demonstrated that the NFκB pathway was constitutively activated in tumor cells of SZ patients, on the oncogenic process of carcinomas by promoting epithelial-mesenchymal transition. Since we have dermal origin in adults, mainly under the control of NFkB pathway. It has been involved in the transcription factor Twist1. Cutaneous and blood expression of Twist is correlated with disease stages, a decrease in Twist expression, as did also Twist siRNA. The specific Twist synthesis by tumor SZ Medicine / Dermatology, University of California, San Diego, San Diego, CA and 4 Integrated Shitsukawa, Japan, 2 Dermatology, Asahikawa Medical University, Asahikawa, Japan, 3 Yamamoto2 and K

ABSTRACTS

As 8.3%). Most AE were transient and allowed maintenance or reintroduction of propranolol. In metabolic (hypoglycemia: 16.7%), cardiovascular (bradycardia: 12.5% and peripheral vascular and digestive AE (11.1%) with mainly diarrhea. Serious AE were respiratory (41.7% of all SAE), but no polymorphonuclear cells. In conclusion, PPP-VF contains the proteinase required for LL-37 hCAP-18/LL-37, and the processing to the active form (LL-37) was detected in it. Proteinase 3, which at both the mRNA and protein levels. Recombinant hCAP-18 was incubated with PPP-VF depleted of hCAP-18/LL-37 in PPP vesicles and to determine whether this material contributed to subsequent inflammation of the pustular phase) formed in the acrosyringium contain the antimicrobial peptides cathelicidin (LL-37) and defensins, the principal aim of this study was to clarify the manner of hCAP-18/LL-37 expression in lesions. In conclusion, the decrease of Twist expression in the presence of Twist siRNA suggests that Twist expression is regulated by specific factors. Determination of this pathway in Twist synthesis, suggesting that it might be used as a therapeutic target.

Vesicular LL-37 contributes to inflammation of the lesional skin of palmpoplantar pustulosis

Since 2008, propranolol has become the first line treatment of severe infantile hemangioma (IH), although few data are available on the safety of betablockers in the pediatric-specific population. Our study analyzed the prospective vigilance cohort of the French compassionate use program (CUP) for the use of a new paediatric formulation of oral propranolol. Consecutive patients with proliferating IH requiring systemic therapy were included in the CUP database from 2010 to 2013. Demographic data, characteristics of IH were collected at inclusion. Safety data were collected from Days 1, 8, 29, 85 and 140. Biopsies from 10 untreated healthy volunteers (HV) provided reference data. Baseline levels of FcεRI and IgE skin cells were higher in CSU patients than HVs. At Day 85, FcεRI(+) cells decreased significantly more with omalizumab than placebo (mean -5.7, p = 0.0002) as compared to previous studies. Levels of FcεRI(+) cells decreased in omalizumab patients (mean -5.4, p = 0.004). Levels of FcεRI(+) cells in omalizumab patients at D85 had declined to levels seen in HVs. No meaningful changes were observed in the placebo group. Omalizumab was effective in the treatment of CSU, and appears to decrease levels of FcεRI(+) and IgE(+) skin cells to levels similar to those in healthy individuals. Many patients with chronic spontaneous urticaria (CSU) who are symptomatic despite antihistamines respond to the humanized monoclonal anti-IgE antibody omalizumab (Xolair), but the mechanism of action (MoA) is not completely understood. A randomized, double blind, placebo-controlled study in CSU patients (18-year-75 years) was performed to explore the MoA of omalizumab in CSU, specifically effects on high-affinity IgE receptor-positive (FceRI+) and IgE-positive (IgE+) skin cells. Propranolol is an AT1 receptor antagonist and its approximate EF index: 3.8±0.2 vs. 8.1±1.2 (p<0.05). Propranolol did not correlate significantly with the clinical picture of the skin according to the IFSI classification. The mean severity of CI (VAS) showed a significant correlation only with IFSI III. The representative study on CI in HD patients demonstrates that dermatological diseases and findings are frequent in HD patients and that CI is still a major burden in this patient population.

Omalizumab normalizes levels of high affinity immunoglobulin E receptor-positive skin cells in patients with chronic spontaneous urticaria: a randomized, double-blind, placebo-controlled study

A comparison of elastic fibres in atrophic and hypertrophic facial photoaging

3-year safety data of propranolol therapy for severe infantile hemangioma: report of the French experience from the Compassionate Use Program database

