specific inhibitors or dominant negative plasmids. As expected, we detected Twist gene and protein pathway in SZ. Gene and protein expression of Twist was quantified in SZ lines and tumor cells of we aimed to establish whether Twist expression depends on the constitutive activation of NFkB contribution to the embryonic development, Twist is synthesized by most of the cells of meso-

ABSTRACTS

Dermatological findings of chronic itch in hemodialysis patients: results from GEHIS (German Epidemiological Hemodialysis-Itch Study)

M. Weiss7 and E. Griffiths1

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Aladimahbrook: Improved Treatment Satisfaction with Medication (TS-M) in Patients with Moderate-to-Severe Hidradenitis Suppurativa (HS) in a 12-week Randomized Controlled Trial (PRONE-MH)

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HS is an inflammatory skin disease characterized by recurrent, painful lesions that may lead to physical disfigurement and psychosocial strain. Recent data indicate that TNF-alpha blockade 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 aladimahbrook (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 ≥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, patient adherence 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 than PBO in 7 of 14 TSQM items. There was no difference in treatment satisfaction between gender, with females and males showing similar improvements. The purpose of this study was to investigate whether aladimahbrook 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 ≥1 year, a total abscess and inflammatory nodule count ≥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, patient adherence 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 than PBO in 7 of 14 TSQM items. There was no difference in treatment satisfaction between gender, with females and males showing similar improvements.
Baseline characteristics of patients with psoriasis enrolled in the British Association of Dermatologists' Biologic Interventions Register.

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ABSTRACTS

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

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Dermatitis herpetiformis (DH) is a cutaneous form of coceliac disease affecting approximately 1% of coceliac disease patients. Lifelong gluten-free diet (GFD) is the treatment of choice for DH equally effective in all stages of disease, and it may therefore be considered as the gold standard for the treatment 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 diagnosis had less than 10 years of disease duration. The majority of patients had a diagnosis of DH was evaluated. Twenty (4%) DH patients had a prior diagnosis of coceliac disease. The median duration of disease was 13 years. Before DH occurred 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. Coceliac autoantibodies were positive in 12 (60%) 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 coceliac disease may develop DH by time: in only the skin dryness scores, whereas the 10% and 20% groups showed significant improvements in the skin dryness and scratch marks scores, as well as increased skin conductance.

Furthermore, the 20% GFD group showed greater improvements in the skin dryness scores and skin conductance than the white petrolatum group. The VAS score of the GFD 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% GFD group than in the other groups. In conclusion, the moisturizing cream containing DDIC significantly improved skin dryness and pruritus in a dose-dependent manner. Therefore, application of this cream may be effective for the management of dry and itchy skin in senile xerosis.

Chronic kidney disease: from classical disease to dermatitis herpetiformis

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Efficacy of bath-PUVA therapy for all stage of mycosis fungoides -retrospective analysis of 64 patients

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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 narrowed UVB has become more popular, bath water delivery of 8-methoxypsoralen and subsequent UVA-irradiation (bath-PUVA) remains an effective alternative to systemic application and the gold standard of phototherapy modalities. In our previous studies, bath-PUVA-induced circulating regulatory T cells (Tregs), which also acquired the suppressive function, in patients with psoriasis. However, the underlying mechanisms for mycosis fungoides (MF) remains unclear. To understand the mechanisms in MF, we analyzed intravital circulating cells before and after bath-PUVA therapy. Bath-PUVA-induced CCR4 expressing malignant T cells with reduced Tregs in MF lesions. The efficacy of bath-PUVA for early-stage of MF was well documented. In this study, we conducted a retrospective analysis of all the data of bath-PUVA treatment of MF patients at our clinic in Nagoya City University Hospital between November 2004 and 2013. Sixty-two patients with MF (8 stage IA, 30 stage IB, 5 stage IIb, 17 stage IIIA, 1 IVa2) were analyzed. Of the 62 patients in the study, 47 (75.8%) had complete response (CR), 7 patients (11.3%) had partial response, and 8 patients (12.9%) had no response (NR). The almost patients with IA/B and IIIA achieved CR. One of 5 IIIb patients achieved CR and two was PR. Serum sIL-2R and LDH levels in patients after bath-PUVA significantly decreased (P<0.001). Several factors related to disease progression were identified in our data. The number of patients with coagulation disorders increased from 14 in 2004 to 30 in 2013. The largest study of bath-PUVA for all the stages of MF. Bath-PUVA is highly effective for the early stage and partially effective advanced stage. Depending the stage and progression, the photobiological mechanisms should be analyzed to maximize the efficacy of bath-PUVA.

