL AS ON QUALITY OF LIFE (QOL) OF WOMEN WITH POSTADOLESCENT FACIAL ACNE DURING MC.

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#### **INTRODUCTION & OBJECTIVES**

Few clinical studies have shown that adult female acne may worsen during their luteal (premenstrual) period of the menstrual cycle (MC). Elevated progesterone levels may be transformed into elevated testosterone levels. The latter stimulate androgen receptors present on sebocyte nuclei resulting in an increased sebogenesis with a modified sebum composition leading to flares of non-inflammatory and inflammatory lesions.

This study assessed the benefit of a dermocosmetic (DC) containing the keratolytic agent salicylic acid at 2%, sarcosine and an extract of hydrolysed alginon, on the acne lesion count, sebum levels, marks as well as on quality of life (QoL) of women with postadolescent facial acne during MC.

#### **MATERIALS & METHODS**

39 women aged 18 to 45 years, with regular MC, not using hormonal contraception and with a varying oily or combined skin type,  $\ge 10$  non-inflammatory and  $\ge 2$  inflammatory lesions and a sebum level  $\ge 100 \mu g/cm^2$  on the frontal area, all increasing during their MC, were enclosed in this study.

Twice-a-week assessments (24 visits) during the 1st (MCO), 2nd (MC1) and 3rd MC (MC2) included an exposome questionnaire at MCO, non-inflammatory and inflammatory lesions count, sebum level determination, red and brown marks count and self-perceived skin oiliness (scale from 0=none to 4=very oily and greasy). QoL using the AcneQoL questionnaire was assessed on Day 0, Day 28 and Day 56. DC was applied daily during MC1 and MC2.

#### **RESULTS**

All subjects had regular MC, oily or mixed skin and/or acne lesion flares during MCO. The majority of subjects were stressed (74%), tired (69%) and exposed to environmental pollution (64%).

After MC2, DC had significantly decreased the peaks of non-inflammatory lesions (-29% of maximum value, 74% had improved) and inflammatory lesions (-20% of maximum value, 67% had improved). DC decreased the peak sebum level (-20.8  $\mu$ g/cm², 77% had improved), red and brown marks (-17%, 67% had improved) and the peak of skin oiliness (-28% of maximum value; 62% had improved). All changes from MC0 were statistically significant (p<0.05).

At MC2, QoL had significantly (p<0.05) improved from MC0: self-perception 43% (90% reported improvement), emotion: 40% (87% reported improvement), social role: 22% (62% reported improvement), acne symptoms: 46% (97% reported improvement) and total score: 38% (92% total score improved).

#### **CONCLUSION**

The results from the present study provide evidence that the tested DC applied daily during menstrual cycles is beneficial in reducing peaks of acne lesions, peak of sebum level as well as red and brown marks, additional improving the women's QoL.





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# EFFECTIVENESS AND SAFETY OF A DERMOCOSMETIC CREAM CONTAINING SALICYLIC ACID, LIPOHYDROXY ACID, NIACINAMIDE, AQUA-POSAE-FILIFORMIS, PROCERAD AND ZINC-PCA AS AN ADJUVANT TREATMENT FOR MILD AND MODERATE ACNE IN INDONESIA

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#### **INTRODUCTION**

Acne is a chronic inflammatory condition in which dermocosmetics (DC) can be used as an adjuvant treatment to standard therapy with additive benefits in terms of efficacy or tolerability.

#### **OBJECTIVES**

The aim of this study was to evaluate the efficacy and tolerability of a DC cream containing Salicylic Acid, Niacinamide, Aqua-Posae, Procerad and Zinc in adjunct to adapalene in Indonesian patients with mild to moderate acne.

#### **MATERIALS & METHODS**

This multicenter, randomized, evaluator-blind, parallel-group study was conducted in five hospitals in Indonesia from May to December 2022. Subjects with mild and moderate acne, aged 15 to 50 years, were randomized into three groups. All subject received 0.1% adapalene cream at night: Group1 had 0,1% adapalene cream only, Group2: 0.1% adapalene cream every other night and DC every morning, and Group3: 0.1% adapalene cream every night and DC every morning. Subjects were evaluated on day 28 and 56. Evaluations included GEA scale and lesion count (IAEM scale), sebum levels, patient's quality of life (QoL) using CADI and Acne QoL questionnaires. Patient's satisfaction and tolerability were evaluated by investigator and patient (score 1-4).

#### **RESULTS**

293 subjects were included, distributed evenly among three groups. All subjects were Asian, the majority of them were female (60%), phototypes IV (79.5%), aged >25yo (55.3%), Javanese (54%), with a higher education (54%). After D56, all 3 groups showed significant improvements in terms of GEA scale, lesion count and QOL. There was a significant difference in group C showing a higher reduction of GEA compared to group A (p=0.038). There were significant differences in the investigator's tolerance score among the three groups (p 0.001), with group A (adapalene alone) having a higher score (less tolerance) than both groups B and C on D28 and D56. For the patient's tolerance score, no difference was seen between groups B and C, with a majority scored 1–2 (92–94%). Study showed significant difference in investigator's evaluation of patient's satisfaction among three groups (p<0.001) with groups B and C having higher score, mostly scoring 4–5, than group A both on day 28 and day 56. For patient's evaluation of satisfaction, study showed no significant difference between group B and C, majority of both scored 4–5. In group B, there was significant increase in subjects scoring 4–5 between D28 and D56.

#### **CONCLUSION**

The usefulness of an active dermocosmetic as an adjunct to drugs has already been reported in the management of acne. This is the first time a randomized controlled clinical study is conducted combining a multitargeted dermocosmetic cream with adapalene in mild to moderate acne. This study showed a significant improvement of acne over time in the 3 groups with a superior efficacy for the association of DC and





adapalene QD in GEA scale, as well as a superior tolerability and satisfaction for the 2 regimens combining the DC and adapalene compared to adapalene alone.

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### EFFICACY OF A DERMOCOSMETIC CREAM COMPARED TO BENZOYL PEROXIDE GEL ON ACNE VULGARIS TREATMENT

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

Acne vulgaris is a skin inflammatory disease characterized by non-inflammatory (comedones) and inflammatory lesions. Benzoyl peroxide (BPO) is widely used as an efficient, approved treatment for acne. However, this treatment is often associated with skin irritation and/or contact allergy. Current scientific research of the best combinations of ingredients is generating highly efficient dermocosmetic products which could potentially be used as monotherapy for patients with milder forms of acne.

The objective of this study was to compare the efficacy of a dermocosmetic cream ("DC-Eff") containing salicylic acid, lipohydroxy acid, niacinamide, procerad, glycerin, octopirox, zinc salt of L-pyrrolidone carboxylic acid (Zinc PCA), mannose, aqua posae filiformis, thermal spring water, with that of a gel containing 5% BPO in the treatment of acne vulgaris.

#### **MATERIALS & METHODS**

The study was approved by an Ethics Committee. A total of 150 Caucasian subjects presenting at least 10 inflammatory lesions (IL) and 10 non-inflammatory lesions (NIL) were randomized in 2 parallel groups (DC-Eff or BPO applied twice a day). Dermatologist evaluated the number of acne lesions at baseline and after 28 and 56 days of treatment.

#### **RESULTS**

A significant reduction of acne lesions was observed versus baseline for both products. The effect of DC-Eff on lesion counts was an average reduction of 8.3 and 10.9 lesions for IL and 11.7 and 20.4 lesions for NIL after 28 and 56 days, respectively. BPO effect on lesion counts was an average reduction of 7.7 and 9.9 lesions for IL and 14.1 and 25.1 lesions for NIL over the same treatment periods. There were no statistically significant differences between the treatments.

#### **CONCLUSION**

The studied DC-Eff efficiently reduced the number of acne lesions with a level of efficacy comparable to that of BPO.

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#### A DERMOCOSMETIC REGIMEN IS BENEFICIAL IN THE MANAGEMENT OF SKIN SENSITIVITY CAUSED BY A RETINOID-BASED ACNE FIXED COMBINATION

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#### INTRODUCTION

Topical retinoids and benzoyl peroxide cause skin discomfort mainly during the first weeks of application. In this context, a dermoscosmetic is important to reduce treatment-related signs and symptoms.

#### **OBJECTIVES**

To assess the benefit of a DC compared to routine care (RC) in mitigating local tolerance issues caused by a retinoid/BPO-based fixed combination in acne subjects.

#### **MATERIALS & METHODS**

Double-blind, randomised study in subjects ≥16 years with mild to moderate acne. Evaluations took place at Day 0, 7, 14, 28, 56 and Day 84 including erythema, desquamation, burning, itching and stinging all assessed on a 4-point scale (none to important), skin discomfort (SD) being a composite score of local treatment-related signs and symptoms and acne severity. Subjects applied the DC or RC daily together with the fixed combination for 84 days.

#### **RESULTS**

The mean age of the 88 subjects was 21 years; 84% were females.

Clinical signs and symptoms scores were significantly reduced with DC than with RC after 14 days (p<0.05). At Day 0 the SD score was 0.8 in both groups. The difference was statistically significant with DC compared to RC (1.6 points, vs 2.4 points p<0.05) after 14 days. DC performed better than RC at all time points. Acne severity improved in both groups.

Local tolerance was good for both regimens.

#### **CONCLUSION**

DC significantly reduces retinoid/BPO-based fixed combination-related local signs and symptoms as well as skin discomfort compared to RC especially during the first 14 days of treatment without interfering with the clinical efficacy of the treatment thus helping to maintain treatment adherence. Both regimens were well tolerated.

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#### INTERNATIONAL EXPERT CONSENSUS RECOMMENDATIONS FOR THE **USE OF DERMOCOSMETICS IN ACNE**

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES:**

Acne vulgaris is a very common global problem. Efficacious treatments are available, but clinicians and patients alike are continuously searching for ways to improve acne management. Recently, attention has focused on use of dermocosmetics to enhance outcomes in patients with acne. Dermocosmetics (or "cosmeceuticals") are skincare products that use sophisticated active ingredients to directly support and care for the symptoms of various skin conditions. They potentially have a biologic activity in skin that supports skin integrity and relieves skin conditions.

#### **MATERIALS & METHODS:**

A systematic literature review was performed and a panel of dermatologists with interest and expertise in acne management analyzed the literature, held a live meeting, and then conducted a three-step Delphi process online. The panel acknowledged the evidence base for dermocosmetics is less robust than that for prescription products but utilized available evidence and expert opinion to come to consensus.

#### **RESULTS:**

The panel suggested that dermocosmetics may be used as monotherapy to treat milder forms of acne or maintain the benefit post Rx treatment, supported by studies demonstrating improved global assessment, reduced acne lesions counts and skin oiliness, and effective maintenance after acne clearance. In addition, the panel recommends dermocosmetics may be used as adjunctive therapy to prescription treatments. As adjuncts, dermocosmetics may help to prevent and manage irritation and/or drug-induced adverse effects, and may also reduce skin oiliness, improve barrier function, and improve adherence, satisfaction, or quality of life of acne patients. Limited evidence also suggests adjunctive use of dermocosmetics may enhance efficacy, perhaps by facilitating the ability of patients to adhere to prescription therapy.

#### **CONCLUSION:**

Together the literature review and expert consensus through Delphi method support the use of dermocosmetics in acne management.

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#### ACNE, THE USEFULNESS OF USING A DERMOCOSMETIC

#### **AUTHORS**

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#### INTRODUCTION AND OBJECTIVES

Acne is a very common chronic inflammatory skin disease, which mainly affects adolescents and young adults of both sexes. Several studies have confirmed that acne also affects adults,

In the 'Objectifs Peau' study, published by the French Society of Dermatology (SFD), the prevalence of acne was 6.22% [95% CI: 5.89-6.56%] among individuals older than 15 years.

#### **MATERIALS AND METHOD**

To evaluate the impact of using a DermoCosmetique [skincare containing APF, salicylic acid and panthenol], we administered the Al-ADL burden questionnaire [Dreno B, JEADV 2021], at day zero and day 30 to adults whose acne diagnosis and severity had been confirmed by a dermatologist during a spontaneous consultation.

#### **RESULTS**

524 respondents aged 18 years and older, sex ratio in favor of women [74%, n = 361]. Mean age 24.5, median was 21. Of these 92% [N=484] reported using DermoCosmetique which we will refer to as the exposed group. 3 severity groups were identified: 57.3% were identified as mild [n = 297], 34.9% as moderate [n = 181], 7.7% as severe [n = 40].

In terms of burden, on day 30, the prevalence of improvement in the exposed group was 79.9%. The mean burden score evolved from 19.4 to 12.8 between day zero and day 30 (p<0.001). In the unexposed group, the prevalence of improvement was 64.1%.

The mean burden score evolved from 19 to 14.7 between day zero and day 30. Beyond these results, after 30 days of use, 95% were satisfied with the product and 91% said that the product had helped to reduce their imperfections.

#### CONCLUSION

Adherence to acne treatments is often a barrier to successful treatment. The fact that patients are satisfied with the product or that their blemishes have improved, allows us to hope for better compliance. Improved burden after 30 days of use also improves compliance.