Non-melanoma skin cancer (NMSC) is the most common malignancy in the USA. Several risk factors have been associated with the development of NMSC, but the underlying mechanisms which in turn may play a role in skin cancer development. In summary, AP photoaged facial skin had less fibrillin-rich microfibrils than HP (10.4% ± 2.6). All subjects had 4mm skin biopsies taken from UV-exposed facial skin (upper zygomatic arch). The percentage of elastin deposition (Weigert’s resorcin fuchsin), calculated between the dermal-epidermal junction (DEJ) to a maximal dermal depth of 40µm by image analysis, was significantly increased in HP (mean ± SE; 34.1% ± 7.7) as compared to AP (16.1% ± 6.6; p<0.001). Fig 2A. Microfibrils were identified by periodic acid-methenamine method. The percentage of deposition was calculated between the DEJ to a maximal dermal depth of 50µm. AP (21.8% ± 1.1) contained significantly more fibrillin-rich microfibrils than HP (10.4% ± 1.8; p<0.001). There was no significant difference in DEJ collagen content (col I and III) between AP and HP. At the dermo-epidermal junction, AP had more elastin (39.2% ± 3.6) than HP (26.8% ± 3.6). The percentage of elastin deposition was higher in AP (21.8% ± 1.1) than HP (10.4% ± 1.8; p<0.01). There was no significant difference in DEJ collagen content (col I and III) between AP and HP. At the dermo-epidermal junction, AP had more elastin (39.2% ± 3.6) than HP (26.8% ± 3.6). The percentage of elastin deposition was higher in AP (21.8% ± 1.1) than HP (10.4% ± 1.8; p<0.01). The percentage of elastin deposition was higher in AP (21.8% ± 1.1) than HP (10.4% ± 1.8; p<0.01). The percentage of elastin deposition was higher in AP (21.8% ± 1.1) than HP (10.4% ± 1.8; p<0.01). The percentage of elastin deposition was higher in AP (21.8% ± 1.1) than HP (10.4% ± 1.8; p<0.01). The percentage of elastin deposition was higher in AP (21.8% ± 1.1) than HP (10.4% ± 1.8; p<0.01).
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Adalimumab Improves Treatment Satisfaction with Medication (TS-M) in Patients with Moderate to Severe Hidradenitis Suppurativa (HS) in a 12-week Randomised Controlled Trial (PIONEER-HS2)
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HS is an inflammatory skin disease characterized by recurrent, painful lesions that may lead to physical debilitation and psychosocial strain. Recent data indicate that TNF-alpha blockage is of benefit to patients (pts) with HS. Patient satisfaction is an important outcome parameter in the assessment of treatment, and was studied in a phase 3 clinical trial to evaluate the safety and efficacy of adalimumab (ADA) vs placebo (PBO) in pts with moderate to severe HS. This multicenter study included a 12-week, double-blind, PBO-controlled period (Period A) followed by 24 weeks of double-blind treatment. For Period A, pts were randomized 1:1 to ADA (160 mg at week 0; 80 mg at week 2; 40 mg weekly from week 4) or matching PBO. At baseline, pts had a diagnosis of HS for ≥1 year, a total abscess and inflammatory nodule count ≥3, HS lesions in ≥2 body areas, Hurley Stage II or III, and were anti-TNF-naive. TS-M was measured using the Treatment Satisfaction Questionnaire for Medication (TSQM). The TSQM has 14 items across 4 domains: effectiveness, side effect severity, treatment satisfaction, and global satisfaction (GS). Each domain is rated on a 100-point scale with higher scores indicating greater TS-M. Pts receiving ADA reported having greater GS with treatment at week 12 compared with PBO pts (56.5 vs 46.9; p<0.004). Further, pts rated ADA better on effectiveness, on topical treatment only, were recruited. The purpose of this study was to investigate alcohol use in individuals with psoriasis and correlate this intake with the extent of the disease and degree of pruritus. A cross-sectional study was performed. Twenty-nine patients (15 females and 14 males) with stable chronic plaque psoriasis of moderate to severe severity, on topical treatment only, were recruited. The self-reported use of alcohol according to the AUDIT and LDH questionnaire, positively correlated with the PETH concentration in blood. The severity of disease, as measured by the PASI, positively correlated with alcohol use during the past year and the past week as assessed by LDH, and also with the blood levels of PETH. When this group of individuals was separated between sexes, significant correlations between disease severity and the LDH were noted for females, but not for males. In individuals with psoriasis, the level of alcohol consumption was correlated with the extent of the disease. No correlation with pruritus was found.

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Advances in the preclinical prediction of skin drug levels and systemic exposure in patients after topical treatment
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Reliable drug level determination in skin after topical treatment in a clinical setting is challenging due to several reasons, e.g., the high risk of contamination with non-absorbed drug present on the treated skin surface. Given the similarity between human and pig skin, we developed a pre-clinical, 4-tiered approach for the prediction of drug levels in man after topical application. This system included evaluation of 1) penetration into and permeation through normal human and pig skin in vitro; 2) in vivo kinetics of penetration into the dermis of pigs after single application and 4) penetration into and permeation through inflamed pig skin in vitro and in vivo. These parameters allow the compilation of a pharmacokinetic profile for a given substance which is considered to be predictive for the human situation. In addition, the preclinical prediction system has been further refined by establishing a method to determine depth of drug penetration via serial sectioning of punch biopsy samples taken from heat-deepimmunized and frozen skin treated with the compound of interest. A potential target candidate is the peripherally expressed kappalpha opioid receptor (OPRK1), which is expressed in various cell types in the skin, such as keratinocytes, macrophages and sensory nerve fibers. The aim of the present study was to determine the cutaneous expression level of OPRK1 in lesional, pruritic skin by means of immunofluorescence. In this study, we can conclude that both infliximab and adalimumab seem to be equally effective in managing HS and led to a remission of symptoms in BD patients.

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Alcohol intake, as measured by phosphatidylethanol in blood and the Lifetime Drinking History questionnaire, is correlated with extent of psoriasis
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The purpose of this study was to investigate alcohol use in individuals with psoriasis and correlate this intake with the extent of the disease and degree of pruritus. A cross-sectional study was performed. Twenty-nine patients (15 females and 14 males) with stable chronic plaque psoriasis of moderate to severe severity, on topical treatment only, were recruited. The self-reported use of alcohol according to the AUDIT and LDH questionnaire, positively correlated with the PETH concentration in blood. The severity of disease, as measured by the PASI, positively correlated with alcohol use during the past year and the past week as assessed by LDH, and also with the blood levels of PETH. When this group of individuals was separated between sexes, significant correlations between disease severity and the LDH were noted for females, but not for males. In individuals with psoriasis, the level of alcohol consumption was correlated with the extent of the disease. No correlation with pruritus was found.

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Artificial antigen-presenting cells trigger highly cytotoxic CD8+ T lymphocytes with restricted T Cell Repertoire (TCR) diversity
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We have studied the T Cell Receptor (TCR) repertoire of melanoma-specific CTLs generated in an adoptive immunotherapy strategy based on the use of artificial antigen-presenting cells (AAPCs). Artificial T cell activating systems have been developed based on the use of artificial antigen-presenting cells (AAPCs). These AAPCs have been transduced to express molecules involved in the immunological synapse restrained to the HLA-A201 molecule, and essential to activate CTLs against MART-1 (M1), an auto-antigen overexpressed in melanoma. We have studied T Cell Receptor (TCR) repertoire of AAPC activated M1-specific CTLs from healthy donors and melanoma patients, through Vβ subfamily repertoire diversity and CD3γδ analysis. We observed that the most expanded Vβ subfamilies displayed oligoclonal distributions, with sequences shared between healthy donors and patients, and a dominant clone representing more than 50% of total CTLs. After T cell sorting based on Vβ expression, CTLs from the dominant Vβ subfamily had higher functional avidity, higher perforin and granzyme B production, and effector memory phenotype (CD45RA+CD62L+CCR7-). Altogether, our data reveal that, in the AAPC-based CTL stimulation, the dominant responding Vβ subfamily has an oligoclonal profile that could be interesting to expand perfectly characterized highly cytotoxic CD8+ population in a reproducible manner.
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Baseline characteristics of patients with psoriasis enrolled in the British Association of Dermatologists’ Biologic Interventions Register.