Deciphering the aquagenic pruritus in patients with myeloproliferative neoplasms: not exclusive of polycythemia vera

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Pruritus is the most common symptom of skin disease in the elderly. Patients with senile xerosis often experience severe itching, which also acquired the suppressive function, in patients with psoriasis. However, the underlying mechanisms for mycosis fungoides (MF) remains unclear. To understand the mechanisms in MF, we analyzed intravital circulating cells before and after bath-PUVA therapy. Bath-PUVA-induced CCR4 expressing malignant T cells with reduced Tregs in MF lesions. The efficacy of bath-PUVA for early-stage of MF was well documented. In this study, we conducted a retrospective analysis of all the data of bath-PUVA treatment of MF patients at our clinic in Nagoya City University Hospital between November 2004 and 2013. Sixty-two patients with MF (8 stage IA, 30 stage IB, 5 stage IIb, 17 stage IIIA, 1 IVa2) were analyzed. Of the 62 patients in the study, 47 (75.8%) had complete response (CR), 7 patients (11.3%) had partial response, and 8 patients (12.9%) had no response (NR). The almost patients with IA/B and IIIA achieved CR. One of 5 IIIb patients achieved CR and two was PR. Serum sIL-2R and LDH levels in patients after bath-PUVA significantly decreased (P<0.001). Several factors related to disease progression were identified in our data. The number of patients with coagulation disorders increased from 14 in 2004 to 30 in 2013. The largest study of bath-PUVA for all the stages of MF. Bath-PUVA is highly effective for the early stage and partially effective advanced stage. Depending the stage and progression, the photobiological mechanisms should be analyzed to maximize the efficacy of bath-PUVA.
Efficacy of D-delta-tocopheryl retinoate in the improvement of photodamaged skin

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Photaging is characterized by wrinkles, motilied pigmentation, loss of skin tone, laxity, dryness and roughness of the skin. All-trans-retinoic acid is a potent anti-aging ingredient, hovewer, due to its irritating and mutagenicity, several less aggressive retinoids have been developed. 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 a new TR-containing formulation using morphological and clinical evaluation. For this purpose, 40 healthy female volunteers aged between 40-65 years-old applied daily a formulation containing, or not, (vehicle) 0.1% of TR on the face for 12 weeks. Their effects were evaluated before, and after 4, 8, and 12 weeks using biophysical and skin imaging techniques.

After 4 weeks of application of the formulation with TR, a significant increase of the stratum corneum water content, and reduction of the skin roughness were observed. These results sustained for the 12 weeks of the study. An increase in skin elasticity and a reduction in skin transepidermal water loss were observed after 12 weeks of the study. It was not observed differences in dermis echogenicity.

In the efficacy perception study, the volunteers perceived an improvement of skin hydration and smoother appearance of the skin. Moreover, it was not described irritation and/or erythema caused by the product application. The clinical scrores showed a reduction of uneven pigmentation and roughness, and improvement of skin tone. In conclusion, this study evidenced the potential of TR to be applied in photodamaged skin, which presented effects in skin hydration, elasticity, microrelief, barrier function, and skin pigmentation.
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Generation and characterization of induced pluripotent stem (iPS) cells from Autosomal Recessive Congenital Ichthyosis patients – a new model system to study rare keratinization disorders

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Autosomal recessive congenital ichthyosis (ARI) is a heterogenous skin disorder characterized by skin barrier dysfunction which presents severe scaling of the skin and erythema. Treatments for this disorder are only symptomatic, leading to the urgent need for suitable disease models. Hence, the aim of our project is to create iPS-based in vitro skin models for ARI to overcome the limited availability and lifespan of primary human keratinocytes in culture and provide a virtually endless source of these cells. We have been characterizing iPS lines generated from two ARI patients using the polymeric STEmCCA virus system. Both cell lines presented typical features of iPS including embryonic stem cell-like morphology and alkaline phosphatase activity. 1. University of Colorado Denver, School of Medicine, Denver, CO and 2 AbbVie Inc, North Chicago, IL