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## CERAMIDE-BASED SKINCARE PROVIDES ADJUNCTIVE EFFICACY AND IMPROVED TOLERANCE TO RETINOIDS IN PATIENTS WITH MILD-TO-MODERATE ACNE

#### **AUTHORS**

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#### INTRODUCTION

Acne vulgaris (acne) is the most common inflammatory skin disorder in the United States, affecting up to 20% of the Canadian population.¹ While topical retinoids are the mainstay of acne treatment, they are associated with local adverse events such as skin irritation. These adverse events have been associated with poor tolerability and poor treatment adherence. Efforts to improve topical retinoid tolerability and adherence may include utilizing adjunctive skincare, such as appropriate cleansers and moisturizers.² As ceramides are key physiologic lipids required for the construction and maintenance of the epidermal barrier and restoring the skin's natural protective barrier, the use of skin care products containing ceramides may be particularly beneficial for acne sufferers.³

#### **OBJECTIVE**

Evaluate the impact of a ceramide-containing hydrating cream-to-foam cleanser and PM facial moisturizing lotion on acne treatment tolerability and adherence.

#### **METHODS**

Seven Canadian sites participated in this multicenter, open-label, cohort study designed to clinically evaluate a combination treatment, which included a topical retinoid, twice-daily use of an adjunct cleanser, and oncedaily use of a PM moisturizer\*. Subjects completed a total of four study visits, over a duration of 12 weeks. Visits occurred at screening/baseline, and weeks 4, 8, and 12. Throughout the study, subjects self-reported adverse events such as itchiness, soreness/pain, and stinging. At each visit, investigators completed i) the Dry and Irritated Skin Scale (DISS), which graded the presence of skin roughness, flakes/scales, erythema, dehydration, and inflammation, with higher total scores corresponding to a worse condition; and ii) the Investigator Global Assessment (IGA) of acne, which rates acne severity on a 5-point scale ("clear", "almost clear", "mild", "moderate", "severe"). In addition, Investigators completed the Global Aesthetic Improvement Scale (GAIS) at each follow-up visit, which rated the subject's response to treatment as "very much improved", "much improved", "improved", "no change", or "worse".

#### **RESULTS**

A total of 110 subjects (80 females, 30 males) were included in the analyses. The average age of the sample was 23.79 (SD: 7.48), including 20 pediatric subjects (ages 12–17) and 90 adults (≥18 years). The sample consisted of subjects presenting mild (n = 37; 33.64%) and moderate acne (n = 73; 66.36%) at baseline. After 12 weeks of treatment, 94.55% (n = 104) of subjects achieved "improved" or better based on the GAIS, and 71.82% (n = 79) of subjects presented with "clear" to "almost clear" skin. The average DISS score significantly improved by 62.77% from baseline (M = 6.58) to week 12 (M = 2.45; p<0.05). Rates of subject-reported itchiness, soreness/pain, and stinging remained stable throughout the 12-week study period.

#### **CONCLUSION**

Daily use of a ceramide-based skincare regimen was associated with the prevention of retinoid-induced adverse events such as skin itchiness, soreness/pain, and stinging, and improved compliance with prescription acne treatments.





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### A DERMOCOSMETIC SIGNIFICANTLY IMPROVES ACNE FLARES AND OUALITY OF LIFE DURING MENSTRUAL CYCLES

#### **AUTHORS**

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#### INTRODUCTION

Few clinical studies have shown that adult female acne may worsen during the luteal (premenstrual) period of the menstrual cycle (MC). Elevated progesterone levels may be transformed into elevated testosterone levels.<sup>1,2</sup> The latter stimulates the androgen receptors present on sebocytes, resulting in an increased sebum quantity and a change in its composition leading to flares of noninflammatory lesions and inflammatory lesions.<sup>3,4</sup>

#### **OBJECTIVE**

This study assessed the benefit of a dermocosmetic (DC) containing keratolytic salicylic acid at 2%, sarcosine and an extract of hydrolyzed alginon, on the acne lesions count, sebum levels, marks as well as on the quality of life (QOL) of women with postadolescent facial acne during menstrual cycle (MC).

#### **MATERIALS & METHODS**

- A total of 39 women aged 18 to 45 years, with regular MC, not using hormonal contraception, and with a varying oily or combination skin type,  $\ge 2$  inflammatory and  $\ge 10$  non-inflammatory facial skin lesions and a sebum level  $\ge 100 \mu g/cm^2$  on the frontal area, all increasing during their MC, were included in this study.
- Assessments twice-a-week during the 1st (MCO), 2nd (MC1) and 3rd (MC2) MC, included, inflammatory and non-inflammatory lesions count, sebum level determination using a sebumeter, red and brown marks count, and self-perceived skin oiliness (scale from 0=none to 4=very oily and greasy); QoL was assessed on Day 0, Day 28 and Day 56. An exposome questionnaire was completed by the subject at inclusion.
- Peak assessments were defined as maximum values observed.
- DC was applied daily during MC1 and MC2.

#### **RESULTS**

- All subjects had regular MC, oily or mixed skin and acne lesion flares during MCO; 74% were stressed (74%), 69% were tired and 64% were exposed to environmental pollution.
- After 2 MC, DC had significantly (all p<0.05) decreased peaks of inflammatory (-19.6% of maximum value, Figure 1; 66.7% of the subjects had improved,) and non-inflammatory lesions (-28.5% of maximum value, Figure 2; 74.4% of the subjects had improved).
- DC decreased the peak of sebum level ( $-20.8\mu g/cm^2$ , see Figure 3; 76.9% of the subjects had improved sebum level peaks) at MC2.
- Red and brown marks were reduced by 17.4% at MC2 and 66.7% of the subjects had an improvement reported (Figure 4).
- The maximum value of self-perceived skin oiliness at MC2 had improved by 27.6%; 61.5% of all subjects reported an improvement (Figure 5) correlating well with sebumeter results.
- QoL had improved (self perception had improved by 43.3%; 89.7% of the subjects reporting an improvement; emotion had improved by 39.7%, (87.2% reported an improvement); social role had improved by 21.9% (61.5% reported an improvement); acne symptoms had improved by 45.8% (97.4% reported an improvement). The total score had improved by 37.6% and 92.3% of all subjects had their total score improved at MC2 (Figure 6).





#### **CONCLUSION**

The tested dermocosmetic applied twice daily during menstrual cycles is beneficial in reducing acne lesions, sebum levels and marks, and improves the women's QoL.

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### DERMOCOSMETICS IN MANAGEMENT OF CANCER-RELATED SKIN TOXICITIES: INTERNATIONAL EXPERT CONSENSUS

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#### **INTRODUCTION & OBJECTIVES**

Skin toxicities – one of the most frequent adverse events associated with cancer therapies – can occur with all types of cancer therapeutic interventions. Further, new side effects emerge as new oncology drugs are approved (eg, targeted therapies, immunotherapies), which are associated with a negative impact on quality of life, oncologic treatment dose reductions and/or treatment discontinuation. From a pathophysiologic point of view, skin toxicities during cancer treatment result mostly from alterations in skin barrier function, with altered immune functions inducing inflammation, and phototoxicity. Minimizing alterations in skin barrier function and prescribing a photoprotection facilitate prevention and management of adverse events to optimize treatment outcomes.

#### **MATERIALS & METHODS**

In partnership with the Association Francophone des Soins Oncologiques de Support

(AFSOS) and Multinational Association of Supportive Care in Cancer (MASCC), a group of international experts (onco-dermatologists, oncologist, radiation oncologist, oncology nurse) all involved in management of cancer patients performed a literature review and a consensus meeting to define skin care including dermocosmetics to both to prevent and or manage skin adverse events induced by cancer drugs

#### **RESULTS**

Dermocosmetics, or cosmeceuticals, include a range of products that can have both therapeutic and cosmetic value. These products help support and maintain the epidermal skin barrier with all its functions and in addition the cutaneous microbiome. Some have been formulated for skin that is particularly fragile, and sensitive.

For general recommendations,

- 1- Skin care should be implemented as soon as at initiation of any anticancer drugs associated with skin toxicities, since prevention is a crucial aspect of management.
- 2- Skin hydration relieves symptoms and reduces exacerbations of xerosis and itching.
- 3- Cleansers should have a pH close to 5, while basic and neutral pH cleansers should be avoided inducing dysbiosis.
- 4- Urea, particularly in the case of anti-cancer drugs leading to hyperkeratosis and hand foot syndrome, is important due to its exfoliating and hydrating actions.

Finally, to help to have a global approach of the skin toxicities, the group also developed recommendations for the management of specific skin toxicities depending on their severity.

#### CONCLUSION

Emerging evidence is providing support for the beneficial impact of dermocosmetics in management of treatment-related skin toxicities targeting mainly skin barrier and microbiome, together with photoprotection. These recommendations include as well the need for education of all healthcare providers and patients.





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## INVESTIGATION ON THE IMPACT OF CUTANEOUS ADVERSE REACTIONS ON THE QUALITY OF LIFE IN CANCER PATIENTS

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#### **INTRODUCTION & OBJECTIVES**

While new cancer treatments have significantly improved survivals, they also led to a large variety of new adverse events including skin related that have a strong impact on patient's quality of life and can even lead to cancer treatment dose reduction or interruption in the most severe cases. The study aims to investigate the prevalence of cutaneous adverse reactions among cancer patients who have experienced or experiencing cancer treatment in China and its impact on their psychological and physical health.

#### **MATERIALS & METHODS**

Online questionnaire survey was sent to the patients of the Beijing LoveBook Cancer Foundation for data collection. The survey contents include basic information, psychological and physical health status, and the social needs of cancer patients. The questionnaire design referred to several international scales including SF-36, EQ-5D, FACT-G, and DLQI. SPSS23.0 was used for data analysis. Comparisons were conducted by Chi-Square test. The relationship between cutaneous adverse reactions and mental and physical conditions was analysed using a multivariate logistic regression model or an ordinal logistic regression analysis.

#### **RESULTS**

The survey included 2244 cancer patients (M: 320, F: 1924) from 22 provincial regions in China. Among all participants, breast cancer (56.61%) was the leading type of cancer.

Surgery (85.96%) and chemotherapy (76.25%) were the mostly experienced treatments.

The overall prevalence of cutaneous adverse reactions related to cancer treatment among all participants was 25.98% (N=583).

Pruritus (67.92%), xerosis (58.66%), and pigmentation (44.77%) were the most common symptoms of cutaneous adverse reactions of cancer patients.

Patients with cutaneous adverse reactions are more likely to experience emotional distress (62.61%), emotion impact on life (62.61%), sleep disorders (73.58%), psychological burdens (86.28%), and poor health status (67.07%) than those without cutaneous adverse reactions.

Besides, compare to patients without cutaneous adverse reactions (5.54%), more patients with cutaneous adverse reactions (8.75%) indicated that they were less familiar with cancer-related disease knowledge (data not shown, p<0.001). Majority (71.48%) of the patients considered the communication with doctors during the appointment as the main way to learn about the disease and side effects.

#### **CONCLUSION**

The prevalence of cutaneous adverse reactions in cancer patients is high in China, which seriously affect their psychological and physical health. Clinical physicians, especially oncologists and dermatologists, should pay great attention to the adverse skin reactions related to cancer treatment and provide professional and timely treatment to cancer patients to improve their quality of life and compliance to the cancer treatments.





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### SKIN ADVERSE EVENTS OF ANTI-CANCER TREATMENTS: AN EXAMINATION OF DRUG-ADVERSE EVENTS ASSOCIATIONS

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#### **INTRODUCTION & OBJECTIVES**

While anticancer treatments, including chemotherapies, targeted therapies, radiotherapy, and immunotherapy, are effective for treating cancer, they can be associated with significant skin toxicities (adverse events [AEs]). These AEs can cause discomfort and may lead to discontinuation of therapies. However, a comprehensive estimation of associations between the use of cancer drugs and skin AEs is currently lacking. This study aims to investigate these associations using a large database.

#### **MATERIALS & METHODS**

This study utilized the FDA's Adverse Event Reporting System (FAERS) database, focusing on health professional reports from January 2013 to September 2022. The database included 3,399,830 reports involving 3084 drugs across all therapeutic areas and 16348 AEs. A matching model using the nearest neighbor technique to identify 10 control reports for each case report based on cosine similarity of demographic and AE severity factors was used to minimize false positives and negatives. Bonferroni correction was used to handle false positives due to multiple comparisons.

#### **RESULTS**

Anticancer drugs were identified in the database (n=212). There were 10,698 anticancer drug-skin AE pairs, of which 676 had significant reporting odds ratios (ROR) >1, comprising 113 drugs and 144 AEs. The minimum ROR was 1.25, and 50% of associations displayed a ROR >10. Rash was significantly associated with 51 drugs and dry skin with 28 drugs. Methotrexate was associated with 34 different AEs (among the 34 AEs, 7 were also statistically considered an indication of treatment), mechlorethamine with 33, and the anti-BRAF vemurafenib with 24 AEs. Targeted therapies were present in 49% of the pairs, chemotherapies in 35.9%, and immunotherapies in 11%. Multikinase inhibitors were present in 21.8% of the pairs involving a targeted therapy, and antimetabolites were present in 33.3% of the pairs involving chemotherapy. Considering the relative weight of skin AEs on the tolerance profile of drugs, these AEs were present on average in 11% of the reports, with a maximum of 51% for mechlorethamine.