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ABSTRACTS

68% of all patients had co-morbidities and 41% had more than one. The most frequent co-morbidities were hypertension, DM, IBD and bronchial asthma. This underscores the need to identify biomarkers to refine prognosis. The majority of MCCs develop de novo and is histologically pure. A subset of MCCs (collision MCCs), however, is found in divergent differentiation and intimate association with dysplastic changes of overlying and adjacent epithelium. The relationship between differentiation and expression of variable markers of MCCs, neuroendocrine, epithelial, mesenchymal, stem cell, and follicular differentiation markers were used to evaluate the immunohistochemical phenotypes. In all cases with collision MCCs, neuroendocrine component of MCC expressed CK7, TTF-1 and p53 with a high frequency, but no CM2B4. On the other hand, none of pure MCCs expressed CK7, TTF-1 and p53. Our results suggest that immunohistochemical detection of CK7, TTF-1, p53 and CM2B4 is in a value in the histologic indicator for divergent differentiation of MCC (collision MCCs) and facilitates a retrospective and prospective study of prognosis and divergent differentiation of MCC. However, larger series of cases will be required to determine if aberrant differentiation and dysplastic changes of overlying epithelium represents another negative prognostic factor.

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Changing phenotype of coccygeal disease: from classical disease to dermatitis herpetiformis

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Dermatitis herpetiformis (DH) is a cutaneous form of coccygeal disease affecting approximately 17% of coccygeal disease patients. Lifelong gluten-free diet (GFD) is the treatment of choice for DH equally effective for the development of DH, and what is the impact of GFD in this. In our prospective collected DH series from 1970 comprises 514 patients. In this study we analyzed all those DH patients who at starting DH had been on GFD for at least 1 year. We also documented the development of DH, and what is the impact of GFD in this. In our prospective collected DH series from 1970 comprises 514 patients. In this study we analyzed all those DH patients who at starting DH had been on GFD for at least 1 year. The development of DH was evaluated. Twenty (4%) DH patients had a prior diagnosis of coccygeal disease. The median time interval between the detection of coccygeal disease and DH was 9.5 (range 2-134) years. Before DH appeared four patients had been on a normal gluten-containing diet, 10 (50%) had dietary lapses on a GFD and only six were on a strict GFD. Coccygeal autoantibodies were positive in 32% of the patients, and five out of seven undergoing small bowel biopsy evinced partial villous atrophy in small bowel specimens. Following DH diagnosis the rash was controlled after a median of 6 (range 1-84) months on a strict GFD. Patients with coeliac disease may develop DH by time. Only the skin dryness scores, whereas the 10% GFD and 20%DCC groups showed significant improvements in the skin dryness and scratch marks scores, as well as increased skin conductance. Furthermore, the 20%DCC group showed greater improvements in the skin dryness scores and skin conductance than the white petrolatum group. The VAS score of the DCC groups and white petrolatum group significantly decreased compared to the no-treatment group. In particular, after 1 week of treatment, the VAS score was significantly lower in the 20% DCC group than in the other groups. In conclusion, the moisturizing cream containing DCC significantly improved skin dryness and pruritus in a dose-dependent manner. Therefore, the application of this cream may be effective for the management of dry and itchy skin in senile xerosis.

Clinical effect of a moisturizing cream containing an oligomer ester, diethylene glycol/dilinolenic acid copolymer, on senile pruritic xerosis

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Pruritus is the most common symptom of skin disease in the elderly. Patients with senile xerosis often experience severe itch and discomfort, which could influence the quality of life. A previous study showed that the oligomer ester, diethylene glycol/dilinolenic acid copolymer (D/DC), has a significant moisturizing effect on atopic dermatitis. In the present study, we aimed to evaluate the anti-itching effect of a topical cream containing D/DC in patients with senile pruritus. We performed a single-blind study of 40 subjects aged 50 to 73 years, who were randomly divided into the 10% DCC cream, 20% DCC cream, white petrolatum, and no-treatment groups. The subjects were instructed to apply DCC creams and white petrolatum to the lower legs for 4 weeks. The clinical scores (skin dryness, scratch marks and electrochemical skin conductance) were evaluated before and after treatment, and the visual analogue scale (VAS) score for skin itching was assessed once a week. Compared with the no-treatment group, the white petrolatum group showed improvement in the skin dryness scores, whereas the 10% DCC and 20% DCC groups showed significant improvements in the skin dryness and scratch marks scores, as well as increased skin conductance. Furthermore, the 20% DCC group showed greater improvements in the skin dryness scores and skin conductance than the white petrolatum group. The VAS score of the DCC groups and white petrolatum group significantly decreased compared to the no-treatment group. In particular, after 1 week of treatment, the VAS score was significantly lower in the 20% DCC group than in the other groups. In conclusion, the moisturizing cream containing DCC significantly improved skin dryness and pruritus in a dose-dependent manner. Therefore, the application of this cream may be effective for the management of dry and itchy skin in senile xerosis.

Efficacy of bath-PUVA therapy for all stage of mycosis fungoides -retrospective analysis of 62 cases

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Phototherapy with psoralen and UVA (PUVA) is widely used as an effective treatment for refractory skin diseases. Although PUVA has become less popular, as narrowband UVB has become a valuable modality for the treatment of refractory skin diseases, the PUVA protocol is still used for refractory skin diseases. Although PUVA has become less popular, as narrowband UVB has become a valuable modality for the treatment of refractory skin diseases, the PUVA protocol is still used for refractory skin diseases. Although PUVA has become less popular, as narrowband UVB has become a valuable modality for the treatment of refractory skin diseases, the PUVA protocol is still used for refractory skin diseases.
Efficacy of D-delta-tocopheryl retinoate in the improvement of photodamaged skin

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Photaging is characterized by wrinkles, motified pigmentation, loss of skin tone, laxity, dryness and roughness of the skin. All-trans-retinoid acid is a potent anti-aging ingredient, however, due to its irritative and mutagenic, several less aggressive retinoids have been technologically modified for clinical evaluation. Among these, D-delta-tocopheryl retinoate (TR) is presented as a differentiated active ingredient for improving photodamaged skin conditions. Thus, the aim of this study was to evaluate the clinical efficacy of TR in cosmetic formulations using photodamaged and non-photodamaged skin. The study included 25 photodamaged and 25 non-photodamaged patients. The degree of wrinkle reduction and a panel of laboratory tests. Decrease in PASI score was significantly greater in patients with psoriasis arthritis than in patients with psoriasis vulgaris. Ustekinumab can be used even after the failure of biologics, but according to the patient’s disease course, sometimes a combination therapy will be delayed. The same applies to the patients previously treated with methotrexate. The effectiveness of ustekinumab treatment is independent of gender. The most visible results of the treatment appear after one to four months of the first taken dose.