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Human papillomavirus (HPV), Merkel cell polyomavirus (MCPyV), HIV and non-melanoma skin cancer

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In conclusion, ADA pts had significantly greater improvements in the physical aspects of the SF-36, and localized inflammatory reactions. The aim of these studies was to evaluate the effects of a highly sensitive broad spectrum HPV DNA detection assays were used to identify cutaneous and localized inflammatory reactions. The aim of these studies was to evaluate the effects of a

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In vitro and in vivo efficacy of a new complex on acne pathogenesis: the P. acnes case study

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Acne is a common multifactorial inflammatory dermatosis of the pilosebaceous unit in which sebum and the bacterium Propionibacterium acnes play an important role. P. acnes secretes proteoglycans and lipases that generate pro-inflammatory mediators, leading to the formation of comedones and localized inflammatory reactions. The aim of these studies was to evaluate the effects of a highly sensitive broad spectrum HPV DNA detection assays were used to identify cutaneous and localized inflammatory reactions. The aim of these studies was to evaluate the effects of a

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Impaired incrinet effect is an early sign of dysmetabolism in non-diabetic patients with psoriasis

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Psoriasis is associated with increased risk of type 2 diabetes, but the underlying pathophysiology remains largely unknown. The gastrointestinal system plays a major role in the development of type 2 diabetes. The impact of psoriasis on gut factors involved in glucose metabolism has not previously been examined. In this study, we aimed to investigate if non-obese, non-diabetic patients with psoriasis exhibit impaired incrinet effect and/or gastrointestinal mediated glucose disposal. A three hour 50 gram oral glucose tolerance test (OGTT) and an isoglycemic intravenous glucose infusion (IGII) were performed in 12 patients with moderate, untreated psoriasis and 12 healthy controls matched for age, gender, and body mass index. All subjects had normal glucose tolerance and no genetic dispositions to diabetes. Glucose, insulin, and C-peptide levels were measured repeatedly. The incrinet effect and IGII were calculated based on insulin responses and amounts of glucose utilised, respectively. The patients with psoriasis exhibited significantly impaired incrinet effect (18.5% vs. 36.5%, P=0.021) and gastrointestinal-mediated glucose disposal compared to healthy controls (52.5% vs. 60.9%, P=0.038). OGTT and IGII blood glucose excursions were significantly higher in the psoriasis group (P=0.036). These novel findings suggest that gut-related pathophysiological mechanisms may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis.

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Vitiligo and the use of immunosuppression in Bullous Pemphigoid

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Immunoadsorption (IA) is increasingly used for treatment of pemphigus. IA has also been successfully applied in pemphigoid diseases, characterized by subepidermal blistering due to autoantibodies directed against structural proteins of the dermal-epidermal junction. However, information on the use of IA in bullous pemphigoid (BP), the most frequent pemphigoid disease, is limited. Here, we report on 15 patients with severe or relapsing BP (mean age 79 years; range 54 to 94 years) treated by adjuvant IA on 3 consecutive days in addition to tapering doses of oral prednisolone, dapsone, hydroxychloroquine and losartan. During the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively. Within the follow-up period of between 1 and 57 months (mean 19.5 months) reversible anaemia in 7 of the 15 patients (46%) was the most common adverse event, most likely attributed to concomitant dapsone, while antibodies decreased by 78% and 93% within 1 and 3 months, respectively.

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Highly sensitive broad spectrum HPV DNA detection assays were used to identify cutaneous HPV DNA was extracted from microdissected, formalin-fixed, paraffin-embedded tissue from 191 clinical samples. It was shown that HPV DNA was detected in 76% of the samples, with high prevalence in NMSC/pre-cancer and MCV also appears to be prevalent. 61% MCV+/ve cases were HPV-ve, suggesting that HPV may have a negative impact on the risk of MCV infection. Overall, 16% (36%) MCV+/ve cases were HPV +ve without any difference between HPV+ve and -ve groups. The detection of MCV in NMSC may simply be an incidental finding, but if MCV and HPV are factors in NMSC pathogenesis, they may work independently.