#### **CONCLUSION**

This study used a large database to examine the associations between anticancer drugs and skin AEs. 113 anticancer drugs were identified as significantly associated with skin AEs, with rash and dry skin as the most reported AEs. Targeted therapies were most frequently associated with skin AEs, followed by chemotherapies. Methotrexate and mechlorethamine had the greatest number of associations. Some associations could be partially explained by the fact that certain anti-cancer drugs are also used to treat dermatological diseases or are administered transdermally. These data do not allow the assessment of skin AEs incidence with anticancer drugs as they are likely underreported, but the results enable quick identification of signals of skin toxicity after the introduction of new treatments. They also highlight the importance of monitoring skin AEs in patients undergoing anticancer treatments.





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# EFFICACY AND TOLERABILITY OF A PREBIOTIC-CONTAINING MULTIPURPOSE HEALING BALM IN THE MANAGEMENT OF DRY ECZEMATIDES ACROSS PHOTOTYPES, LOCALIZATIONS AND AGES

# **AUTHORS**

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# INTRODUCTION

Some mild cutaneous conditions do not necessarily deserve a prescription drug as a first line treatment. This is typically the case with dry eczematides for which a healing product may solve the problem with expectations including perfect tolerance, rapid calming effect and quick come back to a mark-free skin across phototypes worldwide. Evidence is growing that to restore skin microbiome plays an important role.

# **OBJECTIVES**

To evaluate the efficacy and tolerability of a prebiotic-containing healing balm in the management of dry eczematides.

# **MATERIALS AND METHOD**

This is an open label non comparative study conducted in 4 centers in Poland (n=6), Mauritius (n=2), China (n=10) and the US (n=12) in male and female of phototypes I-VI aged 12 to 69 years, with dry eczematides of various localizations. Product was applied at least twice daily for 21 days. Evaluations were conducted as per: IGA for improvement, success rate (IGA 3 and 4), local signs, pain and pruritus, post recovery marks, local tolerance.

# **RESULTS**

Success was obtained in 62% of subjects at day 21. Hyperpigmentation was absent or almost absent in 64 % of cases. It was well contained in others (53% mild, 13% moderate, no severe). Pruritus nearly disappeared after the first application of the product. Local tolerance was considered good or excellent in 100% of cases. Subgroup analysis showed consistent efficacy across ages, localizations and phototypes. Pictures are provided to illustrate efficacy across subgroups.

# **CONCLUSION**

The study showed the efficacy of a prebiotic-containing multipurpose healing balm in the first line management of dry eczematides over 21 days with a success rate of 62% across phototypes, ages and localizations. Hyperpigmentation was contained and an immediate calming effect was observed. It is likely that the effect on the microbiome restauration plays an important role in these results.

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# EFFICACY AND TOLERABILITY OF A PREBIOTIC-CONTAINING MULTIPURPOSE HEALING BALM IN THE MANAGEMENT OF SKIN IRRITATION OF VARIOUS ETIOLOGIES ACROSS PHOTOTYPES, LOCALIZATIONS AND AGES.

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# INTRODUCTION

Some mild cutaneous conditions do not necessarily deserve a prescription drug as a first line treatment. This is typically the case with dry eczematides (DE), unspecific irritative and cracked dermatitis (ICD), non-disease specific irritations of the lips, genitals and peri anal region (LGPA), rubbing irritations (RI) and superficial burns (SB). For these conditions a healing product may solve the problem with expectations including perfect tolerance, rapid calming effect and quick come back to a mark-free skin across phototypes worldwide. Evidence is growing that to restore skin microbiome plays an important role.

# **OBJECTIVES**

To evaluate the efficacy and tolerability of a prebiotic-containing healing balm in the management of irritations of various etiologies.

# **MATERIALS AND METHOD**

This is an open label non comparative study conducted in 4 centers in Poland (n=27), Mauritius (n=27), China (n=25) and the US (n=30) in male and female of all phototypes aged 3 to 70 years, with various kind of non-disease-specific irritations of the skin, lips, genitals and peri anal region. Product was applied at least twice daily for 21 days. Evaluations were conducted as per: IGA for improvement, success rate (IGA 3 and 4), local signs, pain and pruritus, post recovery marks, local tolerance.

# **RESULTS**

At day 21, success was obtained in 62% of subjects for DE, 88% for ICD, 71% for LGPA, 67% for RI and 93% for SB. Hyperpigmentation was absent or almost absent in 73% of cases with phototypes I-III and in 46% of cases with phototypes IV-VI. It was well contained in others (30% mild, 7% moderate). Pain and pruritus nearly disappeared after the first application of the product whatever the indication. Local tolerance was considered good or excellent in 99% of cases ranging from 94% to 100% depending on the indication. Subgroup analysis showed consistent efficacy across ages, localizations, phototypes and etiologies. Pictures are provided to illustrate efficacy across subgroups.

# **CONCLUSION**

The study showed the efficacy of a prebiotic-containing multipurpose healing balm in various nonspecific irritative dermatitis over 21 days with a success rate ranging from 62% to 93% across phototypes, ages and localizations including lips and genitals. Hyperpigmentation was contained and an immediate calming effect was observed. It is likely that the effect on the microbiome restauration plays an important role in these results.

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# EFFICACY AND TOLERABILITY OF A PREBIOTIC-CONTAINING MULTIPURPOSE HEALING BALM IN THE MANAGEMENT OF IRRITATIONS OF THE LIPS, GENITALS AND PERI ANAL REGION ACROSS PHOTOTYPES, LOCALIZATIONS AND AGES.

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# INTRODUCTION

Some mild cutaneous conditions do not necessarily deserve a prescription drug as a first line treatment. This is typically the case with non disease specific irritations of the lips, genitals and peri anal region for which a healing product may solve the problem with expectations including perfect tolerance, rapid calming effect and quick come back to a mark-free skin across phototypes worldwide. Evidence is growing that to restore skin microbiome plays an important role.

# **OBJECTIVES**

To evaluate the efficacy and tolerability of a prebiotic-containing healing balm in the management of non disease specific irritations of the lips, genitals and peri anal region.

# **MATERIALS AND METHOD**

This is an open label non comparative study conducted in 4 centers in Poland (n=4), Mauritius (n=6), China (n=4) and the US (n=8) in male and female of phototypes I to IV aged 3 to 69 years, with non disease specific irritations of the lips, genitals and peri anal region. Product was applied at least twice daily for 21 days. Evaluations were conducted as per: IGA for improvement, success rate (IGA 3 and 4), SCOREPI (SCOre de REparation de l'EPIderme)1, local signs, pain and pruritus, post recovery marks, local tolerance.

# **RESULTS**

Success was obtained in 71% of subjects at day 21. Mean IGA score was improved from 0.7 at D2 to 3.1 at D21. SCOREPI was improved by 80%. Erythema was improved in 93% of patients and cracks were improved in 75% of patients at D21. Pruritus nearly disappeared immediately after the first application of the product. Local tolerance was considered good or excellent in 94% of cases.

# **CONCLUSION**

The study showed the efficacy of a prebiotic-containing multipurpose healing balm in the first line management of non disease specific irritations of the lips, genitals and peri anal region over 21 days with a success rate of 59% across phototypes, ages and localizations. Hyperpigmentation was contained and an immediate calming effect was observed.

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# EVALUATING THE EFFICACY OF A NEUROSENSINE-ENRICHED DERMOCOSMETIC IN PATIENTS WITH SENSITIVE SKIN AND/OR ALLERGIES: A ONE-MONTH OBSERVATIONAL STUDY

# **AUTHORS**

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# **INTRODUCTION & OBJECTIVES**

Sensitive skin and allergies are influenced by various factors, including demographic characteristics, environmental triggers, and living conditions. Specific dermocosmetic products (DC) are designed to alleviate symptoms associated with these conditions. In this study, our objectives are to describe the baseline profile of patients with sensitive or intolerant skin and allergies (demography, main triggers, living environment, type of allergy) and assess the efficacy of a DC after one month of use, based on clinical evaluations by dermatologists and self-assessments by patients.

# **MATERIALS & METHODS**

This observational study was conducted in dermatologist offices of 6 countries with a total of 2,018 patients with sensitive skin and/or allergy. Patients were assessed at baseline and after one month of using a DC containing moisturizing ingredients (i.e., Shea butter and Glycerine) in combination with Neurosensine, Sphingobioma, Neurofense, ingredients that target the signs of skin sensitivity and support the skin barrier function.

# **RESULTS**

The study included 79.8% female subjects, with a mean age of 37.6 (range 3-89) and 57.0% having phototype I/II. The majority of patients (77.8%) lived in a city.

Among the participants, 72.2% had cutaneous allergies, 24.5% had respiratory allergies, 18.2% had eye allergies, and 11.7% had a food allergy. Emotions are the most commonly reported trigger for allergic skin reactions by patients. After using the DC for one month, there were noticeable improvements in all parameters, as assessed by both dermatologists and patients. Patients displayed a high response rate on dryness, erythema, desquamation, skin itching, irritation, burning sensations, and discomfort.

# **CONCLUSION**

This study demonstrates the effectiveness of the DC in alleviating symptoms associated with sensitive skin and allergies. The findings provide valuable insights into the baseline profile of patients with these conditions and highlight the potential benefits of using DC to improve skin health and overall quality of life.

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# THE CLINICAL EFFICACY AND TOLERANCE OF A CERAMIDE-CONTAINING MOISTURISING CREAM IN THE MANAGEMENT OF SENSITIVE FACIAL SKIN

# **AUTHORS**

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# **INTRODUCTION & OBJECTIVES**

Patient-perceievd sensitive skin can be the result of several factors, but a leading hypothesis is an imparied epidermal barrier. It is common patients with dry skin or inflammatory conditions, known to be associated with reduced ceramide levels and barrier dysfunction, report experiencing symptoms of sensitive skin. The objective of this study was evaluate the clinical efficacy and tolerance of a cream containing three ceramides (EOP, NP and AP) in the condition and management of the symptoms of sensitive skin on the face.

# **MATERIALS & METHODS**

110 patients with self-perceived sensitive skin on the face were enrolled in this study. The patients applied the test cream twice daily for 28 days. The patients were randomly divided into group A (n=44) and B (n=66). Skin barrier function were evaluated on day 0, 1, 7, 14 and 28 in group A. Self-assessment on sensitive skin, patients' satisfaction, clinical efficacy was scored by patients in group B on different time points. Tolerance was evaluated by dermatologists in all 100 patients.

# **RESULTS**

After 28 days of usage, the moisture content of stratum corneum in group A increased from (33.90 ± 12.30) C.U to (46.70 ± 10.40) C.U (P<0.05); The skin erythema index EI decreased from 258.30 ± 61.10 to 249.50 ± 54.40 (P<0.05); The sebum content is (65.00  $\pm$  32.00)  $\mu$  G/cm<sup>2</sup> increased to (80.00  $\pm$  35.00)  $\mu$  G/cm<sup>2</sup> (P<0.05); Skin transcutaneous water loss decreased from  $(17.00 \pm 4.60)$  g/(h·m2) to  $(15.30 \pm 6.40)$  g/(h·m2) (P<0.05); The skin red area a\* value decreased from 14.95 ± 4.31 to 13.59 ± 4.53(P<0.05); 28 days later, the skin irritation and sensitive symptoms of the patients in Group B skin were alleviated; 94% of the subjects agreed the ceramidecontaining cream was gentle and comfortable to use; According to the evaluation of dermatologists, the test product was well-tolerated. During the study, the patients had no adverse reactions.

# CONCLUSION

The test cream containing three skin-identical ceramides (ceramides EOP, NP, and AP) significantly improved skin hydration and barrier function assocaited with the reduction in symptoms of sensitive skin. The test cream was well-tolerated and percieved as gentle by subjects with self-perceived sensitive skin on the face.

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# EFFICACY OF CERAMIDE-CONTAINING LOTION WITH SUNSCREEN ON SKIN BARRIER FUNCTION

# **AUTHORS**

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# **INTRODUCTION & OBJECTIVES**

UV rays not only cause oxidative damage to the skin but have been shown to cause damage its barrier. Sunscreen use is a crucial part of protecting the skin from UV radiation, but it may also have a positive impact on the function of the skin barrier. While much research has focused on the protective effects of sunscreen against UV oxidative damage, little is known about the impact of daily sunscreen use on the skin barrier function. This study investigated the changes in skin barrier function before and after using a ceramide-containing sunscreen.

# **METHODS**

Sixty volunteers (mean age: 36.43±6.14, from 20-45) were recruited. A least 40 the volunteers also self-percieved having sensitive skin. All participants apply ceramide-containing sunscreen twice a day (once morning, once afternoon) on the face for 4 weeks. Transepidermal water loss (TEWL), skin hydration, erythematic index (EI) value and skin redness area a\* value were measured using Tewameter, Corneometer, Mexameter and image analysis via VISIA-CR, respectively, at baseline, week 1 and week 4. Tewameter, Corneometer and Mexameter measurement was taken on the center of each subject's right or left check. Adverse reactions were also assessed.