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Efficacy of ustekinumab in the treatment

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Biological drugs are becoming a standard treatment of psoriasis in Western countries. Unfortunately, it is very expensive method and therefore unattainable for all patients. That is the reason why resources allocated for this method of the treatment should be disposed properly. The administration of biologics to the patients who have already applied them in the past is associated with prolonged latency periods before the response of the therapy starts. We decided to investigate development of the response to the treatment with ustekinumab in patients with psoriasis who were previously treated with biological agents. The study included 11 patients who had PS at the Regional Hospital of Poznan with psoriasis, including 6 women and 5 men aged 19-69 years (mean: 41 years). It was patients diagnosed with psoriatic arthritis, and 31 with psoriasis vulgaris. Patients were coming for the check-ups and administration of the next dose of medication in the scheme 0-16-24-32-40-52 weeks. During these visits PASI, BSA and DLQI were evaluated. PASI, BSA and DLQI were statistically significant lower in the subgroups of patients treated with ustekinumab compared to the previous therapy. The use of ustekinumab in patients with psoriasis who were previously treated with biological agents is justified.
HUMIRA Improves Health-Related Quality of Life (HRQoL) in Patients with Moderate to Severe Hidradenitis Suppurativa (HS): Results from the First 12 Weeks of PIONEER I

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Hidradenitis suppurativa (HS) is an inflammatory skin disease characterized by recurrent, painful abscesses and nodules that may occur on any part of the body, including the breast, axilla, groin, and perianal area. HS can lead to significant physical debilitation and psychological strain. Currently, there are no curative treatments for HS, and management typically involves topical and systemic therapies, such as antibiotics, retinoids, and immunosuppressants. In the PIONEER I study, a Phase 3 clinical trial, we evaluated the safety and efficacy of adalimumab (ADA) vs placebo (PBO) in patients with moderate to severe HS.

The study included patients with a diagnosis of HS for ≥1 year, a total abscess count of ≥15, and a skin-specific quality of life score of >15. Patients were randomized to receive ADA (140 mg at week 0, 80 mg at week 2, 40 mg weekly for week 4) or PBO. The primary endpoints were improvement in skin-specific quality of life (DLQI) and skin-related health-related quality of life (HRQoL) measures as assessed by the short form 36 (SF-36).

At the end of 12 weeks, ADA pts reported significantly greater improvements in skin-specific HRQoL compared to PBO (5.4 vs 2.9; p<0.001). Similarly, ADA pts had significantly greater improvements in the physical aspects of the SF-36 compared to PBO pts (4.3 vs 0.8; p<0.001). ADA pts also reported significantly greater improvements in skin-related physical pain and disability (9.6 vs 4.1; p=0.001). Additionally, ADA pts reported significantly greater improvements in the mental health component of the SF-36 compared to PBO pts (3.1 vs 0.9; p<0.001).

In conclusion, ADA pts had significantly greater improvements in the physical aspects of the SF-36, skin-related health-related quality of life, and skin-related physical pain and disability compared to PBO pts. Further studies are needed to determine the long-term efficacy and safety of ADA in HS.
201 Increased iron levels in aged skin lead to increased ferritin expression and higher ROS-levels after irradiation

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Iron is essential for cell growth and many metabolic processes, but it is also toxic and involved in the generation of reactive oxygen free radicals via Fenton and Haber-Weiss reaction. Tight regulation of iron stores by e.g. desferrioxamine or menstruation usually prevents iron accumulation in the human body. The purpose of our study is to examine the changes in iron level and metabolism during aging of human skin. Here, we present the effect of iron loading on the ferritin expression and the reaction of reactive oxygen species (ROS) in human dermal fibroblasts. Additionally, we firstly showed the expression of ferritin in the dermis of aged female human dermis. We used a cell culture model for the determination of the accumulation of iron in human dermal fibroblasts and used this system for the analysis of the effect of iron on the cells. Moreover, we examined dermal samples from young (22.7 ± 4.4 mean age ± SD), n = 14) and old (60.8 ± 7.0 mean age ± SD), n = 14) women to analyze iron in vivo. In cell culture, ferritin light chain as well as ferritin heavy chain was induced by the treatment with ferrous ions. Thus, the cells avoid the toxic effect of an iron accumulation by binding the iron to ferritin and by that keeping the iron in a redox inactive state. As a result of iron loading, we could confirm the results of Sato et al. ID YAG laser therapy for cutaneous lesion of neurofibromatosis and the accumulation of iron. These findings lead to new possibilities for the repression of light-induced ROS-generation in old skin by iron chelating agents.

202 Independent association of neutrophil counts and PASI under TNF-α antagonist treatment. A retrospective study investigating differential effects of Adalimumab, Etanercept, and Ustekinumab

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TNF-α inhibitors Adalimumab and Etanercept, and IL12/IL23 antagonist Ustekinumab are used to treat psoriasis and psoriatic arthritis. General alterations of inflammatory biomarkers under treatment with these biologics have been reported, a detailed description of parameter dynamics and a correlation between treatment response is, however, lacking. Here, we present a retrospective data analysis of our treatment of 203 patients receiving Ustekinumab, 23 patients receiving Etanercept, and 23 patients receiving Ustekinumab. Anti-nuclear antibody (ANA) titers, anti-double-stranded DNA (anti-dsDNA) concentrations, polymorphonuclear cell (PMN) counts, Non-PMN leucocyte counts, C-reactive protein (CRP) concentrations and PASI values at baseline and during treatment were recovered. ANA-titers and anti-dsDNA concentrations significantly increased under treatment with PMN counts considerably decreased under treatment with Adalimumab and Etanercept and, to a lesser extent, under treatment with Ustekinumab. Interestingly, statistical analysis using general linear models for their associations revealed significant effects contribute to the differential therapeutic efficacy of treatments observed in individual patients.