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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 1

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Both immunosuppression and viral infections may be associated with skin cancer. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis. We have investigated mechanisms that may underlie the increased susceptibility for type 2 diabetes in patients with psoriasis.
Increased iron levels in aged skin lead to increased ferritin expression and higher ROS-levels after irradiation. 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 generation of reactive oxygen species (ROS) in human dermal fibroblast. Additionally, we firstly showed the iron deposit 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. Furthermore, 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 of the iron to ferritin and by that keeping the iron in a redox inactive state. We observed an increase in ROS generation with 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 the patients who were also noted after three treatments. Complete disappearance was achieved at 12 eyes and an improvement was confirmed at 3 eyes. Conjunctival edema and mild subconjunctival haemorrhage had occurred in the period of observation. The Q-switched Nd: YAG laser has been found to be effective and safe therapy for ocular superficial lesions. The present data illustrates differential effects of iron on the skin metabolism and the possibility of iron reactivity to react with oxygen species. The analysis of skin samples by a photometric iron assay revealed an increase in non-heme iron concentration in the dermis of aged skin. Furthermore, ferritin, ascorbate and haptoglobin were identified to be increased by aging. In the in vivo results in combination with the findings in the cell culture model support our hypothesis of a direct connection between higher ROS levels in aged dermis 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.

Laser therapy for ocular lesions of nevi of Ota

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Laser therapy for cutaneous lesion of nevi of Ota has already established, however therapy for ocular lesion has not been reported. The purpose of this study was to examine the treatment efficacy to validate the efficacy and safety of Q-Switched Nd: YAG laser therapy for ocular lesion of nevi 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 the patients who were also noted after three treatments. Complete disappearance was achieved at 12 eyes and an improvement was confirmed at 3 eyes. Conjunctival edema and mild subconjunctival haemorrhage had occurred in the period of observation. The Q-switched Nd: YAG laser has been found to be effective and safe therapy for ocular superficial lesions. The present data illustrates differential effects of iron on the skin metabolism and the possibility of iron reactivity to react with oxygen species. The analysis of skin samples by a photometric iron assay revealed an increase in non-heme iron concentration in the dermis of aged skin. Furthermore, ferritin, ascorbate and haptoglobin were identified to be increased by aging. In the in vivo results in combination with the findings in the cell culture model support our hypothesis of a direct connection between higher ROS levels in aged dermis 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.

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-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2, C16-KK-NH2 were obtained via chemical synthesis. Their antimicrobial activity against reference strains of bacteria and fungi as well as towards toxicity towards human HaCaT keratinocytes were assessed. Tested lipopeptides exhibited activity against all tested microorganisms. However the compounds faced to prove the toxicity towards HaCaT cells in their optimization phase. The experimental studies were performed using a semi-automatic tensiometer. The compounds did not permeate through synthetic membranes what allows to expect lack of penetration through human skin. Therefore their application on the intact skin (e.g. for eradication of SA carriage) is considered. We have found that lipopeptides were developed after conjugation process 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 roles of the preservative and the surface-active agent. Our next step is to evaluate efficacy of tested compounds with stress, self-efficacy and personality traits in dermatological out-patients.

Modulating effect of a new biofunctional agent 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 (mitHSFs), which help to preserve functional proteins and cellular homeostasis during heat shock, and CTRP proteases (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 out on 39 Asian volunteers (30 to 65 year-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 Visioline® VL650 and Visia-CR® pictures. The skin tone and spot appearance were assessed by Nexometer® 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 of 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 sample. The results indicate that the extract helped decrease the appearance of skin wrinkles as well as improving skin complexion.