# **RESULTS**

After 4 weeks of using the ceramide-containing lotion with sunscreen, significant reductions in skin redness compared with baseline were observed. Both skin redness area a\* value and skin erythema index value has decreased significantly by 11.89% and 5.68% respectively. There was also a significant decrease in TEWL by 22.96% and a significant increase in skin hydration by 21.96% in the stratum corneum. No adverse events occurred during the entire testing process.

# **CONCLUSION**

Daily application of the tested ceramide-containing lotion with sunscreen increases skin hydration and enhances the function of the skin barrier while helping to protect skin from UV radiation.

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# SUN EXPOSURE AND ASSOCIATED RISKS: INSIGHT FROM A SURVEY IN 17 COUNTRIES WITH A FOCUS ON THE POPULATION WHO HAVE BEEN TREATED WITH IMMUNOSUPPRESSIVE ANTI-GRAFT REJECTION DRUGS DUE TO AN ORGAN TRANSPLANTATION

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# **INTRODUCTION**

This survey investigates knowledge and behaviors regarding sun exposure among population who have been treated with immunosuppressive anti-graft rejection drugs because of an organ transplantation.

# **METHODS**

The survey (N=17,001) was conducted online in 17 countries (5 continents) from 28 September-18 October 2021. Automated selection from the Ipsos online Panel ensured samples of 1,000 individuals in each country fit the quotas method based on gender, age, employment status, and country regions. Data covered demographics, phototype, exposure habits and practices, knowledge and understanding of risks. The current focus in this abstract was defined as individuals who have been treated with immunosuppressive anti-graft rejection drugs because of an organ transplantation.

# **RESULTS**

This sub population represents 3% of the surveyed population (n=434), it comprised 65% men, average age was 39.7 years (SD:14.6) and 57% were of phototype 1–2. Eighty five percent were aware of sun-related skin-health issues, a similar awareness among general population (88%). Seventy-nine did know that sun protection is useful when the weather is overcast, a better knowledge compared to the general population (61%). Furthermore, 75% did understand the difference between UVA and UVB vs 30% in the general population. But, 69% indicated it was safe to expose themselves without protection when already tanned, a much larger misconception compared to the general population (23%).

Only 46% systematically/often use all protections measures during exposure; still a higher practice compared to the general population (12%). Sixty three percent said they protected from the sun all year round, a better habit compared to the general population (23%). However, during sun exposure, among the 93% who declared using sunscreen, 85% applied sunscreen only once or twice a day, a worse practice compared to the general population (74%). And when already tanned 37% decreased frequency of application and/or used lower protection (44% among general population). Eighty-nine regretted not having previously used better protection, a much stronger regret compared to the general population (57%).

# **CONCLUSION**

Although individuals who have been treated with immunosuppressive anti-graft rejection drugs because of an organ transplantation had better knowledge and behavioral attitudes compared to the general population, this survey provides insight into the need for additional photoprotection education among this specific population.





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# SUN EXPOSURE AND ASSOCIATED RISKS: INSIGHT FROM A SURVEY IN 17 COUNTRIES WITH A FOCUS ON THE POPULATION WHO HAVE BEEN TREATED FOR SKIN CANCER OR PRE-CANCEROUS LESIONS IN 17 COUNTRIES

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# **INTRODUCTION**

This survey investigates knowledge and behaviors regarding sun exposure among population who have been treated for skin cancer (melanoma/non melanoma) or pre-cancerous lesions in 17 countries.

# **MATERIALS AND METHOD**

The survey (N=17,001) was conducted online in 17 countries (5 continents) from 28 September-18 October 2021. Automated selection from the Ipsos online Panel ensured samples of 1,000 individuals in each country fit the quotas method based on gender, age, employment status, and country regions. Data covered demographics, phototype, exposure habits and practices, knowledge and understanding of risks. The current focus in this abstract was defined as individuals with a history of melanoma/non melanoma skin cancer, pre-cancerous lesions.

# **RESULTS**

This sub population represents 8% of the general population (n=1372), it comprised 54% men, average age was 49.9 years (SD:17.6) and 58% were of phototype 1–2. 90% were aware of sun-related skin-health issues (vs 88% in the general population). Seventy nine did know that sun protection is useful when the weather is overcast, a better knowledge compared to the general population (61%) (P<0.001). However, 34% indicated it was safe to expose themselves without protection when already tanned, a larger misconception compared to the general population (23%). Fifty four did not understand the difference between UVA and UVB vs 70% in the general population (P<0.001).

Only 28% systematically/often use all protections measures during exposure; still a higher practice compared to the general population (12%). However, 42% said they protected from the sun all year round, a better habit compared to the general population (23%). During sun exposure, among the 91% who declared using sunscreen, 74% applied sunscreen only once or twice a day, a similar practice among general population (74%). And when already tanned 38% decreased frequency of application and/or used lower protection (44% among general population). Eighty two regretted not having previously used better protection, a much stronger regret compared to the general population (57%).

# **CONCLUSION**

Although individuals who have been treated for skin cancer or pre-cancerous lesions had better knowledge and behavioral attitudes compared to the general population, this survey shows that even a population at high risk of skin cancer and having a regular medical follow-up does not sufficiently perceive the importance of photoprotection in a prevention objective. This leads to discuss the implementation of new information tools with more impact.





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# SUN EXPOSURE AND ASSOCIATED RISKS IN 17 COUNTRIES: UK RESULTS

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# **INTRODUCTION & OBJECTIVES**

Primary and secondary prevention of skin cancer vary considerably from one country to another.

This survey investigates knowledge and behaviours regarding sun exposure in the United Kingdom.

# **MATERIALS & METHODS**

This online survey was conducted in the United Kingdom (N=1,000) from the 28th of September till the 18th of October 2021 and was part of a worldwide survey (N=17,001) conducted in 17 countries (5 continents). Automated selection from the Ipsos online Panel ensured samples of 1,000 individuals in each country fit the quotas method based on gender, age, employment status, and country regions. Data covered demographics, phototype, exposure habits and practices, knowledge and understanding of risks. "At-risk" sub-population was defined as individuals with a history of melanoma/non melanoma skin cancer, pre-cancerous lesions, photo dermatoses, or currently on photosensitive or immunosuppressive drugs.

# **RESULTS**

The population consisted of 49% men, average age was 46.6 years (SD:15.7) and 61% were of phototype 1-2. 76% of Britons stated that a tanned skin looks attractive vs 72% worldwide. And 70% of Britons indicated that a tan conveys a healthy look, a different perception compared to worldwide (64%). Most of Britons were aware of sun-related skin-health issues, a better awareness compared to worldwide (94% vs 88%). 61% did know that sun protection is useful when the weather is overcast, a similar knowledge compared to worldwide (61%). Furthermore, only 15% indicated it was safe to expose themselves without protection when already tanned, a better knowledge compared to worldwide (23%).

In terms of photoprotection, 15% said they protected themselves from the sun all year round, a lower score compared to worldwide (23%). Only 13% systematically/often used all protections measures during exposure; a similar practice compared to the worldwide average (12%). In detail, Britons were more likely to put sunscreen systematically/often on their face (71% vs 60%), on their hands, neck, décolleté, ears (64% vs 52%) and on their arms, legs and chest (69% vs 55%) compared to the global population. But on the other hand, Britons were less likely to try systematically/often to stay in the shade (73% vs 77% worldwide) or avoid sun exposure during zenithal exposure (53% vs 66%). Among those who applied sunscreen, 70% applied it more than twice a day a better practice compared to worldwide average (56%). When already tanned 36% decreased frequency of application and/or used lower protection, this frequency habit reached 44% globally. 52% regretted not having previously used better protection, a weaker regret compared to worldwide (57%). In terms of knowledge, 71% did not understand the difference between UVA and UVB vs 70% worldwide.

At-risk individuals (10%, N=100) had better knowledge and photoprotection habits than the overall population; but only 27% systematically/often used all the protection measures during sun exposure and still 54% felt they did not understand the difference between UVA and UVB.

# **CONCLUSION**

Although risks from sun exposure are widely recognized, sun-protection practice is inadequate. At-risk individuals had better knowledge and behavioural attitudes. Nevertheless, this survey provides insight into the need for additional photoprotection education in the United Kingdom.





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# THIRTY YEARS OF PROMOTING SUN SAFETY IN FRANCE: THE MESSAGES ARE HEARD BUT NOT FOLLOWED!

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# **INTRODUCTION & OBJECTIVES**

For over 30 years [date of the creation of the association Sécurité Solaire 1], annual sun safety campaigns have been run by the authorities and healthcare professionals, with dermatologists on the front line. France is no stranger to the distribution of those messages or the involvement of all public health stakeholders.

# **MATERIALS & METHODS**

Following the quota method, 1,000 respondent's representatives of the French population were surveyed in autumn 2021. The same study was simultaneously conducted in 16 other countries. The digital questionnaire examined not only sun exposure habits and practices, but also awareness, preconceptions and understanding of the risks.

# **RESULTS**

Although a tanned skin is considered "more attractive" for 79% [95% CI:76.5%, 81.5%] of the French and 68% [95% CI:65.1%, 70.9%] associate a tan with good health, it is interesting to note that 93% [95%

CI:91.4%, 94.6%] of respondents were aware of the skin problems caused by too much sun and 87% [95%CI:84.9%, 89.1%] that sun exposure accelerates skin ageing. Women and seniors were the most informed

[p<0.001]. Interestingly, 59% [95% CI:56.0%, 62.0%] know that it is advisable to protect the skin against the sun on cloudy days, but 20% [95% CI:17.5%, 22.5%] think that sunbathing when the skin is already tanned presents no risk, including nearly one in three people aged 18 to 24! 71.4% of the French claim not to sunbath regularly in the hottest part of the day [12 noon–4 pm] (significantly more women (75.8% vs 66.5%, p<0.001)). The use of at least one of the following; headgear, clothing, sunglasses, shade, sunscreen, is reported by 95.4% (with a significant difference in favour of women; 96.8% vs 93.9%,

p<0.001). The use of sunscreens is reported by only 68.3% (with a significant difference in favour of women; 76.8% vs 58.9%, p<0.001). They represent 76.4% of respondents who claim not to sunbath regularly in the hottest part of the day. Only 23% of those who use sunscreen report following the

recommendation to apply it every two hours (with a significant difference in favour of women; 35.5% vs 19.6%, p<0.001). However, 40.6% of the French population regret not protecting themselves better against the sun in the past, with a higher rate in women (45.0% vs 35.8%, p=0.003) but no difference according to age range. Although 93% of the French report knowing the skin health risks of unlimited sun exposure but, only 40% are fearful of the risk of developing cancer and 48.3% premature skin ageing.

# **CONCLUSION**

Prevention messages explaining the dangers of sun exposure have multiplied in the last 30 years. Our study shows that although the French population has been exposed to these awareness campains, not everyone follows the photoprotection recommendations. It is indeed difficult to change attitudes when, up to 79% find tanned skin more attractive and 68% see it as a sign of good health. On top, whilst sunscreen is widely used, it is not always used correctly and recommendations are not always followed! Prevention and public health messages as they have been conducted to date are clear/undersrtood but the recommendation not followed! Together, we need to concentrate on the key messages to be delivered — sun exposure and risk of skin cancers, of premature ageing, education on the differences between UVA and UVB, on sunscreen packaging information such as SPF and UVA logo, and repeat the behaviors to adapt towards sun exposure (avoiding hottest times,





seeking shade, wearing hats, protecting clothes, sun glasses).

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# CLINICAL EFFICACY OF EMOLLIENTS IN ATOPIC DERMATITIS PATIENTS: LONG-LASTING EFFICACY.

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# INTRODUCTION

Atopic dermatitis (AD) is a chronic inflammatory skin disorder that involves alteration of skin physical barrier, microbiome and immune system. It affects children and adults with a substantial impact on quality of life (QoL). Emollients are the baseline therapy for any severity of AD with emollient "plus" being emollients with active ingredients to maintain healthy skin microbiome.

# **OBJECTIVES**

Evaluation of the efficacy of an emollient "plus" containing Aqua Posae filiformis, Microresyl, LRP Thermal Spring Water, Shea Butter and Niacinamide to improve AD after 1 month and maintain the improvement for 5 additional months.

# **MATERIALS AND METHOD**

monocentric, open label study conducted with 56 subjects (45% children ≥3 years old (YO); 55% adults) having mild AD under dermatological control. All subjects were treated twice daily for 6 months with the emollient "plus". The evaluation of the efficacy of the emollient "plus" was based on the SCORing Atopic Dermatitis (SCORAD) reduction after 28 days and the SCORAD maintainance during the following 5 months (assessed at D84 and D168). Additionally, impact of AD on QoL was evaluated through a DLQI and CDLQI questionnaire.

# **RESULTS**

At D28, the average SCORAD was 40% lower compared to baseline (D0: 15.29; D28 9.11; p<0.001). During the maintenance phase, the average SCORAD at Day 84 and D168 was respectively reduced by 8% and 17% compared to Day 28 (D84: 8.37; D168: 7.52; p<0.05). The continuous use of the emollient "plus" improved 90% of the adults and 84% of the children QoL scores by the end of the study (Adults: D0: 6.6; D168: 0.7; Children: D0: 5.3; D168: 0.8; p<0.001).