203 Laser therapy for ocular lesions of nevus of Ota

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Laser therapy for cutaneous lesion of nevus of Ota is already established, however therapy for ocular lesion has not been reported. The purpose of our study was to investigate the efficacy and safety of Q-switched Nd:YAG laser therapy for ocular lesion of nevus of Ota. 15 eyes from 13 patients were treated by Tango (Ellex) at SLT mode (wave length: 532 nm, diameter: 400 mm, laser irradiation time: 3 nsec). An informed consent was obtained from all the patients. The cases were selected under the condition that the patients were treated more than three times and followed-up three times or more. 3 male and 10 female patients from the age of 19 to 52 (average: 29.5) were enrolled in the study. All the cases were with cutaneous and ocular (sclera) lesion. Irradiation output was 0.8 to 1.5 mJ and a treatment was with irradiation of 10 to 663 shots. Improvements were evaluated objectively by SA and subjectively by the patients at each treatment. The ocular lesions was 0.8 to 1.5 mJ and a treatment was with irradiation of 10 to 663 shots. Improvements were evaluated objectively by SA and subjectively by the patients at each treatment. The ocular lesions was 0.8 to 1.5 mJ and a treatment was with irradiation of 10 to 663 shots. Improvements were evaluated objectively by SA and subjectively by the patients at each treatment. The ocular lesions was 0.8 to 1.5 mJ and a treatment was with irradiation of 10 to 663 shots. Improvements were evaluated objectively by SA and subjectively by the patients at each treatment.

204 Lysine and arginine based surfactants and their potential use in dermatology and cosmetology

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Short cationic lipopeptides were designed in order to imitate the properties of endogenous antimicrobial peptides. The obtained compounds proved to be effective against clinical isolates of Staphylococcus aureus (SA) in our previous study. However due to the haemolytic activity their use in antimicrobial therapy is limited. In the present work lipopeptides: C16-KKK-KKK-NH2, C16-KKK-KKK-NH2, C16-KKK-KKK-NH2, C16-KKK-KKK-NH2, C16-KKK-KKK-NH2 were obtained via chemical synthesis. Their antimicrobial activity against reference strains of bacteria and fungi as well as toxicity towards human HaCaT keratinocytes were assessed. Tested lipopeptides exhibited activity against all tested microorganisms. However the compounds proved to be toxic towards HaCaT cells. All lipopeptides were toxic to HaCaT cells. The obtained results revealed much attention. Theoretically, numbers of SA clinical isolates in medium supplemented with tested compounds, while significant decrease of activity of mupirocin and fusidic acid was observed. Broad spectrum of antimicrobial activity and low risk of resistance development suggests potential application of lipopeptides as future preservatives. Moreover the surface-active properties of tested compounds were confirmed using semiautomatic tensiometer. Obtained results suggest that short lipopeptides could simultaneously fulfill the role of the preservative and the surface-active agent. Our next step is to perform, emulsifying and skin irritation tests.

205 Modulating effect of a new biofunctional on skin photo-aging: in vivo studies conducted on Asian skin

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The signs of age (wrinkles, age spots) are aggravated by external stresses such as long exposure to solar radiation or cold stresses. To limit the damage, the skin possesses highly conserved proteins in the mitochondria, mitochondrial Heat Shock Proteins (mHSPs), which help to preserve functional proteins and cellular homeostasis during heat shock, and CRBP proteins (Cold-Inducible RNA-Binding Protein) in response to cold stress. The aim of our study was to evaluate the activity of an artemisia extract on the skin appearance related to aging (wrinkles and skin tone) during winter. The study was carried on 39 Asian volunteers (30 to 65 years old) for an eight-week period. Volunteers applied the extract and the placebo on their face twice a day. The appearance of wrinkles was evaluated by Visiosil® VL650 and Visia-CR® pictures. The skin tone and spot appearance were assessed by Mesometer® MX18 measurements and by photoMAX® pro at different time points. Since the first week of application, a decrease in the total wrinkle area was observed on the extract treated-sides compared to the placebo sides. After 28 days of treatment with the extract, all the wrinkle parameters were significantly reduced compared to placebo. These beneficial effects on appearance of wrinkles were maintained until the end of the study. Furthermore, the skin and the age spots color continuously declined from the first week of the study to the end, for the biofunctional treated-sides compared to the placebo treated-sides. At all time points, the tone difference between the two treated sides was statistically significant for the measurements done on the skin and on an age spot. The positive effects indicated that the biofunctional extract helped decrease the appearance of skin wrinkles as well as improving skin complexion.

206 Neurontic chronic dermatological patients employ task- and emotion-focused coping with stress and current lower well-being

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2 Psychological aspects play an important role in therapy of chronic skin diseases. The aim of the study was to evaluate selected psychological parameters - coping with stress, self-efficacy and personality traits in dermatological out-patients. The study was performed at the general practitioner office. The group consisted of 84 patients (56 women, 28 men; aged 16-80 years, suffering from chronic dermatological diseases (contact eczema, seborrhic dermatitis, acne vulgaris, urticaria, psoriasis vulgaris). The following questionnaires were used: our socio-demographic questionnaire, INTE questionnaire by Shutter et al (Polish adaptation by Ciechanowicz et al) evaluating emotional intelligence; GSS Generalized Self-Efficacy Scale by Schwarzer and Jerusalem (Polish adaptation by Juczyński), CSS Coping with stress strategies by Endler et al (Polish adaptation by Szczepaniak el al). Statistical analysis was performed by STATISTICA and p<0.05 was considered statistically significant. We found positive correlation between neuroticism and emotion-focused coping (r=0.41, p<0.0001) extraversion and task-orientated coping (r=0.48, p<0.0001) agreeableness and task-oriented coping (r=0.42, p<0.0001) agreeableness and task-oriented coping (r=0.38, p<0.0001); conscientiousness and task-oriented coping (r=0.39, p<0.0001). We observed negative correlation between neuroticism and emotion-focused coping (r= -0.24, p=0.05) and extraversion and current well-being (r= -0.27, p=0.05) in our group of patients. In conclusion, identification of neurontic chronic skin diseases patients should alert every medical health practitioner to employ a more specific care focused on emotional aspects of the disease and strengthening of patients' self-efficacy.
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New biomarkers for disease severity in atopic dermatitis

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Promising new treatments for atopic dermatitis (AD) are currently investigated. However, compar-
ing the results of different trials in AD is difficult because of the large number of different clinical outcome measures that have been used. Therefore, there is an urgent need for valid, reliable and objective severity measures of AD that allow comparison of clinical trials and epidemiological stud-
ies. The purpose of the study was to test a new objective clinical measure that can be used to quantita-
tively assess treatment outcomes.