Neurotic chronic dermatological patients employ task- and emotion-focused coping with stress and present lower resilience

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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 18-60 years, suffering from chronic dermatological diseases (contact eczema, seborrheic 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 Juczyski), CISS Coping with stress strategies by Endler et al (Polish adaptation by Szczepaniak et 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=0.23, p<0.0001); neuroticism and stress-focused coping (r=0.24, p≤0.05); extraversion and distraction coping (r=0.48, p<0.0001); agreeableness and task-oriented coping (r=0.22, p<0.05); agreeableness with distraction coping (r=0.33, p<0.0001); conscientiousness and task-oriented coping (r=0.23, p<0.05). We observed negative correlations between agreeableness and distraction coping (r=-0.24, p≤0.05) and agreeableness with indulging in social contacts (r=-0.27, p≤0.05) in our group of patients. In conclusion, identification of neurotic 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.
New biomarkers for disease severity in atopic dermatitis

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Presenting new treatments for atopic dermatitis (AD) are currently investigated. However, comparability of 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 studies.

We studied whether plasma proteomics could be used to develop new biomarkers of disease severity. We investigated plasma samples of 96 subjects with moderate to severe AD and 51 healthy controls. Disease severity at the time of blood sampling was assessed by using the Six Area Six Sign Atopic Dermatitis (SASSAD). Other measures were used to calculate disease activity, severity and the quality of life. Clinical severity was assessed using the Atopic Dermatitis Severity Index (ADSI). The index scores ranged from 0 (none) to 3 (severe) for erythema, pruritus, exudation, excoriation, and lichenification. The subjects were divided into three groups of increasing disease severity: mild (ADSI score < 15), moderate (ADSI score 15-21) and severe (ADSI score ≥ 22). The plasma samples were analyzed using an Luminex 220 analyzer. Enzyme-linked immunosorbent assay (ELISA) was used to confirm the results.

A total of 564 proteins were measured, with 395 proteins present in at least 5% of samples. Principal Component Analysis (PCA) was used to identify potential biomarkers. 86 proteins were significantly different between atopic dermatitis patients with mild, moderate and severe disease severity. Further validation was performed using an independent cohort of 23 AD patients (mild, moderate and severe disease severity) and 16 healthy controls. Using a threshold of p < 0.05, we identified 20 biomarkers as having the potential to be used as biomarkers of disease severity in atopic dermatitis.

These findings suggest that plasma proteomics is a promising approach to identifying new biomarkers of disease severity in atopic dermatitis. Further work is needed to validate these biomarkers in larger, prospective studies and to determine their clinical utility.
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 chemotherapeutics and stem cell transplantation. We hypothesized that leukemia cutis is not a poor prognostic factor in AML.

To study this, we performed a retrospective study of patients 18 years old with histopathologic diagnosis of leukemia cutis over 12 years at Brigham and Women’s Hospital/Dana Farber Cancer Institute. We identified 51 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. The use of HSC transplants in a smaller cohort of these patients (12 patients) showed that transplant survivors were part of the better survival rate in leukemia cutis patients. In conclusion, our data suggest that leukemia cutis may not be the poor prognostic factor that it was previously thought to be and stem cell transplantation can 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 dermatitis herpetiformis, each of which is associated with marked cutaneous abnormalities. Minimal research has been done on the histological changes in nutritional deficiencies. We hypothesized that a numerical change of the dendritic cells that play a role in controlling the immune response may be observed in these diseases.

We investigated 15 patients including 7 with pellagra, 6 with biotin deficiency, 1 with acrodermatitis enteropathica, and 1 with dermatitis herpetiformis. Dendritic cells were further classified into three types: Langerhans cells, CD14+ dendritic cells, and CD11c+ dendritic cells. Immunohistochemical analyses were done at the time of biopsy and these cells were quantified. The number of Langerhans cells and CD14+ dendritic cells was significantly higher in the skin lesions of these diseases compared to control skin.

In conclusion, the altered distribution of dendritic cells was observed in the skin lesions of various nutritional deficiencies. Further studies are needed to clarify the exact role of these dendritic cells in the pathogenesis of these diseases.

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 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 (Rahb & Holmes Stress Inventory) and anxiety (STAI) were used. Saliva samples measuring cortisol and dehydroepiandrosteron-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, each set was performed three times (morning, afternoon, evening), where two saliva samples were used to compare before and after listening to music. Based on saliva measurements, a statistical difference after listening to 30 min of classical music was found (cortisol p=0.018, mean=7.2, SD=8.2). Additionally, increases in DHEA-S levels during the experimental day were observed. In conclusion, listening to classical music might be an additional technique to look at when treating psoriasis patients.