# **CONCLUSION**

This study highlights the short and long-lasting efficacy of emollient"plus" containing Aqua Posae filiformis, Microresyl, LRP Thermal Spring Water, Shea Butter and Niacinamide for managing mild AD.

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# EFFECTIVENESS AND TOLERABILITY OF AN EMOLLIENT+ FORMULATION IN PATIENTS WITH XEROSIS OR ATOPIC DERMATITIS: RESULTS OF A REAL-WORLD OBSERVATIONAL STUDY CONDUCTED IN THE UNITED KINGDOM

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# **INTRODUCTION AND OBJECTIVES**

Emollients are recommended as basic skin care in patients with any severity of atopic dermatitis (AD). Data from a previous randomized double-blind study suggest that an emollient+ plus comprising shea butter, niacinamide, mannose, Vitreoscilla filiformis biomass extract grown in thermal spring water (VFB-TSW) and Ophiopogon japonicum root extract had significantly greater improvements in pruritus versus standard emollient in patients with moderate-to-severe AD on systemic treatment.1 The impact of this emollient+ on symptom management and health-related quality of life (HRQoL) in patients with xerosis or AD was assessed.

# **MATERIALS AND METHOD**

The current observational study included patients aged >16 years with mild-to-severe xerosis, a history of skin disease, and prone to AD. Patients with severe/very severe AD receiving oral corticosteroids or other oral immunosuppressants were excluded. The study was conducted by dermatologists in the United Kingdom. Patients were recommended to use the emollient+ once or twice daily. Patients and physicians completed questionnaires to evaluate effectiveness, satisfaction, and tolerability, while patients also assessed their HRQoL. Questionnaires were completed at baseline (Visit 1 [V1]; 0 weeks) and end-of-study (Visit 2 [V2]; typically 8–12 weeks).

# **RESULTS**

In total, 98 patients were evaluated: mean (standard deviation [SD]) age, 42 (16) years; 58.2% female, with mainly either Fitzpatrick skin type II (34.7%) or IV (25.5%). AD was the most common skin condition (48.5%), followed by severe xerosis other than AD (22.7%), senile xerosis (12.4%), psoriasis (6.2%), and other skin conditions (10.3%). Mean disease duration was 21.4 (standard deviation [SD] 15.1) years for patients with AD, 21.0 (15.1) years for those with psoriasis and 6.1 (6.0) and 8.4 (8.8) years for those with senile or severe xerosis, respectively. Physicians recommended treatment over a mean (SD) of 9.2 (3.0) weeks, and twice-daily application for most patients

(74.5%)

Compliance was good, with 84.7% of patients indicating daily application. Tolerability and satisfaction were high, with 83.7% of patients reporting high/excellent tolerability and 94.9% being satisfied/very satisfied with treatment. Symptoms improved following treatment, with a greater proportion of patients having no/mild symptoms at V2 (>75%) versus V1 (Table). More patients had lesion-free skin at V2 (46.9%) versus V1 (24.5%). Dermatology Life Quality Index scores showed improvement in HRQoL, with "no effect at all on patients' lives" reported for 46.9% of patients at V2 versus 16.5% at V1.

# **CONCLUSION**

These real-world data support the clinical effectiveness of an emollient+ in patients with mild-to-severe xerosis including AD.





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# **REFERENCE**

1. Jaenicke T et al. EADV 2022; abstract 3490.

Table. Clinical skin assessments, symptoms and quality of life endpoints

		Phy	sician ratin	g of patient	s' symptom:	5				
	Absent/mild				Mod		Severe/very severe			
	V1		V2*		V1 V2		.* V1		V2*	
Skin disease intensity	47 (48.0)		76 (79.2) 4		9 (50.0)	19 (1	9.8) 2 (2.0)		1 (1.0)	
Skin dryness	36 (36.7)		86 (89.6) 5		7 (58.2) 10 (1		.0.4) 5 (5.1)		0 (0.0)	
Pruritus	47 (48.0)		81 (84.4) 4		1 (41.8) 12 (1		2.5) 10 (10		3 (3.1)	
Intensity of daily discomfort	63 (64.3)		87 (90.6) 3		0 (30.6)	7 (7	3) 5 (5.1)		2 (2.1)	
	Unaffected/mildle		y affected		Moderately affected			Heavily/very severely		affected
Sleep impact	74 (75.5)		90 (93.8) 22		2 (22.4)	4 (4	.2)	2 (2.0) 2 (2.1)		2 (2.1)
	None		>0-<30		0% ≥		30-<75%		≥75%	
	V1	V2'	V1		V2*	V1	V2	•	V1	V2*
Inflammatory lesions, (skin surface affected)	24 (24.5)	45 (46	9) 67 (68.4)		50 (52.1)	6 (6.1) 2		.1) 1	(1.0)	0 (0.0)
		101	C	LQI score	_	olo -		100	200	
	No effect (score 0–1)		Small effect (score 2–5)		Moderate effect (score 6–10)		Large effect (score 11–20)		Extremely large effect (score 21–30)	
	V1	V2	V1	V2	V1	V2	V1	V2	V1	V2
Effect of skin condition on patients' lives	16 (16.5)	46 (46.9)	32 (32.7)	34 (34.7)	22 (22.4)	11 (11.2)	26 (26.5)	6 (6.1)	1 (1.0)	1 (1.0)

Data shown are n (%) of participants.

DLQI, Dermatology Life Quality Index; V, visit.





<sup>\*</sup>Data available from n=96 participants.

# TREATMENT AND MAINTENANCE OF XEROTIC SKIN USING A ONCE DAILY LIPID REPLENISHING CLEANSER AND MOISTURIZER

# **AUTHORS**

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# **INTRODUCTION & OBJECTIVES**

Xerotic skin presents with dryness, scales, and flakes, which can lead to fissures, cracks and sometimes eczema. These signs and symptoms can negatively affect patients' quality of life. The purpose of this open-label, multicentre cohort study was to evaluate the improvement of mild-to-moderate xerosis following the use of a once-daily gentle cleanser and moisturizer, over a duration of 28 days.

# **MATERIALS AND METHODS**

The study recruited subjects from 4 Canadian sites with a documented history of xerosis on the torso, arms, and/or legs. Clinical assessments were performed at baseline and end of study (Day 28 +/- 5 days) using the physician-assessed Dry Skin Classification Scale (DSCS) and the Global Aesthetic Improvement Scale (GAIS). The primary study endpoint was the proportion of subjects having at least a one-grade improvement in skin dryness, based on the DSCS.

# **RESULTS**

48 Subjects were enrolled [8 males (16.67%); 40 females (83.33%)], with 47 subjects completing all study endpoints. The average age of the sample was 47.14 years (SD: 18.08). The population included Caucasian (n = 35; 72.92%), Asian (n = 8; 16,67%), other (n = 5; 10.41%) All subjects (100%) reported being entirely compliant with the once-daily application regimen. No product-related adverse events were reported. In addition, 91.49% (N = 43/47) of subjects in the per-protocol population met the primary endpoint, including: 51.06% (N = 24) of subjects demonstrating a multi-point decrease and 40.43% (N = 19) of subjects demonstrating a multi-point decrease in skin dryness. At the end of the study, 95.74% (N = 19) of subjects at least "improved" based on the physician- assessed GAIS.

# **DISCUSSION**

The once-daily regimen was very well tolerated in a cohort of subjects that are prone to skin irritation. The investigative cleanser and moisturizer significantly improved clinical signs of xerosis, including skin dryness.

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# TREATMENT AND SKINCARE FOR ATTENUATING ATOPIC DERMATITIS IN NEWBORNS, INFANTS, AND CHILDREN – SYSTEMATIC LITERATURE REVIEW AND CONSENSUS RECOMMENDATIONS

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# **BACKGROUND**

Atopic dermatitis (AD) is a common eczematous disorder, typically starting in infancy and early childhood that oftentimes can persist into adulthood. Hallmarks of AD are the chronic-recurrent nature of an eczematous skin rash with associated pruritus and a genetic predisposition. Daily use of moisturizers that contain humectants and ceramides has been shown to reduce the rate of AD flares and the need for topical steroid treatment.

The current consensus recommendations aim to attenuate AD in newborns, infants, and children using prescription medication and daily skincare, specifically ceramide-containing skincare.

# **METHODS**

The consensus recommendations aim to serve pediatric dermatologists, pediatricians, and other healthcare professionals caring for pediatric AD patients and patients at risk for developing AD. The advisors published a consensus paper, an algorithm on ceramide-containing skincare in newborns and infants, and the mitigation of AD.

Systematic literature searches (20 - 22 December 2022) for publications in the English language from 2010 to December 20, 2022, on PubMed and Google Scholar, informed the draft statements. The advisors convened a meeting on February 10, 2023. First, they reviewed and discussed the literature on AD attenuation with prescription and nonprescription treatment and skincare using cleansers and moisturizers for pediatric patients. Working with fifteen draft statements, the advisors developed five statements applying the selected literature, drawing from their clinical knowledge and experience, and reached a consensus.

# **RESULTS**

The systematic literature searches yielded N=234 publications (221 Pubmed, 22 Google Scholar). Excluded were n=49 (duplications and poor quality), leaving n=194 comprising n=126 clinical studies (93 clinical evaluations, 26 randomized controlled trials, 7 other) and n=68 reviews (20 systematic reviews, 9 meta-analyses, 24 consensus, guidelines and algorithms, 15 reviews). Guidelines, algorithms, and consensus papers agreed that skincare should be integrated into AD attenuation approaches as a mono or adjunct to prescription treatment. The systematic literature search publications showed a mixed picture of preventing AD with skincare but demonstrated that skincare has benefits for AD attenuation. Three meta-analyses showed a low-moderate certainty of skincare benefits for AD prevention, 1 was inconclusive for prevention, 3 displayed benefits for AD attenuation, and one did not include skincare. Ten randomized controlled clinical studies showed low (2/4) certainty evidence on skincare for AD prevention, and eight studies demonstrated moderate (3/4) certainty evidence attenuating AD in a high-risk population. The type of moisturizers used in the studies is a significant source of heterogeneity, and the number of studies was too small to stratify them by type.

# **CONCLUSION**

Studies that report significant benefits of prophylactic skin-lipids-containing moisturizers tended to have recommended daily or more frequent applications of moisturizer to the majority of the skin surface. A growing body of evidence recognizes the benefits of ongoing daily use of skin care, such as ceramide-containing skincare as a monotherapy or as an adjunct to prescription medication for attenuating AD for newborns,





# infants, and children.

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# THE BENEFITS OF A CERAMIDE-CONTAINING SKINCARE ROUTINE AS PART OF THE TREATMENT OF ATOPIC DERMATITIS, PSORIASIS, AND XEROSIS

# **AUTHORS**

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# **INTRODUCTION**

Atopic dermatitis (AD), psoriasis and xerosis are frequent reasons for dermatological consultation. Moisturisers, as adjunctive or monotherapy, are often used to help address and manage the symptoms of these three pathologies by hydrating the skin. Underlying skin dehydration in these conditions is a disrupted skin barrier and altered barrier lipid composition, in particular a deficiency of ceramides. Ceramide-containing moisturisers help to restore barrier function to help maintain hydration and address symptoms of dryness, which will benefit patients with AD, psoriasis and xerosis.

# **OBJECTIVES**

Evaluate the benefits of incorporating a skin identical ceramide containing cleanser and moisturiser in the treatment plan of patients with AD, psoriasis and xerosis.

Assess the impact of this ceramide containing test routine on Quality of Life using the DLQI 10 questionnaire in patients with AD, psoriasis and xerosis.

# **METHODS**

This prospective, multicenter, interventional study in adult patients with mild to moderate AD, psoriasis and xerosis enrolled 312 patients. Subjects presented at baseline with a SCORAD (Scoring Atopic Dermatitis) <40 for AD; PASI (Psoriasis Area and Severity Index) <10 for chronic plaque psoriasis; VAS (Visual Analogue Scale) <4 for xerosis. Patients were instructed to use the ceramide–containing hydrating cleanser 1/day and the ceramide–containing moisturiser at least 1/day, in addition to any previously prescribed treatments (if applicable) for 4 weeks.

The investigating physicians evaluated the skin of the patients at baseline (Visit 1) and after 4 weeks (Visit 2) using the SCORAD for AD, PASI for psoriasis and a 10-point VAS scale for symptoms of xerosis.

# **RESULTS**

- After 4 weeks of incorporating the test routine in their treatment plan, patients with AD (n=91) experienced significant improvement in SCORAD score (Figure 1) and patients with psoriasis (n = 71) had a significant reduction in PASI score (Figure 2).
- Symptoms in patients with xerosis (n = 94) showed a significant improvement after 4 weeks in all the following parameters (Figure 3): dryness, erythema, roughness, desquamation, pruritus, burning, and pain.
- The assessment of quality of life in the entire group of patients (n = 203) using the DLQI-10 questionnaire showed an overall improvement (Figure 4).