We investigated the correlation of skin signs (erythema, pruritus and excoriation) as assessed by 3 SASSAD scores with laboratory methods (Enzyme-linked immunosorbent assay (ELISA) was used to measure cytokine levels) on admission and after treatment were compared to determine if they are associated to disease severity.

Of the 31 markers studied, seven showed a statistically significant decrease after treatment and are therefore associated with SASSAD. This included PARC, MDC-12, PARC, VCAM-1 and interleukin 10. Reactive skin is characterized by a marked sensitivity of the skin to external stimuli and impaired skin barrier repair ability. Probiotics are defined as live microorganisms that when ingested in sufficient amount positively balance the host microbiota and beneficially improve health. Beyond the effect on the intestinal microbiota, some probiotic strains display potent immune-modulatory properties including at the skin level. Indeed, we have previously shown in ex vivo and preclinical studies and for the first time in a randomized placebo-controlled trial that oral supplementation with a probiotic beneficially impacted skin sensitivity and barrier function. The aim of this study was to confirm the efficacy on skin reactivity. For that purpose, Lactobacillus paracasei CNCM I-2116 was tested in a randomized double-blind vehicle-controlled trial. 66 female volunteers with reactive skin received placebo vs. probiotics powders and were supervised in double-blinding at a daily dose of 109 CFU for 2 months period. Skin reactivity as assessed by capsaicin test and skin barrier function recovery. These evaluations were performed at initiation (day 0) and at the end of the supplemen-
tation period (day 60). The results showed that the volunteers who received L. paracasei CNCM I-2116 presented a significant decrease in skin sensitivity over the treatment period. Moreover the barrier function recovery, following tape-stripping disruption, was significantly faster for the volunteers having received L. paracasei CNCM I-2116 compared to the volunteers taking placebo powder. The results of the study confirm that oral supplementation with the probiotic L. paracasei CNCM I-2116 has a beneficial effect on reactive skin and underline that the efficacy is maintained with a lower dose (i.e. 109 CFU as compared to the first study in which 1010 CFU was tested). Overall these findings support new strategies based on a nutritional approach for the treatment and prevention of the symptoms related to reactive skin.

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Probiotic strain Lactobacillus paracasei CNCM I-2116 decreases skin reactivity

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Reactive skin is characterized by a marked sensitivity of the skin to external stimuli and impaired skin barrier repair ability. Probiotics are defined as live microorganisms that when ingested in sufficient amount positively balance the host microbiota and beneficially improve health. Beyond the effect on the intestinal microbiota, some probiotic strains display potent immune-modulatory properties including at the skin level. Indeed, we have previously shown in ex vivo and preclinical studies and for the first time in a randomized placebo-controlled trial that oral supplementation with a probiotic beneficially impacted skin sensitivity and barrier function. The aim of this study was to confirm the efficacy of skin reactivity. For that purpose, Lactobacillus paracasei CNCM I-2116 was tested in a randomized double-blind vehicle-controlled trial. 66 female volunteers with reactive skin received placebo vs. probiotics powders and were supervised in double-blinding at a daily dose of 109 CFU for 2 months period. Skin reactivity as assessed by capsaicin test and skin barrier function recovery. These evaluations were performed at initiation (day 0) and at the end of the supplemen-
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Safety and Efficacy of Adalimumab in Patients with Moderate to Severe Hidradenitis Suppurativa: Results from First 12 Weeks of PIONEER I, a Phase 3, Randomized, Placebo-Controlled Trial

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This multicenter study evaluated safety and efficacy of adalimumab (ADA) in patients with moderate to severe hidradenitis suppurativa (HS). The 12-wk double-blind, placebo (PBO)-controlled period is reported here. Anti-TNF-naive pts diagnosed with HS for a year, with total abscess and inflammatory module (AN) count of ≥1 and HS lesions in ≥2 body areas (Hurley Stage II or III), were randomized 1:1 to ADA 160mg at wk0; 80mg at wk2; 40mg weekly from wk4 or matching PBO. Efficacy was analyzed for all randomized pts (intent-to-treat [ITT]), and safety for all ITT pts who received at least 1 dose of study drug. Non-responder imputation was used for missing data. The 307 ITT pts (63.8% female, 76.2% white, 20.2% black, median age 37.0 years, mean HS duration of 11.5 years, and median AN count of 11. A significantly higher proportion of pts randomized to ADA achieved the primary efficacy endpoint HASCR (Hidradenitis Suppurativa Clinical Response defined as ≥50% reduction from baseline in AN count with no increase in abscess or draining fistula counts) at wk12; ADA (64/153, 41.8%) vs PBO (40/154, 26.0%; p=0.003). Adverse events (AE) reported by >10% of pts were excoriation of HS (13.2%; PBO: 9.2%), and nasopharyngitis (10.5%; PBO: 5.9%). ADA: Cellulitis was reported by 2 pts for each PBO and ADA. Serious AEs included pyelonephritis (n=1 ADA) and breast cancer (n=1 PBO). No deaths occurred. In PIONEER II, a Phase 3 randomized PBO-controlled study of ADA in HS, significantly more pts randomized to ADA achieved HSSCR vs PBO randomized to PBO. AEs were comparable to PBO and consistent with the ADA safety profile; no new risks were identified.