216 The efficacy and safety of cryo fatty 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 suction lipectomy. Cryo fat reduction provides nonsupervised, selective, localized subcutaneous adipose 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 fatty fat reduction twice bimonthly. 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 6, week 12, 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 fatty reduction is a safe and effective therapeutic option in 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 itchy, 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 randomized trial, in which we compare the effect of Aprepitant to a standard topical treatment. Adult patients with AD (n=16) received 80 mg Aprepitant daily in 7 days as supplement to a standard topical treatment with a moderately strong steroid and a moisturizer (n=15). The control group of 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 group treated with Aprepitant the SCORAD decreased from 36.7 ± 15.7, VAS from 6.5 ± 74.6. In the control group SCORAD decreased from 44.0 ± 2.3 to 4.6, respectively, compared to only 7 months mean survival, and 1- and 5-year survival rates of 10 and 0%, respectively, in non-transplanted patients. Moreover set of data suggests that leakage cutis may not be the poor prognostic factor that it was previously thought to be and stem cell transplantation can lead to improved survival in this patient population.

In conclusion, our data suggest that leakage cutis may not be the poor prognostic factor that it was previously thought to be and stem cell transplantation can lead to improved survival in this patient population.

218 The role of PPARY 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 glycemic 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 PI3K/Akt pathway that, in turn, induces the expression of SREBP-1, resulting in enhanced sebogenesis. The nuclear receptor peroxisome proliferators-activated receptor-y (PPARY) is pivotal in lipid and glucose metabolism, and in the modulation of inflammatory pathways. Thus, we investigated the role PPARY plays in the sebaceous lipid synthesis and cytokines expression induced by insulin/IGF-1 in sebocyte cell line ZS95 using specific PPAR-y agonists such as pioglitazone. In the absence of IGF-1, activated PI3K/Akt pathway was down-modulated by pioglitazone. In conclusion, we observed that IGF-1 induced sebogenesis and inflammation in vitro. Modulating activity of PPAR-y appears to be a new therapeutic target for severe atopic dermatitis.
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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 Ingenol mebutate (IngMeb) is approved for field treatment of actinic keratosis (AK). The treatment causes transient and potentially severe inflammation that can be disconcerting to 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, Chronic myeloid leukemia (CML) is a myeloproliferative disease characterized by a hybrid gene and its upregulated activity of the tyrosine kinase (TK) BCR-ABL1. TK inhibitors like imatinib (IMA) or nilotinib (NIL) inhibit this TK and have therefore changed the therapy of CML dramatically. However, IMA and NIL exert “off-target” side effects on hormone metabolism in adult and pediatric patients. As vitamin D3 is involved in the complex cycle of bone remodelling, we investigated the influence of IMA and NIL on the vitamin D3 metabolism in HaCaT cells. Therefore, cells were incubated with 25 mM 7-dehydrocholesterol and exposed to UVB. Starting with the beginning of irradiation cells were incubated with 1 mM TKI for 24 hours, 48 hours or 72 hours, respectively. Calcidiol and calcitriol levels were determined quantitatively using commercial enzyme assays. To analyze if the VD3 processing cytochrome P450 isoforms CYP2R1, CYP27A1 and CYP27B1 were inhibited by TKI, specific inhibitors were applied concomitantly. In vitro at the clinically effective concentration both TKIs tested significantly impaired production of calcidiol and calcitriol. IMA incubation resulted to calcitriol levels of about 50% while NIL levels decreased to 10 % in comparison to controls without TKI. Additionally, interaction studies performed with inhibitors of P450 enzyme family (VID400, ketoconazole) in the absence of IMA revealed unchanged calcidiol levels (range: 90 – 110 ng/1*106 cells) while calcitriol levels decreased to 60 % of control values. Adding IMA in the presence of VID400 resulted in increased calcidiol levels by 600 % but unchanged calcitriol synthesis. Treatment with ketoconazole and IMA revealed increased calcitriol levels by 200 %. This point to interferences of IMA and NIL with the vitamin D3 cascade due to its metabolism by CYP2B7 and led to detailed studies about appropriate compensation strategies.