# CONCLUSION

• Incorporating a daily dermocosmetic skin care routine, consisting of a cleansing and moisturizing product containing skin-identical ceramides, is both effective and well tolerated as monotherapy or as adjunct to the treatment of AD, psoriasis and xerosis, all conditions associated with barrier disruption.





• A daily ceramide-containing cleanser and moisturiser routine contributes to a significant reduction in signs and symptoms of AD, psoriasis and xerosis with a high degree of patient satisfaction and improved quality of life.

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# COGNITION AND BEHAVIORS OF SKIN BARRIER REPAIR IN CHINESE PSORIASIS PATIENTS

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# INTRODUCTION AND OBJECTIVES

Psoriasis is a chronic immune-mediated skin disease with complex pathogenesis. Guidelines and consensus on psoriasis have recommended the use of emollients as the basic treatment method to repair the skin barrier damage caused by psoriasis. However, studies on the status and feedback of emollient use in Chinese psoriasis patients are limited. The objective of this study is to evaluate the current situation of the cognition and behaviors of skin barrier repair in Chinese psoriasis patients.

# **MATERIALS AND METHOD**

Online questionnaires were distributed to six core hospitals in China from March to May 2022. Finally, 2095 questionnaires were collected, of which 2043 were validated. All participants provided written informed consent and were recruited according to the protocols approved by the Institutional Ethics Committee of a Hospital. Statistical analyses were performed using SPSS 23.0 software. Descriptive statistics were calculated for each variable using frequencies and percentages for categorical variables and means and standard deviations for continuous variables. OR [95% confidence interval (95% CI)] was also calculated.

# **RESULTS**

Emollients were the most commonly used method for improving dry skin in psoriasis patients (67.4%). Overall, 1693 (82.9%) of the respondents had a habit of using emollients, of which 61.4% had received health education (61.4%) on their use by professional doctors. (Table 1). We analyzed the respondents' preferences regarding the use of emollients for improving scales (Table 2), dryness (Table S1), and pruritus (Table S2). We found that patients with drier, more sensitive, and itchier lesions preferred using emollients. We also analyzed the survey respondents' preference for using emollients, including their frequency, type, time, quantity, seasons, body parts, and sequence, in three dimensions: scale, dryness, and pruritus improvement rate. Interestingly, patients who used emollients twice a day or more had better improvement of scales (OR 2.857, 95% CI 1.962–4.161, P<0.001) and pruritus (OR 2.282, 95% CI 1.657–3.145, P<0.001) in the lesion area than those who used emollients once a day or occasionally. Patients who applied the emollient to and around the lesion or the whole body showed a better rate of improvement in dryness than those who applied the emollient only to the lesion (OR=1.593, 95% CI 1.119–2.266, P=0.01).

# CONCLUSION

The results revealed that emollients may reduce scale, dryness, and pruritus to some extent and that the proportion of respondents who were able to apply emollients correctly was not ideal, suggesting that psoriasis patients need to be further educated in this area. This study provides important insights into caring for psoriasis patients.

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# EFFICACY OF A DERMOCOSMETIC CONTAINING NEUROSENSINE, SPHINGOBIOMA AND NIACINAMIDE IN ATOPIC DERMATITIS PATIENTS ACHIEVING RAPID SYMPTOM RELIEF AFTER ONE-DAY USE AND SUSTAINED IMPROVEMENT OF DISEASE SEVERITY AND QUALITY OF LIFE OVER TIME

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# **INTRODUCTION AND OBJECTIVES**

Atopic Dermatitis (AD) is a chronic inflammatory skin disease associated with dysfunctional integrity of epidermal barrier, which frequently results in skin dryness, itching, burning sensations and inflammatory lesions. Maintaining and stabilizing the skin barrier is essential for preventing and treating AD. Everyday emollient therapy is the basis of AD treatment and helps to restore epidermal barrier functions.

The purpose of this clinical study was to evaluate the effects of a face skin care cream (DC) on skin barrier function, clinical symptoms, skin appearance, and quality of life in patients with AD.

# **MATERIALS AND METHOD**

A total of 63 adult patients with mild to moderate AD without acute eczema on face, neck and décolleté were enrolled and applied the DC twice daily on their face, neck, and décolleté for two weeks. The following investigations were performed at baseline, after 24h and day 14: Clinical parameters such as general SCORAD (Scoring of Atopic Dermatitis) and EASI (Eczema Area and Severity Index) scores and local SCORAD, skin physiological measurements such as TEWL, pH, corneometry, sebumetry, chromametry, and electrochemical impedance spectroscopy (EIS). Subjective and objective assessments of the skin as well as The Dermatology Life Quality Index (DLQI) questionnaire were evaluated at baseline and over time.

# **RESULTS**

The study results indicate that the application of the DC led to significant improvements in both subjective and objective symptom assessment as early as day 1, with further improvements observed after 14 days. Patients reported a significantly (p<0.001) reduction in symptoms such as dryness, itching, redness, desquamation, burning, and tightness feeling on the face, neck, and décolleté over time, with the strongest improvement observed in the facial area.

Disease severity, as measured by SCORAD and EASI, improved over time, particularly in the reduction of skin symptoms intensity and subjective symptoms such as sleep disorders and pruritus intensity. Clinical examinations confirmed the high dermatological tolerance of DC. An improvement in quality of life (DLQI) was also observed.

# **CONCLUSION**

The study demonstrates the tolerability and rapid and sustained efficacy of a DC containing neuroserine, niacinamide and sphingobioma used twice a day in improving the signs and symptoms of AD. The use of a facial skin care cream resulted in improvements in quality of life and disease severity of the patients. This finding confirms the importance of emollients to be used on the facial, neck and décolleté areas in the management of AD.





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# HEALTH LITERACY AND TOPICAL CORTICOSTEROID ADHERENCE IN PARENTS OF CHILDREN WITH ATOPIC DERMATITIS IN FRANCE

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# INTRODUCTION AND OBJECTIVES

Therapeutic nonadherence is frequent amongst the parents of children with atopic dermatitis (AD) treated with topical corticosteroids (TCs)<sup>1</sup>. Therapeutic nonadherence is a multidimensional phenomenon involving the interaction of numerous factors, particularly health literacy (HL), that refers to the ability to access, understand, communicate, calculate and process specific information on medicinal products<sup>2</sup>. It is known that low HL can be associated with therapeutic nonadherence in chronic conditions<sup>3</sup>. A recent study showed that low HL is associated with a higher risk of steroid phobia. However, the description of HL amongst parents of AD children remains limited. Therefore, our study aims to evaluate the prevalence and sociodemographic factors associated with HL in the parents of AD children.

# **MATERIALS AND METHOD**

A cross-sectional study describing parents of AD children was conducted in France between March and April 2022. A dedicated questionnaire was used to identify parents of AD children from a representative sample of French adults, characterized using the quota method: age, sex, location, and socio-professional status. In case of a prescription of topical steroid for the treatment of AD for their child, it was proposed to the parents, a description of their attitude regarding this topical therapy.

# **RESULTS**

Three populations were identified:

- 1/ steroid adherents (SA) who reported following the TCs prescription unquestioningly,
- 2/ steroid sceptics (SS) who reported following the prescription after researching TCs, and
- 3/ steroid phobes (SP) who reported rejecting the TCs prescription due to fear of its effects.

35.5% (n=5343) of our sample reported living with at least one child under the age of eighteen. Among them 25% (n=1335) reported having a child affecting by AD and/or eczema (21.8% of men vs 29.6% of women).

61.5% (n=822) of these parents reported a prescription of topical steroid for the management of AD for their child. In total, a population of 822 parents of AD children who have received TCs treatment was identified. The mean age of parents was 37.82 y.o + /-10.01 years. In this age group, more than 1 in 2 people have completed higher education, which is consistent with our results with 334 (40.6%) fathers and 488 (59.4%) mothers respectively.

Within the population, 146 parents (17.8%) were identified as steroid phobes.

676 parents (92.2%) demonstrated some health literacy: 90 (10.9%) were identified as steroid sceptics and 586 (71.3%) as steroid adherents. The sociodemographic profile of steroid sceptic parents was not significantly different from steroid adherent parents. Compared to steroid sceptic parents, steroid phobe parents were significantly younger (38.37 vs 34.43, p<0.005) and often live in urban areas (78.1% vs 54.4%, p=0.012).

Compared to steroid adherent parents, steroid phobe parents were significantly more often men (54.1% vs 38.4%, p=0.02), younger (34.43 vs 38.58, p<0.001), living in urban areas (78.1% vs 61.3%, p<0.01) and with a recent history of dermatoses (37.7% vs 28.8%, p <0.001). To our knowledge, our study is the first to propose the evaluation of the prevalence of health literacy in a large population of parents of AD children.





# CONCLUSION

To our knowledge, our study is the first to propose the evaluation of the prevalence of health literacy in a large population of parents of AD children. Easy access to information [ media, social network] on TCs and their side effects, may contribute to increasing fear and concern, heightening the risk of steroid phobia. Therefore, the role of healthcare professionals such as dermatologist and/or general practitioner appears crucial to provide clear and comprehensible information on the disease and how to use the topical therapies prescribed. Patients must also be encouraged, via their organizations, to ask questions and request clarifications in order to ensure that they fully understand their treatment plan. Therapeutic education in atopic dermatitis as well as share decision the also has an essential role to play in the respect and knowledge of the treatments. Health literacy levels should be improved in parents of AD children so that they can better manage their health.

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# PREVALENCE OF PIGMENTARY DISORDERS DIAGNOSED BY DERMATOLOGISTS AND THEIR IMPACT: RESULTS OF THE FIRST LARGE INTERNATIONAL SURVEY

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# **INTRODUCTION AND OBJECTIVES**

Pigmentary disorders (PD) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide survey evaluates the self-reported prevalence of PD such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH), their impact on quality of life (QOL) and stigmatization. We present here the results among people who had a diagnosis for their PD by a dermatologist (PDD) versus the ones who were diagnosed another way (self-diagnosed or by another HCP) (nPDD).

# **MATERIALS AND METHOD**

Survey (N= 48,000) conducted in 34 countries from all continents (structured: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from December 2022–February 2023. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

# **RESULTS**

50% of the population report having at least one PD such as solar lentigo 27%, AH 18%, PIH 15%, POH 15%, melasma 11% and vitiligo 8%, with an average age of 44yo and affecting more women (59%).

Among people who reported PD, 36% of them (n=8,482) had a diagnosis confirmed by a dermatologist (PDD): 49% for vitiligo, 41% for melasma, 38% for PIH, 34% for POH, 34% for AH and 33% for solar lentigo.

People diagnosed by a dermatologist (PDD) were more affected by their disorder than those whose PD have not been diagnosed by a dermatologist (nPDD): DLQI was >10/30 for 40% of them, vs 20% for nPDD. Social stigmatization was also more important among PDD: 54% have concealed the visible parts of their affected skin (vs 40% among nPDD), and 41% have avoided some people (vs 27% among nPDD). Impacts on stigmatization can be found in all aspects of people's lives and were more important among PDD: professional: 31% have felt discrimination at work (vs 15% among nPDD); familial: 27% have felt they brought shame to their family (vs 15% among nPDD); and affective: 28% have felt pushed away by their partner (vs 14% among nPDD).

# **CONCLUSION**

This first large international survey shows the high prevalence of pigmentary disorders worldwide and the stronger impact on QOL and stigmatization of those with a diagnosis confirmed by a dermatologist (PDD).





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# PREVALENCE OF VITILIGO, IMPACT ON QUALITY OF LIFE AND SOCIAL STIGMATIZATION: RESULTS OF THE FIRST LARGE INTERNATIONAL SURVEY

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# **INTRODUCTION AND OBJECTIVES**

Pigmentary disorders (PD) are frequent even if little is known on their real-world prevalence and impact. This first worldwide survey evaluates the self-reported prevalence of PD such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH), their impact on quality of life (QOL) and stigmatization. We present here the results of Vitiligo.

# **MATERIALS AND METHOD**

Survey (N= 48,000) conducted in 34 countries from all continents (structured: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from December 2022–February 2023. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

# **RESULTS**

8% of the population report suffering from vitiligo (n=3,394), affecting more male (52%) with a mean age of 40.8 yo. 27% declare they are phototype IV, V or VI, vs 25% worldwide.

Vitiligo seems more frequent in China (10%), Ivory Coast (13%), Thailand (12%), Malaysia (12%), Indonesia (10%), Morocco (12%), Kuwait (15%) and Oman (15%), compared to Europe (6%), North America (5%) and Latin America (4%). 49% had a diagnosis confirmed by a dermatologist, while 4% made their own diagnosis thanks to the questionnaire. In average, people were 26,5 yo when vitiligo started (median: 22).

Vitiligo has a major impact on the QOL with a DLQI >10/30 for 47% of them. Impacts on stigmatization is very high: 40% felt left out by their colleagues; 37% felt they brought shame to their family; 35% felt pushed away by their partner. 52% hid the visible parts of their affected skin, while 46% refused direct contact with the public.