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213 Survival analysis in AML patients with leukemia cutis
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Leukemia cutis refers to skin infiltration by lymphoid or myeloid malignant cells, and is considered a poor prognostic factor in patients with hematologic malignancy. However, studies of the disease are limited, especially over the past decade despite major advancements in chemotherapy regimens and stem cell transplantation. We hypothesized that leukemia cutis is not a poor prognostic factor in AML. To test this, we performed a retrospective study of patients aged 18 years old with histopathological diagnosis of leukemia cutis over 12 years at Brigham and Women’s Hospital/Dana Farber Cancer Institute. We identified 61 patients with acute myelogenous leukemia (AML) with leukemia cutis. Duration of survival for all AML patients with leukemia cutis was 22 months, with absolute survival rate of 36% and 24% at 1- and 5-years, respectively, compared to the current national 5-year survival rate in AML of 24.9%. Survival in leukemia cutis patients varied with type of AML. Further, leukemia cutis patients who were treated with stem cell transplantation had significantly prolonged survival of mean duration 44 months, with absolute 1- and 5-year survival rates of 69 and 46%, respectively, compared to only 7 months mean survival, and 1- and 5-year survival rates of 10 and 0%, respectively, in non-transplanted patients. Our results indicate that leukemia cutis may not be the poor prognostic factor that it was previously thought to be and stem cell transplantation may lead to improved survival in this patient population.

214 The altered distribution of dendritic cells in the inflamed skin lesion of various nutritional deficiencies
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Nutritional deficiencies cause pellagra (nicotinic acid deficiency), biotin deficiency, acrodermatitis enteropathica, and other cutaneous conditions. These patients commonly present with similar skin dermatosis and share common histological alterations, including vacuolization and necrosis of keratinocytes in the upper epidermis. We previously reported the complete depletion of Langerhans cells in human pellagra and biotin deficiency patients. We further conducted to determine the distributions of dendritic cells in skin lesions of patients with acrodermatitis enteropathica, necrolytic migratory erythema those additionally show the shared histological alterations with pellagra and biotin deficiency. Six pellagra and one biotin deficiency, one acrodermatitis enteropathica, three necrolytic migratory erythema as well as eleven healthy individuals those served as controls were included. We found Langerhans cells were substantially decreased or eventually disappeared in skin lesion of all observed diseases. In contrast, CD14+ dendritic cells were correspondingly disappeared in the dermis of moderate to severe pellagra and biotin deficient patients. Meanwhile, in skin lesions of acrodermatitis enteropathica and necrolytic migratory erythema, CD14+ were not at all affected. CD14+ dendritic cells increased in the dermis of all observed diseases compared to non-inflamed healthy skin, however, there was no apparent difference of CD14+ dendritic cells induction among these trophic diseases. Our observations suggest that the susceptibility to nutrients varies among the cutaneous dendritic cells, and the origin of these dendritic cells likewise differs with each.

215 The effects of listening to classical music on saliva stress parameters in psoriasis in-patients
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The purpose of this study was to evaluate the effects of classical music on selected psychological and physiological stress parameters in psoriasis in-patients. Hospitalised psoriasis patients were subjected to psychological and physiological sets of measurement during two days (first day no classical music vs. second day classical music). Four psychological questionnaires measuring depression (Beck’s Depression Inventory), quality of life (Skindex-29), stress (Rah & Holmes Stress Inventory) and anxiety (STA) were used. Saliva samples measuring cortisol and dehydroepiandrosterone-sulphate concentrations (using ELISA) were collected. A total of 12 saliva samples per patient, divided in two sets (no music and preselected classical music) were taken. Moreover, set data suggested that classical music may induce a statistical significant result between the control and experimental group (DHEA-S p= 0.002, mean= -7.2, SD= 8.2). Additionally, increases in DHEA-S levels during the experimental day were reported in the experimental group. The results of this study prove that listening to classical music could have a positive effect on psoriasis patients.

216 The efficacy and safety of cryo fat reduction in the treatment of pseudogynecomastia
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Pseudogynecomastia is a condition of enlarged male breast primarily due to the accumulation of adipose tissue. Treatment options for this condition are limited including weight reduction and surgical liposuction. Cryo fat reduction provides nonsurgical, selective, localized subcutaneous adipose tissue destruction without epidermal or dermal injury by inducing selective adipocyte apoptosis. This study was designed to evaluate the efficacy of cryo fat reduction in the treatment of pseudogynecomastia. In this prospective, 28-week trial, 12 male volunteers with pseudogynecomastia were treated with cryo fat reduction twice biweekly. Efficacy was determined by breast circumference measurement, ultrasonographic measurement of subcutaneous layer thickness, physician’s global photographic assessment, and patient’s satisfaction at baseline, week 4, week 8, week 16, and week 28. Safety was evaluated by questionnaire at each visit. In 11 subjects who completed the trial, breast circumference and thickness of fat layer decreased significantly at week 8, and were gradually reduced until week 28. Physician’s photographic assessment and patient’s satisfaction showed significant improvement at each visit. Although some volunteers reported transient pain or bruise after treatment, there was no serious adverse event. In conclusion, cryo fat reduction is a safe and effective therapeutic option of the treatment of pseudogynecomastia.

217 The potential role of substance P antagonist in the treatment of atopic dermatitis
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Atopic dermatitis (AD) is an often severely itching, chronic, inflammatory skin disorder and may worsen due to stress and anxiety. Tachykinins have been suggested to influence the level of inflammation as well as being involved in pruritus, stress and anxiety. Aprepitant is an antagonist for the NK-1 receptor of substance P. Patients with moderate-severe AD have been recruited to an open trial. Aprepitant 80 mg daily in 7 days was administered to a total of 12 patients with AD (n=16) received only topical treatment. The patients have been monitored regarding extent of the disease (SCORAD), degree of pruritus (VAS) and scratching. In the control group SCORAD monitored regarding extent of the disease (SCORAD), degree of pruritus (VAS) and scratching. In conclusion, our results suggest that the susceptibility to nutrients varies among the cutaneous dendritic cells, and the origin of these dendritic cells likewise differs with each.