In terms of photoprotection habits, 84% protect their skin and 49% protect it all year-long. Only 28% are aware that sun exposure might be beneficial to their PD, 46% said it is neutral and 26% deleterious.

# **CONCLUSION**

This first international survey reports a higher prevalence of vitiligo worldwide compared to previous studies. This prevalence remains high when only cases confirmed by a dermatologist was considered. It also shows, that among all the PD studied, vitiligo has the most important impact on QOL and stigmatization.





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# STIGMA IN PATIENTS WITH PIGMENTARY DISORDERS: RESULTS OF AN INTERNATIONAL STUDY

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# **INTRODUCTION & OBJECTIVES:**

Pigmentary disorders are a group of skin diseases characterized by changes in skin tone. These diseases can occur at any age, affecting men, women and children of all ethnic backgrounds. They can have a significant impact on the perception of physical health, aesthetic appearance towards patients and deeply affect quality of life. To date, no study has specifically addressed the stigma experienced by individuals with pigmentary disorders.

The PUSH-D, a skin specific patient reported outcome assessing stigma, was recently published. It is composed of 17 items, easily understandable regardless of the socio-cultural level of the respondents and has been translated and validated in more than 20 languages (www.push-d.org). The higher the Push-D score, the greater the stigma

# **MATERIALS & METHODS:**

In this cross-sectional study, we aimed to assess stigma related to pigmentary skin diseases across 34 different countries. In each participating country, the sample was representative in terms of age and sex of the adult population. Self-diagnosis questionnaires allowed us to identify patients who declared pigmentary disease confirmed by a physician. Socio-demographic data and the type and localization of pigmentary disease were retrieved for each participant who were also asked to answer the PUSH-D.

# **RESULTS**

In total, 48,000 individuals were recruited from December 2022 to February 2023. Participants to the present study were those who declared having been diagnosed by a physician with a single pigmentary disorder (n=12332). Of those participants, 6037 declared having solar Lentigo [SL], 873 Melasma, 414 Vitiligo, 1937 isolated axillary hyperpigmentation, 1396 post-inflammatory hyperpigmentation [PIH], and 1387 Peri Orbital Hyperpigmentation.

The mean PUSH-D score in the overall population, was  $8.2\pm12.3$  in men vs  $9.3\pm13$  in women (p<0.05). Significant differences in the PUSH-D scores were also observed according to age group: the younger the subject, the higher was the PUSH-D score:  $14.6\pm14.5$ ,  $9.4\pm12.4$  and  $4.8\pm10.2$  respectively in those aged 30 years and under, 31-55 years and over 55 years.

In the global population, no significant difference was found according to phototype: Fair skin (Phototype I,II,III) vs Dark skin (Phototype IV,V,VI) [8 .8±12.8 vs 8 .9 ±12.5].

Whereas this difference in PUSH-D scores becomes significant in patients with PIH and POH (13.2 & 10.9 scores in Fair skin phototype vs 11.5 & 9.2 in dark skin phototypes). Regarding the declared disease, highest PUSH-D stigma score were found in vitiligo patients (19.4±18.2) and Melasma patients (17.2±4).

# **DISCUSSION**

A better knowledge on the populations that feel stigmatized should be taken into account in dermatoses management.

However, to date and to the best of our knowledge, stigmatization in dermatology has not been studied in skin diseases in a large population. This may be due to the lack of skin specific tools that explore different domains





of stigmatization. The PUSH-D score may fill this gap as it explore both enacted and felt stigma.

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# IMPACT OF MENOPAUSE ON THE SKIN...INFORMATION STILL INSUFFICIENT

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# **INTRODUCTION & OBJECTIVES**

Menopause is not a disease; it is a physiological situation that affects all women in their fifties. That said, the resulting lack of oestrogen can lead to atrophic skin changes and acceleration of skin aging. Thus, the impact of menopause on the skin is often underestimated or even ignored by health professionals and induces the fact that women can live it as a fatality linked to the passing of life. The objective of this survey was to collect the state of knowledge and concerns of exposed women concerning menopause and its impact on the skin.

# **MATERIALS AND METHOD**

The women were recruited from February to April 2022 from a representative sample of the general French adult population aged 18 years and overusing proportional quota sampling based on the distribution of the population by age, gender, administrative region, environment (large cities, towns and rural areas) and income to ensure the national representativeness of the sample.

# **RESULTS**

Following that recruitment method, a sample of 15050 French people [7105 men & 7945 women] aged 18 and more has been obtained. To limit the effect of age on the skin problems only women from 45 to 65 years who reported having experienced menopause has been selected, with as a result a sample of 2090 postmenopausal women.

A total of 53.11% ±2.14% of menopausal women said they heard that menopause can affect the skin, with no difference by age group. A total of 82.73% ±1.62% admitted having noticed one or more changes in their skin since menopause, 88.38% among those who said they had heard that menopause can affect the skin, 71.94% among others (p<0.001). The 2 most frequently cited changes are the dryness of the skin (60.19%), the deepening of wrinkles (45.93%). If the appearance or reappearance of acne is cited by 8.33% of women, this symptom is significantly related with age (45–49 years: 18.14%, 50–54 years: 8.20% 55–59 years: 7.05%, 60–64 years: 6.78%, p<0.0001). All the symptoms reported (for the general population and by age group) are described in table 1

In impacted women, the most disturbing changes were hair loss (31,09%), excessive sweating (26,87%), skin dryness (21,38%), hair growth (20,83%) and wrinkle deepening (19,48%)

# **CONCLUSION**

Surprisingly, almost one in two women (46.89%) was not aware that menopause also has an impact on the skin. 61% of them considered that they were not sufficiently informed about menopause; as a result of this non satisfying level of information, the women could face the impact of menopause on their skin as a fatality. The impact of menopause on the skin is often underestimated or ignored by health professionals, which can lead women to feel helpless and resign themselves to...the aging process. This study aimed to assess women's knowledge and concerns regarding menopause and its impact on the skin. The results showed that a significant percentage of women experienced skin changes during menopause, with drying out of the skin and deepening of wrinkles being the most frequently cited changes.

However, almost half of the women were not aware of the impact of menopause on the skin, and many felt they were not sufficiently informed about menopause. These findings highlight the importance of educating women and healthcare professionals about the impact of menopause on the skin to improve women's quality of life and





self-esteem during this stage of life.

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### PATIENT SATISFACTION: A FACTOR TO CONSIDER FOR IMPROVING ADHERENCE

#### **AUTHORS**

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#### INTRODUCTION AND OBJECTIVES

Patient satisfaction is important as it can improve motivation and the ability to follow treatment instructions, which may lead to better long-term health outcomes.

Dry skin remains one of the most common reasons for dermatological consultations.

The Objectifs Peau project suggests that 23.83% of the French have dry skin: 20% in people with no related skin condition and 32.5% in those with one.

#### **MATERIALS AND METHOD**

In the context of patient centricity, we wanted to better understand patients' expectations in order to evaluate their level of satisfaction. Satisfaction can be objectively described as the difference between the expected and the observed.

All 300 GPs who agreed to take part in the evaluation gave a two-part questionnaire to patients who had been prescribed an emollient [a dermocosmetic containing shea butter, niacinamide, LRP thermal spring water (TSW), APF (a biomass of VF grown in TSW) and microresyl] for xerosis and informed of the diagnosis that prompted the treatment.

One questionnaire focused on patients' expectations: the second concentrated on patients' experiences.

#### **RESULTS**

The study included 2,723 patients, of whom 2,386 completed questionnaire 1 and 1,348 questionnaire 2. To evaluate their satisfaction, the patients had to complete both questionnaires, giving 1,009 evaluable responses.

The patients' priority expectations identified in questionnaire 1 were clear: 99% wanted the product to be effective, 96% to provide rapid relief for their skin and 92% to reduce itching.

Following 15 days of use, the study's results can be summarized as follows: 98% of the patients felt that the product was effective, 97% that it was easy to use, and 96% that it reduced sensations of tightness and itching.

87% of the patients also reported an improvement in the intensity of their skin's dryness, 84% in the intensity of the itching and 77% in the intensity of the redness.

#### **CONCLUSION**

This study made it possible to:

- suggest that the emollient is effective at relieving the symptoms of skin dryness, itching and redness, thereby meeting patients' priority expectations.
- better understand xerosis patients' expectations of treatment and measure their level of satisfaction after 15 days of using an emollient prescribed by their doctor.

Furthermore, the results show that patients have clear expectations of treatment efficacy, rapidity of action and reduction of itching sensations. The patients also expressed a high level of satisfaction with the prescribed emollient, with significant improvements in their skin's dryness, itching and redness. These results emphasize the importance of considering patients' expectations when prescribing treatments and working to maintain a high level of satisfaction in order to improve treatment adherence and long-term health outcomes.





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### EFFICACY OF A CERAMIDE-CONTAINING OINTMENT IN A LASER-INDUCED WOUND HEALING MODEL

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

Dry skin lacks essential intercellular lipids, particularly ceramides. Overly dry skin can form cracks and superficial wounds within the stratum corneum causing it to become more permeable to external aggressors and less effective at reducing transepidermal water loss (TEWL). Emollients, humectants and occlusives are common ingredients found in epidermal repair products. The mechanism of occlusives is particularly beneficial for damaged skin by creating a waterproof barrier on the skin's surface without impeding barrier recovery. Additionally, topically applied ceramides are proven to be beneficial for disrupted skin barriers. In this double-blind study, a ceramide-containing occlusive ointment was assessed to evaluate its ability to accelerate wound healing speed and quality versus an emollient reference cream.

#### **MATERIALS AND METHODS**

A new technique of using an ablative laser (Sciton) to induce consistent, superficial wounds at 150  $\mu$ m was investigated on the volar forearm of 24 male and female subjects (25-45 years old) of Fitzpatrick types II or III. All subjects applied the test ceramide-containing healing ointment or an emollient reference cream twice daily for 18 days. One site was left untreated. Hydration (Corneometer) was assessed at baseline and at days 1, 3, 7, 11, and 18. Erythema, epithelial confluence, scabbing/crusting, smoothness, and general wound appearance were clinically scored by the investigator at baseline post-laser and at all timepoints. Subjects assessed their wounds for burning, stinging, itching tightness, tingling, pain and general wound appearance at baseline post product application and at all timepoints.

#### **RESULTS**

The ceramide-containing occlusive ointment consistently showed better general wound appearance from day 1–7 with significant improvement (p<0.05) on days 1 and 7 compared to the untreated site. Compared to the untreated control and emollient reference cream, the ceramide-containing occlusive ointment displayed significantly (p<0.05) less crusting and scabbing on days 1 and 7 versus the untreated control and day 3 versus both the untreated control and emollient reference cream. Generally, both the ceramide-containing occlusive ointment and emollient reference cream had little to no impact on erythema during healing. The ceramide-containing occlusive ointment also resulted in superior hydration (p<0.05) compared to both the emollient reference cream (days 1, 3, 11) and untreated control at days 1, 3, 7 and 11.

#### CONCLUSION

The ceramide-containing occlusive ointment accelerated wound healing versus the untreated control with significantly more epithelial confluence on days 3 and 7 compared the untreated site. Laser induced wound healing model proved to be an effective method to demonstrate the efficacy of the topical products in promoting skin repair and improving skin quality.

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# A SPLIT-FACE STUDY ASSESSING THE CLINICAL BENEFIT, TOLERABILITY AND SUBJECT SATISFACTION OF DERMOCOSMETIC CREAM CONTAINING SPHINGOBIOMA AND NEUROSENSINE IN SUBJECTS WITH ROSACEA ASSOCIATED WITH ERYTHEMA AND SENSITIVE SKIN

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

Rosacea is a chronic inflammatory skin condition associated with an altered skin barrier and microbiome, inflammation and vasodilation. Persistent erythema is a common primary feature, and can be associated with flushing, papules, pustules. Rosacea is associated with sensitive skin symptoms including tightness, stinging, burning and pain. A specific dermocosmetic (DC) containing Sphingobioma to restore skin barrier, decrease inflammation and redness, as well as Neurosensine to improve sensitive symptoms, and shea butter to moisturise the skin barrier has been developed for these patients. Objective to assess the efficacy and tolerability of the DC cream in patients with rosacea associated with erythema and sensitive skin.

#### **MATERIALS AND METHODS**

Intra-individual single-blind study with a split-face design comparing the DC cream applied twice daily compared to usual skin care of subjects for 28 days in 22 female adult subjects >18 years of age, phototype I to IV with very mild to mild erythema of rosacea (IGA 1-2), having sensitive skin (positive skin stinging test with 15% lactic acid). Clinical evaluations at baseline, Day15 and Day 28 included assessment of erythema, skin tightness, burning sensation, stinging and pain according to 0-10 VAS scale, rosacea severity (0-4 Modified IGA Scale), stinging test, and local tolerability. Instrumental evaluations included Chromameter, Corneometer and Tewameter. Digital images by ColorFace® and Skincam were taken at all time points on both sides. Subject quality of life was assessed at Baseline and Day 28 by Stigmatization, RosaQOL and DLQI questionnaires. Demodex density (SSSB method) was assessed at Baseline and Day 28.