218 The role of PPARγ modulation in the control of insulin and IGF-1 induced sebogenesis and inflammation in vitro
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One of the current hypotheses of acne pathogenesis suggests that dietary glicemic load predispose to dysregulation of the sebaceous gland activity, leading to altered sebum secretion. By contrast, low glycemic load diet seems to ameliorate clinical manifestations of acne. Triggers of insulin-like growth factor-1 (IGF-1) signalling are key stimuli for the sebaceous gland functions. In sebocytes, insulin/IGF-1 signaling activates PPARγ/IKK pathway that, in turns, induces the expression of SREBP-1, resulting in enhanced sebogenesis. The nuclear receptor peroxisome proliferators-acce-}

Trecinceptor-γ (PPARγ) is pivotal in lipid and glucose metabolisms, and in the modulation of inflammatory pathways. Thus, we investigated the role PPARγ plays in the sebaceous lipid synthesis and cytokines expression induced by insulin/IGF-1 in sebocyte cell line ZD55 using specific PPARγ activator GW9662 isolated from Crataegus maximowiczii. GW9662 abolished the GMG-43AC effect on the lipogenic and inflammatory genes confirming that both activities are substantially decreased or eventually disappeared in skin lesion of all observed diseases. In conclusion, our data suggests that the susceptibility to nutrients varies among the cutaneous dendritic cells, and the origin of these dendritic cells likewise differs with each.
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Topical application of baby- and adult-aloe on ultraviolet B irradiated mouse skin with metabolite profiling based biomarker discovery

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Topical application with two different sized-aloextractss, baby aloextract (immature aloewith <10 cm) and adult aloextract (mature aloewith >50 cm), suppressed ultraviolet B(UV) B-induced skin damages including increased epidermal thickness and matrix metalloproteinase-1 expression, decreased procollagen type I and involucrin expressions, and the change of collagen fiber. Additionally, we revealed that many different kinds of skin metabolites, such as amino acids, organic acids, nucleobases, fatty acids, steroids, carbohydrates, and glycoconjugates, were altered by topical application with adult aloexextract and baby aloextract extracts in epidermal and dermal layers from UVB-exposed skin using mass spectrometry (MS)-based techniques with multivariate statistical analysis. Especially, four nucleobases (hypoxanthine, uridine, inosine and cytidine) and cholesterol were specifically influenced by adult aloexextract and baby aloextract treatment, respectively. The alterations in skin metabolites generated by applying aloextracts on UVB-induced skin were generally greater in epidermis than in dermis of the skin. These data demonstrated that these metabolites could be biomarkers to explain the effects of aloextracts on UVB-irradiated skin. Our results suggested that topical application with aloextracstot was efficient at restoring the changes of skin conditions and skin metabolites caused by UVB irradiation.

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Topical Clotetasolpropionate has no Influence on Inflammation or Efficacy after Ingentol Mebutate Treatment of Grade I-III Actinic Keratoses

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Topical Ingentol Mebutate (IngMeb) is approved for field treatment of actinic keratosis (AK). The treatment causes transient and potentially serious inflammation that can be disconenting in patients. In this study we investigated if local skin responses (LSR) generated by IngMeb can be reduced with a topical glucocorticosteroid and its possible impact on treatment efficacy. In a blinded, randomized clinical study, patients with grade I, II and III AKs on face or scalp were treated in two 25 cm² symmetrical fields with IngMeb (0.01%) once daily for three consecutive days. Following IngMeb treatment one field was randomly assigned to application of topical clotetasolpropionate (CP) (0.05%) twice daily for four days. Skin response was evaluated on day 1, 4, 8, 15 and 57 on an LSR scale ranging from 0-24 with higher numbers indicating more severe reactions. Clearance of lesions was evaluated after two weeks and two months. A total of 21 patients with a median of 16 AKs per treatment field (range 8-27) were included in the study. No difference in LSR-score was found between IngMeb treatment, and IngMeb followed by CP (LSR on day 8: 7 vs. 6; p = 0.93). Skin response peaked on day four (LSR 10) and returned to baseline values on day 15 (LSR 2). CP-application had no effect on treatment efficacy. At two-month follow-up, overall lesion clearance was 86% (86% IngMeb vs. 86% IngMeb+CP) and when stratified for AK-grade, clearance rates were 88% (grade I AK), 70% (grade II), and 60% (grade III). In conclusion, application of a topical glucocorticosteroid after IngMeb does not influence local skin response or treatment efficacy. Overall, IngMeb clears over 85% of treated lesions and shows a therapeutic effect on all AK severity grades.

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Topical penetration of clotetosol-17-propionate into porcine lesional and non-lesional skin illustrated with time and space resolution by dermal open flow microperfusion

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The hyperkeratosis stratum corneum in psoriasis has been reported to act as trap compartment for lipophilic drugs. acting as trap compartment for lipophilic drugs. dOFM is suitable for lipophilic sampling and delivers drug into lesional and non-lesional skin, and supports the role of the stratum corneum in psoriasis to faster penetration. This dOFM study sheds light on the penetration of a typical lipophilic topical in lesional vs. non-lesional psoriatic skin and higher dermal AUCs after repeated application due to faster penetration. This dOFM study sheds light on the penetration of a typical lipophilic topical drug into lesional and non-lesional skin, and supports the role of the stratum corneum in psoriasis acting as trap compartment for lipophilic drugs. dOFM is suitable for lipophilic sampling and delivers pharmacokinetic data with time and space resolution.

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Tyrosine kinase inhibitors exert inhibitory effects on vitamin D3 metabolism

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Tyrosine kinase inhibitors exert inhibitory effects on vitamin D3 metabolism. In a blinded, randomized clinical study, patients with grade I, II, and III AKs on face or scalp were treated in two 25 cm² symmetrical fields with the tyrosine kinase inhibitors imatinib (IMA) or nilotinib (NIL) once daily for 10 days. On day 1 and day 14 dermal Open Flow Micropcrufion (dOFM) probing were performed. The dOFM samples were analyzed by liquid chromatography-mass spectroscopy (LC-MS/MS). The hyperkeratosis stratum corneum in psoriasis has been reported to act as trap compartment for lipophilic drugs. acting as trap compartment for lipophilic drugs. dOFM is suitable for lipophilic sampling and delivers drug into lesional and non-lesional skin, and supports the role of the stratum corneum in psoriasis to faster penetration. This dOFM study sheds light on the penetration of a typical lipophilic topical drug into lesional and non-lesional skin, and supports the role of the stratum corneum in psoriasis acting as trap compartment for lipophilic drugs. dOFM is suitable for lipophilic sampling and delivers pharmacokinetic data with time and space resolution.

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