#### **RESULTS**

Clinical evaluation of skin erythema, tightness, burning and stinging showed a statistically significant difference in favor of DC cream at both time points (all  $p \le 0.05$ ).

Chromameter evaluation of erythema showed a statistically significant difference in favor of DC cream at both time points (p<0.001 at D15, and p<0.01 at D28).

Corneometer and TEWL evaluations showed a statistically significant difference in favor of DC cream at both time points (respectively p<0.0001 and p<0.01 at D15, and p<0.0001 and p<0.05 at D28).

Skin sensitivity assessed through the skin stinging test showed a statistically significant difference in favor of DC cream at both time points (p<0.001 at D15, and p<0.001 at D28).

At D28, a significant (p<0.05) reduction of the mean Demodex density was observed on the DC cream side compared to the opposite side.

Tolerance was excellent in all subjects.

#### **CONCLUSION**

A rosacea specific DC cream significantly improves skin redness, as well as skin sensitivity symptoms, skin hydration and TEWL, as soon as after 15 days of twice-daily use, and significantly decreases Demodex count at D28, with a very good tolerance.





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#### A COMPREHENSIVE ANALYSIS OF GLOBAL SKIN CANCER INCIDENCE AND MORTALITY WITH A FOCUS ON DERMATOLOGIST DENSITY AND POPULATION RISK FACTORS

#### **AUTHORS**

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#### **INTRODUCTION AND OBJECTIVES**

Melanoma and Non-Melanoma Skin Cancers (NMSC), such as Squamous Cell Carcinoma (SCC), Basal carcinoma (BCC), and Merkel Cell Carcinoma (MCC), pose a global health burden. This study assesses global skin cancer epidemiology, emphasizing incidence, mortality, risk profiles, and dermatologist density's impact.

#### **MATERIALS AND METHOD**

Using WHO International Agency for Research on Cancer (IARC) data, we conducted an epidemiological analysis of skin cancer. Our study focused on the worldwide distribution of skin cancer and examined the correlation between dermatologist density and mortality-to-incidence ratios. By mapping melanoma mortality-to-incidence ratios relative to dermatologist density, we developed an indicator to assess healthcare system efficiency in managing melanoma. We also examined skin cancer Relative Risks (RR) in immunocompromised individuals, individuals with genodermatosis (albinism and xeroderma pigmentosum(XP)), the elderly (65+), individuals with outdoor occupational exposure, individuals with indoor tanning practices, and by skin color. We derived the RR for the previously mentioned conditions from a literature review. However, the RR for melanoma by skin color and among the elderly was sourced from US CDC data. The melanoma RR based on skin color was calculated using age-adjusted prevalences to account for age disparities across different ethnicities.

#### **RESULTS**

In 2020, global skin cancer incidence was 1,522,708, resulting in 120,774 deaths. Europe bears the heaviest burden with 506K cases and 39,039 deaths. Africa had the highest mortality-to-incidence ratio (0.33 vs 0.02 for North America), indicating a higher probability of melanoma-related mortality. NMSC, despite lower mortality likelihood, led to 63,731 deaths in 2020 due to significantly higher incidence. The data clearly showed an issue about a non-uniform under-reporting of NMSC incidence with for example 1 death every 109 cases in the US vs 1 every 28 in Europe and 1 every 3 in Asia. Even countries with a high proportion of dark phototypes are not immune to the risk of death from skin cancer, as demonstrated by the registered 11,281 deaths in Africa. Among 59 countries with data, dermatologist densities varied widely (0.33 per 100K in Pakistan to 15.15 in Greece), with no linear correlation to wealth or melanoma incidence. Mapping revealed high skin cancer incidence in countries with fair-skinned and elderly populations: USA, Germany, UK, France, Australia, and Italy. Conversely, low dermatologist density countries (India, China, Turkey, Korea, Morocco) showed higher mortality-to-incidence ratios. Japan, Russia, and Argentina had high ratios despite high dermatologist density. Australia, the UK, and Canada maintained low ratios despite fewer dermatologists. Key melanoma 'at risk' populations are fair skin (RR: 10), elderly (RR: 5), organ transplant recipients (RR: 2-8), and XP (RR: 2000). Outdoor workers face a higher risk of NMSC compared to Melanoma.

#### **CONCLUSION**

Our findings emphasize the need for enhanced melanoma awareness, early detection, and patient education, especially in vulnerable populations and countries with high mortality-to-incidence ratios. Australia, UK, and Canada demonstrate a different approach to skin cancer management, with lower ratios despite fewer dermatologists. Early detection campaigns, specialized training for non-dermatologist healthcare professionals,





healthcare structures focused on skin cancer and high-tech diagnostic tools may partially explain this success. Education on photoprotection and early access to healthcare professionals for at-risk groups (fair-skinned, elderly, immunosuppressed, genodermatosis patients) are crucial for improving melanoma survival. NMSC, with increasing incidence and substantial mortality, require improved surveillance through national registries. Further investigations are necessary to identify factors contributing to effective skin cancer management in specific countries.

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## SPHINGOMONAS XENOPHAGA FROM THERMAL LA ROCHE POSAY SPRINGWATER IS NEW COSMETICAL INGREDIENT TO TACKLE CUTANEOUS VASCULAR DISORDER INVOLVED IN ROSACEA

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

We isolated and fully characterized a flagellated bacterial strain of Sphingomonas xenophaga from the endogenous flora component of La Roche Posay spring water. We then developed an industrial fermentation process that guarantees the production of a robust, reproducible biomass from this Sphingomonas strain in order to evaluate the biological impact of the Sphingomonas extract on vascular skin parameters in vitro and in vivo. We focused on the kallikrein activity and the potential effect on vascular disorders to alleviate rosacea symptoms.

#### **MATERIALS & METHODS**

In vitro study: effect of the extract Sphingomonas on the kallikrein – kinin system: the activation of prekallikrein is evaluated after 10 min of incubation of a normal plasma with the extract at test at 0°C at concentrations of 0, 0.02, 0.1, 0.2, 0.3, 0.4 and 0.5% followed by full activation prekallikrein thanks to dextran sulphate. The enzymatic activity is monitored by spectrophotometry using a chromogenic substrate.

In vivo study: the randomized double-blind clinical study was conducted on 86 Caucasian female subjects presenting sensitive and reactive skin with permanent redness and vascular disorder on face. They were divided in two groups of treatment. Instrumental evaluation of vascular disorders has been done by Dermascore after 28-days treatment.

#### **RESULTS**

As expected from such a flagellated microorganism, in vitro data on isolated skin cells in culture indicated a triggering of both TLR2/4 and TLR5 innate skin immune pathways in Normal Human Skin Keratinocytes (NHEK), with respectively EC50 =  $6 \mu g/mL$  for TLR2 and EC50 -  $400 \mu g/mL$  for TLR5.. On plasma model, Sphingomonas ferment extract inhibited the activation of the kallikrein system kinin. The inhibitory effect is observable from a concentration of 0.4 %. Inhibition of the kallikrein system is 49 + / - 8 and 90 + / - 8% at the final concentration of 0.4 and 0.5 % (p<0.001). This pre-Kallikrein activity is an enzymatic machinery normally present in the skin and the plasma and converts pro-bradykinin into the inflammatory vasoactive bradykinin moiety. Since in skin Bradykinin is involved in skin red flushes and vasodilation, we thus investigated whether the newly isolated biomass INCI name Sphingomonas ferment extract could modulate skin inflammation and redness parameters in vivo. The randomized clinical study showed significant resolving effect on vascular disorder after 28 days of topical application of 2% Sphingomonas ferment extract (-10% compared to baseline; and significant difference compared to the vehicle -adjusted p-value: 0.038).

#### **CONCLUSION**

These unique properties on Kallikrein activities together with TLRs-inducing innate immune responses make this Sphingomonas ferment extract a potentially new active ingredient alone or in combination with other soothing agents to target skin inflammatory pathways and to help resolve intolerant skin vascular disorder as involved in rosacea.





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## A SCIENTIFICALLY VALIDATED TOOL FOR RECOMMENDING ESSENTIAL PRODUCTS FOR PROTECTION AND REPAIR AND THEN WORK UP TO MORE ADVANCED PRODUCTS FOR SPECIFIC CONCERNS.

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

Consumers often seek recommendations from dermatologists on the best ingredients in dermocosmetics for their specific skin aging concerns. The objective of this international expert consensus was to provide a scientifically validated tool for recommending essential products for protection and repair and then work up to more advanced products for specific concerns.

#### **MATERIALS & METHODS**

A panel of 7 international experts reviewed 8 hypothetical case scenarios as representative examples of patients seen in daily dermatological consultations, covering different ages, skin issues (e.g., sensitivity, acne, melasma) and exposure to exposome factors, for both sexes and all Fitzpatrick skin types (FST). The RAND/UCLA appropriateness method was used to obtain consensus. The experts completed a questionnaire to evaluate the appropriateness of 17 key ingredients in dermocosmetics on a scale from 1 (totally inappropriate: never used as risks greatly outweigh the expected benefits), through 5 (uncertain), up to 9 (totally appropriate). After statistical analysis, two meetings and email discussions refined the recommendations.

#### **RESULTS**

Specific recommendations were made to summarize appropriate ingredients for each scenario. Dermocosmetic ingredients recommended for all 8 scenarios included wide spectrum sunscreen with high sun protection factor for UVB and UVA, niacinamide, and other topical antioxidants. Further discussions were required to reach a consensus for some of the other key ingredients; for example, tinted sunscreen/iron oxide were recommended for all, especially for women, although compliance may be sub-optimal for darker phototypes (IV-VI) if not cosmetically acceptable to the patient. For darker phototypes, the experts recommended combining a facial foundation with tinted, or non-tinted, broad-spectrum (UVB, UVA, visible light) sunscreen as a solution to obtain visible light protection that closely color matches diverse color tones. Retinols were not recommended as a first-line treatment for cases of sensitive skin, especially FST V and VI, due to the risk of irritation. After ablative laser treatment, it was recommended to avoid (or use with caution by avoiding high concentrations and low pH) alpha hydroxy acids in FST IV to VI due to the elevated risk of post-inflammatory hyperpigmentation.

#### **CONCLUSION**

We describe a simple, practical tool for use in daily dermatology consultations that is adapted to specific patient needs. This work provides recommendations to cover diverse and inclusive populations of patients, addressing all skin types and international needs.





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## CYCLE IRREGULARITY, PERIMENOPAUSE AND POST-PARTUM CAN INFLUENCE SELF-PERCEPTION OF SKIN DISORDERS AND IMPACT WELLBEING: RESULTS OF A WORLDWIDE EPIDEMIOLOGICAL STUDY

#### **AUTHORS**

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#### **INTRODUCTION & OBJECTIVES**

Impact of hormonal variations on skin disorders in women has been poorly studied. This worldwide epidemiological study describes self-perceived skin disorders in women at various stages of their hormonal life and across their menstrual cycle.

#### **MATERIALS & METHODS**

Online interviews have been conducted using the Ipsos Access Panel with quota method applied to age, occupation, and region, from January to February 2023. 20.001 interviews have been conducted in 20 countries from 5 continents among representative samples of women aged from 18 to 55 years. Women were classified into mutually exclusive subgroups: menopausal (n=1463), perimenopausal (n=3918), post-partum that gave birth less than two years ago (n=1978) and active ovulation (n=13571), including regular (59%) and irregular (41%) cycles. Women were asked about 12 skin disorders (changes in pore dilation, skin shininess, skin paler, skin elasticity, skin tone, skin thickness, pigmentation spots or patches, wrinkles, redness, dark circles, flakiness), skin dryness and sensitivity, wellbeing, and their variations across the menstrual cycle when relevant.

#### **RESULTS**

Most women (91%) experienced at least one skin disorder. 61% of women with active ovulation complained that skin disorders were present or worsened at a certain time point of the cycle, mainly before or during menstruation (76%). Of note, three out of four skin disorders are present or worsen throughout menses, being pale skin, dark circles under the eyes and dull skin tone the three skin disorders most reported at this moment of the cycle (50%, 49% and 49% respectively). Interestingly, the peri-ovulation period seems to reduce self-perceived skin disorders. For perimenopausal women, skin disorders were significantly overrepresented (96% with at least one skin disorder). Conversely, they were underrepresented in the menopausal population (88% with at least one skin disorder). Skin disorders were significantly overrepresented among post-partum women as well: 93% of them experienced at least one skin disorder. From their perspective, the three most common skin disorders were dark circles, pore dilation and dull skin tone (67%, 57% and 56% respectively). Accordingly, women felt hormonal variations negatively impact their wellbeing in 72% of cases, being 82% in the perimenopausal group and 79% in the post-partum group.

#### **CONCLUSION**

The study showed a significant impact of hormone variations on skin disorders, across the women hormonal life and the menstrual cycle. Their prevalence increases in frequency mainly during the perimenopause, the premenstrual or menstrual stages of the cycle and post-partum, with parallel alteration of wellbeing. These periods in women's life deserve, therefore, special attention from the dermatologist and adapted cosmetic advice to address women needs related to their hormonal status. This is a request from the vast majority of women, paving the way to endocrinologic supportive skincare.

#### Affiliations

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